Perspectives on Teacher Education and Development

Edited by
Alenka Lipovec   Janja Tekavc

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Preface

ALENKA LIPOVEC, JANJA TEKAVC

The constant social changes we have been witnessing nowadays require rapid, professional, and high-quality reflections in the field of education. Quality teaching contributes to improved society's development and plays a critical role in fostering significant and meaningful student learning.

The scientific monograph Perspectives on Teacher Education and Development presents a comprehensive, detailed, in-depth, and holistic view of teacher education. It contains 38 research papers which are organized into eight different capters based on their main research area. The papers were written by several authors from Slovenia, Croatia, Slovakia, the Czech Republic, Germany, Turkey, Finland, and USA. The monograph offers research-based reflections on how to promote lifelong learning and the development of the competencies needed to meet the current and future challenges by improving and promoting pedagogical staff education. It is primarily aimed at researchers, university teachers, representatives of school policy, teachers, preschool educators, and everyone who is concerned about education and learning.

Research papers offer a wide-ranging contribution to the research-informed improvement of teacher education, which show how information and ideas drawn from research in education can be applied to daily teaching and learning. The

contributors offer insights into trends and innovations in the field of teacher education and reflect on the history of reforms and current climates in teacher education. The researched areas include modern didactic and pedagogic strategies, digital transformation of education, changes in education related to the pandemic, inclusivity in education, educational policies, curriculum aspects of teacher education, and teachers' personal and professional development. Therefore, the monograph Perspectives on Teacher Education and Development contributes new information and insights to this evolving but vital area of research.

Chapter 1
EDUCATION CHALLENGES IN PSYCHOLOGY

THE ROLE OF THE IDENTIFICATION AND PROMOTION OF STUDENT TEACHERS' CHARACTER STRENGTHS IN THEIR PROFESSIONAL DEVELOPMENT

POLONA GRADIŠEK
University of Ljubljana, Faculty of Education, Ljubljana, Slovenia
polona.gradisek@pef.uni-lj.si

Abstract Character strengths, defined as positive personality traits that are morally valued, are an important research topic in the field of positive psychology. In this study, 130 first-year student teachers participated in an online workshop, designed by the author, on identifying and promoting character strengths. Prior to the workshop, the students completed the VIA-IS survey on character strengths. After the workshop, they answered two open-ended questions for reflecting on the process of identification and promotion of their character strengths in relation to their personal and professional development. The students had the highest scores on the character strengths of Fairness, Kindness, Teamwork, Leadership, and Gratitude, and the lowest on Bravery, Self-regulation and Love of learning. The results of the qualitative analysis showed that the participants would most use Kindness, Fairness, Love, Teamwork and Humour in their future work, while they wished to further develop their Creativity, Perseverance, Courage and Self-regulation. The role of identification and promotion of student teachers' character strengths in their professional development and the professional identity formation is then discussed.

1   Introduction

Since 2000, when positive psychology was recognized as a new domain in psychology (Seligman & Csikszentmihalyi, 2000), there has been a growing body of scientific research on the factors that contribute to living a fulfilling life. Research in positive psychology focuses on the study of three main topics: positive subjective experiences (e.g., happiness, joy), positive individual traits (e.g., optimism, kindness), and positive institutions that facilitate positive experiences and positive traits (e.g., schools, educational institutions, families) (Seligman & Csikszentmihalyi, 2000). Positive psychologists recognized the need for providing a common language for understanding what is good in people, so the classification was developed as a parallel framework to medical classifications of diseases or mental disorders, which have already provided a common language to discuss mental disorders (Park et al., 2006).

One of the largest projects in the field of positive psychology was therefore the development of the VIA Classification of character strengths and virtues (Peterson & Seligman, 2004). Character strengths are defined as positive personality traits that are morally valuable (Peterson & Seligman, 2004) and constitute a "good character", which is necessary for individuals and societies to thrive (Park et al., 2006). In the VIA Classification, there are six core virtues, which have been globally and historically recognized as positive and desired, therefore they are considered to be universal in time and place; these are Wisdom and Knowledge, Courage, Humanity, Justice, Temperance, and Transcendence. Following from these six higher-order virtues, 24 ubiquitously-recognized character strengths are organized as follows (Peterson & Seligman, 2004):

- *Wisdom and Knowledge*: Creativity, Curiosity, Judgment, Love of learning, Perspective
- *Courage*: Bravery, Perseverance, Honesty, Zest
- *Humanity*: Love, Kindness, Social Intelligence
- *Justice*: Teamwork, Fairness, Leadership
- *Temperance*: Forgiveness, Modesty, Prudence, Self-regulation
- *Transcendence*: Appreciation of beauty and excellence, Gratitude, Hope, Humour, Spirituality

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Research on character strengths focuses on character strengths in the general population (e.g.; McGrath, 2015b; Park et al., 2006), children and adolescents (e.g., Park, 2004; Park & Peterson, 2006), specific populations, such as pre-service or in-service teachers (e.g., Gradišek, 2012; Gustems & Calderon 2014; Haslip & Donaldson, 2021), the assessment of character strengths (e.g., Peterson et al., 2004; Ruch et al., 2020), the empirical hierarchical structure of the VIA Classification (e.g., Brdar & Kashdan, 2010; McGrath, 2015a; Shryack et al., 2010), character strengths at work (e.g., Harzer & Ruch, 2012; Littman-Ovadia & Lavy, 2016; Peterson & Park, 2006), and character strengths interventions (e.g., Niemiec, 2018; Proyer et al., 2015; Ruch et al., 2020).

The present study focuses on the importance of the identification and promotion of character strengths of first-year student teachers, who are at the beginning of their professional development. Researchers agree that the development of a professional identity is an important component within the process of learning to become a teacher (Friesen & Besley, 2013). The author of present paper agrees with Korthagen (2004) that teachers' personal and professional selves are in interaction, and therefore argues that in the process of developing a professional identity as teachers, the personal identity of student teachers must also be emphasized and promoted. In the beginning of student teachers' process of professional development, emphasis should be put on (student) teachers as persons, and character strengths represent an important part of one's personality. In a study of teacher identity development, Friesen & Besley (2013) found that greater personal identity (and social identity) of student teachers resulted in increased professional teacher identity. These results mean that "those [student teachers] who have a well-formed sense of personal identity are more likely to be ready to begin the process of forming a professional identity" (Friesen & Besley, 2013, p. 30).

There has been much research on character strength interventions, which explored life and work outcomes (Niemiec, 2018). Research shows both internal (e.g., happiness and life satisfaction) and external (e.g., higher educational attainment) associations with the development of character strengths (Weber et al., 2016). The use of character strengths can help individuals to fulfil their potential and achieve their goals, leading to positive outcomes, including achievements and well-being (Linley & Harrington, 2006). Niemiec (2013) proposed the Aware-Explore-Apply (A-E-A) model to describe how strengths-based approaches lead to positive

outcomes: (1) *Aware*: individuals build up knowledge of their strengths; (2) *Explore*: they explore how their character strengths relate to valued outcomes in their past and current experiences; (3) *Apply*: they use their character strengths in their everyday lives. In the higher education context, this gives students opportunities to apply their strengths in the processes of learning, intellectual development, and personal excellence (Louis, 2011).

Knowledge about the VIA classification and the positive outcomes of character strengths' use is a good starting point for self-reflection in first-year student teachers. Through the (guided) process of identification of their character strengths they can become more aware of the positive aspects of their personalities and consider them in the light of their emerging teacher identities and professional development. It is important that student teachers are aware of their character strengths, especially of their signature strengths – those that they own, celebrate, frequently use, and feel fulfilled and excited when using (Peterson & Seligman, 2004). The process of character strengths' identification and exploration must be carried out in an appropriate, non-judgmental and positively-oriented atmosphere, with respect to students' integrity. The reflection process within the identification and exploration of student teachers' character/signature strengths is evoked during a workshop, but it can continue to be reflected in their thoughts and actions in their private and professional lives.

1.1   Aims of the Study

The aims of the present mixed-methods study were (1) to assess student teachers' character strengths, (2) to identify students' character strengths during the workshop and direct their thoughts onto the possible use of their strengths in their professional development, (3) to collect and qualitatively analyse students' written reflections about the role of their character strengths in their professional development.

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2   Method

2.1   Participants

The participants of the study were 130 first-year students from various study programs at the University of Ljubljana, Faculty of Education: preschool education ($n = 59$), social pedagogy ($n = 25$), special and rehabilitation pedagogy ($n = 29$), and speech and language therapy and surdopedagogy ($n = 17$). There were only two male students in the sample, which reflects the typical gender structure in Slovenian educational study programs. The average age of the participants was 19.51 years ($SD = 0.66$).

2.2   Instruments

The participants completed two questionnaires.

Character strengths

The Values in Action Inventory of Strengths (VIA-IS; Peterson et al., 2004) was used to measure students' character strengths. The questionnaire consisted of 240 items (10 items per character strength). The character strengths were assessed on a 5-point Likert scale (from 1 – not at all like me to 5 – completely like me). Example items are "I enjoy being kind to others" (Kindness), "I am always willing to take risks to establish a relationship" (Love), "I always admit when I am wrong" (Fairness), "I never quit a task before it is done" (Perseverance), "I work at my very best when I am a group member" (Teamwork). Research shows good internal reliability of the scales, test-retest reliability, and validity (Park et al., 2006; Ruch et al., 2010). In our sample, reliability coefficients ranged from .63 (Self-regulation) to .87 (Creativity). In the research a Slovenian translation (Gradišek, 2014) of the VIA-IS was used.

Character strengths and professional development

The participants were asked three open-ended questions to collect their insights into how their character strengths can contribute to their professional development:

1. Which character strengths could help you in your future work with children?
2. Which character strengths would you like to develop to become a good teacher/pedagogue?

2.2   Procedure

The students participated in a workshop on character strengths as a part of their coursework at the university. The study took place during the third wave of the COVID-19 pandemic in March 2021, therefore, the study-related activities (workshop and completing the questionnaires) were carried out in an online form. Prior to the workshop, the participants completed the VIA-IS questionnaire. During the 90-minute online workshop, the students (1) were introduced to the theory on character strengths and the VIA classification, (2) identified their most typical character strengths and (3) reflected on their results with a special focus on the role of character strengths in their professional development. After the workshop, they were asked to answer the open-ended questions. The data were considered anonymously.

3   Results

3.1   Student Teachers' Character Strengths

The descriptive statistics of the students' character strengths are presented in Table 1. The students showed the highest scores on the character strengths of Fairness, Kindness, Teamwork, Leadership, Gratitude, Love, Honesty, Humour, and Appreciation of beauty, where the mean scores were above $M = 4.0$. The lowest-rated character strengths were Spirituality, Bravery, Self-regulation, and Love of learning; however, all the scores were above $M = 3.0$.

Table 1: Descriptive statistics from the VIA-IS questionnaire

Character strengths	M	SD
Fairness	4.32	0.44
Kindness	4.29	0.40
Teamwork	4.18	0.45
Leadership	4.17	0.45
Gratitude	4.17	0.50
Love	4.14	0.51
Honesty	4.08	0.44
Humour	4.07	0.55

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Character strengths	M	SD
Appreciation of beauty	4.05	0.51
Curiosity	3.96	0.53
Zest	3.92	0.56
Judgment	3.91	0.49
Modesty	3.81	0.60
Hope	3.80	0.64
Perseverance	3.79	0.60
Social intelligence	3.77	0.50
Creativity	3.75	0.65
Perspective	3.73	0.47
Forgiveness	3.72	0.56
Prudence	3.67	0.53
Spirituality	3.58	0.84
Bravery	3.54	0.53
Self-regulation	3.51	0.51
Love of learning	3.37	0.62

3.2 Character Strengths and Students' Future Work with Children

Table 2 shows the results of a qualitative analysis of the students' responses on character strengths that could help in working with children in the future. The participating students could list several character strengths; on average, they listed 4.41 character strengths per person.

Table 2: Frequency distribution of the character strengths that could help students in their future work with children, according to their responses

Character strengths	f	Character strengths	f
Kindness	80	Zest	16
Fairness	62	Appreciation of beauty	15
Love	56	Hope	13
Teamwork	43	Judgement	10
Humour	42	Love of learning	9
Leadership	34	Self-regulation	7
Creativity	32	Forgiveness	7
Perseverance	28	Prudence	7
Honesty	26	Perspective	7
Social intelligence	22	Spirituality	7
Gratitude	22	Modesty	5
Curiosity	20	Bravery	3

The most frequently mentioned character strength was Kindness. The students recognized Kindness as *"a basis for good relationships and well-being of children"*, moreover, they stressed that "*a kind and positive environment is the most encouraging for children*". They would use their Kindness "*to make students feel relaxed around [them]",* and "*to take care of them*". In their opinion, Kindness is important when working with children because "*children need someone kind to help them" – "a loving and kind person to talk to, who they can trust with their problems".* According to the students, if teachers are kind, *"children respond better and are more active".* Several responses described the intertwined role of Kindness and Love, which was the third most frequently mentioned character strength regarding the students' future pedagogical work (*Table 2*). For example, "*Love and Kindness are important for children to feel loved by teachers, to feel that someone cares about them, helps them, understands them and wants the best for them".* The students also noted that in using Kindness and Love, *"we can constructively solve problems, understand each other better, respect each other and listen to each other".* The students recognized Love as *"a basis for good relationships"* and stressed its importance for teachers: *"Without Love, one cannot (or should not) be a teacher".*

Fairness was the second most frequently mentioned character strength that the students thought could help in their future work with children. "*You must be fair when working with children. All of them must have equal opportunities*". They highlighted the role of teachers as role models: "*If we will be fair, children will learn how to be fair"; "Preschool children don't yet understand what fairness is, therefore we must show it to them with our actions".*

The students recognized Teamwork for teachers as a *"prerequisite for quality work with people"* and they stressed its importance for teachers: *"In our profession, we will work together with a child, his or her parents, and our colleagues. We will all share a common goal – the welfare of the child."* Leadership is a character strength that is associated with Teamwork. The students noted that they could use their Leadership to *"assure that every member of a group feels included and to strive toward building positive relationships."* They recognized the role of Leadership in "*having authority in a classroom"* and *"to be able to listen to every child and to consider the children's needs".*

The students also recognized the importance of Humour ("*It is hard to work with people if you don't use a bit of humour. I only remember teachers who made us laugh and used humour during their teaching.")* and Creativity for teachers *("Creativity is my strongest character strength. It is important, because it helps me to present things differently to children, and I stimulate*

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them to use their imagination and to not be limited."). The students were aware that they *"must never give up on children" (Perseverance).*

3.3   Character Strengths That the Students Would Like to Develop Further

The student teachers were asked what character strengths they would like to develop further in order to become good teachers/pedagogues. *Table 3* shows the frequencies of character strengths that they listed in their answers. The students could list several character strengths in their response; they listed in average 2.41 character strengths per student.

Table 3: Frequency distribution of character strengths that students would like to develop further, according to their responses

Character strengths	f	Character strengths	f
Creativity	37	Fairness	9
Perseverance	34	Honesty	8
Courage	33	Teamwork	8
Self-regulation	27	Love	8
Hope	18	Forgiveness	8
Social intelligence	17	Kindness	7
Zest	16	Gratitude	6
Love of learning	15	Prudence	5
Judgement	14	Perspective	3
Leadership	13	Appreciation of beauty	3
Humour	10	Spirituality	3
Curiosity	9	Modesty	2

The most frequently mentioned character strength that the students would like to develop further was Creativity. The students recognized the importance of creativity in their future work with children: "*I will try to think outside the box, do more activities that require creativity. I will allow myself to be more creative and will not set boundaries for myself. Creativity should be promoted and not hindered."* In addition, they recognized the need for intentionally developing their creativity, in order to *"have new and original ideas, which [they] sometimes lack"*; some students even noticed *"a slight decline in [their] creativity over the last few years, probably because of the educational system".*

Perseverance was the second most frequently mentioned character strength, which the students wished to develop further. One of the students wrote: "*I am not a disciplined person, but I would like to become one. Perseverance, discipline and organization would be beneficial for me. When I don't reach my goals, I feel disappointed. This negatively affects my self-esteem and prevents me from setting new, more challenging goals.*" They recognized the need for developing their perseverance because "*[they] don't want to give up on children's problems if they become challenging and also [they] want to persist with their ideas and not give up*".

More Courage could help students to "*dare to try some new pedagogical activities, methods or approaches*", to "*stand behind [their] actions and not be afraid of every change that occurs*". They believed that "*it is important for [them] to dare to make a change, react in a certain situation*". The importance of reacting appropriately was also recognized in relation to Self-regulation: "*In our profession, you can find yourself in an unplanned situation and must be capable of reacting suitably.*"; "*I hardly control my emotions and I must learn this. It's important to show emotions properly when working with children.*"

Developing the strength of Hope could help students "to become more positively-oriented and more focused on the future". One student wrote that "*expecting the best and working with specific goals give meaning to [her] profession*". According to students' responses, their Social Intelligence needed further development because students and teachers "*must understand the grounds of certain behaviours in children instead of interpreting them in the wrong way and therefore reacting inappropriately*".

Comparison of the Results

Finally, the ranks of character strengths were compared and analysed, which were assessed in three different ways: (1) the students' results on character strengths, measured by the VIA-IS survey; (2) character strengths that the students' could use in their future work with children, according to their responses; (3) character strengths that the students would like to develop in order to become good teachers/pedagogues, according to their responses.

Table 4 shows the comparison of the character strengths' ranks.

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Table 4: Comparison of ranks of character strengths according to the VIA-IS survey and the students' responses (the strengths they could use in their future work and the strengths they would like to develop further)

	VIA-IS (rank)	Strengths for future work (rank)	Strengths to develop (rank)
Fairness	1	2	13
Kindness	2	1	18
Teamwork	3	4	14
Leadership	4	6	10
Gratitude	4	10	19
Love	6	3	14
Honesty	7	9	14
Humour	8	5	11
Appreciation of beauty	9	14	21
Curiosity	10	12	12
Zest	11	13	7
Judgment	12	16	9
Modesty	13	23	24
Hope	14	15	5
Perseverance	15	8	2
Social intelligence	16	10	6
Creativity	17	7	1
Perspective	18	18	21
Forgiveness	19	18	14
Prudence	20	18	20
Spirituality	21	18	21
Bravery	22	24	3
Self-regulation	23	18	4
Love of learning	24	17	8

Note: Some of the character strengths have tied ranks, such as Leadership and Gratitude in the VIA-IS column.

The character strengths that were more typical for student teachers, according to the results of the VIA-IS, were recognized to a higher extent as strengths that students could use in their future work (e.g., Fairness and Kindness, which were ranked first and second in both cases). The student teachers would like to develop the character strengths that were not very typical for them, such as Creativity, which was ranked 17th in the VIA-IS and first regarding the wish for developing it, as well as Perseverance, which was ranked 15th in the VIA-IS and second regarding its development.

4   Discussion

The professional development of student teachers begins when they enter educational universities and begin the teacher education study programs. In the process of the professional development of teachers, we must pay close attention to the formation of the (student) teachers' professional identities because, among other factors, professional identity determines the way teachers teach (Beijaard et al., 2004). Professional identity formation is a complex process, which includes the interpretation and re-interpretation of experiences and is influenced by factors, such as personal history, social interactions and psychological and cultural factors (Lamote & Engels, 2010). A teacher as a person is so strongly interwoven with how they act as a professional that their professional identity cannot be separated from their personal identity (Lamote & Engels, 2010). Therefore, exploring the personal identities of future teachers can be a beneficial pathway towards building their professional identities. Character strengths reflect our personal identity (Niemiec, 2018), so the process of identifying character strengths can be a useful strategy for student teachers to start exploring and shaping their professional development as (future) teachers at the beginning of their teacher education.

In the study, the participants assessed their character strengths on the VIA-IS survey. The student teachers in our sample had the highest scores on Fairness, Kindness, Teamwork, Leadership, Gratitude and Love (*Table 1*). These results are similar to other studies on student teachers (Gradišek, 2012; Gustems & Calderon 2014) and reflect the strengths that are important for teachers in order to be able to establish positive relationships with students and colleagues.

Besides the perceptions on who they are as a (student) teacher, another important aspect of a teacher's professional identity includes the kind of teacher they want to be (Lamote & Engels; 2010). Therefore, after having been introduced to the VIA classification, the theory about character strengths, and their practical implications during the online workshop, the participating student teachers were invited to reflect on their character strengths in the light of their future work with children as teachers or pedagogues. Interestingly, similar strengths (as measured with the VIA-IS) were reported by the student teachers in their responses to open-ended questions. The students wrote that they would mostly use their Kindness, Love, Fairness, Teamwork and/or Humour in their future work with children (*Table 2*). It is very

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positive that the student teachers in their first year of teacher education were able to reflect on their most typical character strengths and recognize the benefits of using them in their future work. It is important that the student teachers, as early as at the beginning of their professional development, are aware of and understand that it is of great importance for teachers to be kind, loving, fair and humorous in their interactions with students and to know how to work well in teams. "*Teachers' work is easier, if it is based on kind and loving relationships, intertwined with humour,*" was one of the student's responses. Another student described the importance of Kindness and Love: *"I would use the strengths of Kindness and Love in my work with children. If we are loving to children, they will love us back. I believe that our good deeds return one day. Personally, I feel good when I help someone, make someone's day with a smile, say Hello in a polite manner or wish someone to have a nice day. In my opinion, it is crucial that we raise children to be kind and good-hearted individuals."* Other character strengths were also recognized as being important. Among others, one student stressed the importance of Creativity and Curiosity, however, the teacher's role in modelling character strengths is also implicit in her response: "*Creativity and Curiosity are two wonderful character strengths that children have, but often disappear with growing up. These two character strengths help me to be able to listen to a person without judgement and to seek new solutions.*"

Originating from the premise that character strengths can be developed (Niemiec, 2018; Peterson & Seligman, 2004), the student teachers were asked which character strengths they would like to develop further in order to become good teachers or pedagogues. In their answers, the most frequently mentioned character strengths were Creativity, Perseverance, Courage, Self-regulation, Hope, Social Intelligence, and Zest. It is interesting to note that they listed those strengths which had lower scores in the VIA-IS survey but were found to be important in the teaching profession. The participants stressed the importance of Creativity for teachers to have new, creative and interesting ideas for children, Perseverance for not giving up in difficult situations, Courage for daring to try new teaching methods or to stand behind their actions, and Self-regulation for being able to control their emotions and responses in challenging situations in a classroom.

The student teachers' reflections on their character strengths in relation to their future work as teachers/pedagogues proved an interesting strategy for developing teacher identity. A professional (teacher) identity is strongly connected to the student teacher's personal identity, as a part of their professional development. The students

recognized the importance of several character strengths that are important for teachers. On the one hand, they were able to reflect on which of the character strengths that they already possessed could be used in their work, and also which character strengths would they need (or wish) to develop further to become good teachers. The author of present paper agrees with Lamote & Engels (2010) that student teachers should be stimulated to build on their emerging professional identities from the beginning of their professional development.

One of the main areas of research in positive psychology are positive institutions (Seligman & Cziksentmihalyi, 2000). Higher education institutions, especially educational faculties, should be(come) positive institutions, in which the development of student teachers' positive traits – character strengths – should be promoted, and experiencing the positive emotions of both student teachers and their teachers should be enabled. First-year student teachers are aware that they need to develop some of their character strengths to become good teachers, such as Creativity, Perseverance, Courage, and Self-regulation, and the university teachers should be able to support them in this process. Student teachers should learn in a supportive context, in which their character strengths will be recognized and promoted, their potentials fulfilled, and in which their professional (teacher) identities will be supported and developed from the beginning of their professional development as first-year student teachers.

The limitations of the study are linked to the method used in the study. The cross-sectional design of the study allowed us to observe the character strengths of one generation of student teachers, however, a longitudinal design would allow us to observe possible changes in their character strengths during their following years of study. Also, the possible changes in their perceptions regarding character strengths use and development in relation to their future work in the following years would be interesting to observe. Another possible limitation was the use of the self-report measure because of the risk of socially more desired responses. In future, it would be interesting to collect a larger sample of students from various educational study programs to compare their character strengths and their reflections regarding the identification and promotion of their character strengths.

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THE ASSOCIATION BETWEEN CAREER ANXIETY AND LIFE SATISFACTION: THE MODERATING ROLE OF A FIXED MINDSET

EVA KRANJEC, JANJA TEKAVC

University of Maribor, Faculty of Education, Maribor, Slovenia
eva.kranjec@um.si, janja.tekavc@um.si

Abstract Research suggests that teacher students are at particular risk for experiencing career anxiety compared to other professions (Daniels et al., 2006). The purpose of this study was to investigate the presence of career anxiety in students in their final years of studies and the moderating role of a fixed mindset in the relationship between career anxiety and life satisfaction. The study examined 192 students in their final years of the Preschool Education and Primary Teacher Education study programs. Besides basic demographic information, the mindset questionnaire, the career anxiety scale, the SWLS life satisfaction questionnaire, and the STAI-X2 anxiety scale were used to obtain the data. The findings showed that the majority of students reported being satisfied with their life and that higher life satisfaction was positively connected with less trait anxiety and career anxiety, as well as a less fixed mindset. Furthermore, the results showed that a fixed mindset was an important moderator of the relationship between career anxiety and life satisfaction in future preschool and primary education teachers. Based on the obtained results, their implications were summarised for teacher education programs and counselling at university career centres.

1   Introduction

The transition from secondary to higher education, one's university years, and entering the job market represent an important developmental phase in the life of a young adult in which they are confronted with many requirements as well as challenges across different areas of their life. From a developmental perspective, the age group of young adult students (aged 18-24) has been described as "emerging adulthood", which represents a transitional developmental stage between late adolescence and adulthood (Arnett, 2004). This transition requires developing skills for maintaining the independence and self-sufficiency a person gains through adolescence, and for managing new tasks with regard to developing and maintaining intimate relationships, new educational tasks, and career choices. Failure to accomplish these developmental tasks may result in life dissatisfaction (Newman & Newman, 2008). As such, the developmental stage of "emerging adulthood" is considered stress-arousing and anxiety-provoking (Meadows et al., 2006).

During their university years, students try to gather the knowledge, skills, and practical experiences that would allow them a more successful entry into the job market. Preparing for their future profession is often connected with experiencing stress and anxiety, which can decrease their sense of subjective well-being and life satisfaction (Tsitsas et al., 2019). However, personal characteristics like personality traits and mindset can act as moderators in this process. To determine the purposes of this study, the authors will briefly introduce the constructs of (career) anxiety, life satisfaction, and fixed mindset.

1.1   Career Anxiety

Anxiety is defined as a negative emotional state in response to an uncertain threat (Rachman, 2013). Anxiety disorders are the most prevalent mental disorders. According to large population-based surveys, up to 33.7% of the population are affected by an anxiety disorder during their lifetime (Bandelow & Michaelis, 2015). Unlike in human species history, wherein a threat was commonly connected with life-threatening events, one of the biggest concerns people have nowadays is having a decent life in the future. This mostly relies on finding a good job that fulfils their needs (Takil & Sari, 2021). Therefore, one of the biggest sources of anxiety today is career anxiety.

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Career anxiety can be defined as negative emotions experienced before or during various stages of the career decision-making process and job performance (Fouad, 2007). While a certain amount of anxiety can help individuals prepare for career-related tasks, an overwhelming amount of anxiety is no longer beneficial. Most university students report experiencing some amount of career-related anxiety, especially in their senior year before they graduate and enter a competitive job market (Gallagher, 1992). However, regardless of developmental stage, individuals often experience anxiety about their career paths (Shin & Lee, 2019).

Research suggests that teacher students are at particular risk of experiencing career anxiety compared to other professions (Daniels et al., 2006). The reasons that make them more susceptible to career anxiety are mostly connected with their perceived lack of competence, financial issues, and the relatively low prestigious status of being a teacher (Daniels et al., 2006; Su, 1997). Especially in transition periods, such as the first year in the study program and the beginning of their teaching career, teacher students may experience anxiety and a decrease in their sense of control (Daniels et al., 2006). Past studies show that anxiety has large and negative effects on teacher students' competence and career certainty (Daniels et al., 2006). Student teachers who experience high levels of anxiety tend to perceive their capacities for effectively filling their professional roles as being significantly lower. Also, they express less confidence in their decision to become professional teachers.

Having an anxious personality trait may be associated with the inefficient use of attentional resources. However, although anxiety is defined as a negative emotional state, it is not necessarily harmful to the organism. Anxious feelings typically arise in response to an anticipated threat; thus, they can help the organism to be prepared in advance (Eysenck, 2013). When the threat is real and likely to be harmful, anxiety may indeed help one to be prepared to cope with the source of the threat. This latter case may be the situation with prospective teachers. Teacher students must deal with many obstacles in order to have a decent job and life, such as competitive exams that they need to pass after graduation, financial problems (low salary), issues relating to job prestige, etc. (Daniels et al. 2006; Su, 1997). Hence, to be able to come to grips with these "career threats", being concerned about them in advance and preparing accordingly can be a good strategy to successfully develop their career. Therefore, feeling anxious is not necessarily a maladaptive phase for teacher students. In their case, the "threat" value of the situation (i.e., not being able to find a job) that they

are experiencing is realistically high. In this case, devoting cognitive and attentional resources to career-related concerns can be seen as productive and beneficial (Takil & Sari, 2021).

1.2   Life Satisfaction

How an individual evaluates their life is defined in psychology as an individual's subjective well-being. A component of this multidimensional construct of subjective well-being is life satisfaction. It is defined as a person's conscious, cognitive, and affective evaluation of life quality (Bradley et al., 2014). Pavot and Diener (2008) describe it as "a judgemental process, in which individuals assess the quality of their lives on the basis of their own unique criteria (p. 164)".

Higher levels of life satisfaction have been associated with several positive psychological and physical benefits, e.g., lower levels of depression, improved physical health, as well as more effective responses to stressful life events (for a review, see Bradley et al., 2014). People with higher life satisfaction tend to respond more effectively to stressful life events, since life satisfaction mediates changes in adaptive coping with stress (Gilman & Barry, 2003). It is therefore not surprising that many authors (e.g., Diener, 2000) relate life satisfaction closely to positive mental health. In this essence, assessment of life satisfaction is considered to be one of the most important indicators of an individual's mental health (Huebner & Gilman, 2002).

Studies in which researchers assessed individuals' life satisfaction report that people are generally satisfied with their lives. However, certain variables, such as gender, socio-economic status, and self-esteem seem to be important factors in relation to life satisfaction (for a review, see Moksnes & Espnes, 2013), as well as complex cultural, personality, and environmental relationships (Diener et al., 1999). Research suggests that life satisfaction is determined to a considerable extent by personality traits and one's level of self-acceptance (Diener et al., 2003).

Over the past decade, academic interest in life satisfaction among young adults has increased (see Huebner et al., 2004 for a review). Most studies (e.g., Kruczek & Janicka, 2019) report on the average level of young adults' satisfaction with their lives, however, differences among individuals seem to exist. Considering the ever-changing world with increasingly complicated life situations and, in particular, one's

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university years, in which students constantly think about their future professional careers, it is, therefore, important to understand the characteristics of young adults' satisfaction with life as well as how it is connected to other psychological constructs.

1.3   Fixed Mindset

To orient themselves more easily within their social environment, individuals rely on guiding cognitions, which help them interpret and respond to social interactions and experiences. These cognitions can be more or less accurate and serve as more or less adaptive in times of adversity (Beck, 2002; Starr & Davila, 2012; Stuijfzand et al., 2018). Since the transition to university and later the transition to the job market represent a time of challenges for a young person, these guiding conditions can play an important role in how effectively they will face these adversities and adapt to the situation.

A type of guiding condition that received increased attention within the past decade is implicit theories or mindsets (for a review, see Schleider et al., 2015). Mindsets represent a person's core beliefs about the plasticity of their self-attributes, such as personality and intelligence (Molden & Dweck, 2006). These beliefs lie along a continuum ranging from the growth mindset or incremental theory to the fixed mindset or entity theory (Schroder et al., 2019). People with a growth mindset, in general, perceive their personal traits as inherently malleable and therefore changeable through learning and effort. On the other hand, people with a fixed mindset view their personal traits as fixed and therefore unchangeable through effort (Molden & Dweck, 2006). Individuals with more of a growth mindset tend to attribute failures to a lack of effort. Their motivation seems to be a never-ending development of their mastery; therefore, they view themselves as a work in progress (Schroeder et al., 2015). On the contrary, individuals with more of a fixed mindset tend to attribute failure to a lack of ability. Rather than developing mastery of the task, they are motivated by outperforming others, and view their abilities as fixed (Schroeder et al., 2015).

Studies report on several psychological outcomes when a person displays either a growth or a fixed mindset. In general, a growth mindset has been related to several positive outcomes for individuals, such as more adaptive coping with stress and faster recovery after experiencing setbacks (for a review, see Mullarkey & Schleider,

2020). Also, a growth mindset is negatively correlated with psychopathology (Schleider et al., 2015) and negative effects (Burnette et al., 2013). A fixed mindset, on the other hand, correlates with and predicts higher levels of depression and anxiety in young people and adults (for a review, see Schleider & Schroder, 2018) and is in general perceived as a possible cognitive vulnerability factor for these internalizing problems (Alloy et al., 2017, Miranda & Mennin, 2007). However, the degree to which a fixed mindset independently explains variance in these problems remains unclear. This is mostly because a fixed mindset correlates with other cognitive risk factors for internalizing problems, e.g., perfectionism (Mullarkey & Schleider, 2020). Also, research shows that a fixed mindset in students does not predict low self-confidence, meaning that students can have a fixed mindset and high confidence for learning accounting (Beatson et al., 2019).

The Present Study

Previous research has shown that students in various study programs experience career anxiety in their final year of study, owing to fear of academic failure and lack of employment opportunities (Hammad, 2016; Karayagiz, 2020). Although it is well known that increasing anxiety in college students is associated with lower levels of subjective well-being and life satisfaction (e.g., Paschali & Tsitsas, 2010; Tsitsas et al., 2019), much less research examined the moderating role of certain individual characteristics (e.g., mindset) in the relationship between students' career anxiety and life satisfaction. The present study explores the degree and direction of the relationship between fixed mindset, trait anxiety, career anxiety, and life satisfaction. In addition, the relationship between these constructs and students' beliefs and confidence in obtaining employment was examined. For a more in-depth understanding of the relationships between these variables, the authors hypothesized that a fixed mindset would moderate the indirect effects of career anxiety on life satisfaction. The above hypothesis is presented in the conceptual model shown in Figure 1.

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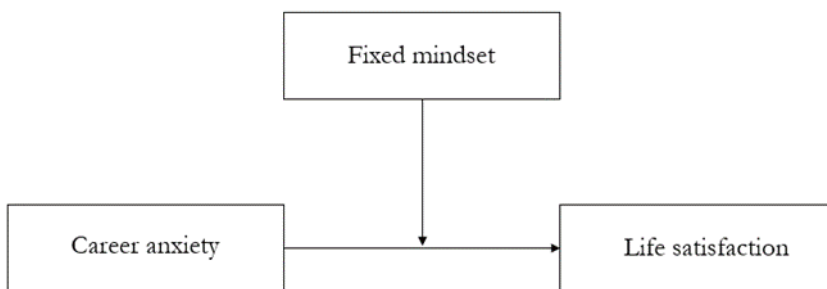
Figure 1: A conceptual model of a simple moderation.
Source: own

2 Method

2.1 Participants

The present study is based on a sample of 192 participants (men = 9, women = 183). All participants were in the 3rd or 4th year of the first study cycle (69.8%) or in the 1st year of the second study cycle (29.7%) in two different educational disciplines (i.e., Preschool Education and Elementary Education) at three pedagogical faculties in Slovenia. The mean age of the sample was 23.93 years (SD = 4.24).

2.2 Instruments

The Implicit Theories of Intelligence (Self-Theory) scale (De Castella & Byrne, 2015) assesses students' general beliefs about the stability or variability of their intelligence, that is, their beliefs about their ability to modify their mental abilities. The questionnaire contained eight items divided into two subscales: The Entity Self Beliefs subscale (e.g., "My intelligence is something about me that I personally cannot change very much.") and the Incremental Self Beliefs subscale (e.g., "With enough time and effort I think I could significantly improve my intelligence level."). Using the 6-point scale (1 – strongly disagree, 6 – strongly agree), participants indicated the extent to which they agreed or disagreed with the statements. Previous studies have reported Cronbach's alpha coefficients of .90 (De Castella & Byrne, 2015) and .95 (Polh Budja & Košir, 2019). Internal consistency was acceptable in our sample, i.e., .81 for the Entity Self Beliefs subscale and .91 for the Incremental

Self Beliefs subscale. For the purpose of our study only the Entity Self Beliefs subscale was used.

Career Anxiety items (Daniels et al, 2011). Students' career anxiety was assessed with nine items, including "How worried or concerned are you about finding out later that you do not like the career you choose?" and "How worried or concerned are you about not being able to find a job or position in the field you choose?". Participants answered the items on a 5-point scale (1 – not worried, 5 – very worried) with a higher score indicating greater levels of career anxiety. The items used were not yet adapted to the Slovenian cultural and linguistic environment. The reliability coefficient obtained for our data is .88.

The Satisfaction with Life scale (SWLS; Diener et al., 1985). As one of the two major components of subjective well-being, this scale is narrowly focused on measuring overall life satisfaction and does not refer to similar constructs, such as positive affect and loneliness. It represents the evaluative or cognitive component of life satisfaction. The scale score can be described as an individual's global assessment of their quality of life according to their personal criteria. The SWLS includes five items (e.g., "In most ways my life is close to my ideal.") to which participants respond on a 7-point scale (1 – strongly disagree, 7 – strongly agree). The resulting scale score for an individual is the sum of the individual item scores with a possible range of 5 to 35. The results of the SWLS can be interpreted in terms of both absolute and relative life satisfaction. A score of 20 represents the neutral point on the scale (i.e., the participant is equally satisfied and dissatisfied), while scores between 5 and 9 represent extreme dissatisfaction and scores between 31 and 35 represent extreme satisfaction (Pavot & Diener, 1993). The SWLS has been shown to be a valid and reliable measure of life satisfaction (Cronbach's alpha coefficient of .87; Diener et al, 1985). The internal reliability coefficient for our sample is .86.

State-Trait Anxiety Inventory – X2 (STAI-X2; Spielberger et al., 1983). The STAI-X2 is one of the most common measures of anxiety as a personality trait, that is, the tendency to react anxiously in most situations, as opposed to the STAI-X1, which measures anxiety as a current state. The STAI-X2 consists of 20 statements (e.g., "I have problems that accumulate so that I cannot cope with them."). All items are rated on a 4-point scale (1 – almost never, 2 – sometimes, 3 – often, and 4 – almost

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always). The range of possible scores for STAI-X2 varies from a minimum score of 20 to a maximum score of 80. A high score indicates the presence of high levels of anxiety. Internal consistency coefficients for the original scale have ranged from .86 to .95 (Spielberger et al., 1983). The reliability coefficient obtained for our data is .92.

Demographic information. Before completing the questionnaires, the participants provided information on their gender and age, faculty and study program, reasons for choosing a particular study program, and level of belief and confidence in obtaining employment in the profession for which they were being trained. The belief in obtaining employment was assessed by the participants on a 5-point scale (1 − I do not believe that I will obtain regular employment, 5 − I absolutely believe that I will obtain regular employment), as well as confidence (I do not trust that I will obtain regular employment, 5 − I absolutely trust that I will obtain regular employment).

2.3 Procedure

Preparations for the study took place in February 2021. The application of the questionnaires was carried out in March 2021. The participants completed the questionnaires in an online form created using the 1KA application. An online version of the questionnaires was sent to participants during online lectures or classes, or a link was posted on the Moodle learning platform. The participants completed the questionnaires in approximately ten minutes. The information collected was kept confidential and used only for the purposes for which it had been provided. The students were not compensated for their participation.

2.4 Data Analysis

Data analyses were conducted using IBM SPSS 27.0. The descriptive analysis was performed to obtain a preliminary description of the sample. Pearson's correlation coefficient was calculated to find the correlation between the scores of the Career anxiety scale, The Implicit Theories of Intelligence (Self-Theory) scale, and the Satisfaction with Life scale. Then, based on our hypothesis, the moderation model was examined using the SPSS PROCESS macro v3.5 software (Hayes, 2013). In PROCESS, Model 1 was applied for simple moderation, with career anxiety as an

independent variable and life satisfaction as a dependent variable. The covariate (i.e., a variable that explains part of the variability in the outcome) of trait anxiety was also included in the model. Two values of the fixed mindset were defined – low fixed mindset (one standard deviation below the mean) and high fixed mindset (one standard deviation above the mean) – to test for significant moderating effects.

3   Results

3.1   Descriptive Statistics and Intercorrelations

Table 1. Descriptive statistics and intercorrelations for the study variables

Variables	M	SD	1	2	3	4	5
1. Belief	3.45	1.04	–				
2. Confidence	3.41	1.09	.72**	–			
3. CA	20.96	7.42	-.32**	-.35**	–		
4. F-MIN	2.22	0.88	.00	.00	.29**	–	
5. SWLS	23.84	6.08	.27**	.27**	-.37**	-.26**	–
6. STAI-X2	38.91	9.93	-.30**	-.29**	.53**	.31**	-.53**

Note. $N = 192$. Belief: belief in obtaining regular employment; Confidence: confidence in obtaining regular employment; CA: the average career anxiety score; F-MIN: the average fixed mindset score (the Entity Self Beliefs subscale); SWLS: the average life satisfaction score; STAI-X2: the average trait anxiety score. * $p < .05$; ** $p < .01$.

3.2   Moderation Analysis

Consistent with the aim of the present study, the moderating role of a fixed mindset in the relationship between career anxiety and life satisfaction were further explored. The results of the moderation analysis are presented in Table 2. For life satisfaction, the overall model was statistically significant, $R = .561$, $F (4, 187) = 21.439$, $p < .001$. Career anxiety and fixed mindset were predictive of life satisfaction, as was STAI, with the significance of STAI as a covariate meaning that there were differences in mean life satisfaction scores between students with low and high trait anxiety. Consistent with our prediction, there was a significant interaction effect between career anxiety and fixed mindset in predicting life satisfaction (see Table 2).

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Table 2. The linear model of predictors of life satisfaction

	b	SE B	t	p
Constant	42.58 [36.90, 48.26]	2.877	14.80	< .01
Career anxiety (centred)	-.34 [-.61, -.67]	.137	-2.46	< .05
Fixed mindset (centred)	-2.98 [-5.39, -.57]	1.223	-2.44	< .05
Fixed mindset x Career anxiety	.11 [.00, .22]	.054	2.04	< .05
STAI-X2 (covariate)	-.26 [-.35, -.18]	.045	-5.98	< .01

Note. R^2 = .31.

To interpret the moderation effect, the simple slopes were examined. The results
showed the following: (1) when fixed mindset is low, there is a significant negative
relationship between career anxiety and satisfaction with life, $b = -.190$, 95% CI
$[-.344, -.035]$, $t = -2.42$, $p = .016$; (2) at the mean value of fixed mindset, there is
a non-significant negative relationship between career anxiety and satisfaction with
life, $b = -.093$, 95% CI $[-.210, -.242]$, $t = -1.56$, $p = .120$; (3) when fixed mindset
is high, there is a non-significant positive relationship between career anxiety and
satisfaction with life, $b = -.005$, 95% CI $[-.141, -.150]$, $t = .06$, $p = .951$. These
results tell us that students with a higher fixed mindset reported lower life
satisfaction than students with an average score and students with a lower fixed
mindset. As career anxiety increases, students' life satisfaction with a higher or
average fixed mindset does not change significantly, while the life satisfaction of
students with a lower fixed mindset decreases. The simple slope graph is shown in
Figure 2.
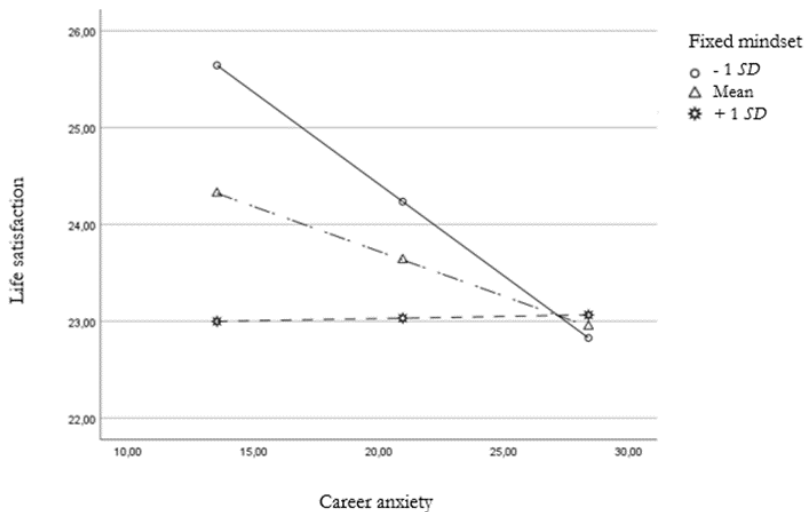
Figure 2: Simple regression slopes for moderation analysis
Source: own.

4   Discussion

This study was conducted to investigate the level of fixed mindset, trait anxiety, career anxiety, and life satisfaction among teacher students, as well as to explore the relationship between all these constructs, especially the moderator role of a fixed mindset in the relationship between career anxiety and life satisfaction. Considering the latter, the authors predicted that a fixed mindset would moderate the indirect effects of career anxiety on life satisfaction.

The findings of this study show that the majority of teacher students appear to be satisfied with their lives. Most of the participants in this study reported being slightly satisfied or satisfied with their lives, which confirms previous findings (for a review, see Moksnes & Espnes, 2013), stating that most people are in general satisfied with their lives. Since the life satisfaction of young adults is an important factor that influences their subjective well-being and mental health, it is important to examine the factors that impact their life satisfaction. Previous research shows that the self-efficacy of young adults significantly predicts their life satisfaction (Çakar, 2012) and that life satisfaction was related to optimism and positive thinking (Caprara & Steca, 2006). Our findings confirm this, since teacher students who hold higher beliefs and confidence in obtaining regular employment were found to be more satisfied with their lives as well as reported experiencing lower levels of both trait and career anxiety. It seems that in the final years of their studies, which relate to their upcoming entrance into the job market, making occupational decisions, becoming independent from their family, etc., their trust and self-confidence in their abilities to succeed in finding a job as a teacher contribute to their satisfaction with life.

Besides being more self-confident and holding more optimistic beliefs about their future occupation, our research findings suggest that students with higher life satisfaction could, in general, be characterized as holding a more adaptive mindset about the plasticity of their self-attributes. The results of this study show that teacher students who are more satisfied with their life experience hold more of a growth mindset and experience less trait anxiety and career anxiety. This is in line with previous findings, indicating that a growth mindset relates to better mental health (Schleider et al., 2015) and fewer negative effects (Burnette et al., 2013). Similarly, a positive correlation in our study was found between trait anxiety, career anxiety, and fixed mindset, suggesting that students with fixed mindsets experience higher levels

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of trait anxiety and career anxiety. This confirms the notion that having a predominantly fixed mindset can be a possible risk factor for several internalizing problems, such as anxiety and depression (e.g., Alloy et al., 2016; Miranda & Mennin, 2007). It seems, therefore, that teacher students who tend to attribute failures to a lack of effort are constantly motivated by developing mastery and view themselves as a work in progress (i.e., express a growth mindset), experience less anxiety in general as well in terms of their future profession, and perceive their life as more satisfying.

In terms of the moderation effect of a fixed mindset in the relationship between career anxiety and life satisfaction, the authors found that teacher students with a higher fixed mindset report being less satisfied with their lives compared to students with an average score on fixed mindset and students with a lower fixed mindset. As career anxiety increases, students' life satisfaction with a higher or average fixed mindset does not change significantly, while the life satisfaction of students with a lower fixed mindset decreases. A fixed mindset appears to be connected with students' life satisfaction only when their level of career anxiety is low, with students with lower levels of fixed mindset expressing higher levels of life satisfaction. However, when career anxiety is high, all students experience a comparable level of low life satisfaction. One can assume that when young adults with more of a growth mindset experience high levels of trait and career anxiety, their constructive cognitive styles no longer prevent them from experiencing lower satisfaction with life. This notion stresses the importance of managing students' anxiety and enhancing their perceptions of control. Since research suggests that most university students experience at least some amount of career anxiety (Gallagher, 1992), and that teacher students are at particular risk for that in comparison to other professions, it seems necessary to address career anxiety in this population and intervene. Interventions that target students' trait and career anxiety seem a possible solution, as well as incorporating these topics in teacher education study programs. As Daniels et al. (2006) suggest, teacher education programs should be created in a way that helps student teachers to overcome their anxiety and learn to manage unpredictable environments. One of the options for how to tackle anxiety in teacher students is incorporating the concept of mindfulness and mindfulness techniques in the study program, which the students found to be useful and well-accepted content (Tekavc, 2021). Another solution to help students successfully deal with their anxiety could be professional support at university career centres implemented as individual

support (e.g., counselling, career coaching) or group workshops aimed to teach students to effectively cope with anxiety and plan their careers.

The moderation effect found in the relationship between fixed mindset, career anxiety, and life satisfaction could also suggest an adaptive response in people with a growth mindset when experiencing anxiety. When their anxiety increases, teacher students with the lowest levels of fixed mindset seem to experience the highest drop in their life satisfaction. Anxiety typically represents a negative emotional state for a person and can be perceived as decreased satisfaction with life. However, negative emotions and not being satisfied with one's life call for action and can act as an important motivator for creating a change. While students with a higher fixed mindset do not experience this drop in their life satisfaction when their anxiety increases, students with more of a growth mindset do, and could therefore feel more willing to think about an adaptive way to respond or change. As Eysenck (2013) suggests, anxiety is an adaptive emotional response for survival and serves the purpose of being prepared to cope with the source of the threat. Teacher students face several potential threats, e.g., exams, financial problems, issues relating to job prestige, etc. (Daniels et al. 2006; Su, 1997). To deal effectively with these threats, being concerned about them in advance and preparing accordingly can be a coping strategy to successfully carry on with their career.

Conclusion

The results of our study confirmed our hypothesis that a fixed mindset would moderate the indirect effects of career anxiety on life satisfaction. When career anxiety is low, teacher students with a lower fixed mindset seem to be more satisfied with their life than students with a higher fixed mindset. However, when career anxiety is high, the life satisfaction of students with a lower fixed mindset decreases, while for students with a higher fixed mindset, it does not change. Despite the somewhat motivational role of anxiety, which has the potential to stimulate the person into responsive action, our results call for interventions aimed at reducing student teachers' anxiety and supporting their sense of control. Future studies should explore the moderator role of a fixed mindset between career anxiety and life satisfaction within the general student population. Also, investigating the content of career anxiety (by conducting e.g., in-depth interviews with teacher students) would enable us to define the most important domains wherein to intervene.

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Sources and Components of Professional Stress from a Teacher's Perspective

Maja Ljubetić, Toni Maglica, Ante Grčić

University of Split, Faculty of Humanities and Social Sciences, Split, Croatia
ljubetic@ffst.hr, tmaglica@ffst.hr, agrcic2@ffst.hr

Abstract The teaching profession is often associated with stress, which has a negative impact on the individual and can have negative consequences on the academic achievements of students. To determine the components of individual sources of occupational stress on a sample of 538 teachers, qualitative methodology was used, and a thematic analysis was conducted. The research problems were as follows: gaining an insight into the components of the experience of stress in relation to individual sources of stress and gaining an insight into teachers' actual difficulties and their thoughts, which the researchers assumed went beyond the sources of occupational stress in the workplace. Results: the components of individual sources of occupational stress are most often related to students, parents, expert associates and principals, excessive administrative tasks, and to a lack of professional training. The teachers also expressed their dissatisfaction with the social status of their profession and saw it as a significant source of stress.

1   Introduction

In general, teachers[1], regardless of the institution where they work (be it kindergartens, primary or secondary schools), regularly experience professional stress in the workplace (Sandilos et al., 2018; Harmsen et al., 2018; Dankade et al., 2016; Murray-Harvey & Slee, 2007). The sources and intensity of this stress differ considerably, but the vast majority of teachers most often link the cause of professional stress to students and their parents (Randhawa, 2009), working conditions, which have recently been connected to online teaching (Rapanta et al., 2020; Ljubetić, 2020), the non-existence and/or the inefficiency of the institution's expert team, poor interpersonal relationships (Van Thanh, 2016), the principal's incompetence (Blase, 1987), and very often to excessive administration.

Contemporary pedagogical practice expects teachers to have more and more diverse and complex competences in order to respond to their demanding role; this is evident from the fast-changing educational goals that are created in line with the requirements of the contemporary era. This, in turn, requires teachers to have more abilities, knowledge and skills. These requirements also lead to increased professional stress. One of the participants in the study stated the following: "I want to stress that the demands put forward by our profession are increasing and that this is great because we are making progress as a society and as individuals. However, there is less and less training provided to meet these challenges." Since teachers are largely responsible for the functioning and development of the education system, they need strong and effective professional competences. Therefore, Selvi (2010) emphasizes the need to review and redefine teachers' competences depending on the development of overall human life and education. Kress (2000, p. 133) points out that "the previous era had required an education for stability, the coming era requires an education for instability," which is one of the fundamental features of today. Therefore, one seems justified in asking how to remain stable in an unstable world, or more specifically, what destabilizes teachers in their professional life and environment and what kind of support system do they need? Ljubetić and Kostović Vranješ (2008) conducted a study on a sample of 260 teachers in the Split-Dalmatia County, which showed that the teachers were occasionally assessed as being pedagogically incompetent because they felt insecure, did not take responsibility,

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[1] The term teacher refers to kindergarten, class, and subject teachers. It is gender neutral.

were aware of their own mistakes and difficulties in solving disciplinary problems, etc. It is very likely that they experience a higher or lower level of stress and need/expect help and support first and foremost in their professional environment. It is reasonable to expect that timely and appropriate support would also result in reduced levels of stress and eventually in greater efficiency and satisfaction with the teaching profession. Therefore, it seems important to explore the sources of stress in the professional environment (kindergarten/school) and understand them as risk factors that need and can be reduced and/or eliminated. At the same time, it is important to explore and raise awareness on protective factors (support factors) that can significantly reduce the negative impact of risk factors on teachers' success and satisfaction, but it is necessary to create conditions for this to be achieved.

2 Methodology

2.1 Research Aims and Problems

The research presented in this paper is part of a broader scientific study conducted by Full Professor Maja Ljubetić, Associate Professor Ina Reić Ercegovac and Toni Maglica, PhD, from the Faculty of Humanities and Social Sciences, University of Split, on a sample of 538 kindergarten, elementary, and high school teachers to determine the sources of professional stress and support in their work environments. In this study, the respondents completed the Measures of Strengths, Supports, and Stressors for Teachers – MOST (Sandilos & DiPerna, 2021) questionnaire and answered two open-ended questions. The two questions were aimed at investigating the sources of stress in more detail and, based on the answers obtained, and acting at the levels of educational policy and founder to reduce and/or eliminate sources of stress.

In this paper, the focus is on the following two open-ended questions:

1. What specifically causes you the greatest professional stress?
2. What do you want to say/emphasize that was not covered in the questionnaire?

These questions aimed to determine the research participants' free associations. Therefore, qualitative methodology was used, as it provided a better insight into the participants' personal experiences and their subjective perceptions of stress. Insights

into the personal experience of stress or support provide an understanding of the meaning that a particular situation holds for the participant (Maxwell, 1996, according to Milas, 2005). This is a process wherein the subjective dimension of assessment is acknowledged. Thomas (according to Merton 1995, p. 384) emphasizes: "If people define things as real, they are real in their consequences." Thus, an insight into personal experience allows one to understand the meaning that a situation has for an individual (Maxwell 1996, according to Milas 2005).

Bronfenbrenner's (1989) ecological systems theory provides a basis for understanding and explaining how professional stress and teacher support are experienced at all levels of the educational system. as it includes multiple and dynamic systems that make up an individual's environment, which can be simultaneously understood as sources of professional stress but also of possible support. Therefore, to analyse the environment (microsystem, mesosystem, exosystem, macrosystem and chronosystem), the participants' perceptions of certain relationships (with colleagues, expert team, children, parents, educational policy, principals, etc.) are more important than what they are really like. The participants had the possibility to interpret their reality and to insist on their subjectivity. In line with this premise, Ajduković (2014) stresses that qualitative methodology is aimed at gaining an insight into the whole and providing detailed descriptions of individual situations, processes and events, focusing on the modes of interpretation and of giving meaning to the world and the social context in which the individual exists. The questions focused on the participants' perspectives as well as the way they saw and experienced the sources of stress. The participants were allowed to speak in their own words and from their own perspective, thus leaving the possibility of collecting data not predicted by theory or anticipated by the questions in the questionnaire. Such an approach provided broader and deeper insight into the issues being researched.

2.2   Conducting Research and Data Processing

The online study was conducted in February 2021. All research participants received information on the research purpose and goal, the method of implementation, voluntariness and anonymity, and the possibility of withdrawing from the study at any time. The study had been reviewed by the Ethics Committee of the Faculty of Humanities and Social Sciences in Split (2020).

The results cannot be generalized, but conclusions can be drawn on how most participants perceived reality, i.e., on the most common sources of stress that teachers experience in their institutions and beyond. Given the stated research goal, the following two research problems were set: a) gaining an insight into the components of stress experience in relation to individual sources of stress (children, parents, professional associates, working conditions, etc.), and b) gaining an insight into teachers' real difficulties and their reflections that researchers assume go beyond the sources of professional stress in the workplace.

When analysing the obtained data, all three researchers separately recorded the codes, which they compared after conducting separate analyses. During the process of coding, the codes began to repeat themselves, reaching a point where new codes no longer emerged, which Glaser and Strauss (1967) call saturation.

Thematic analysis, as the basic qualitative method recommended for such research (Braun & Clarke, 2012), was used to analyse the data. Maguire and Delahunt (2017) point out that the goal of thematic analysis is to identify interesting and important themes/patterns that the researchers use to answer the questions asked or address the research problems. Data analysis was conducted following the phases of the thematic analysis as prescribed by Maguire and Delahunt (2017) and Braun and Clarke (2012). The paper cites authentic participant testimonies, because in qualitative research "the report is written primarily in the participants' words" since the researchers' focus is on their perception and experience (Creswell, 2009, p. 195). Themes and codes obtained through thematic analysis are data-driven, according to Joffe (2012), and will be presented in the results, while the patterns, themes and codes will be considered in the discussion section from the perspective of Bronfenbrenner's (1989) ecological development systems theory (Maglica et al., 2020).

2.3   Participants

This paper presents only certain results of the study in which 538 participants (kindergarten, class, and subject teachers) took part. Of the participants, 93.7% were women. The participants were aged between 24 and 63 and had between 1 and 42 years of work experience. Concerning education, 0.6% of the participants had

completed high school, 36.4% had a vocational school degree, and 60% had an undergraduate university degree. A total of 1.5% of the participants had completed graduate university studies, and 1.5% of participants had a master's degree or a PhD. The sample included 46.5% kindergarten teachers, 36.4% subject teachers, and 17.1% class teachers. Their institutions were located in the city (78.4%), municipality (11%), countryside (34%), on the islands (3.3%), or on the mainland (0.9%). A total of 7.8% of the participants expressed their complete satisfaction with their monthly income, while 21.4% were completely dissatisfied. The vast majority of participants expressed satisfaction with their monthly income (70.8%).

3 Results and Discussion

The results will be presented in relation to the research problems, with an overview of the codes and the themes that arose (*Table 11*).

Table 1: Research codes and generalized topics – Sources of stress

Theme	Codes
Children's/Students' parents	"Constant complaints from parents", "Demanding parents (with unrealistic demands)", "Unreasonable attacks by parents", "Unwillingness to cooperate or poor cooperation with teachers", "Parents neglect their children/students", "They talk badly about teachers", "They do not appreciate the teachers' effort and commitment", "Inappropriate reactions in problem situations (e.g., in situations when a child is injured in kindergarten)", "Parents frustrated with their own parenting", "Uncooperative parents of a child with behavioural difficulties", "A minority of parents trying to impose their opinion on the majority", "Parents providing increasingly less support for teachers", "Parents 'interfere' with every segment of learning and assessment."
Children/Students	"(Too) many children in classes and in educational groups and the need for a 'third' kindergarten teacher" ("Pedagogical standard! Will we ever meet it?"), "Children's injuries and running away from the group/kindergarten (causes a permanent feeling of fear in kindergarten teachers)", "Children's/students' rude behaviour as a consequence of lacking manners (disrespect for teachers, vulgarity, disrespect for the school environment)",

	"Children with behavioural difficulties (internal/external difficulties)", "Children's aggressive behaviours towards peers and adults", "A large number of children with special needs", "Children behave in very different ways and have different habits (which the kindergarten teacher detects at the beginning of the pedagogical year, they have little information about the children and are expected to act promptly)", "A large number of students (about 500) and the constant obligation of descriptive monitoring", "Students' lack of interest and apathy (inability to motivate students to work)", "Students' socio-economic and emotional problems".
Expert team at the institution	"A lack of supervision and professional support and/or weak support", "A lack of support from the management and no expert team", "Expert team's disrespect for practitioners", "Irresponsibility and idleness of the expert team", "A lack of understanding from the experts", "A feeling of helplessness and being left to fend for oneself in all situations that should involve professional associates", "Experts are more focused on meeting parents' needs rather than those of the children."
Principal	"Poor organization, untimely and nonclear notifications of tasks classified as 'other'", "Changes in operations that are introduced hastily without prior agreement and cooperation with the teacher", "A lack of communication with superiors, not taking into consideration our opinions, belittling teachers", "A lack of support, no reactions to the problems presented", "Principal's inadequate and very unprofessional behaviour", "Giving prominence to individual colleagues at school", "The principal does not provide support and does not protect us (we are always the ones who are the grown-ups, and we have to deal with problems at school on our own)", "Principal's disrespect and non-acceptance of our competence and personal success".
Agency/Ministry/Founder	"Neglect by the Ministry and the founders", "Founders, principals and professional associates belittle teachers", "Inconsistency of all those responsible for the current situation in the kindergarten (and whose great promises begin and end with political campaigns)", "A system in which rules are not clear and the laws are not respected; a political abuse of power due to which society and even the education system cannot make progress", "Adapting the institution to the expectations of the community (of parents) that do not favour the child's progress", "Practitioners' resilience to changes and poor support of the Education and Teacher Training Agency", "Doubting the success of the implementation of the National Curriculum for Early and Preschool Education",

	"Curricular reform has been implemented quickly and I am not coping well in implementing the reform."
Working conditions	"Paperwork (too demanding, many tasks, short deadlines)", "Cramped and unsafe spaces for kindergarten children", "Lack of equipment and teaching aids (kindergarten)", "Lack of technical equipment (school)", "Obligation to fill in for an absent employee in a kindergarten (frequently, without material remuneration)", "Working conditions are constantly changing because of the current situation (online classes, masks, working in an insecure school following the earthquake)", "I experience a lot less stress at school, online classes are exhausting", "Constant changes within the subject (informatics and technical culture)", "Changing classrooms during the day", "Introduction of new technologies and programs", "Low salary in relation to the level of education", "The same salary regardless of whether the teacher has a bachelor's or a master's degree", "A constant sense of lacking time due to pointless paperwork", "Teachers compensate for (material) things missing at the institution with their own (additional) engagement and resources."
Personal	"A subjective feeling that I don't know something; I'm not prepared enough, etc.", "No possibilities for training", "A sense of incompetence to respond in a timely and appropriate manner to children's special needs."
Relationships	"Evil people, individuals who constantly cause discomfort, and because of whom there is a negative atmosphere in the team", "Lack of socializing with colleagues (due to the pandemic)".

In general, the results could be explained by a quote from a participant who stated the following in relation to the research aim: "*Increasing administrative requirements, increasing effort to motivate students to work, less support from parents and the community. There is a lack of teams of psychologists and social workers who will enter the classrooms and talk to children who are having a hard time dealing with problems, and we are finding it increasingly difficult to deal with them. A school psychologist and pedagogue are no longer enough. The school can no longer solve the accumulated problems on its own.*"

As can be seen from the results, the majority of the teachers' sources of stress come from parents and students. Teachers perceive parents as demanding and accusatory, and their cooperation poor, even offensive. This is not surprising, since many international studies indicate the same sources of stress among teachers (Brady & Wilson, 2021; Aydin & Kaya, 2016; Randhawa, 2009). When examining the results

concerning the students as sources of stress, most of the statements deal with the high number of children (in a kindergarten setting) and their behavioural problems (running away, disrespect, vulgarity, aggressive behaviour) and how to deal with them. It is not surprising that the preschool teachers who consider it very important have the knowledge and competences to work with children with behavioural problems, evaluate their personal competences as mediocre and are highly motivated to improve in this field (Maglica & Tomić Kaselj, 2021).

Some sources of stress are more related to working conditions, which depend on the following decision-makers: the Ministry, the education agency, and principals themselves. Too much administrative work, low salaries, deadlines, a lack of technical equipment, as well as objective circumstances, such as the pandemic and online teaching, cause the teachers to feel stressed. Regarding principals, their role in forming institutional culture is crucial but they also report high levels of stress caused not only by parents (their indifference) and their indecisive behaviours, but also by teachers' undocumented behaviours, and unnecessary reports by and permissions for teachers and staff (Cevik et al., 2022).

The participants also covered the perception of their status in society. The teachers were united in their assessment that they are insufficiently recognized and appreciated in society, which can be deduced from the following statements: *"Negative opinion of the environment on the teaching vocation that parents often pass on to their children. It takes a lot of effort and work to alleviate and/or correct such a distorted opinion step by step"; "The demands on us teachers are great, and the state invests in education modestly"; "Being a teacher is an honourable and responsible job, but unfortunately underestimated in our society"; "My job is extremely important for the development of young people into healthy people and should be more recognized in society as such"; "Education policy in the city. That is the only thing that frustrates me at the moment, and that no one appreciates our many years of systematic effort and work"; "I think that many teachers are frustrated by the fact that our profession is totally marginalized and very often ranked as a service activity"; "It is often difficult to work with high school students who have difficulty concentrating and are unmotivated, but there are days that undo all of the above and this forces us to remain optimistic and enthusiastic in the classroom despite the weak support from and demeaning by the Ministry, pedagogical services and society."*

It is clear that the participants were dissatisfied with their treatment and status both in their own institutions and in society in general, and although most often they are considered underpaid, this reason does not stand in the forefront of their dissatisfaction. The results obtained are in line with the results of studies by Mutluer & Yüksel, (2019), Aydin et al. (2015), and Van Laar & Sidanius (2001). In considering the obtained answers in the context of Bronfenbrenner's ecological model of development, it is clear that if a kindergarten/school is understood as a microsystem, its survival, quality, health and functionality depend on the support network of all other systems (meso, egzo and macro), which is, as assessed by the teachers, lacking.

4   Conclusion

The participants' free associations (second question) most often focused on the following specific **proposals for the researchers**: "The attitude of the competent Ministry and the Agency towards us should be investigated. How much do they help or hinder?", "Investigate the relationship between the legal department and the school administration and how much they are of use to the teacher", "Talk more about teaching in combined classes, level of school equipment, working in one shift", "Children's and teachers' mental health should be dealt with. In fact, from the very beginning, we should work more with parents and raise their awareness of their mistakes in the educational process that they are not aware of"; **for the creators of educational policies**: "Let us be more of an educational institution. Education is more talked about", "I think that professors (mentor, advisor) should be ranked differently, because it is not the same whether vocational or general education subjects are taught. Everything is available for general education subjects (literature, preparation, training), and for the vocational subjects, there is often no literature, there is no preparation at all, almost no training. The profession should be addressed once and for all."; **for the founders and principals**: "Training is available to us if we have the initiative ourselves to attend a training course, if we want to improve our work and our practice on our own […] sometimes we finance our own training", "Reducing administrative work would significantly contribute to our job satisfaction and greater commitment to children. We are dealing more and more with papers (plans, programs, reports, minutes, consent, etc.), and less and less with children."

A kind of resignation can be felt when reading one participant's comment: "In the beginning, I was very enthusiastic in my work, and I wanted to complete everything the best I knew how. As the years go by, I try to stick solely to teaching lessons rather than waste my time and energy on other people's ideas and problems." Another participant concludes: "My answers would be much more positive if the school building was safe, if I was not worried about the pandemic and if there was less corruption and crime that have almost been legalized. All this is related to education and upbringing because it is difficult to be satisfied and full of enthusiasm when a parent from a position of power violates the teacher's integrity or when the education authorities grope in the dark and do not adopt a quality curriculum, but it is instead being written for a political period of 4 years."

One of the participants' comments, in a way, concludes all of the above: "No matter how much of an intrinsic motivation educators, teachers and professors have, it is difficult not to break down physically and mentally when you are constantly hitting a wall. And yes, it is very stressful to meet all the needs of children, parents, expert team, and the principal, and finally the founder, when you do not have the basic conditions for work."

In the context of Bronfenbrenner's ecological model of development, this participant's comment clearly reflects the impact of a chronosystem that reflects changes over time within an individual. Some of the changes can be predicted (maturation, experience) but others are also unexpected (resignation, giving up, apathy), which is not acceptable in the teaching profession. However, teachers remain true to themselves, and as one participant stated: "I am proud to be a teacher. Well done to all the colleagues who bravely deal with the difficulties of our profession and do not give up on trying to improve it."

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Chapter 2
EDUCATION CHALLENGES IN PEDAGOGY

MILESTONES IN TEACHER EDUCATION: LOOKING BACK, LOOKING FORWARD

PAVEL ZGAGA

University of Ljubljana, Faculty of Education, Ljubljana, Slovenia
pavel.zgaga@pef.uni-lj.si

Abstract Anniversaries are occasions for reflection, and this is also the purpose of this paper. On the occasion of the venerable anniversary of the academic institution dedicated to teacher education, we shall reflect on the milestones that mark the journey so far and, on the other hand, on the main ideas, dilemmas and conceptual solutions that have accompanied this journey through several stages. Since the middle of the last century, two important milestones have been identified: the beginning of teacher education at the tertiary level in the early post-war period and then, just at the time of Slovenia's gradual independence, its full integration into the general framework of university studies. These two milestones mark the historical rise of the field of teacher education, which has been confronted with ever new challenges over the last three decades. As in the past, these challenges have been linked both to general societal changes and to the specific problems that these changes bring to the complexity of the field of education. Therefore, this paper will also focus on the challenges, questions and dilemmas in the midst of which we find ourselves today and to which we obviously do not yet have all the answers.

Keywords:
teacher education,
higher education,
Slovenia,
Pedagogical
Academy,
Faculty of
Education

1   Introduction

Anniversaries are an opportunity for reflection, and on this occasion, some of the findings of research on teacher education have been summarized (Zgaga, 2010; 2013; 2020a; 2020b). Firstly, the perspective from which this topic was approached, is explained. The predominant approaches are those that focus on processes centred on pedagogical, didactic, and psychological paradigms. The author's disciplinary roots are in philosophy and sociology, so this topic was approached somewhat differently. On the one hand, it could be called a history of educational policy ideas, and on the other hand, an analysis of teacher education from the perspective of contemporary interdisciplinary studies of higher education.

Since the arrival at the former Pedagogical Academy in Ljubljana in 1977, the author's interest in the study of teacher education has been strengthened by the realization that teacher education institutions are squeezed between the external demands of political institutions as well as the broader social environment – and the internal demands of academic institutions, especially the more prestigious faculties.

Teacher education is an important segment in higher education systems; according to international statistics, about 10% of all students are enrolled in this field, yet, in terms of academic power and influence, it remains a marginal sector (Zgaga, 2010, p. 176-177). For example, its share of international student and staff mobility is often quite low compared to the dominant faculties, and the salaries of graduates from this field are often lower than those of the more attractive academic professions, and so on. However, the research field in higher education studies, which has only developed in the last few decades, tends to focus on topics in dominant university settings, while teacher education – and some others, such as social work – remain overlooked. Regardless, schools for future teachers have gone through a gradual and rather difficult process of "universitisation" since the middle of the last century. For that reason, a devotion towards consideration of this phenomenon is necessary.

2   The "Universitisation" of Teacher Education

Among renowned scholars, there are a few who have recognised this blind spot. For example, in his iconic work on academic tribes and territories, Tony Becher (1989) points to the tension between "research excellence" and the supposedly routine

"ability to teach" as one of the fundamental contradictions of modern universities. The fact is that research is generally more valuable than teaching. But in the specific area of teacher education, this tension appears in several forms: as tension between the subject content and pedagogy, as controversy over a parallel or sequential system of teacher education, and so on. In educational reforms, these tensions are reflected in the conflicting demands to include either "more subject" or "more pedagogy" in the curriculum for future teachers, in the formal criteria for promotion of staff, and so on. All this defines the complex context in which the transition of teacher education to the tertiary level – in Slovenia as well as worldwide – has taken place since the middle of the last century.

With its universitisation, teacher education has found itself in a dilemma between two equally important functions: the traditional function of educating future teachers and the new academic, especially research, function. What should exist in an and - and relationship, unfortunately, is often viewed as an either - or relationship. Publish or perish. About twenty years ago, this was discussed in an interesting way by two Americans: John Goodlad, a distinguished researcher in teacher education, and Burton Clark, a doyen of studies of higher education.

Reflecting on the process of universitisation of teacher education, Goodlad (1999) notes that teacher education schools entered the university arena with an innate unease while this space received them inhospitably and full of scepticism about their academic fitness and worth. On the one hand, they were constrained by the disciplinary requirements of the humanities and natural sciences, i.e., the two dominant academic spheres that also have a hegemonic role in terms of the content of the school curriculum. As a result, once incorporated into universities, teacher education schools have been assigned a relatively marginal role with less autonomy than most other schools and faculties enjoy. Even at America's research universities, these schools were out of luck, Goodlad argues; in that environment, they were better promoted academically, but the price was that they lost touch with primary and secondary schools – their natural laboratories. Goodlad concludes his reflections with a parallel between the study of medicine and the study of future teachers: the expansive scientification of medicine has led to its dehumanization – a trend that now threatens studies by future teachers as well.

In his reply to Goodlad, Burton Clark (1999) points out that all "professional schools"[1] at American universities are subject to certain constraints. They are constrained both by academic disciplines and by professional associations (or chambers) outside universities. However, teacher education schools are subject to specific constraints unique to the teaching profession. These schools prepare students to teach the subject, while the subject itself is in the hands of other, dominant, humanities and science departments at American universities. This is not the case in any other professional school, such as engineering.

The situation of teachers' schools, however, is not hopeless, Clark comforts his readers. He draws on the theory of the "new production of knowledge" by Michael Gibbons (1994) and his group. Gibbons distinguishes between Mode 1 (disciplinary knowledge) and Mode 2 (transdisciplinary, applied knowledge), but Clark proposes an additional Mode 1½ that includes interdisciplinary knowledge. According to Clark, teacher education schools must build on all three modes: Mode 1 is disciplinary and includes (in his somewhat specifically American view) educational psychology and methodology in addition to the disciplines that provide school subject knowledge; Mode 1½ combines history, sociology, philosophy and similar broader views of education in an interdisciplinary way, while Mode 2 focuses on transdisciplinary work on key issues facing practitioners in schools.

Clark (1998) is best known as a theorist of university organization, so it is not surprising that he identifies the main problem facing teachers' schools within universities as an organizational one: there are different streams of knowledge generated at the university, and the question is how best to connect all these streams in preparing future teachers and similar profiles. However, he points out that there is no magic formula on how to achieve this goal. He advises us to seek the path of "local experimentation". Clark (1999) says that new patterns do not emerge overnight but can only be the result of "years of learning through trial and error".

When we acknowledge local distinctiveness, all of this is generally true for our region as well. We, too, have had decades of "local experimentation", of "learning by trial and error". This now requires us to rethink the milestones we have reached. The journey of the universitisation of teacher education has gone through several phases.

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[1] This term should not be confused with terms such as Fachhochschule in German or Visoka strokovna šola in Slovene.

The following two important milestones can be recognized in Slovenia: first, the beginnings of tertiary teacher education in the early post-war years, and then its full integration into the university system around 1990. We will try to rethink this process, which has lasted more than half a century, and to distinguish four phases.

3   Phase 1: From Higher Pedagogical School to Pedagogical Academy (1947 – 1961)

The field of education in the early post-war period was strongly marked by the terrible consequences of the four years of destruction. The renewal of the educational system was, therefore, initially characterised by lower standards (e.g., 7-years of primary school instead of 8 was conducted for a couple of years), but at the same time, the fundamental goal of the new state was to eliminate illiteracy and enrol all children in schools. An almost impossible demand – both for the teachers and for the teachers' teachers. The training of primary school teachers continued to take place at upper secondary teacher training colleges (*učiteljišča*). The University of Ljubljana (established in 1919), the only Slovenian university at the time, followed its traditionally elitist mission, paying no attention to the education of primary school teachers. Under these circumstances, in 1947, the government founded the Higher Pedagogical School in Ljubljana (*Višja pedagoška šola*)[2] as the first Slovenian institution of its kind at the tertiary level. An excellent study by Aleš Gabrič (2006) on the post-war educational reforms states that the university was "a staunch advocate of traditional academic principles. Therefore, it strongly opposed the proposals of the Higher Pedagogical School to join the University", as it was "pedagogical rather than scientific in nature" (ibid., p. 212). Gabrič also mentions the position of the Faculty of Philosophy (University of Ljubljana), which "felt it has nothing in common with the Higher Pedagogical School" (ibid., p. 239).

Controversy also broke out within the national reform forums. The positions of the representatives of the different federal republics[3] diverged, among other things, on the question of what kind of education the teachers of the renewed eight-year school should have. The Slovenian representatives were in favour of a four-year higher education degree (*visokošolska izobrazba*), but because of the unification of the system

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[2] Odločba o ustanovitvi Višje pedagoške šole v Ljubljani [Decision on the establishment of the Higher Pedagogical School in Ljubljana]. Uradni list LRS, July 5, 1947.
[3] The Yugoslav Federation (1945–1991) consisted of six *republics*.

throughout the Federation, a two-year degree was finally legalised (*višješolska izobrazba*). At the same time, the old Humboldtian concept of "impartial search for truth" was replaced by the concept of a "university meeting the needs of the development of a socialist society". The old organisational framework of the university was fragmented: now, it was only a loose "association of higher education institutions" and the faculties became fairly independent units, but of course under careful political control. The great need to increase the number of graduates in the country was reflected in the division of traditional four-year degree programs into two stages (2 + 2-year system), and in the establishment of new self-standing colleges (*višje in visoke šole*; two- or four-year systems, respectively), especially in some industrial centres where they had not existed before. Such case in Slovenia was the city of Maribor. The reform of compulsory education should not be ignored: the abolition of lower grammar schools (*nižja gimnazija*) and the introduction of a comprehensive eight-year primary school. The external differentiation after 4th grade was thus abandoned, but the differentiation of teacher education remained: for *all* primary school *teachers* (such was their formal title), two years of tertiary education was only a promise in 1958, while for upper secondary school *professors* (formal title), four years of university education was already the traditionally accepted standard.

The reform of the late 1950s was in many ways problematic, contradictory, and ideologically charged, but in the case of teacher education, there is no denying that it reached a new level with this reform. The idea of a "*pedagogical academy*" (Dekleva, 1960) had now gradually taken hold even if its realization was not without complications and paradoxes. The idea had already existed: Gabrič (2006, p. 122) reports that in June 1954, the authorities took a "decision in principle on the establishment of teacher academies in Ljubljana and Maribor"; even a draft law on these academies was prepared, "which was postponed at the end of 1954 and then forgotten". The main reason was the different cultural traditions and the uneven development of education within the "*multi-culti*" federation.

By the 1950s, the Higher Pedagogical School in Ljubljana was in full operation. Its founding decree (1947)[4] stated that it was to train qualified teachers for teaching in lower grammar schools or in the upper grades (5 – 8) of primary school, as well as

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[4] Odločba o ustanovitvi Višje pedagoške šole v Ljubljani [Decision on the establishment of the Higher Pedagogical School in Ljubljana]. Uradni list LRS, July 5, 1947.

educators for special schools and educational homes. At the *tertiary* level this was the novelty. However, teachers for the lower grades continued to be trained at the old *upper secondary* level colleges (*učiteljišča*). When the entire educational system was reformed in the late 1950s, several questions arose about teachers. Documents from this period testify that a teacher with a secondary school degree was "increasingly treated as a semi-intellectual" (Dekleva, 1960, p. 61) by the public. *Učiteljišča* became obsolete. At the same time, the Higher Pedagogical School, which had now been in existence for more than ten years, was accused of neglecting the pedagogical preparation of its graduates and emphasizing subject knowledge instead. In the eyes of the faculties, however, this subject knowledge was "far too weak" to enable these graduates to pursue a four-year university program.

In this situation, the idea of a *Pedagogical Academy* as a higher educational institution was reaffirmed, which should have taken care of strengthening all types of teachers, while the *učiteljišča* and the Higher Pedagogical School should have been abolished or transformed. Considering the political efforts to establish new higher education centres throughout the Federation, it is easy to understand why the first Pedagogical Academy was established in Maribor in June 1961[5]. A new Slovenian higher education centre was gradually emerging in the city, and it was expected that a new institution of this kind would significantly promote its growth into the new, second Slovenian university. On the other hand, there was no university here (yet) that would hinder the development of such an institution with academic scepticism, as was the case in Ljubljana. The first steps of the Pedagogical Academy in Maribor were supported by the Higher Pedagogical School in Ljubljana, which was also transformed into a Pedagogical Academy a little later, in 1964.

4 Phase 2: From Pedagogical Academies to Pedagogical Faculties (1961-1991)

The establishment of two Pedagogical Academies completed the first phase of the transition of teacher education to the tertiary level. With the result achieved, of course, new questions soon arose, which continued into the 1980s. We cannot go into detail here, rather, our focus was on the mid-1980s and the transition to the 1990s, when decisive steps were taken in the second phase of the gradual

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[5] Zakon o ustanovitvi Pedagoške akademije v Mariboru [Act on the Establishment of the Pedagogical Academy in Maribor]. *Uradni list LRS*, June 29, 1961.

universitisation of teacher education in Slovenia. However, it is necessary to say that both pedagogical academies became *members of the universities*,[6] the old one in Ljubljana and the new one, established in 1975, in Maribor.

The second phase was again closely connected to a major educational reform: the last and the most disputed in the framework of socialist Yugoslavia. It was a reform of *career-oriented education* (*usmerjeno izobraževanje*), which was prepared in the Federation in the mid-1970s. In Slovenia, its implementation was delayed[7] and accompanied by many dilemmas and open criticism (see Zgaga, 2021, p. 217-220). In a broader historical perspective, the criticism of this reform was one of the currents that led to the *Slovenian Spring* in the late 1980s, while in a more specific, educational perspective it also contributed to the development of teacher education.

The main criticism of this reform was that it completely subordinated the educational system to instrumental understanding, the opposite of concepts such as *Bildung*, and moreover, subjected it to even stricter ideological control than had previously been the case. The 1980s were the years of the awakening of civil society and pro-democratic "alternative movements" in Slovenia, which contributed to the fact that the system gradually underwent significant changes, both in the political and educational sense, as soon as after 1986. In this context, a decisive step was also taken in the universitisation of teacher education.

The concept of career-oriented education presupposed "educational verticals" between upper secondary and higher education: a student who started at an upper secondary mechanical school, for example, could in principle continue at the Faculty of Mechanical Engineering as well as other faculties, depending on the entrance exam. The traditional *gimnazija* (grammar school) was abolished. All higher education study programs had to be adapted to this principle, and so a Pandora's box of study programs was opened. First, there was a significant change in pre-school education: in 1984, both Pedagogical Academies introduced a two-year degree program in this field. So now the entire vertical of teacher education from kindergarten to the end of primary school was at the tertiary level. This raised the old question: Why is a four-year university degree required for secondary school teachers and only a two-year diploma for primary school teachers? Moreover, the policy of "educational

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[6] *Članica univerze* is a term typical for Slovenian university terminology.
[7] Zakon o usmerjenem izobraževanju [Career-Oriented Education Act]. *Uradni list SRS*, May 7, 1980.

verticals" led to the gradual emergence of new subject programs at the Pedagogical Academy in Maribor that resembled the university programs at some faculties in Ljubljana, while some subject programs (e.g., Slovenian and foreign languages) at the Pedagogical Academy in Ljubljana were transferred to the Faculty of Arts. The result of this program shuffling was that the old demand to raise the education of *all teachers* to university level was finally accepted in the mid-1980s. At the same time, the Pedagogical Academy in Maribor was renamed Faculty (1986), as this was important for the development of the University of Maribor, but in Ljubljana this happened later, in May 1991, after long negotiations within the university and with the authorities.

This difference can be explained primarily by the attitude of a broader university understanding of the role of the "teacher training school", if using a pejorative term. In Ljubljana, the Pedagogical Academy was a chick under the not always friendly protection of a hen (i.e., traditional faculties), while in Maribor, the Pedagogical Academy was a hen that hatched new disciplinary faculties[8] and thus considerably strengthened the University itself. This is Clark's "local experimentation" and "learning by trial and error" transferred to our environment. Two completely different contexts led to the same result. After the proclamation of the Republic of Slovenia in June 1991, there were two Faculties of Education at two universities licenced to award university diplomas to their graduates. Master's programs were emerging; doctoral studies were still very limited. The major obstacle was research capacity and output. At this point, the second phase of the development I am talking about comes to an end.

5 Phase 3: Consolidation of Teacher Education Standards (1991-1999)

At the beginning of the 1990s, Slovenia fortunately avoided the storms of war that began to rage in the territories of the disintegrated Federation. The central task became the creation of new structures in an independent state, including the education system. A new Higher Education Act was passed in 1993[9] and a package of laws regulating pre-tertiary education in 1996[10]. Among other things, nine-year

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[8] Two decades later, in 2006, the previous Faculty of Education was divided into three faculties: the Faculty of Arts, the Faculty of Natural sciences and Mathematics, and the Faculty of Education. See *Uradni list RS*, 6 April 2006.
[9] Zakon o visokem šolstvu [Higher Education Act]. *Uradni list RS*, 17 December 1993.
[10] Zakon o organizaciji in financiranju vzgoje in izobraževanja; Zakon o vrtcih; Zakon o osnovni šoli; Zakon o gimnazijah; Zakon o poklicnem in strokovnem izobraževanju; Zakon o izobraževanju odraslih [Organisation and

primary education was introduced, which also had a major impact on teacher education.

The Higher Education Act, among other things, abolished the former two-year degree study programs and introduced three-year (the *professional degree*) and four-year (the *university degree*) programs. Both types of degree programs were run by university faculties. Thus, the pre-school education program had to be raised to a three-year program. But the question remained: should other teacher education programs be transformed into "professional" (3-year) or "university" (4-year) programs? Since 1986, they had been implemented as four-year programs. On the other hand, the act introduced a system of national accreditation for higher education, which, among other things, contributed to another important step – the phase of *consolidation of standards for teacher education.*

When the Pedagogical Academies became faculties and the study programs were extended to four years, a new systemic issue arose: the *formal status* of graduates of "pedagogical" (i.e., teacher education) programs was now the same – regardless of which faculty they came from, but the *structure and content* of their studies were not. In some faculties, where the education of future teachers was a marginal task and the main task a fundamental discipline, the pedagogical dimensions of the study program were neglected. The question of the relationship between the subject and the pedagogy in the programs at various faculties, which formally confer on graduates the licence to teach in schools, was again open. The lack of pedagogical skills among graduates of some faculties was increasingly pointed out by the primary and secondary schools themselves, which, with a thorough reform of the system, were faced with a new set of tasks for which they needed competent pedagogical staff. This, in short, is the context in which the initiative was implemented to define, within the general criteria for the accreditation of all higher education programs, a set of specific criteria that should apply to *all* teacher education programs.

Thus, in June 1995, the Council on Higher Education, the accrediting body in the country at the time, adopted "Criteria for Evaluation of Pedagogical Study Programmes"[11]. In addition to meeting all other academic criteria, it specified that

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Financing of Education Act; Act on Kindergartens; Basic School Act; Gimnazije Act; Vocational and Technical Education Act; Adult Education Act]. *Uradni list RS*, 29 February 1996.
[11] Uradni list RS, June 22, 1995.

"pedagogical programs" must include both "subject" and "pedagogy modules" – the latter lasting *at least one semester or more*. The aim was thus to formalize a *parallel model* of teacher education, irrespective of the faculty at which it takes place. The realization of this criterion for both Pedagogical Academies was not as much of a novelty as for other faculties. At the same time, shorter, initially one-semester pedagogical training programs were created for the graduates who had not received a "pedagogical package" during their studies, but who wanted to work as teachers (*sequential model*).

6 Phase 4: The Impact of Internationalization on Teacher Education (1999)

Adopting the new criterion was far from an easy task, but *growing international cooperation* also made an important contribution to its successful implementation. In consolidating standards for teacher education, the example of good practice from other EU countries was followed upon. In the 1990s, several EU TEMPUS programs in teacher education were carried out, in which colleagues from e.g., Finland also participated, which was particularly interesting for us (Hytönen et al., 1999). In general, the 1990s were marked by "Europeanisation" in the field of education. In 1999, Slovenia completed the pre-accession negotiations in the field of education for joining the European Union and ratified the Lisbon Recognition Convention (concerning higher education in the European Region); it joined the ERASMUS program and signed the Bologna Declaration. All this indirectly shaped the processes in the field of teacher education to such an extent that one can speak of a *fourth* phase.

In the past, practically everywhere in the world, the field of teacher education was jealously confined to patriarchal domesticity, quite different from the classic university disciplines, where international openness and participation are considered an inevitable prerequisite for academic quality. However, by the end of the twentieth century, teacher education was also included in the process of European consolidation (Hudson & Zgaga, 2017). Joint projects were launched, such as the renowned Tuning Project (Wagenaar, 2019), the Green Paper on Teacher Education (Buchberger et al., 2000) was published, and the first, initially modest, exchanges of teacher education students and staff began (Zgaga, 2010). ERASMUS brought a tremendous change; teacher education broke away from patriarchal domesticity, the

process of getting to know each other and learning about good practice began to flourish, and all this also accelerated research in the field, which was a particularly important step. Not to mention that the question of a "European teacher" was raised (Schratz, 2014).

Europeanisation has led to a new national reform of higher education, popularly known as "Bologna". What needs to be said here in this context is that this reform, like the reforms in the past, has opened space for new steps in teacher education. Among other things, undergraduate pedagogical programs – expanding now to 5 years (BA + MA) – have gained in prestige as a result of this reform, not least because international cooperation and research achievements in the field have been strengthened. Organizational innovations are also noticeable: the Faculty of Education in Maribor has multiplied, like a good hen hatching her chicks, creating new faculties, as has been established. In 2003, Slovenia gained its third Faculty of Education, this time in Koper (within the newly established University of Primorska)[12], founded on the basis of a previous branch of the Faculty of Education in Ljubljana. One could therefore say that the Ljubljana Faculty has also "multiplied", albeit in a different way. It is worth highlighting that with this reform, doctoral studies in teacher education and educational sciences have finally been articulated and affirmed (2010). We are proud of the doctoral school in Ljubljana, where in recent years these studies have been carried out in both Slovenian and English language groups. So, these are the results of our "local experimentation" and "learning by trial and error". This is the position from which we must now look forward.

7   Conclusion

After seventy-five years of the development of teacher education at the tertiary level (in this country) we have not, of course, arrived at a "millennial kingdom". Nor will we ever reach it. There is no shortage of problems, questions and dilemmas regarding the way forward, and we will certainly have the opportunity to discuss this topic extensively. To the old issues, such as the relationship between subject and pedagogy, new ones are added, such as inclusion in education, the use and misuse

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[12] Odlok o ustanovitvi Univerze na Primorskem [Decree on the Establishment of the University of Primorska]. *Uradni list RS*, February 7, 2003.

of ICT, sustainable development, the consequences of the recent pandemic in education, etc. Since it is impossible to address all these issues at this time, a few words that refer to a broad and general, but strategically no less important, topic can be drawn in conclusion.

The teaching profession is the heir of the Enlightenment – and it shares its destiny with that of the Enlightenment. Anthropocene, artificial intelligence, and similar modern concepts bring up difficult questions that we need to be able to articulate and answer very soon. On the other hand, the world in which we find ourselves today is the world in which we compete – not for the first time – with currents hostile to the spirit of Enlightenment. The language of *scholars* and *teachers* is being replaced by *Twitter* and *Instagram*. Argumentative debate is being replaced by populism. It is as though schools have taught people to read just so they can read the tabloids and fake news. *"There are no viruses!" "There is no global warming!" "The earth is flat again!"* So, what is the point of educating teachers? A world like this needs gurus, or a Caesar, or both. Not teachers.

The universities and the scientific community in general do not have entirely clean hands in this matter. They have strayed too far from these issues. And the fact is that the whole spirit of the Enlightenment – and by extension the sciences – face major challenges. Universities have to face these challenges: not only classical "Mode-1" faculties, but also faculties of education.

Recently, there has been an increasing emphasis on the importance of communicating and reporting sciences and arts to a wider audience. An important question is also how science today – and the spirit, the culture of the Enlightenment in general – can be communicated through the educational process. Here a broad field opens up in which faculties of education must work hand in hand with all other faculties. This action must be in the common interest. *As teacher education has universitised it has become an area for which the whole university should feel responsible.* Many of the challenges of the "risk society", as defined by the German sociologist Ulrich Beck (1986), require thorough responses from *all disciplines*, in inter- and trans-disciplinary ways, and the culture and knowledge achieved must be communicated to a wider society if it is truly a "knowledge society" – and if universities are not just closed *ivory towers*. We need not just multiply – but *integrate*. We need to be able to bring new knowledge and a new culture, which provides answers to the challenges

of the *risk society*, into the entire educational vertical. And in this process, well-educated teachers at universities will remain one of the most important pillars.

Acknowledgments

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Do We Educate Future Teachers to Work in Extracurricular Activities?

Smiljana Zrilić,[1] Vesnica Mlinarević,[2]
Karmen Marčina Travirka[1]

[1] University of Zadar, Department of Teachers and Preschool Teachers Education Zadar, Croatia
szrilic@unizd.hr, kmarcina@unizd.hr
[2] University in Osijek, Faculty of Kineziology, Osijek, Croatia
vesnica.mlinarevic@kifos.hr

Abstract Extracurricular activities are an integrated part of the elementary school curriculum. They offer students the possibility of well-spent leisure time, contribute to better social connections, and prevent the occurrence of various manifestations of unacceptable behaviour, therefore their organization is necessary. However, research conducted so far has shown that the real possibilities and creative potentials of students engaging in extracurricular activities have not been fully utilised, and the methods used by teachers are still not conducive to encouraging and developing creativity. The questions arise as to how much we prepare future teachers during their studies for organizing extracurricular activities, and how competent they are in recognizing interest, motivation, and the individual talents of students to be able to include them in extracurricular activities. It should be emphasized that the teacher has a difficult task in making extracurricular activities more interesting for students than leisure and play. Numerous dangers lurk in leisure time, and pedagogical activity must be directed to their prevention. This paper will analyse the integrated undergraduate and graduate study programs for teachers at six higher education institutions/teacher's colleges in the Republic of Croatia, as well as the courses that determine the development of competences for work in extracurricular activities.

1   Introduction

One of the important functions of contemporary school is offering students the possibility to engage in extracurricular activities. Although extracurricular activities have been neglected in many schools for a variety of reasons, including a lack of materials and staff, it is important to emphasize that they are always useful for students not only as an incentive for meaningful organization and useful spending of leisure time, but also as a means of preventing numerous unacceptable behaviours, which are implied precisely in unorganized leisure time. By engaging in freely chosen extracurricular activities, children create social connections and relationships, which build their personality in every way. Extracurricular activities contribute to the students' social development, which is the task of the educational work of schools (Pejić Papak & Vidulin, 2016).

Extracurricular activities have previously been studied in the context of encouraging and developing creativity in students, and their realization in the field of physical competences and health, as well as musical competence. In the past two centuries, emphasis has been put on the connection between extracurricular activities, success at school, and various preventive aspects in the context of behavioural disorders (Darling et al., 2005).

The most well-known and widespread way of preparing children for active and meaningful leisure time is the organization and implementation of extracurricular activities in school. This, guided by individual interests and free choice, gives students the opportunity to develop their personal potentials through various activities. Unlike regular classes, the curricula of extracurricular activities are not strictly structured, so they enable students to introduce new themes and contents into their work, unforeseen by their teachers. Students are motivated during extracurricular activities, there is no summative evaluation, they are interest-oriented and more satisfied, and they work creatively in a stimulating atmosphere. The creative process itself takes place within individual groups that contribute to recognition within the school itself, at inter-school, and on the local and wider community level (Valjan Vukić, 2016).

The organization of extracurricular activities contributes to better social connections. Working in small, informal groups without school desks is always

better than the rigid rules that regular classes are subject to. By engaging in extracurricular activities, students decide on how to spend part of their leisure time in school, which the school should recognize as an opportunity for additional educational activities. Until recently, studies have shown that the real possibilities and students' creative potentials during extracurricular activities have not been fully used, and the methods used by teachers are still not conducive in encouraging and developing students' creativity. It should be further emphasized that in many schools, extracurricular activities are neglected and exist only in school documents without practical application.

Success in extracurricular activities can work as encouragement for successful integration into class, which can prevent failure in the social field and avoid emotional difficulties, as they are very often the reasons for academic failure.

1.1 Extracurricular Activities

Extracurricular activities are an indirect educational form of work with students, and their implementation is mentioned in the school curriculum, a document at school level. Extracurricular activities are pedagogically designed activities whose function is education and upbringing during and for leisure time (Mlinarević & Brust, 2009). They are educationally planned activities that enable the confirmation of the student's personality, and they provide the teacher with opportunities for expanded educational influence (Previšić, 1987, according to Zrilić & Košta, 2009). "Extracurricular leisure activities are not exempt from the obligation of schoolwork, requirements and necessity of execution, they prepare children in many elements for active and meaningful learning and are therefore in the function of leisure education but are also a part of the compulsory schoolwork" (Previšić, 1987, according to Pejić Papak & Vidulin, 2016, p. 73). "Extracurricular activities are the most effective way of preventing socially unacceptable behaviour and are exceptionally stimulating for the self-actualization of students and individual research learning" (Curriculum for primary school, 2006). In accordance with the National Framework Curriculum (2011), the school prescribes learning and teaching outcomes, methods of work, organization of learning and teaching, and the evaluation of the learning and teaching process for the current school year. The school curriculum is the work, mode of action, and the evaluation of the effects of the entire school life on students and teachers. Extracurricular activities are an inseparable part of the school curriculum,

according to which the school is recognizable and original in its environment. Their implementation has become an obligation in many countries with the aim to increase the quality of education (Acar & Gündüz, 2017). The document describes the activities, results, implementation, and evaluation of all extracurricular activities at a certain school and in the varied fields of education in the curriculum. In participating in extracurricular activities, students decide to spend their own leisure time at school, and this offers the possibility of additional educational activities. The school should offer students facilities/contents for quality leisure time and provide them with such facilities that will meet their specific interests and needs. The goals of extracurricular activities are: connection, expansion and deepening of knowledge, skills, the acquisition of habits during instruction and extracurricular activities, the adoption of new knowledge, the acquisition of skills and habits, the development of interest in socially useful, humanitarian and voluntary work, the identification of gifted students and students that show an increased interest in a single field, arousing curiosity, training for leisure activities that will aid in the development of education, the prevention of all types of addiction, protection and health improvement, training for active participation in social life and its civil and democratic development, the encouragement of children's creativity – communication, interaction and cooperation with others and training, enabling the recognition of others who are different, and, finally, enabling the learning of flexibility and tolerance (Mlinarević & Brust Nemet, 2012). Extracurricular activities offer students the freedom to choose the activity in which they will engage, depending on their interests and preferences. Extracurricular activities abound in many advantages, and the goals in programming leisure activities are as follows: introducing students to social life and decision-making, developing a sense of work and organization of work, awakening the child's affinity for an activity, engaging students in socially useful work, the successful development of specific capabilities, assistance in the realization of general school goals, and the massification of consumers of cultural goods (Mlinarević & Brust Nemet, 2012).

Students are highly motivated in participating and adopting new knowledge and skills because they are free to choose extracurricular activities and acquire new knowledge and develop abilities and skills, strengthen their self-confidence, and socialize with peers.

The curricular approach creates extracurricular activities where teachers and students have their freedom. Ivančič and Sabo (2012) state that engaging in extracurricular activities in students' leisure time has a positive effect on creating a close relationship between students and this activity, it positively affects students' affiliation and connection with school, and it improves their academic success and reduces the possibility of developing risky behaviours (Umeh et al., 2020).

As students are interest-oriented and more satisfied during extracurricular activities than in regular classes, they creatively work in a stimulating atmosphere and work as a team. By involving students in extracurricular activities, their educational and upbringing needs are met equally. Participation in extracurricular activities contributes to an active life for children as well as having a positive influence on their health (Acar & Gündüz, 2017). Goals that cannot be achieved in regular classes are realized here, and contents that follow modern events and knowledge are also offered. Extracurricular activities are very important in upbringing because with their contents, they come closer to the desires of the students and contribute to the development of their personality, create conditions for their cultural advancement, and protect and promote cultural differences. Extracurricular activities are the activities that best shape the development of these student characteristics through their form and action. Contemporary schools must enable children to develop all their abilities, enrich them with experiences and prepare them for active participation in society (Šiljković et al., 2007). Educational methods used in extracurricular activities are numerous, but the most common are the following: the method of conversation (individual, partner, group and collective), the method of persuasion, the method of habituation, the method of motivation and stimulation (encouragement), and the method of monitoring (Bognar & Matijević, 2002).

Schools offer students a variety of extracurricular activities, and students choose them freely and participate according to their interests, while such activities influence the student's biological, social, experiential, psychomotor and cognitive development and ensure their needs for self-actualization. The question is whether students, after choosing an extracurricular activity, have the opportunity to co-create a curriculum and propose new extracurricular activities, i.e., change the existing activities that are of little interest to the students. Children spend most of their leisure time doing physical activities, particularly doing certain sports in school or at an out of school organization or association (Pejić Papak & Vidulin, 2016). Research results

show that children spend most of their leisure time in activities that include music, media or socialization, and their mutual time is directed towards entertainment, while there is a low moderation towards cultural and artistic contents. Nowadays, the increasing presence of the media in modern society limits children and young people in engaging in better quality content in their leisure time (Miliša & Milačić, 2010). The content of leisure time should be enjoyable for children because various activities satisfy their individual needs (Dubovicki et al., 2014). A contemporary school that demands quality, productive and dynamic acquisition of knowledge is imbued with continuous activity. The use of creative thinking and behaviour is inevitable (Fudurić, 2012). Research indicates that the participation of students in extracurricular activities and the development of their capacities and potentials lead to the discovery and development of the student's talents (Antovska & Kostov, 2016). The content of extracurricular activities should be tailored to help develop students' abilities and work habits, and their ability to take care of their own health (Svalina et al., 2016).

Regular classes cannot fully satisfy the needs and potentials of every student, so the school curriculum is enriched with extracurricular activities and projects. Therefore, today, extracurricular activities are not given the necessary importance, children do not have access to a great variety of fields to be able to satisfy their needs and interests.

More contemporary ways of learning and teaching, as well as innovations to stimulate the development of children's creativity should be introduced in extracurricular activities, allowing them free expression and the expression of their creativity (Pejić Papak & Vidulin, 2016).

Activities in various fields of extracurricular activities are important for students to acquire experience, accept various roles, and create the possibility of getting to know one another and getting closer to science and culture. In participating in extracurricular activities, students organize themselves into educational groups and teams and make important decisions concerning their lives and their work in school by pointing out the talent they wish to build and empower. Quality-filled free time reduces the possibility of risky behaviour because the students meet their current needs and interests and develop their potential, and, in various extracurricular activities, they gain experience and competences that will make their future lives

easier. "Both in teaching and in extracurricular activities, basic values should be represented and promoted, as well as social, cultural, spiritual and moral values" (Mlinarević & Brust Nemet, 2012, p. 175).

"The teacher is a professionally competent person capable in the upbringing and education of students; an expert who organizes the upbringing and education process and with general knowledge of the basics of education, pedagogy, didactics and psychology achieves the aim and task of upbringing and education" (Strugar, 1993, according to Mlinarević & Brust Nemet, 2012, p. 201). The teacher needs to define goals, devise methods and forms of work, choose materials etc. in leading students in extracurricular activities, and they should be the initiator and organizer in performing extracurricular activities, as well as capable of noticing the student's skills and counselling and developing their potentials. The teacher should likewise be creative, inclined to researching, experimenting, and improving the activities they manage, because the teacher is not only required to realize a determined program of extracurricular activities but also to improve it.

Leisure time activities that are most represented in schools can be divided into five categories: foreign languages, musical activities (choir, orchestra), sports activities (football, rhythmic gymnastics, tennis), outdoor activities (scouts, ecology), and other activities, which include those that cannot be classified in any of the above categories, for example, journalism, etc. (Šiljković et al., 2007). Every school is obliged to organize extracurricular activities respecting the interests and needs of its students. The Primary and Secondary School Education Act and the Curriculum for Primary School (2006) is the legal basis for executing extracurricular activities. Article 28 of the mentioned Act states that the school curriculum establishes the teaching plan and program for elective subjects and extracurricular activities, and these are adopted based on the national curriculum, teaching plan and program. The introductory part of the Curriculum for primary schools (2006) emphasizes the following: "Extracurricular activities are the most effective way of preventing unacceptable behaviour and they are exceptionally stimulating for the self-actualization of the student and their self-exploratory learning." Extracurricular activities are also planned according to grade and the total weekly and annual number of hours. The introduction of the Croatian National Education Standard (HNOS) in 2006 factored in special attention to extracurricular activities as an essential factor in the entirety of a student's upbringing and education and as a part of the obligatory

teaching plan. The mentioned documents emphasize the significance of extracurricular activities.

However, this raises the question of their implementation in daily practice. Teachers are responsible for this, and how competent they are in organizing extracurricular activities certainly depends on the higher education curricula at teacher training colleges, which educate teachers to work in the classroom and outside of the classroom.

In the following part the authors will, therefore, analyse integrated undergraduate and graduate university study programs for teachers at six faculties for teachers in the Republic of Croatia, with reference to elective courses and modules, i.e., intense courses that strengthen the competences of future teachers for the preparation and successful implementation of extracurricular activities.

3   Methodology

The aim of the study was to gain insight into the integrated undergraduate and graduate study programs for teachers at six higher education institutions/teacher training colleges in the Republic of Croatia and establish the contents that determine the development of competences for the successful preparation and implementation of extracurricular activities. The paper uses the method of working on documentation. The task was the content analysis of study courses in integrated undergraduate and graduate university study programs for school teachers in the Republic of Croatia. The authors analysed and compared the integrated undergraduate and graduate five-year university study programs in teacher training at Croatian faculties in Osijek, Zagreb, Rijeka, Split, Zadar, and Pula. The criteria for selecting integrated undergraduate and graduate five-year university study programs for school teachers were the contents of compulsory and elective courses that indicated the development of competences for the successful preparation and implementation of extracurricular activities.

4   Results and Discussion

4.1   The *Syllabus* for Teacher Training Faculty Programs in the Republic of Croatia Determined by the Development of Competences for Work in Extracurricular Activities

The authors gained the information that follows by reviewing the Integrated Undergraduate and Graduate Teacher Training Programs at six (6) teacher training faculties in the Republic of Croatia.

At the Faculty of Teacher Education in Zagreb, four modules are conducted in the Integrated Undergraduate and Graduate Teacher Training Program. The authors have singled out courses that are important for teachers' successful preparation and implementation of extracurricular activities.

Upon completion of their studies, the students acquire the competences necessary for the complete upbringing and education of younger children (1st – 4th grade of primary school). The acquired qualification enables successful involvement in the upbringing and education process, and it is based on general and specific competences and additional competences acquired within the framework of a single module (educational sciences, visual arts, computer science, and Croatian language) for work in primary school.

The Integrated University Undergraduate and Graduate Study Program for Teachers in Zagreb has the largest number (56) of elective courses aimed at creating and performing extracurricular activities in various fields. Two courses are called extracurricular activities and are focused on the organizational forms of specific activities and skills such as hiking and horseback riding.

At the Faculty of Education in Osijek, three modules are taught: Developmental studies, Computer Science, and English language. The Developmental studies module, with its chosen subjects from Pedagogy, Psychology and Methodology, broadly enables students to understand specific issues concerning upbringing, education, and child development. The Computer Science module enables students to use computer science technology in education and upbringing, and in the upbringing and education of children on the topic of computer science in the first four grades of primary school (Ministry of education and sports project of

September 1, 2003). The English language module additionally enables students for the early study of foreign languages for younger children.

Table 1: Courses in the Integrated Undergraduate and Graduate Teacher Training Program in Zagreb

Faculty of Teacher Education in Zagreb	
Croatian language module	Media culture, Stage culture, Drama upbringing, Music practicum 3, Puppetry, Speech, Interdisciplinary approach to media.
Visual arts and culture module	Drawing 1, Drawing 2, Spatial-plastic design 3, Spatial-plastic design 4, Painting 1, Painting 2, Letter 1, Letter 2, Graphics 1, Graphics 2, Visual communication 1, Visual communication 2, Music practicum 1, Music practicum 2
Computer science module	Programming, Programming of educational program packages, Spatial-plastic design 1, Spatial-plastic design 2, Information systems, Computer networks, Advanced use of the computer and internet, Stage culture
Educational science module	Spatial-plastic design 1, Spatial-plastic design 2, Music practicum 1, Music practicum 2, Media culture, Interdisciplinary approach to media.
Elective courses	Instrumental training – Piano 1 and 2, Musical motivation in the initial learning of reading and writing, Musical-scene processing of literary works 1 and 2, Public performances of musical-scenic works 1 and 2, Composing music 1, 2, 3 and 4, Group music-making 1, 2, 3 and 4, Creative approach to reading, Children's literature and digital media, Kajkavian language treasure, Chess in primary school 1 and 2, Editing kindergarten and school newspapers 1 and 2, Croatian sign language 1, 2, 3 and 4, Homeland Heritage Research, Volunteering in Education 1 and 2, Educational robots and microcomputers in education, Extracurricular organizational forms of work – Mountain climbing 1 and 2, Boy scouts and schools, Winter 1, 2, 3 and 4, Human rights education, Women's history – Public history – Cultural history, Water ecology, European national parks, Education for development, Religion and education – Philosophical approach, Bioethics in education, Sculpture and ceramic design, Visual design of puppet shows, Chamber vocal music, Musical animation, Bilingualism in education and society, Extracurricular organizational forms of work – horseback riding, Student cooperatives 1 and 2, Swimming 1 and 2, Contemporary children's books, Sustainable development in early childhood.

Upon finishing their studies, students will have acquired competences used in the wholesome upbringing and education of younger school-age children (1st to 4th grade of primary school). The acquired qualification enables successful work in the upbringing and education process, and it is based on general and specific competences and additional ones acquired within the individual module for work in primary schools.

The authors have singled out the courses that are important for teachers in their work in extracurricular activities.

Table 2: Courses in the Integrated Undergraduate and Graduate Teacher Training Program in Osijek

Faculty of Education in Osijek	
Developmental studies module	World religions, Drama education, Visual communications and design.
Computer science module	Music playing 1 and 2, Art techniques and design in space, Mathematics and gifted students, Web programming, Computer for leisure time and entertainment, Musical computer tools, Graphics, animations, and movies.
English language module	Music playing 1 and 2, Media culture, Art techniques and design in space, Ecology, Natural-geographical features of Croatia, Children's media culture in English.
Free elective courses	Drama education, Children's stage creation, Drama workshop in English, Children's musical creation, Native idiom, Information literacy, Rhythmic gymnastics and dance, Swimming, Children's artistic creation, Protection and communication of art heritage in school and kindergarten, Mathematics in play and leisure, Interculturalism in upbringing and education, Extracurricular activities in the school curriculum, Bioethics, Nonviolent communication, Ecological upbringing, Scouts and schools, Knowledge of plants and animals, Local history, Technical sciences, Extracurricular sports activities, extracurricular computer science and technical activities.

The integrated undergraduate and graduate university study program for class teachers has a total of 21 elective courses directed towards competences (knowledge, abilities, skills and beliefs) for the preparation and management of extracurricular activities, while 3 elective courses have extracurricular activity in their title. One course refers to mountain climbing and creating extracurricular activities and the other two are specific fields of extracurricular activities, such as sports and IT.

At the Faculty of Teacher Education in Rijeka, classes are taught without a module, and the students (future teachers) acquire additional competences for the organization of extracurricular activities through elective courses.

The Faculty of Teacher Education in Rijeka, University Integrated Undergraduate and Graduate Study of Primary School Education has five elective courses aimed at creating and performing extracurricular activities.

Table 3: Courses in the Integrated Undergraduate and Graduate Teacher Training Program in Rijeka

Faculty of Teacher Education in Rijeka	
Extracurricular visual arts activities	One of the outcomes of learning is the development of a creative opinion and expression in the field of Drawing, Painting, Three-dimensional shaping, Graphics and design, Development of expert methodological competences for the performance of art activities inside and outside art culture teaching.
Folklore music	The mentioned learning outcomes refer to the development of cognitive skills: research, analysis, conclusion and interpretation of musical folklore facts, which are characteristic and appropriate in teaching extracurricular and out of school activities.
Extracurricular music activities	The mentioned outcomes refer to the capability of designing, organizing and creating differing music playing activities in classroom teaching. The development of skills that in organized forms of work encourage children to be creative and imaginative. Research teaching of science where planning of teaching and learning of educational content in school and out of school are emphasized.
Extracurricular science and mathematics activities	The ability to perform experiments in science and mathematics and their interpretation are emphasized.

In the introductory part, the teacher study program emphasizes how one of the outcomes at program level is that the student (future teacher) recognizes and knows how to apply the specific methodology in teaching all subjects in primary education in regular, elective, supplementary and additional classes, and in leisure activities. The students also, having passed their exams, will be capable of organising and managing upbringing and education activities in cultural and art societies, associations, museums, kindergarten institutions, primary schools – in particular extended stays and in other institutions and organizations in the field of culture, education and art. At the teaching program in Split, three modules are conducted: early learning of foreign languages, Information-communication-technology application in learning and teaching, and Sustainable development education.

Along with numerous elective courses, the authors singled out the courses shown in Table 4.

One of the learning outcomes at the program level is to organize and implement a variety of extracurricular and out of school activities. They are conducted in three modules: Module of Croatian language and literature; Module of Art culture and, in Gospić, the Module of Cultural and natural heritage.

Table 4: Courses in the Integrated Undergraduate and Graduate Teacher Training Program in Split

Faculty of Humanities and Social Sciences in Split, Department of Teacher Education	
Visual arts group as a form of extracurricular activities	The learning outcome is to enable students to master various techniques and materials of artistic expression.
Activity in the development of ecological sensitivity in children and plant breeding	Developing the skill of creatively designing eco-activities with the aim of realizing upbringing values. These activities are especially attractive today, in times when we return to the outdoors and school gardens.
Stage culture	Students understand the importance of stage culture in the education program and the possibilities of introducing the child to theatre culture offered in education. Students will thus know how to apply the basic principles, teaching methods and forms of work in teaching the subject of Stage culture. They will be able to stimulate and develop the basic esthetical drives of the child and be able to organize activities related to drama and puppet workshops and lead them independently at the primary level.
Programming for school age children	Introduction to the basics of visual graphic programming language.

Table 5: Courses at the Integrated Undergraduate and Graduate Teacher Training Program in Zadar

Department of Teacher and Preschool Teacher Education, University of Zadar	
Module of Croatian language and literature	Literary, drama, and puppetry extracurricular activities.
Module of Art culture	Art extracurricular activities.
Module of Cultural and natural heritage (in Gospić).	Students acquire additional competences for the organization of literary, drama, puppetry, and art extracurricular activities.
Free elective courses	Glagolitic alphabet and Glagolitic monuments, Ecology, Drama workshop, Puppetry, Math games in school, Rhythmic gymnastics and dance structures in early and preschool education.

At the University of Zadar, students are offered a variety of elective courses, and those that organise and implement various extracurricular and out of school activities, as stated in their syllabuses as outcomes of learning the capacities, are: Glagolitic alphabet and Glagolitic monuments, Ecology, Drama workshop, Puppetry, Math games at school, and Rhythmic and dance structures in early and preschool education.

At the Faculty of Educational Sciences in Pula, English language and Computer science modules are taught in addition to compulsory courses.

Table 6: Courses at the Integrated Undergraduate and Graduate Teacher Training Program in Pula

Faculty of Educational Sciences in Pula	
Module of English language and Computer science	Literary, drama.
Free elective courses	Speech expression, Puppetry and stage culture, Working with gifted students, Active learning strategies.
Compulsory courses	Music letters and playing, Basics of ecology, Image design and desktop publishing, Music playing 1 and 2, Media culture, Basics of technical culture, Programming.

The Integrated Undergraduate and Graduate University Teacher Study Programme in Pula has a total of 4 elective courses focused on the preparation and implementation of extracurricular activities, which is the lowest in relation to the other 5 teacher training faculties and their study programs for initial teacher education.

All teacher training faculties in the Republic of Croatia have elective courses that expand student competences, as well as those of future teachers, to successfully create an extracurricular curriculum of activities. Likewise, in the study programs at teacher training faculties, there are modules that students may choose. Even though at the level of study programs, the results of learning are stated, and they emphasize the mentioned competences for work in extracurricular activities, the authors singled out courses and modules that, according to them, are important for the development of competences for working in extracurricular activities.

The results of the comparative analysis of the study programs within the Integrated Undergraduate and Graduate Teacher Programs show that the Faculty of Teacher Education in Zagreb has the largest number of compulsory and elective courses – 56 courses, which are aimed at creating and conducting extracurricular activities in various fields, while the Faculty of Teacher Education in Osijek has 17 courses in 3 elective modules and 21 elective courses. One could state that in these study programs, future teachers receive the necessary competences to work in extracurricular activities in their future professional work.

The other analysed study programs have fewer courses, specifically the Department of Teacher and Preschool Teacher Education at the University of Zadar has 16, the Faculty of Educational Sciences in Pula has 12, while the study program in Rijeka has 6 elective courses.

A comparative analysis of study programs for primary school teachers (Zagreb, Osijek, Split, Rijeka, Zadar, Pula) showed that there is content for the preparation and implementation of extracurricular activities in the future professional work of teachers, but it differs in amount and type. The precondition for successful upbringing and education, especially a successful school curriculum and extracurricular activities within it, is quality initial teacher education.

4 Conclusion

Croatian faculties (6) that educate future teachers strengthen the future teachers' competences for the preparation and implementation of extracurricular activities in the names and contents of courses in their study programs and encourage sensibility and the strengthening of students' intercultural competences. The results of the analysis of study programs shows a different degree of need in dealing with content for the preparation and implementation of extracurricular activities. The results of the work on the documentation refer to the contents written and available in the analysed study programs for school teachers at Croatian faculties, but the practical and actual application of these contents in teaching is original and special because each professor is autonomous and creative in their course and can, more or less, include contents for conducting extracurricular activities in their teaching, regardless of the contents written in the study program.

One can conclude that, in Croatian integrated study programs for teachers, numerous courses are being conducted, both elective and compulsory, that empower teachers with competences for the organization and successful implementation of extracurricular activities. Presently, there are numerous activities organized in school that are interesting to children, and the great task of teachers is making children more interested in extracurricular activities than in entertainment and hedonism. Children are active participants in the learning process when a certain field is of interest to them. The teachers – the leaders in extracurricular activities – must consider all aspects of upbringing and education just as they would in regular teaching. Teachers

are expected to discover the students' strong sides and capabilities to focus on their development in an encouraging learning environment. Teachers also need to be counsellors and creators of the learning process that encourage independent research and experimenting, and the adoption of new knowledge and skills (Mlinarević & Brust Nemet, 2012). They must be at the disposal of their students, they need to listen to them, take their suggestions into account, respect their interests, and make decisions jointly with children on the contents to be represented in their work and the manner in which the work itself will be conducted in groups. One of the pre-conditions for the quality performance of extracurricular activities is an adequately equipped school space with appropriate means and aids. Various approaches to work, such as teaching in the field, projects, collaborative learning, and similar contribute to the improvement of the quality of extracurricular activities.

Many students have difficulty in establishing relationships with their peers. Usually, these students are aggressive by nature or too withdrawn or introverted. A child who is withdrawn needs daily support from their environment, to be praised, and be more frequently involved in group work at school. An extracurricular activity is an ideal place to involve a withdrawn child in school life. Open communication and an atmosphere that does not impose strictly framed work and learning just for better grades are the elements that have a distinctly positive effect on the involvement of every child. Hence, there is no fear of failure. The choice of activity is up to the student and to their abilities.

The purpose of extracurricular activities is not only to fulfil the teaching program but to become a continuous and stable culture for the students.

It must also be mentioned that some parents do make mistakes, as do teachers, so they do not include children with lower grades in extracurricular activities, believing that this will cause additional effort for them. A student must not be denied participation in extracurricular activities owing to poor academic performance, but a student must not be forced to participate in extracurricular activities for which they have no interest, and especially the desire for inter-school competition. Success in extracurricular activities can be an incentive for successful integration into the group, which can prevent failure in the social field and avoid emotional difficulties which are very often the cause of academic failure. The extracurricular activity programs in primary school offer students the possibility of spending quality time. Their aim is,

therefore, to include as many students as possible, regardless of their abilities, and the learning outcomes of courses in higher education institutions should follow the needs of school practice and the students' interests in extracurricular activities.

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Systematically Guided Reflection on Teamwork as an Opportunity to Enhance the Personal and Professional Development of Student Teachers

ALENKA POLAK

University of Ljubljana, Faculty of Education, Ljubljana, Slovenia
alenka.polak@pef.uni-lj.si

Abstract Teamwork is an important generic competence in teachers today, therefore well-developed teamwork skills in student teachers should be an important study goal in modern teacher education. Students' teamwork competence can be developed indirectly – using teamwork as an approach within various courses, and directly – within a specific course, based on a systematically-guided process of personal and professional development in teamwork. A team represents a powerful learning context; several intrapersonal and interpersonal processes cause rich self-reflective and metacognitive learning. Within the qualitative research approach, the method of content analysis was used on 132 students' written self-reflections on teamwork experience as a part of the students' portfolios. The findings indicate that students' in-depth self-reflection on their own teamwork experience contributes significantly to their personal and professional development. The findings are discussed in relation to various theoretical models of team dynamics. Some suggestions for future teacher education and ideas for future research are highlighted.

1   Introduction

The ability to cooperate with colleagues and to work in teams is recognised as an important generic interpersonal competence in the field of teacher education. The *ability to work in a team* as a generic competence was also stressed within the Tuning Project (Tuning Educational Structures in Europe, 2008), as a leading project of the European restructuring process regarding teacher education. Teacher education experts emphasise the need for greater cooperation between teachers. Research shows that teacher cooperation and teamwork increase the efficacy student learning and positive interdependence among teachers, as well as enhance informal reflection and interpersonal feedback (Schleicher, 2019). The university restructuring process in Slovenia took place at the beginning of the 21st century, and almost every empirical study on student teachers' necessary competences emphasized collegial cooperation and teamwork as an important competence in modern teachers (Razdevšek Pučko, 2004; Razdevšek Pučko & Rugelj, 2006, Peklaj, 2010).

The role of contemporary teachers, who can share the professional vision to be reflective experts in their field and pedagogy, as well as important role models for students, demands constant updating and upgrading of their repertoire of approaches, methods, and knowledge. Competent teachers represent a powerful source of *professional capital* for future generations (Hargreaves & Fullan, 2012), and because they are long-term "influencers", it is very important how carefully they are educated and trained. Teamwork can also lead to *a culture of efficacy*, recognised from the point of view of teams, school collectives, or broader society (Bloomberg & Pitchford, 2017).

The literature on teamwork emphasizes that the teamwork approach among teachers should be introduced, applied, evaluated within a systematically guided process, and accompanied with reflection (Arcaro, 1995; Brady, 2009; Buckley, 2000; Day, 1999; Polak, 2014; Reynolds, 1994; Tom, 1997; Vangrieken et. al., 2014). Day (1999, p.7-8) sees teamwork as one of the main trends in contemporary education and according to him, it should be one of the school demands, because "Teaching takes place in a world dominated by change, uncertainty and increasing complexity." […] "Schools are confronted by a number of changes, which lead to several demands, beside many others (e.g.: commitment to education for all, an extension of the period of initial schooling, recognition of the growing importance of lifelong education etc.)

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also to increasing emphasis on teamwork and cooperation". According to Brady (2009), communities of teachers can provide a better space for an individual teacher to direct their own development, while being provided the opportunities to be supported and challenged by their peers, as well as exposed to the research and expertise of other educators and professionals.

1.2 Enhancing of Teamwork Competency as Part of the Professional Development of Student Teachers

A successful program of teacher professional development should be based on critical and intellectual discussion, which can only be developed in a group of teachers (Yaxley, 1991; Bell & Gilbert, 1996). To develop the teamwork competences of teachers, the university teaching process needs to include various approaches and teaching methods, directly and indirectly focused, with the aim to motivate student teachers for teamwork in a school context (Polak, 2014). Teacher teamwork cannot be learned on the basis of someone else's experience with teamwork, it needs to be systematic and designed as a step-by-step approach based on learning through the individual's own experience. Learning within a team includes learning about oneself, learning about others, learning from the others, and learning about the group. Team planning, team teaching and team evaluation encourage teachers to be involved in the process of sharing experiences, views and opinions, as well as developing collective responsibility for teaching and learning. Teacher teamwork as a learning context ensures psychologically rich processes based on the dynamic nature of social interactions within the team (interpersonal perception, relationships, communication, problem solving, etc.), thus lifelong learning "in" and "about" teamwork should become the permanent way of coping with changes and reaching team goals (Polak, 2007).

Mumford (1999) divides the outputs of various training programs, including a teamwork-training program into knowledge, skills and insight. When we learn in the context of teamwork, the learning process includes acquiring information from others in the group, tapping into the expertise of others, awareness of skills and techniques used by others in the group, as well as awareness of the interaction between oneself and others and between others. Within teamwork, team members practice their personal communication skills, skills of influencing and listening, and many other teamwork skills. Some teamwork experts (Bloomberg & Pitchford, 2017;

Brock & Grady, 2009; Keville et al., 2017) teamwork skills define through the list of desirable personal traits, competences and teamwork strategies. Regarding the team members' insights and attitudes, Mumford (1999) stresses the importance of the awareness of why individuals interact together in the way they do and the awareness of why the team achieves or does not achieve its objectives.

Teamwork is a very successful way of coping with challenges and achieving team goals. Gordon (2018) points out that the most important task of a team is to create a culture – but not just any culture. It must be a positive culture that energizes and encourages team members, fosters positive relationships and successful teamwork, empowers and enables team members to learn and grow, and provides an opportunity for team members to do their best work (Gordon, 2018). A positive team culture can be established when team members: (1) work together toward a shared vision with a greater purpose, (2) enhance optimism, positivity, and belief in success, (3) transform and remove negativity, (4) communicate with and connect to each other, (5) commit to and care for each other, and (6) strive to become better. "Because no one creates success alone" (Gordon, 2018, p. 1).

1.3   The Program of Systematic Enhancing and Motivating (Student) Teachers for Teamwork

The Teamwork (Student) Teacher Training Programme – A Developmental Approach, designed by the author of this paper (Polak, 2001; 2003), is a 30-hour training program, which can be applied both as a training program for in-service teachers, as well as a course for students in programs of teacher education. Through carefully designed intra-personally and inter-personally focused activities, several aims of the program could be accomplished. The whole process is based on a step-by-step approach, which has to be carried out without time-pressure. In general, the main aim of the program is to stimulate personal motivation for teamwork in educational practice, to raise the level of (student) teachers' professional reflection, and to ensure their professional development in the field of teamwork. The main purpose of the program was the author's (Polak, 2003) assumption that teamwork activities, designed as special assignments within the program (e.g., completing questionnaires, writing a portfolio, team discussions) would stimulate (student) teachers' higher level of cognitive, social and emotional activity through their focused reflection on teamwork dynamics and

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psychological processes within a team. The main goals of the program (Polak, 2003) are:

(1) to introduce the (student) teachers to the theoretical, mostly psychological and pedagogical, background of teamwork in the field of education;

(2) to increase (student) teachers' self-awareness and critical self-perception for interpersonal within-team communication;

(3) to identify their concepts of teamwork and their conceptions of interpersonal differences among team members;

(4) to enhance the sincere verbalisation of personal fears, negative and positive expectations regarding teamwork, towards other team members and school principals;

(5) to analyse past positive and negative teamwork experiences and to achieve critical insights on problems, mistakes and conflicts within the team;

(6) to analyse participants'/students' formal and informal roles in the team;

(7) to ensure that the (student) teachers get an authentic teamwork experience of team planning, team teaching and team evaluation;

(8) to reflect and share personal experiences of teamwork and intra-personal insights about constructive and destructive team processes; and

(9) to analyse problems and communication conflicts accompanying teamwork and introduce the most appropriate strategies for resolving them, and (10) to evaluate the advantages and obstacles of teamwork in education practice.

The most important part (as well as the goal) of the program is focused on the implementation of team planning, team teaching and team evaluation in educational practice. Other goals can also be reached within the program because a team is a very powerful and unpredictable learning environment. Through the process of learning within a team and through teamwork, (student) teachers experience several psychological dimensions of teamwork, increase their level of teamwork competency, and consequently progress in their professional development.

Previous research results on the application of the program in educational practice show that engagement in the program evidently contributes to the participants' personal and professional development. In a qualitative study of Slovenian primary school teachers (Polak & Devjak, 2010), many of the participating primary education teachers highlighted that they acquired new knowledge about teamwork – this was

identified by almost one third of the sampled teachers (32.6%). The second most frequent answer was that during the active teamwork in the program, teachers were more able to reflect on teamwork processes and their dynamics in a deeper and broader manner (14.0%). More than 10% of the participating teachers reported that under the influence of the program, they improved their team planning and perceived conflict in a different manner than they had before (both 10.5%). Some teachers reported that through the guided process of reflection within the program, they had the opportunity to confirm their own views, ideas and suggestions about teaching (7.5%), recognized the approval of their work (7.0%), learned how to evaluate their work in a more systematic way (5.8%), learned how to improve their motivation and communication within the team (4.7%), and learned how to develop new teamwork skills (2.3%). In their written answers, they noted that the process of teamwork within the program stimulated their professional development in many ways, mostly in the direction of gaining a broader and deeper understanding of team dynamics and the need for lifelong learning through teamwork experiences.

1.4   The Process of Systematically-Guided Reflection on Teamwork

The Teamwork (student) Teacher Training Programme – A Developmental Approach program was designed to foster several intrapersonal and interpersonal psychological processes, e.g., trust, respect, communication, social perception, role identification, problem solving strategies, etc. (Polak, 1999). To reach students' awareness of their own feelings, attitudes, communication, and actions regarding teamwork, the process of reflection needs to be guided carefully and systematically, with respect to the students' intimate feelings and their preparedness to "explore" and to disclose their inner selves. The authors' past teaching experiences show that this can be achieved only through an in-depth critical reflection from the point of view of both: a) students' reflection about themselves as team members as well as b) their perception of other team members (Polak, 1999; 2012; 2014). According to the step-by-step approach of the program, various teaching methods within the course (e.g., lectures, questionnaires, assessment checklists, written and oral reflections, discussions in pair or teams, plenary discussion, hypothetical problem solving, experienced learning of teamwork, etc.) and a psychologically safe and trusting environment need to be established. To enable sincere and open communication, there should be a democratic and trusting climate within the group of students. Student teachers should also have enough time to experience all these activities,

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didactically shaped as lectures, tutorials, team planning, team teaching and team evaluation, without any time pressure. Time pressure might represent a source of anxiety and a de-motivational factor for the implementation of certain changes in their team-teaching approach.

The program activities, presented above, were designed to foster the individual (student) teacher's awareness of the importance of oral and written critical reflection. The leader of the program (e.g., a university teacher) must therefore be very sensitive and flexible; the participants must be guided through individual reflection, feedback on the process must be given, and the participants should share their thoughts and insights individually or on a team level. During the program, an individual's expressions of their expectations and feelings are stimulated in an oral and/or written way. Honest and sincere oral reflections contribute to an open team climate and group cohesion; and the written reflections, as a part of their personal portfolios, represent an authentic documentation of their personal and professional development. Within each activity they experience in the program, students are asked to write down their impressions, attitudes, thoughts, dilemmas, feelings, etc. In the writing process, students are allowed to write in their own style. According to the goals of the study course, their portfolios consist of several chapters, based on the following specific assignments: (1) a written reflection on the student's personal conception of teamwork; (2) a written reflection on their own fears and positive expectations regarding teamwork; (3) a critical analysis of their team roles and teamwork skills; (4) a critical reflection on their team communication, and (5) the report and written reflection on their personal teamwork experience in the educational practice (e.g., primary school, kindergarten etc.) must include all phases of the process – team planning, team teaching, and team evaluation. The students introduce their projects and teamwork experiences at the plenary session in front of the whole study group (team teaching). The (student) teachers are encouraged by the leader of the program to be personally focused (e.g., focus on relationships, feelings, intra-personal and interpersonal perception), critically focused (e.g., focus on doubts, dilemmas, critical thoughts), problem-focused (e.g., focus on the identification and exploration of teamwork problems, conflicts within the team), and technically focused (e.g., team teaching content, time-management, teaching approaches, didactics methods and tools) in their written reflections (Louden, 1991). According to the pioneer of the written reflection – Schön (1983), during the practical experience of teamwork in educational practice, student teachers

experienced reflection-in-action (during team teaching) and reflection-on-action (during the team evaluation). One can assume there was also an intensive process of reflection during the team-planning phase, which can be called "reflection before action" with the strong anticipation of students' behaviour in the classroom.

1.5   The Aim of the Study

The aim of the study was to identify the extent to which students in the 2nd cycle of the Special and Rehabilitation Education study program reflected on and evaluated their professional development through experiencing the abovementioned training program (Polak, 2001; 2003), which was implemented in the *Teamwork and supervision* course. The program was applied with the purpose of encouraging student teachers to utilise teamwork, and to implement and develop their teamwork skills and their competency for professional reflection. The focus of this study was on the students' personal teamwork experiences in educational practice and their self-recognition of professional development.

2   Method

The study was based on the qualitative research approach, using the method of content analysis on the students' portfolios.

2.1   Participants

The sample included 132 students from the first year of the 2nd cycle of the Special and rehabilitation pedagogy study program (Module for special developmental and learning difficulties) at the Faculty of Education at the University of Ljubljana. All of them were females aged 23 to 24. The sample consisted of four generations of students: 31.8% were of the 2013/2014 school year, 29.5% were of the 2014/2015 school year, 12.1% were of the 2015/2016 school year, and 26.5% were of the 2016/2017 school year (all before the COVID-19 pandemic). All generations of students in the sample took the same course with the same teacher (i.e., the author of the program, A. Polak), so one can safely assume that they experienced similar content and similar situational learning in the university context.

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2.2   Data Analysis

The students' portfolios were analysed using the method of content analysis. The data was not anonymous, because the portfolios included some personal information (e.g., first name, last name, study program, year of study, team members, etc.). The first order categories were established on the basis of theoretical expertise in the field, and open-coded categorisation was used during the categorisation. The following nine categories (areas of professional development) were created: team role development, linking teamwork experience with theoretical knowledge, communication skills development, analysis of individuals' strengths and weaknesses, identification of teamwork benefits, recognition of positive interdependence, personal attitudes towards teamwork, personal importance of teamwork experience, and impact on individuals' own personal development as a part of professional development.

3   Results and Discussion

In using content analysis on the students' portfolios, the students' insights regarding their professional development under the influence of their teamwork experience during *The Teamwork (Student) Teacher Training Programme – A Developmental Approach* program were the focus. The students' written reflections on the teamwork program were one of the chapters in their portfolios. *Figure 1* presents the percentages of the students' most frequently recognised categories as indicators of their professional development during the program.
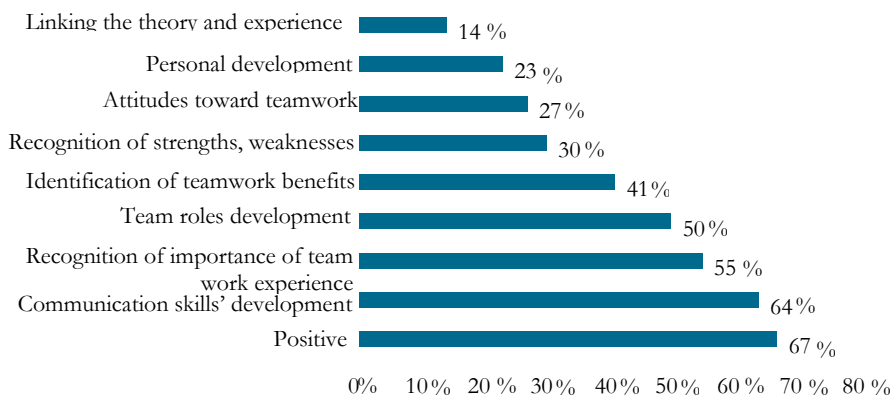
Figure 1: Categories recognised as indicators of professional development by percentage of students (N = 132)

3.1   A Positive Interdependence Between Team Members

The results show that more than two thirds of the students (67%) in our study mentioned a ***positive interdependence*** between team members in their written reflections. In every teamwork situation, positive interdependence is a basic condition for effective teamwork, based on trust, the assignment agreements of all team members, and shared responsibility for reaching team goals. The positive interdependence manifested in quality cooperation among team members, complementary and constructive communication, good relationships within the team, and the team members' dedication to the team goals. Without positive interdependence, it is impossible to reach team goals (Lantz et al., 2020; Maddux, 1996; Polak, 2007). The students in our study recognised that they accomplished much more than they would have in individual work:

> – *"I would like to point out that for both of us this teamwork was an experience that helped to improve our relationship. As the special educator [as a team member from the school] pointed out in the evaluation, this probably wouldn't have happened if we had not established a relationship, based on trust, adequate communication, respect, a mutual desire to achieve a common goal, empathy, similar values, etc." (I. S.)*

As many researchers emphasize (Lantz et al., 2020; Polak, 2007), positive interdependence provided the feeling of psychological safety because the students shared responsibility and reliability with others:

> – *"When I thought about my feelings during the team teaching lesson, I admit that of course I was a little bit scared, but on the other hand, I was much calmer than if I had been teaching by my own. I knew I wasn't alone in the classroom and that I could turn on to my colleagues for help, if I were in trouble, and this gave me a sense of security." (N. S.)*
> – *"Knowing that I shared responsibility for teaching meant a lot to me. I felt relieved, but I also knew that I was expected to participate actively." (B. M.)*

They also expressed the important role of commitment to the team:
> – *"We are both strongly committed to the team; this relationship has formed through our past, very positive collaborative experiences, as well as a confidential and respectful relationship." (K. K.)*

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As seen in the above quotes from the students' written reflections, the students recognised their professional development in experiencing shared responsibility for teaching; they felt that other team colleagues trusted them, and consequently they felt much more competent and had more trust in themselves. Confidence within the team is an important factor of team commitment and team efficacy (Aranda et al., 1998; Lantz et al., 2020).

3.2   The Development of Communication Skills

Verbal and nonverbal communication are the basis for establishing effective teamwork (Chivers, 1995; Maddux, 1996; Streshly & De Mitchell, 1994). In almost every text about teamwork, communication is emphasized as an important aspect of the professional development of teamwork members. In our study, 64% of the student teachers recognised their improved communicational skills as the evidence of their professional development, caused by their teamwork experience within the program. This was explained by the importance of team members being present at the team meetings in person, as well the importance of non-verbal communication:

– *"It's important that everyone is present at the team meeting in person, so the non-verbal side of communication, agreement and disagreement can be visible during the making of decisions." (U. L.)*

The student teachers emphasized the role of non-verbal communication, which can be, as Vec (2005) stated, a very powerful expression of relationships between team members, as well as feelings, attitudes and members' intentions:

– *"There were moments when non-verbal communication was just enough to understand each other." (M. J.)*

Constructive and successful communication is a very important factor for relationships in the team, which helps team members to build team (group) cohesiveness (Dunbar, 1993; cf. Vec, 2005).

– *"After a really successful collaboration, my teacher and I have made a great deal of progress in the field of interpersonal relations, personal values, professionalism. We both had a sense of fulfilment, satisfaction and success, and we have certainly improved our*

analysis skills, listening skills, skills of constructive criticism and last but not least, open communication, which I believe is crucial for any cooperation." (S. K.)

The student teachers in the study also emphasized the importance of feelings of psychological safety, without feeling pressure from more experienced team members. Namely, the student teachers could sometimes feel unequal in the relationships and communication:

- *"I feel like I communicated with her in a more cautious way, and I was more careful about what I was going to say, because I wanted her to have a good opinion of me. At the same time, I did not feel such a strong pressure that came from the position of power of the special education teachers, as those who know more and have more experience, that I would not be able to be honest and genuine. So, I was not afraid to express a certain doubt about the choice of activity for students, or to give feedback that may not have been so consistent with the view of the other team members." (M. V.)*

In the team, it happens quite often that the most experienced team member has more initiative and takes a leading role in team-teaching (Polak, 2007; 2012), which could cause other team members to feel unequal. In the case of student M.V., her sense of safety and equity was strong enough for her to have the courage to express her opinion openly. In their written reflections the students confirmed that confidence; the feeling of safety and equity are very important parts of successful communication, and they recognized their improvement and professional development in this aspect. Effective teams develop a team culture of trust and psychological safety (Aranda et al., 1998; Arcaro, 1995; Lantz et al., 2020; Polak, 2007; Robbins & Finley, 1995) through constructive communication, e.g., by sharing ideas and information, by recognising feelings of acceptance, and through appreciation of individuals' work.

To conclude, in almost every study, team communication is recognized as an aspect of teamwork that team members need to improve, especially listening skills and assertiveness (Chivers, 1995; Da Fonte et al., 2017; Malone & Gallagher, 2010; Pratt et al., 2017, Lantz et al., 2020 etc.)

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3.3 Recognition of Individuals' Own Teamwork Experiences as a Factor in Professional Development

In their portfolios, more than half of the student teachers from the sample (55%) explicitly mentioned their recognition of the great importance of their personal teamwork experience as a factor in their professional development. The student teachers commented that this experience enabled them to gain insight into the reality of team-teaching and helped them to identify the advantages of teamwork in education:

– *"With this [team-teaching] experience, I have gained a valuable experience of how team teaching and insight into the work of a classroom teacher will help me a lot in practice. I also became even more aware of the importance and strength of team teaching." (N. S.)*

In gaining teamwork, and especially team teaching, experience, the student teachers recognized that teamwork skills could be trained exclusively by experiencing teamwork in person and others' experiences cannot be as powerful a learning context as their own:

– *"Although there are different trainings and exercises that can help us develop our own teamwork skills in a controlled environment, we can still only get the experience of teamwork in practice." (B. B.)*
– *"This kind of experience of team teaching enriched me professionally. You should do this more often because you learn a lot of new things; you get a lot of new ideas for different activities in the classroom." (K. C.)*

The authentic personal experience challenges individuals' positive and negative expectations and prejudices regarding teamwork:

– *"As one of my biggest obstacles I would like to stress the prejudices or some opinions I had in the past about teachers in practice. I was often afraid to be active because I am young and unexperienced. I assumed that I would not be seen as equal or competent enough! It was during this teamwork that I received a confirmation that it [the attribution of feelings] is not always the case!" (S. P.)*

Through the personal experience of teamwork in educational practice, the student teachers in our study also recognised that teamwork takes a lot of energy and is time-consuming, but it can be a good platform for the reflective learning of all team members:

– *"I found [the teamwork] very exhausting and extensive at first, but when we systematically shared the work, that feeling disappeared. I liked that I played an important role in the team and that I was an important part of the whole process. At first, I expected the older teachers to take over the leading of the team, but that was not the case. Even on the contrary, I had the opportunity to work with another, 'older' and much more experienced teacher, and I was able to learn a lot more." (A. J.)*
– *"I also learned a lot about myself through the teamwork experience. Participants constantly set up a mirror in which I could observe my reaction, communication, skills, etc." (K. L.)*

As can be seen from the quotations taken from the student portfolios, the teamwork experience was a very special learning situation for student teachers, where they felt safe and where they could make mistakes, get support and tips on how to correct them:

– *"I also liked a safe environment, where I felt accepted and where I had the confidence that if I make mistakes, nothing scary would happen, but I'll get an advice or a recommendation on how to avoid or correct the mistakes in the future. I realized how important it is to feel safe at work – namely, if a person feels safe, then it will be easier to risk and try new things, new ideas, to look for new ways without trembling about how the environment will accept it. But at the same time, the person will probably move forward more quickly and ensure for herself that she will not stay in the same place and fall into routine work, which will be as everyone else does." (Š. H.)*

The student teachers realized, as every research study on teamwork shows, that the individuals' personal engagement in teamwork in educational practice importantly contributes to their professional development, especially in the field of teamwork skills and communication skills. These findings are similar to the findings of Pancsofar and Petroff (2013) on a sample of 129 teachers. The teachers in that study, who reported more opportunities to learn about co-teaching from pre-service and in-service training, were more confident in their co-teaching practice.

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However, only the sample of in-service teachers, trained for teamwork, demonstrated a higher level of interest and more positive attitudes towards co-teaching than the teachers, who reported less frequent training in co-teaching.

3.4   Team Role Identification as a Part of Professional Development

The self-identification of team roles is usually a spontaneous process within the team, and it evolves from the goal-defining phase in team dynamics and crucially contributes to team effectiveness (Belbin, 1993; Polak, 2007). For reaching team goals it is very important that team members are aware of their own strengths and weaknesses, as well as the roles that are needed but not present in the team.

The student teachers in the study perceived the importance of role identification within their team; half of them (50%) highlighted the importance of analysing roles. The students reported that they learned something new about themselves and recognized themselves in several different roles:

- *"With this task, I got a good experience of teamwork. I found it important for team members to understand each other well, that the roles have to be coordinated and carefully distributed among members. I also found out that I can't have a single role on the team; I found myself in multiple roles – even in those, which are not evidently manifested."* (K. F.)

The team role identification process also gave the team members confidence that somebody in the team would take over various assignments and be supportive to other members of the team. Their field of expertise played an important role, as well the perception of specific competences and confidence within the team:

- *"Because the special education teacher was working with a group of students for a long time and knew everything much better than I did, she took the role of coordinator of the team. That was a big help to me, because I knew I could count on her help if something went wrong."* (K. L.)
- *"I also felt good in my role, because I knew I could get a support and understanding, if I forgot something or did something wrong"* (T. F.)

Individual team members' strengths could be seen as an opportunity to manifest their expertise, while self-identification of their own weaknesses could also be an opportunity for their colleagues to express their strengths (Polak, 2012). The formal and informal role identification process could be a very powerful psychological mechanism for improving the acceptance of individual team members' specific personal characteristics and professional competences, which leads to individuals' higher awareness of their personal responsibility in relation to the team. According to Pratt et al. (2017), the responsibilities in the team should be divided according to the principle of personal comfort, professional expertise and evaluation, which is especially important in the phase of team planning.

3.5   Recognition of Teamwork Advantages as Evidence of Professional Development

Teamwork in education has many advantages, and some authors (e.g., Buckley, 2000) divide them into the following three categories: advantages for students, advantages for teachers, and advantages for the whole institution. For 41% of the student teachers in the sample, the recognition of teamwork advantages was evidence of their professional development. They recognized advantages primarily in better classroom management, more flexible teaching, and more interpersonal support between the team members.

In their reflections, the student teachers primarily identified the advantages that teamwork has for students and teachers:

- *"We concluded that while the work was exhausting, we were much more effective than we would be as individuals. It took us a lot of time, but less as if we were doing it alone. The students' results were significantly better." (A. L.)*
- *"Team teaching has its advantages; we were less occupied because we split work equally. We had better control over the students and together we were able to include and check on all the students' work, so that no one was excluded or less active." (K. C.)*
- *"Teamwork in education has opened me up to new perspectives of thinking and perception of teamwork. I believe that teamwork is of paramount importance; both for students who have more support and assistance if there are two teachers in the classroom, as well as for the teacher himself, who receives immediate feedback on his work." (K. C.)*

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– *"The implementation of team teaching has once again given me a confirmation of my work, it makes work easier for us, and it just makes the lesson more diverse and of better quality." (N. L.)*

In this study, the advantages for students were mostly recognized in the teachers' better classroom management, as well as in professional confirmation, collegial feedback and support, as Buckley (2000) emphasizes. There are many other advantages for the students, teachers and educational institutions, as several studies on teamwork in education confirm (Arcaro, 1995; Buckley, 2000; Chivers, 1995; Polak, 2007).

The student teachers in the study also recognised the importance of the heterogeneity of the team members, and they were aware of the outcomes of this phenomenon:

– *"Although there are differences in the number of experiences, opinions, views and knowledge between us [team members], it is this heterogeneity that has influenced us to get new ideas all over again, of what else to include, what else to do, how and why." (J. H.)*

Buckley (2000) emphasizes that teamwork could elicit new teaching perspectives, developed through individual (intrapersonal) cognitive conflicts and social-cognitive (interpersonal) conflicts in their cognitive system (Yaxley, 1991), which leads us to conclude that teamwork constructs a very "rich" social context for the professional development of (student) teachers (Polak & Devjak, 2010).

3.6   Analysis of Strengths and Weaknesses as a Part of Professional Development

The activity of guided individual reflection on personal strengths and weaknesses, which can represent important obstacles of effective teamwork, was also part of the program. Of the student teachers, 30% stated that this reflection process stimulated their professional development, especially if they had the opportunity to manifest their strengths in the team:

– *"I felt quite comfortable performing, as both special education teachers allowed me to give ideas myself and co-design our workshop with the children. Because I had the opportunity to work in my strong field, I had a high motivation and desire to successfully do a job." (H.N.)*

When team members have the opportunity to express themselves through their strengths (personal characteristics, professional competences, habits, talents, etc.) and to compensate for their weaknesses with the support of their colleagues, this enables the feeling of safety within the team (Polak, 2012).

3.7 Recognition of Positive Attitudes Towards Teamwork

Positive attitudes to teamwork are an important precondition and promotor of successful teamwork (Polak, 2003; 2007). Of the student teachers, 27% expressed that during the course their attitudes towards teamwork changed in a positive direction. They confirmed the influential role of attitudes, especially in relation to motivation for teamwork:

– *"In this [teamwork] experience, I realized that a personal attitude towards teamwork is very important, and also the ones of others, which can either inhibit or encourage enthusiasm in the team." (S. G.)*

The positive attitudes of team members towards teamwork, especially the motivational dimension of attitudes, increase motivation for practising teamwork (Chivers, 1995; Polak, 2003) and vice versa – positive experiences with teamwork enable more positive attitudes towards teamwork to develop (Polak, 2003) and lead towards new experiences of teamwork.

3.8 The Recognition of Personal Development

A team can only develop through the personal and professional development of its members – both individually and as a whole entity (Polak, 2003). Teamwork involves the process of establishing relationships and developing various interpersonal skills that have a particular impact on the personal aspect of professional development. After the teamwork experience, the student teachers

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were stimulated to reflect on their experience. They gained deep intra-personal insights, as well as critical thoughts about themselves and their colleagues:

- *"Only the work 'on self' directs us to raise awareness and reflect the dimensions of teamwork, and consequently leads to our personal development. Sometimes it is hard to accept well-intentioned criticism, but I have realized from my experiences, that this is the only way we can grow and develop ourselves." (P. K.)*
- *"Because we worked in the field of developing social skills, about which I do not have so much knowledge, I was inexperienced. My team colleague felt similarly, but she was the first one to admit this fear. I felt relieved. Then, I also admitted my fear aloud." (E. S.)*
- *"In my opinion, the main advantage of the team teaching was the personal growth of all of us involved in the teamwork, because we had to work together, negotiate and adapt to each other all the time." (K. K.)*

In the study, 23% of the participating student teachers noted that focusing on their own internal psychological processes improved their awareness and increased the monitoring of their own progress. The results of the study on the teamwork of 86 primary education teachers (Polak, 2003) showed that teamwork has a powerful influence on personal development. During the program of enhancing teamwork (the same as in this study), the teachers reported that they became more self-confident (18.6%), more tolerant toward others' opinions and ideas (17.4%), more self-reflective (16.3%), more assertive (16.3%), and more sensitive regarding team problems (11.6%). In this field, there is a lack of research findings, especially based on quantitative methodology.

3.9   Linking Theory with Personal Teamwork Experiences

In every new experience in which we feel insecure, it is good to support our experience with theoretical knowledge from professional literature. New insights into teamwork thus enable us a better understanding of oneself and others and promote critical thinking, as well make sense of the reality of the team (Polak, 2007). Of the students in this study, 14% reported that the personal experience of teamwork allowed them to test certain professional propositions and theoretical principles they had learned in class and when reading:

-   *"In team planning and evaluation, my expectations were better matched to reality, so I think we can prepare well for what's happening in the team, and only experience can prepare us for what's going on in the classroom." (B.B.)*

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As can be seen, the student teachers also recognized the importance of professional reflection and its strong connection with all phases of teamwork.

4   Conclusion

A team as a social group with very intensive and unpredictable processes enables rich intrapersonal and interpersonal psychodynamics and thereby represents a very powerful learning context. The results of the content analysis of (student) teachers' portfolios confirmed that the personal experiences of teamwork within the course on the teamwork had a great formative effect – regarding content analysis of the written reflections they contribute to recognisable personal and professional development. The student teachers in this study recognised several areas of professional development, influenced by the program of systematic guided reflection on teamwork (*The Teamwork (Student) Teacher Training Programme – A Developmental Approach).* The majority of the participating student teachers recognised the following positive aspects in their professional development*:* positive inter-dependence with others in the team, development of communication skills, and the recognition of the importance of teamwork experience and team role development. The student teachers from the sample mentioned the identification of teamwork benefits, the recognition of their strengths and weaknesses, more positive attitudes towards teamwork, their personal development, and the process of linking theory and practice in the field of teamwork as the 'evidence factor' of their professional development. The personal experience of teamwork in the study allowed the participating student teachers to develop their personality traits, and to explore their internal impulses, fears and weaknesses, etc. At the same time, the professional development of teaching staff is an every-day and longitudinal process. The findings show that the process of writing a portfolio can be a useful 'tool' to express insights into one's professional development – manifested in a personal 'document', as well as a stimulus for achieving new theoretical knowledge on teamwork. The portfolio enables the comparison of personal insights and observations with research findings, insuring the reflection process on the highest level of critical reflection, e.g., the integration of personal views and theoretical

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background in the field of experience (O'Hanlon, 1991). The results also show that for more focused critical reflection on their teamwork, student teachers should be engaged in a systematically guided, theoretically supported, carefully monitored, and permanently evaluated process of learning by practising teamwork. Only personal experiences enable their process of linking theory and practice in the field of teamwork. Learning about teamwork must be a compulsory part of the under-graduate and post-graduate teacher education programs (Polak, 2014) as well as in-service teacher training (Devjak & Polak, 2007) to ensure the continuity of (student)teachers' professional development.

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INSHIP: Towards Quality in Teaching Practice of Pre-service Teachers

Urška Žerak, Neža Podlogar, Zlatan Magajna, Mojca Juriševič

University of Ljubljana Faculty of Education, Ljubljana, Slovenia
urska.zerak@pef.uni-lj.si, neza.podlogar@pef.uni-lj.si, zlatan.magajna@pef.uni-lj.si, mojca.jurisevic@pef.uni-lj.si

Abstract In this paper, the authors present the results of a qualitative study about teaching practice in pre-service teacher education. The study is part of the international project INSHIP, which aims to develop educational innovation through a complementary partnership model for teaching practice. Using the SWOT matrix, the authors explored the views of university teachers, teacher mentors, students, and deputy head teachers about the teaching practice in two study programs at the University of Ljubljana, Faculty of Education. The results showed that participants expressed both strengths (e.g., students gain experience and insight into the teaching process; schools meet potential future employees) and weaknesses (e.g., the gap between theory and practice) of the existing teaching practice. The participants' perceptions of opportunities and threats were directed toward improving the quality of the organizational (e.g., duration and schedule) and systemic (e.g., mentor selection) elements of teaching practice, as well as its content and interpersonal relationships among different stakeholders involved in teaching practice. The findings suggest that greater involvement of schools is needed in systemic, organizational, and content issues pertaining to teaching practice. Collaborative partnerships between faculties and schools are crucial for the effective implementation of teaching practice.

1   Introduction: Teacher Education in Slovenia

In the Slovenian education system, teacher education is regulated by legalisation for preschool and higher education sectors, which establishes the teacher profiles required at certain levels of the education system, the educational qualifications of teachers, and other elements of the regulated profession (e.g., introduction to the profession, working conditions, professional development, and salaries). The teaching profession in Slovenia is regulated by law, and pre-school teachers must complete the first cycle of studies (bachelor's degree), while primary and secondary teachers must complete a second cycle of studies (master's degree) (Eurydice, n. d.; Komljenovič & Zgaga, 2012; OECD, 2016). Teachers in Slovenia are required to have five years of initial teacher education (Master's level, i.e., 300 ETCS). Exceptions are pre-school teachers and teachers of professional subjects in vocational and technical upper secondary education, who must have at least three years of initial teacher education (i.e., 180–240 ECTS). Primary school teachers complete a five-year qualification at faculties of education (i.e., 4+1, 300 ECTS). Secondary and upper secondary school teachers follow concurrent or consecutive modules of TE at faculties of education or other faculties. All teachers must pass a state professional examination, i.e., the State Teacher Certification Examination, which is taken before the National Examination Board for professional competency examinations in the field of education and appointed by the Ministry of Education, Science and Sport of the Republic of Slovenia (Pravilnik o izobrazbi učiteljev in drugih strokovnih delavcev v izobraževalnem programu osnovne šole, 2012). In Slovenia, there are three public universities that offer study programs in teacher education (TE), in Ljubljana, Maribor and, since 2003, in Koper.

The faculties of education at universities are the most important institutions for pre- and in-service TE. They offer study programs for pre-school and primary school education and some programs for two-subject teachers. In addition, there are some study programs at other faculties (e.g., Faculty of Arts, Biotechnical Faculty, Faculty of Natural Sciences and Engineering), that also offer some teacher education programs, especially for subject teachers in various academic and art domains, as well as in physical education. Universities or other higher education institutions determine all teacher education programs autonomously, and the curricula are designed at the faculty level and approved by the university senates (Pravilnik o izobrazbi učiteljev in drugih strokovnih delavcev v izobraževalnem programu

osnovne šole, 2012). On the other hand, there are formal provisions in higher education legislation, so universities must accredit teacher education programs. The ministry responsible for pre-tertiary education, which is also the employer of preschool and school teachers, is not involved in the accreditation process. Quality assurance in initial teacher education is part of the national (internal and external) quality assurance system in higher education, developed in a European and international context. Teacher education programs are structured according to two models: concurrent and consecutive. All future teacher programs should have at least 60 ECTS credits out of 300 ECTS credits (second cycle) dedicated to educational contents (Komljenovič & Zgaga, 2012).

At the University of Ljubljana, approximately 10% of students are involved in teacher education programs. General admission requirements are regulated by the Higher Education Act, and applicants must meet selective requirements to participate in initial TE (Regulation and legislation, n. d.). These may vary depending on the type of study program or the number of available places. Students are required to provide their Matura (final high school examination) examination certificates, except for Pre-school education, where admission requirement is either the Matura exam or the Professional Matura, after completing a 4-year upper-secondary program in pre-school education or health care. The selection criteria in case of limited places are determined by the individual study program (Valenčič Zuljan et al., 2011).

According to the law, professional development is both a right and a duty for teachers. Each teacher is entitled to five days of professional development per year. Teachers receive points for participating in specific programs, which are necessary for career advancement. In-service teacher education is regulated and financially supported by the Ministry of Education, Science and Sport. Higher education institutions, public in-service teacher education centres, teacher unions and teacher associations, private-sector training centres (e.g., language schools) and others (e.g., NGOs, private companies) may offer in-service professional development courses. The special committee under the auspices of the Ministry of Education, Science and Sport is responsible for the accreditation and evaluation of in-service courses (Komljenovič & Zgaga, 2012).

Since 2009/10, the Faculty of Education at the University of Ljubljana has offered seven first-cycle study programs (BA/BSc) and twelve second-cycle study programs (MA/MSc). It also offers a doctoral program titled Teacher Education and Educational Sciences, which is divided into the two scientific areas of the program title: Teacher Education and Educational Sciences. The program organises various in-service programs for teachers and school counsellors within the framework of continuous professional development and in accordance with the regulations for higher education (Faculty of Education, 2017).

1.1   Teaching Practice in the Framework of Pre-Service Teacher Education

In the reformed Bologna study programs (4+1 or 3+2), teaching practice (hereinafter TP) in schools is an obligatory part of education; it is allocated at least 15 ECTS of the full 300 ETCS. It is organized and carried out according to the principle of reflective practice and must allow students to integrate subject-content and pedagogical-professional knowledge by gradual introduction into teaching and the teaching profession. It is organized differently in different study programs – from four to ten weeks of TP in undergraduate study programs, and to some extent also at the master's level, mostly as research work (i.e., preparation of the master's thesis) (Jurišević et al., 2007b). Before entering the profession, teachers can follow a ten-month induction program (a traineeship), with a mentor assigned to them, or they can apply for open-recruitment job positions, where beginning teachers receive mentoring support. The induction phase prepares them to take the state professional examination to become fully qualified teachers (Valenčič Zuljan et al., 2011).

Teacher mentors do not need to have any additional education/training. Because they are mentors, they usually receive points in the career development system. They can apply for mentorship themselves or school management can give them responsibility for mentoring student teachers. There is no additional payment for mentorship, except that which is included in the regular salary in case of a promotion (Jurišević et al., 2005). Mentors should be competent in the following areas: understanding the model of teaching practice, knowledge of adult learning and teaching, knowledge of the characteristics of each stage of student professional development, identification of individual student needs, communication skills in the

mentoring process, guiding, monitoring, and evaluating students' work in TP, planning, implementing, and evaluating mentoring (Jurišević et al., 2007b).

Student interaction with a mentor, who has good teaching skills, provides appropriate feedback, and establishes a good relationship with students in the classroom, is critical to the successful implementation of TP (Hill & Brodin, 2004). The mentor's role is to help the student with time management, assessment, use of various learning strategies, relationship and conflict management, and classroom management (Paula & Grinfelde, 2018). Developing a professional relationship between mentor and student provides an opportunity for both parties: students can learn how to plan and deliver lessons from their mentor, how to manage time, select topics, and deal with various problem situations. Mentors can encourage younger colleagues to be collaborative and to reflect on their work (Vršnik Perše et al., 2015).

The partnership model of mentorship assumes that learning about teaching and learning to teach aims to improve practice within schools. The core of this model is to understand that close relationships and collaboration are key to learning for both the mentor and the student (Hudson, 2013; Trevethan, 2017). During TP students develop competences in a variety of areas: didactics-methodology, communication, development of professional self-awareness, self-regulation, and educational management, as well as a narrow subject area (Jurišević et al., 2007b).

At the Faculty of Education at the University of Ljubljana, TP has a rich history, dating back 70 years; it is conceptualised based on theoretical and empirical research. The main outcomes were produced by two projects, one in 1996/2004, i.e., Project Partnership I and II (Jurišević et al., 2005; 2007a), and the broader University of Ljubljana project titled Quality Assurance at University of Ljubljana, which took place between 2012 and 2015 (Jurišević, 2017). Quality assurance in TP has been guaranteed by the faculty's TP Committee since 2014; the TP in different study programs is monitored and evaluated internally on a yearly basis (by academic staff and mentors from schools) and externally (by the university evaluation system). A model for quality assurance in teaching practice has been developed (Jurišević et al., 2007b). The model consists of seven core indicators (i.e., assessment criteria, taxonomy of practical knowledge, authentic assessment, teacher mentor competences, teacher educator competences, student teacher self-regulation, and assessment of teaching practice) and four supporting pillars (i.e., system,

organization, content, and relationships), resulting in a total of 22 quality indicators (Juriševič, 2017).

Collaboration with mentors in the primary schools takes place directly through communication with university teachers and staff or indirectly through contacts that students themselves make with mentors, thus strengthening their social skills. Communication takes place in various ways, by phone, online or live, when faculty teachers and staff are involved in the implementation of activities in schools, and at different stages of TP: during the preparation of the TP program, during its implementation, and at the end with the evaluation of the learning content, processes, and student performance (Juriševič et al., 2007b).

The quality of TP is constantly monitored and evaluated at the level of individual implementations and study programs, and it is supported by the TP Committee of the Faculty, which promotes and guides the quality assurance of TP. Formative and summative evaluation (oral, written, individual, group) includes all participants in TP (students, faculty members, mentors in primary schools). Participants' satisfaction with the implementation of the individual TP is monitored and evaluated in the context of joint analyses at schools or faculties and in written form by completing questionnaires after completion of the individual TP (Kristl et al., 2007).

1.2   Teaching Practice for Primary Teachers and Subject Teachers at the Faculty of Education, University of Ljubljana

1.2.1 Primary Teacher Education Study Program

Teaching practice (TP) for prospective primary teachers is organized in the first and second cycle programs – it takes place along the entire educational vertical and its content is upgraded every year, in the form of observations and performances within individual didactic subjects and as pedagogical practice, integrated and independent Table 1 to Table 4. In the first two years of the first cycle, TP is included in four subjects within the pedagogical part of the study program (Developmental Psychology, Didactics, Theory of Education, Educational Psychology). TP is carried out within the scope of the professors of these subjects, while in the third and fourth years of the first cycle, TP is organized within individual didactic subjects; it is led by professors of subject didactics. In the third year, students take turns teaching and

observing in groups of three, and in the fourth year, they teach in collaboration with a mentor. Mentors at primary schools may be qualified primary teachers with at least five years of teaching experience; specialized training for mentoring is desirable. At the Faculty of Education, TP is led by habilitated university teachers and teaching assistants in individual subjects, mostly by university teachers of subject didactics (Juriševič et al., 2007a; Primary Teacher Education, 2017).

A student who achieves 60 ECTS from the pedagogical part of the program (criteria of the Council for Higher Education), of which at least a quarter is accounted for in TP, is recognized as qualified, which is a prerequisite for enrolment in the second cycle (master's) program. In the second cycle, TP is given in the form of project work and is included in the Research of Practice subject (6 ECTS), which is an upgraded form of TP compared to the first cycle. In the project work, students use action research to identify and solve current problems in practice, from which they can then develop topics for their master's theses. Project work in TP is complemented by faculty activities (exercises and seminars) that take place in other subjects in this program. Upon completion of their individual TP, students submit the required assignments (e.g., report, diary, and portfolio) to university teachers, who evaluate them and provide feedback for the students (Juriševič et al., 2007b). The Faculty of Education has contracts (collaboration agreements) with all institutions where students complete teaching practice (Primary Teacher Education, 2017).

Table 1: Student teaching practice model in the first cycle Primary Teacher Education study program at the Faculty of Education, University of Ljubljana.

	1st year
Type of practice	Research
Scope and framework of teaching practice	2nd semester, 15 days in May
Prospective institutes	Registered school and extracurricular educational activities for children aged between 6 to 12
Mentoring conditions	Qualified primary teacher with at least 5 years of teaching experience
Main activities	Primary Teacher Education: 60 hours in class and/or out of class, the structure (performances, observations, conducting research) depends on the research problem. Primary Teacher Education with English: observations and performances in English lessons

Table 2: Student teaching practice model in the first cycle Primary Teacher Education study program at the Faculty of Education, University of Ljubljana

	1st year	2nd year	3rd year	4th year
Duration	2 weeks	2 weeks	3 weeks	3 weeks
Prospective institutes	Primary school	Primary school	Primary school	Primary school
Execution	2×5 days continuous	1×5 days continuous; 1×5 days intermittent	Continuous	Continuous
Purpose	Observational	Assistance	Guided	Independent
Main activities	10 days observing	10 days observing and assisting the teacher	14 hours teaching and about 45 hours observing	1 day observing, 14 days teaching all subjects except foreign languages
Work method	Individual	Individual	Groups of three students	Individual
Link to subject(s) and curricula	Didactics / Developmental Psychology	Educational Psychology / Theory of Education	All special didactics	All special didactics
Choice of lesson objectives	M	M	M	M
Preparation review	M	M	M, F	M
Lesson observation	M	M	S, M, F	M
Lesson analysis	M	M	S, M, F	S, M
Report review	F	F	F	F
Assessment of performance	M, F	M, F	M, F	M, F
Analysis/Evaluation of teaching practice at the faculty	Yes	Yes	Yes	Yes

Note. S – carried out by a student; M – carried out by a mentor in primary school; F – carried out by a faculty teacher or faculty staff.

Table 3: Student observation and performance model in the first cycle Primary Teacher Education study program at the Faculty of Education, University of Ljubljana

Number of performances per student	8
Number of observations in performances	~ 10 x 8
Choice of lesson objectives	M
Help in preparing the lesson	M, F
Preparation review	M, F
Observations	S, M, F
Performance analysis	S, M, F
(Partial) assessment of performance	(M), F

Note. *S – carried out by a student; M – carried out by a mentor in primary school; F – carried out by a faculty teacher or faculty staff.*

Table 4: Student teaching practice model in the second cycle Primary Teacher Education study program at the Faculty of Education, University of Ljubljana

	1st year
Type of practice	Research
Scope and framework of teaching practice	2nd semester, 15 days in May
Prospective institutes	Registered school and extracurricular educational activities for children aged between 6 to 12
Mentoring conditions	Qualified primary teacher with at least 5 years of teaching experience
Main activities	Primary Teacher Education: 60 hours in class and/or out of class, the structure (performances, observations, conducting research) depends on the research problem. Primary Teacher Education with English: observations and performances in English lessons

1.2.2 Two Subject Teacher Study Program

Teaching practice (TP) for future teachers of two-subject study programs is organised in the first cycle programs, i.e., in the third and fourth years (Table 5). The complexity of the context of TP is gradually increasing. It is carried out in the form of observations and student performance in a particular subject didactic topic from two selected subject areas. It is also conducted in the second year of the program and as independent TP. An individual student is educated to teach two subjects in parallel from the following areas: Biology, Chemistry, Computer Science, Home Economics, Mathematics, Physics, and Technology. Although all orientations follow a unified concept and methodology of TP implementation, there are some possible differences between orientations, resulting from the specific content of a particular subject orientation (Juriševič et al., 2007a; Faculty of Education, 2017).

Specifically, TP in the Two-Subject Teacher program includes three types of practicums: (1) continuous TP, (2) student performance outside TP, conducted in collaboration with mentors from schools and under the supervision of academic staff, and (3) student observations outside TP, in which students participate in and analyse regular classes, often supervised by academic staff. Continuous TP includes 8 ECTS (4 weeks total for both subject areas), and the remaining credits are for other forms of TP. As mentioned above, 3rd and 4th year students have continuous TP, which lasts for two weeks each (5 days for each subject area). The TP is conducted simultaneously for all students, during the school semester, therefore, conducting TP results in a disruption of all other study activities at the faculty. For most

students, TP is conducted at the same school for both subject areas. The implementation and organisational aspects of TP in different subject areas are consistent only in terms of duration and administration, and all content and other organisational aspects of TP are specific to every subject area (Magajna, 2005).

In the second cycle program, TP is carried out in the form of exercises and research work in individual subjects, and in the preparation of a master's thesis, but not in the form of ECTS credits. Prior to enrolment in the second level of the study program, the candidate must provide evidence of practical experience in the field of education amounting to 15 ECTS. Candidates may prove their experience with work certificates from their employers or by completing a study program that included at least 15 ECTS of TP in the field of education. The obligations are determined by the Senate of the University of Ljubljana, Faculty of Education (UL PEF) on the proposal of the Commission for Postgraduate Studies at the second level of UL PEF, according to the diversity of the professional field. The candidate may fulfil these study obligations during the first cycle, in continuing education programs, or by passing specific subject examinations before enrolling in the master's program (The two-subject teacher, 2017).

Table 5: Student teaching practice model in the Two-Subject Teacher first cycle study program at the Faculty of Education, University of Ljubljana

	3rd year of study	4th year of study
Function	Independent	Independent
Length and approximate term	Takes place in the spring semester in the form of 5 working days for each subject area	Takes place in the spring semester in the form of 5 working days for each subject area
Envisaged institutions	Primary schools*	Primary, secondary vocational and technical schools*
Conditions for mentors	At least 5 years of teaching experience in teaching the chosen subject*	
Estimated number of student performances/observations	Biology: 3-5/3-5; Physics: 6/4-6; Home economics: 3/5; Chemistry: 3-5/3-5; Mathematics: 8/8; Computer science: 6/4; Technology: 5-6/5	Biology: 3-5/3-5; Physics: 8-10/2-4; Home economics: 3/5; Chemistry: 3-5/3-5; Mathematics: 8/8; Computer science: 3/1; Technology: 5-6/5

Note. *Teaching practice in Computer Science is carried out in all primary and secondary schools, and the written period of the mentor's teaching experience is only a desirable condition.

The mentor for student teachers at partner institutions or the teacher mentor at a school may be a two-subject teacher of the relevant subject with at least five years of relevant professional experience; special training for mentoring is desirable. At the university, TP is led by habilitated university teachers and teaching assistants in specific subjects. Upon completion of each individual form of TP, students submit the required assignments (e.g., report, diary, portfolio) to academic staff, who evaluate them and provide feedback or grades (Ferk Savec & Wissiak Grm, 2017). The Faculty of Education has contracts or cooperation agreements with all institutions, where students conduct TP based on the complementary partnership model.

1.3   The Present Study

TP is one of the key components of the study programs in pre-service teacher education. The purpose of the present study was to examine the current state, best practices, and challenges in implementing TP at the Faculty of Education, University of Ljubljana in order to enhance and ensure more effective and comprehensive professional development experiences for prospective teachers (Čagran et al., 2007; Juriševič, 2007a; 2007b; 2017; Lawson et al., 2015).

2   Method

A qualitative research design was chosen to capture the complex experiences of the various stakeholders involved in teaching practice (TP) in the two study programs at the Faculty of Education, University of Ljubljana. The contextual analysis was conducted using the SWOT matrix.

2.1   Participants

The participants were stakeholders involved in the TP in two different study programs at University of Ljubljana, Faculty of Education: Primary Teacher Education (PT) and Two-Subject Teacher education (TST). Specifically, the participants were 12 third- and fourth-year students (7 PT, 5 TST), 9 university teachers (4 PT, 5 TST), 11 teacher mentors (4 PT, 7 TST), and 2 deputy head teachers from partner elementary schools. Altogether, 29 of the participants were female and five participants were male.

2.2   **Instruments**

Data collection for the SWOT matrix was slightly different for different stakeholders.

University teachers, teacher mentors and deputy head teachers completed the SWOT matrix (strengths, weaknesses, opportunities, and threats). In the instructions, they were asked to reflect on the implementation of TP, and the following possible areas were listed: instructions for mentoring and implementing teaching practice, content and tasks of the practice, student competences, practice organization (duration, year, communication with the faculty), cooperation between the mentor and the student in implementing the activities, cooperation with faculty or teacher-mentor, satisfaction with the mentoring role, feedback to the student, student assessment, and acceptance of the student in the team.

Students completed the SWOT matrix online. In the instructions, they were invited to reflect on their experiences with implementation of the TP that they performed in their previous years of study. The matrix was further elaborated, listing the following aspects of TP implementation:

- instructions and preparation for TP;
- activities and tasks in TP;
- organization of TP (e.g., duration, academic year);
- documentation of TP (e.g., practice diary);
- cooperation with mentors;
- experiences with students;
- TP feedback and evaluation;
- acceptance among school staff; and
- fulfilment of expectations for TP.

The last category was 'other' in which the participants could write about their experiences during TP unrelated to the aspects listed above.

2.3   Procedure

First, all participants were presented with the main objectives of the study and invited to participate. Data were collected through an online survey (students) and emails (university teachers, teacher mentors and deputy head teachers) from February to April 2020. The data received from all participants were analysed and categorised according to the SWOT framework, using comparative content analysis to distinguish the main general and representative responses (Leiber et al., 2018).

3   Results

The qualitative results are presented according to the content areas of the SWOT matrix. First come the strengths of the teaching practice (TP), followed by the weaknesses and possibilities for its implementation. The authors conclude with an analysis of threats covering all four areas of the SWOT matrix.

3.1   Strengths

In general, the participants highlighted the following strengths of TP: (a) instructions for TP are clear, informative, and relevant, (b) activities during TP are well distributed, (c) students are well prepared for TP, (d) evaluation and reflection after each TP, (e) students gain experience and insight into the teaching process, (f) students are accepted by teachers and school staff, and (g) students are active and involved in various school activities.

Specifically, deputy head teachers highlighted two main strengths: (a) teacher mentors and schools learn new approaches from students., and (b) schools get to know prospective teachers for recruitment reasons.

In addition, participants in the PTP program pointed out the following elements:

- TP is conducted in the program every academic year *(S)*[1];
- the complexity of TP gradually increases throughout the study program *(S, M)*;
- experienced teacher mentors provide useful advice and feedback *(S, F)*;

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[1] S – students; M – mentors in primary school; F – university teachers; H – deputy head teachers.

- the majority of teacher mentors are good *(F)*;
- students gain experience with different groups of children because they can choose different schools and classes *(S)*;
- teaching practice is graded "pass" or "fail" *(S)*;
- time to reflect and discuss classroom events *(M)*;
- students explore different teaching approaches, introduce innovations, and help students with special needs *(M)*;
- good integration of TP content with study modules/subjects *(M, F)*;
- good organization and cooperation between the university and schools *(F)*;
- the interests of students are taken into account in TP *(F)*;
- students are involved in teamwork *(M, F)*; and
- good planning, consistent monitoring, and final evaluation *(F)*.

Furthermore, TTP participants highlighted the following elements:

- preparations for lessons are reviewed early *(S)*;
- students' reports from TP are useful for their future teaching *(S)*;
- TP is assessed remotely, so it is useful to write longer reports *(S)*;
- students bring new ideas and new perspectives to the classroom *(M)*;
- mentors receive timely instructions on expected student activities and how to assess them during TP, so they can organize what is needed (*M, F*);
- students have the basic knowledge to carry out the planned activities *(M)*;
- students frequently attended the school, where they do their TP and are therefore motivated and engaged *(M)*;
- TP is a point where mentors in schools and academic staff share ideas *(F)*;
- good coordination between academic staff and mentors leads to effective TP *(F)*; and
- students receive feedback from both their mentors (during TP) and academic staff (after TP) *(F)*.

3.2   Weaknesses

The participants noted the following weaknesses in TP: (a) not enough TP, (b) incorrect understanding of instructions for TP, doing only what is written and no more, (c) overly comprehensive journals or reports, (d) submission forms, reports, and instructions are different for different subjects, and (e) some mentors are

incompetent: they do not respond to students, are not willing to help them, impose their opinion, do not have enough time, and do not take mentoring seriously.

Specifically, the deputy head teachers pointed out three main difficulties in the implementation of TP: (a) the time period for TP should be more in line with the school calendar and curriculum, (b) the gap between theory and practice in terms of student knowledge and expectations, and (c) weak collaboration between school teachers and university teachers before implementing TP.

In addition, the participants from the PTE program identified the following weaknesses:

- too many observational activities and not enough active teaching *(S)*;
- some students never teach in all primary school grades *(S)*;
- not enough knowledge and experience for teaching students with special needs *(S)*;
- too extensive and similar evaluation of TP for different subjects *(S)*;
- teacher feedback is not specific, holistic, or critical enough *(S)*;
- mentors are overloaded with too many students *(S)*;
- some students lack independence in class (*M*);
- some students receiving feedback from mentors do not distinguish between personal and professional communication *(M)*;
- there is not enough time to adequately plan and evaluate teaching practice *(F)*;
- unregulated status of teacher mentors, which causes demotivation among teacher mentors *(F, H)*; and
- weak collaboration between faculty and schools or head teachers *(F)*.

Specifically, TTP participants described the following shortcomings:

- lesson preparation should not be reviewed by teachers *(S)*;
- two weeks is not enough time for a student to feel comfortable and confident in class *(S)*;
- two TPs at the same time of the year result in similar schoolwork being taught *(S)*;
- poor feedback from professors reviewing TP reports *(S)*;

- when TP is organized by the Faculty of Education, school staff have less positive attitudes towards students *(S)*;
- during TP students often focus only on the teaching aspect of the teacher's job *(M)*;
- TP should be part of the curriculum in the first year and/or second year of study *(M)*;
- the timing of TP is not aligned with the primary school calendar *(M)*;
- mentoring in schools is not regulated *(F)*;
- the TP-related workload varies from department to department and even from subject to subject *(F)*;
- students are not familiar with the variety of technology in schools *(F)*; and
- students may have difficulty in dealing with students with special needs *(F)*.

3.3   Opportunities

The participants emphasized the following opportunities for TP: (a) a longer duration of TP, (b) more supervision and discussion of students' difficulties during TP, (c) student visits to the school and observation of mentors in the classroom prior to beginning TP, and (e) more and clearer guidance from mentors on how and what students should do, as well as critical thinking, concrete feedback, and evaluation.

The deputy head teachers pointed to two opportunities in particular: (a) tools to monitor students during TP and appropriate feedback between faculties and schools, (b) preparation for TP should include more real-world knowledge, such as communication, school administration, and legislation.

Participants in the PTP program specifically pointed out the following elements:

- inclusion of the definition of a good mentor in the instructions provided to students, and students provision of subsequent feedback on mentors *(S)*;
- more independent student teaching and collaboration with the teacher (regarding documentation) *(S)*;
- integrated, non-shared TP *(S)*;
- learning about certain topics (e.g., special needs) prior to TP *(S)*;

- – reports should include fewer objective observations and more feelings, memories, good and bad features of the day *(S)*;
- – volunteering to work with the primary school students during their free time *(S)*;
- – in the beginning students could plan lessons and co-teach with the teacher *(S)*;
- – expand the network of mentor schools outside the capital city *(M)*;
- – regulating the status of mentor teachers *(M, F)*; and
- – seminars for mentor teachers prior to TP *(F, H)*.

TTP participants highlighted the following elements in particular:

- – more project work and real-world situations during their faculty education *(S)*;
- – TP in the first year of the program *(S)*;
- – less reflection in reports *(S)*;
- – one-on-one discussion with the professor to highlight the good and bad aspects of their TP *(S)*;
- – TP could take place one day per week, so that students could prepare lessons during the week in consultation with the academic staff *(M, F)*;
- – TP is an opportunity to meet excellent and committed teachers *(F)*; and
- – TP could occasionally take place in a "lab" at the Faculty of Education with primary school students from surrounding schools *(F)*.

3.2   Threats

The participants emphasized the following setbacks in TP: (a) poor relationships between students and mentors, (b) Unexpected situations (e.g., illness or accident, pandemic), and (c) regulations for mentors.

The deputy head teachers specifically pointed out the following challenges: (a) time management and effectiveness, (b) preparation for TP should include more real-world knowledge (e.g., communication, school administration, and legislation), (c) blind acceptance or misuse of approaches and methods from foreign practice, and (d) overly theoretical teacher education.

The participants from PTP specifically pointed out the following:

- lessons at school are cancelled (e.g., school class in nature) *(S)*;
- students may be dissatisfied with TP and thus with the teaching profession because of poor mentoring *(S)*;
- different schedule/program at the faculty *(S)*;
- students are not accepted by teachers and staff *(S)*;
- willingness and lack of motivation in some students *(M, F)*;
- TP should be organized outside the exam period *(M)*;
- excessive bureaucratization and too much documentation could lower the motivation of teacher mentors and students *(S, F)*; and
- decision-makers' unresponsiveness to systemic changes *(F)*.

TTP participants highlighted the following elements in particular:

- overburdened students and professors *(S)*;
- completing certain administrative tasks related to practice may place an unnecessary workload on academic staff *(F)*;
- inconsistencies between school personnel and students *(S)*;
- a mentor may determine that a student is unsuitable for a teaching position for any reason *(M)*;
- many teachers are reluctant to take on the mentoring of a student *(F)*;
- there is no guarantee that a student's mentor is competent *(F)*;
- some mentors work with multiple students at the same time, so students learn from each other rather than from the mentor *(F)*;
- in some school subjects it is difficult to get enough teaching experience in two weeks of TP *(F)*; and
- the TP period is coordinated with various school activities (competitions, field trips, national exams, etc.) *(F)*.

4   Discussion

Quality education cannot be achieved without quality teacher education, as prospective teachers are the most important agents in implementing the curriculum in schools. Namely, teaching practice (TP) is considered an essential part of teacher education because it helps prospective teachers gain practical experience and transfer

their professional background and theoretical knowledge into a role in a school
community (Allen & Wright, 2014; Cohen et al., 2013; Grudnoff, 2011).

The authors can conclude that all exposed criteria to which the SWOT matrix was
applied were evaluated as both strengths and weaknesses, depending on individual
perception and experience. Thus, the results partly confirm that some parts of the
TP in the two studied programs can be set as examples of good practice, e.g., the
organizational structure following the gradual involvement of students during the
first cycle of studies. Similarly, Flores et al. (2014) report students' positive
experiences with the organisational aspects (i.e., interaction with supervisors and
cooperating teachers) and curricular content (i.e., reflection and research
components) of the TP module. In addition, the results of Sangster and Green's
(2012) study of pre-service primary teachers suggest that TP was an opportunity for
students to develop professionally and personally, making them reflective
practitioners (see also Mulryan-Kyne, 2021). Vršnik Perše et al. (2015) report that
students are in general very satisfied with TP and are interested in being actively
involved in the teaching process.

The participants' perceptions of opportunities and treats were focused on improving
the quality of organizational (extended practice, different time period, schedule, etc.)
and systemic elements of TP (selection of mentors, conceptual orientation of pre-
service teacher education, partnership model of teaching practice, etc.).
Correspondingly, Vršnik Perše et al. (2015) report on students' suggestions for
changes related to the adaptation of TP, including mentor-developed criteria for
evaluating students' TP and integration of theory and practice. In addition, Flores et
al. (2014) report on pre-service teachers' suggestions for improving TP in terms of
greater coherence of the curriculum and better articulation of its components. This
can be improved through thoughtful program design, specific pedagogical
approaches, and investment in the quality of all staff involved in the implementation
of TP (Korthagen et al., 2006; Ulvik & Smith, 2011). Furthermore, Rauduvaite et al.
(2015) suggest that to improve the organization of TP for prospective teachers, the
use of reflection in the study process should be encouraged as a basis for combining
and integrating theoretical and practical knowledge and for learning from one's own
experiences.

Moreover, the participants also saw opportunities and treats in the content area (relationship of content and goals in relation to authentic school-based learning and teaching, etc.), and in the interpersonal relationships between students, academic staff, mentors at the school, and school staff in general. Relationships between students and their mentors are particularly important for the professional socialization of prospective teachers (Fuentes-Abeledo et al., 2020). Paula and Grinfelde (2018) found that prospective teachers who had adequate mentor support when entering the teaching profession reported lower levels of stress and uncertainty.

The fundamental elements of TP, such as the objectives of TP, the competences of students in TP, the competences of academic and school staff for mentoring students during TP, and the evaluation of students' performance during TP should also be emphasized (Fuentes-Abeledo et al., 2020). All these aspects were discussed by the participants in the present case study, wherein they demonstrated a certain imbalance in terms of meeting the learning needs of students, which is probably caused by a non-systematic, haphazard approach in coordinating TP at the levels of preparation, implementation, and evaluation. Heeralal and Bayaga (2011) point out the importance of adjusting the TP to the students' needs and interests so that learning is more likely to be of long-term benefit to students. Trevethan (2017) highlights the importance of educative mentoring, in which mentors see their mentoring role as working with student teachers to improve children's learning and emphasizes the importance of professional courses for mentors.

The findings indicate that schools need to be more involved in systemic, organizational, and content issues related to TP. This aligns with previous research by Flores et al. (2014), which points to the need to improve university-school relationships, which can help narrow the gap between theory and practice (Smith et al., 2006). In addition, Paula and Grinfelde (2018) suggest that policy makers should focus on teachers' support guidelines at the national level, which would allow schools to ensure the most appropriate environment for prospective teachers. Collaborative partnerships between faculties and schools are critical for the effective implementation of TP (Lipscombe et al., 2019; Juriševič et al., 2007b). Vršnik Perše et al. (2015) also emphasize the importance of collaborative partnerships between faculty and schools for the integration of TP experiences and the development of teachers' professional identities (see also Zhao & Zhang, 2017).

However, it seems that the regulation of the status of mentoring, especially mentors' responsibilities and competences, organization of training and professional development courses (CPD) for mentors, and a recognition and awards system for mentors at the national level, are an ongoing challenge. Nonetheless, for quality assurance it is important that TP in teacher education is evidence-based and that prospective teachers are equipped with contemporary knowledge and skills to cope with daily challenges in schools (Flores et al., 2014; Hudson, 2013; Juriševič, 2017; Komljenovič & Zgaga, 2012; Leiber et al., 2018).

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COACHING – A NEW TREND IN THE FIELD OF TEACHER EDUCATION

PETRA CAJNKO

University of Maribor, Faculty of Natural Sciences and Mathematics, Maribor, Slovenia
petra.cajnko@um.si

Abstract The teacher represents the foundation of the education process. It is important that the teacher feels good in their work environment and that they are motivated to work. It is also important that the teacher masters the skills of passing on material to listeners, as this affects the satisfaction of the listeners and the amount of knowledge passed on. In recent times, there have been many turbulent adjustments and changes. The question arose as to how to adapt to the situation. And based on this, the decision was made to conduct research on how to connect the following two concepts in new times, the times of the pandemic: the concept of current methods of teacher education and the concept of introducing coaching in the field of teacher education. The study is based on the use of theory and empirical research. Depending on the time period, the study is retrospective.

1   Introduction

A new generation of listeners is coming – millennials and generation Z. Both are considered different from all previous generations. But the fact is that each new generation differs from its predecessor. The coming generation is thought to be disrespectful, spoiled, and redundant. But they are no different than any other generation that came before. We all want to feel valued, respected, and included. The listeners want the same, and in addition to all of the above; they want the teacher to give them the attention they need, because that is the only way for them to become the best.

In this paper, the author presents a new teaching method, which provides guidance and help to both the teacher and the listener, and results in the successful completion of activities that are mandatory for achieving educational goals. The teaching method is supported by three tools, and the author will present the results and findings of the introduction of these tools into the educational process. The results were obtained from quantitative analyses (two study subjects, two years of work).

Based on the above, the author tried to answer the basic research question: *Do the teacher and the listener make significant progress in achieving the set goal with the help of coaching?*

To prove the basic thesis, the author tested three hypotheses. Namely:

H_1: The number of listeners, who achieve the set goal and receive coaching in the educational process is greater than the number of listeners, who are not included in such educational process.

H_2: Listeners, who receive coaching in the educational process have a positive experience.

H_3: A teacher who conducts coaching gains healthy authority.

In summary, one can say that the result of the paper is the publication of the concept of the process. The actual results will be known in five to seven years.

2   The Definition of Coaching Through Time

The beginnings of coaching in the business and sports world goes back several decades. Its founder is W. Timothy Gallwey (1974). He wrote the book *The Inner Game of Tennis*. The coach in the book asked the tennis players open-ended questions. He did not correct their mistakes. The players corrected themselves. It has been proven that players' performance decreases when they listen to coaches' advice. However, when the players were more relaxed and had a sense of the desired result in their heads, they were consequently more successful. The main message of the book is that, in order to master a certain skill, it is necessary to pay attention to the "inner game" that takes place in the mind (Cajnko, 2014).

There are various definitions of coaching (European Coaching Institute, 2007; Čeč, 2006; Megginson & Clutterbuck, 2007; Leshinsky, 2007; Stemberger, 2008; Cajnko, 2014; ICF, 2021 and others). It would be better to say that there are as many different definitions of coaching as there are schools for it.

Coaching cannot be detected in the educational process. Therefore, in this paper, the author discusses a problem that, according to the literature available, has not yet been addressed. No data was found in Slovenia on conducting a survey on the inclusion of coaching in the educational process nor was there any data on the impact of coaching tools on a listener's success in completing tasks. Therefore, the author will define the benefits of including the teaching method of coaching in the educational process in the continuation. The author also upgraded the topic with the tools of coaching, which build the foundation of a new learning method – coaching in the educational process.

2.1   Benefits of Coaching in the Educational Process Abroad

Coaching has become established in the field of education both in the USA and in some parts of Europe, e.g., in Great Britain, and later also in Australia.

In their paper, Devine, Meyers and Houssemand (2012) agree that comprehensive education reform is needed to meet the challenges of the 21st century. They have demonstrated that coaching is a powerful tool that can be used to support: (i) learning, (ii) listener development, (iii) teacher development, (iv) institution management development, and, consequently, (v) institution development itself.

These coaching approaches make a valuable contribution to all the listed benefits. Unfortunately, there will be no benefit if coaching remains at the individual level. Therefore, it is imperative to do everything possible to develop coaching.

The author found a contribution based on a review and analysis of the literature that highlights the benefits of introducing coaching into the education system in Singapore. From the article one can conclude that coaching is carried out in many areas of professional development of teachers in Singapore. These include coaching methods for:

(i)   trainee teachers
(ii)   novice teachers
(iii)   heads of institutions

However, as the paper is based on a review and analysis of the literature, further empirical research on the inclusion of coaching in the education system in Singapore is recommended. However, they recommend research on:

(i)   the impact of coaching on teaching in different contexts;
(ii)   the experience of coaches;
(iii)   the appropriate number of coaches to meet the requirements for coaching in institutions; and
(iv)   the formalization of coaching systems to examine the promotion of innovation in education (Tee Ng, 2012).

Lofthouse (2018) states in his paper that in the UK, coaching has been developing for several decades as a form of professional development for teachers and school leaders. His research focused on the work of six coaches from the UK. In his study the importance of relationships and communication in coaching was demonstrated along with the tools and models that support it. It confirms that coaching is appropriate for helping individuals facing real challenges. It is also one of the valuable tools that serves as a support to the education system, insofar as it is exposed to inconsistencies between teachers and the management of institutions.

2.2   Benefits of Coaching in the Educational Process in Slovenia

For the last two years, the usefulness of coaching has been piloted in Slovenia in the field of primary and secondary education. It has been tested according to international examples and implemented in the form of team coaching and peer coaching. Individual coaching by an external coach for principals and teachers may also be considered. However, it is used both for didactic and pedagogical purposes. It may be used as a method of critical friendship in collegial observations for didactic teaching – for this purpose, for example, the BRSU instrument by Danielson, Marzan, Pressley, Thompson and Wong are used. It can also be used for reflection intervention regarding listener behaviour – for example, the Teacher2teacher program within the CPD program is intended for relational and career challenges (Rutar Ilc, 2014).

The results of the pilot project, which included 17 high schools and 2 primary schools, show that the introduction of coaching in the field of education had a positive impact on all participants in the process. Participants also suggested that it would be useful to extend the introduction of coaching to the entire teaching staff (Rutar Ilc, 2014). Unfortunately, no further research was conducted.

3   Why Coaching is a New Trend and a Teaching Method in the Field of Teacher Education

The listener wants to complete the obligations in a particular subject as soon as possible and to make a living as soon as possible. The listener aims to come into existence – into their own measure of activity. The teacher wants the listener to be active throughout the process and learn the basic values of the subject, based on which they will be able to earn their living in the future. This means that it is in the teacher's interest to adapt the process of education so that the listener comes into existence as soon as possible. The coach also has their own measure of activity to dedicate to this; how to connect, and what to do to make their goals and desires mutual. One would assume that the solution lies in the mode of communication throughout the educational process.

The idea was to include coaching in the educational process for the teacher and the listener to make significant progress in achieving the set goal. The listener would find it easier to follow the progress based on coaching and would also have the

opportunity to learn something new. The teacher who would implement coaching in their educational process would thus upgrade their teaching. The idea was realized by including coaching in the educational process in two university subjects (*Business Economics and Management, and Mathematical Modelling*). For this purpose, the lecturer of the course *Economics and Management of a Company* received additional professional training from an external business coach.

4   Tools Used in Integrating the New Teaching Method of Coaching into the Educational Process

In incorporating the new teaching method of coaching into the education process, the author focused on the following tools:

(i)   a revised GROW model;
(ii)   a model of flow from Csikszentmihalyi; and
(iii)   a listener questionnaire to assess the teacher who provided coaching.

4.1   The GROW Model as a Tool for the Proposed Learning Method in the Coaching Process

According to current teaching methods, the listener is thrown into the water and must learn to swim on their own. How should they swim if they have not learned to swim? How should they fly if they have no wings? They must transform from a caterpillar into a beautiful butterfly (Bach, Grebenshchikov, Franklin Murrell-Wolf and other philosophers and experts), and the basis is that they are guided through the process by a teacher. With the method of **coaching**, it is possible to attain this work process. Therefore, the author presents the GROW model – which is the basic communication tool in coaching. This model also affects two processes; it transforms both the teachers and the listeners from caterpillars into butterflies.

The author included a redesigned GROW model in the new teaching method, which can be used in a real classroom as well as in a virtual classroom, because they anticipated that listeners would complete more tasks in the time they had available. The author also assumed that the listeners' knowledge would be appropriate, that they would be sufficiently motivated, and that the tasks would present them with a sufficiently large challenge to push them forward, into flow (Csikszentmihalyi, 2008).

Goals cannot be achieved without intermediate control, discipline, and perseverance. The GROW model pushes us into flow (Csikszentmihalyi, 2008). so that individuals do not give up on the way to the finish line. With this, the percentage of people (now 10%) who achieve something truly extraordinary in life will rise (Žunec, 2021, p. 267). One could say that perseverance is half the battle.

On the topic of the importance of asking questions, a study was conducted in 2019 at the University of Primorska, in which 252 listeners took part. The study focused on the role and importance of asking questions in a higher education learning environment. They were particularly interested in answers and questions about how listeners perceive the lecturer's questions in lectures and tutorials, what questions (types and frequency) in their opinion and experience lecturers ask, how listeners respond to them, and what are the reasons for certain responses. The results of the study showed that listeners are well-aware of the importance of issues in the educational process. They expressed positive attitudes towards learning environments in which various questions are asked and towards lecturers who often ask questions. At the same time, they were critical of the way questions were asked, especially if they were not placed in the learning space, which enables a positive interaction between listeners and the lecturer and encourages listener responsiveness (Bratož & Pirih, 2020). The study above is an excellent quantitative verification of the tool, which will be described further hereinafter.

The GROW model, developed by John Whitmore in the 1980s, most simply illustrates the essence of the teaching method of coaching. It is considered a fundamental model of coaching. It consists of the following four elements (Levine & Easterly 2010):

    (i)   setting goals;
    (ii)   defining the real situation;
    (iii)   identifying opportunities to move towards the set goals; and
    (iv)   the desire and willingness to do anything to achieve the goals.

The basic idea of asking questions in this learning method, i.e., coaching, is that the listener is an active "epistemic actor" (that he is active and that "he comes to knowledge himself"). At this point, it is similar to "Socratic dialogue". Therefore, it is possible to follow the trend of interdisciplinarity and confirm, from the point of view of philosophy, that this innovative teaching method focused on the listener was

actually found in the foundation of Plato's cognitive theoretical doctrine, which can be traced back about 2500 years (Plato 2004, p. 1165). No one has researched this, so now is the time to make a breakthrough in this area of study.

4.2   The Csikszentmihalyi Flow Model and Its Use in the Coaching Process

The teacher should never give listeners the feeling that they do not know or will be unable to do something. The teacher should include the word "yet" in communication. How does it sound if a teacher says to a listener, "You don't know this" or "You don't know this yet"? The second option is much more acceptable. A teacher who is a coach strives to help listeners achieve their goal and, even though it seems like a small step in communication, the teacher takes a huge step in the listener's well-being. However, the well-being is what influences the attainment of flow and the attainment of a goal. If we are positive, it is almost impossible not to get the job done. From this one may conclude that when the listener achieves flow, they are perfected, happy, and feel successful. This was also confirmed in a survey conducted by Pașcu (2020), as well as in a survey conducted by Bakker (2005).

Daniel Goleman was the first to write about the importance and usefulness of including emotions in a variety of processes in his book *Emotional Intelligence*. In the field of education, various models of emotions from the listener's point of view are also presented.

However, from the teacher's point of view, it has not yet been possible to trace these models.

If the listeners are not respected by the teacher, they also do not respect the teacher. If the listeners are valued, they are more eager to acquire knowledge. Their desire for new knowledge also increases. The more productive they are, the easier it is to remember things. The following are the results of a survey that offer facts about how this works in the business world. The Gallup Institute showed that the productivity of employees increased up to four times in companies where managers respected people, communicated with them, and gave them sufficient quality knowledge[1]. Another example is cited from the world of sports. In 2017, Igor

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[1] https://techjiry.net/blog/employee-engagement-statistics/

Kokoškov led the Slovenian basketball team to the title of European champion – he himself said that the reason was that he respected all the players on the team, encouraged them and offered them support (Žunec, 2021, p. 113).

The flow model, which was included in the coaching process, was measured through self-assessment in order for the listeners to be able to assess their own emotional state (as described in Csikszentmihalyi, 2004; 2008) in each phase of the GROW model implementation, i.e., in the time available to them.

Csikszentmihalyi (2008) – a Hungarian psychologist, defined eight emotional states in his model of flow: anxiety, worry, numbness, boredom, relaxation, control, flow, and awakening. He studied one of the above emotional states, namely flow, in order to better explain the mechanism of motivation. We should also say that the concept of flow was first defined by Csikszentmihalyi. According to Csikszentmihalyi, flow occurs when an individual is confronted with clear sets of goals so that they can respond without questions about how and in what way something should be done. Optimal experiences typically involve a balance between an individual's abilities and challenges (Demerouti, 2006). Flow is a balance between challenge and ability. It most often occurs in activities with a specific goal and rules that require an investment of mental energy, effort, certain skills, and abilities, which can be detected through the introduction of the GROW model.

Much research has been conducted on this topic (DeTombe, 2002; Bakker 2005; Leitner & Leopold-Wildburger, 2011; Emeršič, 2013; Bokal & Steinbacher, 2019; etc.), however only the most prominent will be presented. Namely, a survey that was conducted among music teachers and their listeners, which included 178 music teachers and 605 listeners from 16 different music schools. Based on the literature, it has been hypothesized that work resources, including autonomy, performance response, and social support, have a positive impact on the balance between teacher challenges and skills that contribute to the experience of flow. In addition, it is hypothesized that flow passes from teachers to their listeners. The results of the analyses support both the first and the second hypothesis (Emeršič, 2013).

In Slovenia, a survey among higher education teachers was conducted in 2012. The purpose of the study was to examine the associations between flow and work. The participants were 293 professors from three Slovenian universities: the University of Ljubljana, the University of Maribor, and the University of Primorska. The results

of the study showed that teachers achieve greater flow if they have a free path in planning their work (Emeršič, 2013).

Emeršič (2013) tackled the problem in her study, where she assumed that the listeners' flow would be most influenced by the personality of the professor. She was able to confirm her hypothesis; as many as 48.3% of all surveyed listeners stated that the professor's personality had a very strong influence on their experience of study flow. The results showed that there were more first-year listeners who agreed that the professor's personality influenced their experience of flow the most (M = 4.40) than fourth-year listeners (M = 4.21). Bakker (2005) also found in one study that flow can be transmitted. Music teachers and their listeners participated in the study. They demonstrated that the experience of flow in teachers is positively related to the flow in their listeners.

4.3 Survey Questionnaire for Listeners as a Tool for Assessing the Teacher/Coach After the Implementation of Coaching

Schermerhorn et al. (2005, p. 296) label feedback as "the process by which a listener communicates with a teacher by returning another message."

Brookhart also speaks about the effectiveness of feedback (2011, p. 33). He believes that effective feedback is only that which "helps the teacher to improve their work" and that which says: "What the teachers need to hear, not what the listener has to say."

A potential problem that may arise in giving feedback to a teacher is, as Birkenmaier and Timm (2003, p. 13) point out, hindering the listener from giving feedback for fear that it will affect their evaluation or assessment.

In summary, one can simply state that feedback is important because:

(i)   We know where we are.
(ii)   We know how we are progressing.
(iii)   We know how we can become even better.

That is the whole point. Feedback is important for both the teacher and the listener.

We focus on receiving feedback after conducting coaching, which, however, is not always easy for the teacher. The essential principle is that the teacher must be open, rather than defensive and antagonistic. The proper delivery of feedback plays a key role in achieving teacher flow, as well as healthy authority.

In the field of coaching, which was included in the educational process, the teacher obtained feedback with the help of questionnaires, which the listeners had to solve after completing the educational process and after successfully achieving the goal and performing all activities related to the subject. The survey questionnaires were completed by the listeners, who remained anonymous. Based on this, it can be concluded that they gave honest answers. By doing so, the potential problem highlighted by Birkenmaier and Timm (see above) was also avoided. The results of the survey questionnaire, which was used as one of the tools after the implementation of coaching, are given in the empirical part of the study.

5 Discussion: Empirical Results and Findings

5.1 Results and Findings of the Empirical Research – Introduction of the GROW Model

At the time of the study, the author of this paper had been the holder and executor of the *Economics and Business Management* course at a higher education institution for 7 years. She carried out the educational process for 5 years without introducing coaching. For the last two years, however, she decided to introduce a new method of work into her educational process – coaching – with all the tools presented in the theoretical part of the study.

Table 1 shows the data on:

(i)   how many listeners were enrolled in the course in each academic year;
(ii)   how many listeners attended the course;
(iii)   how many listeners completed all the tasks that were a condition at a given time to complete all activities in this course; and
(iv)   the average percentage of success among listeners, who completed their tasks on time.

Table 1: Number of listeners and achievement of the target set separately in each academic year from 2014 to 2021

Academic year	The education process includes coaching	Number of listeners enrolled in the subject Fi	Number of active participating listeners Fi	Percentage of active participating listeners fi %	Number / percentage of listeners who performed all tasks on time $fi_{1/fi\ 1}$ %	Share of the average of all performed tasks
2014/2015	NO	15	11	73.33	9 / 81.82	74
2015/2016	NO	33	24	72.73	18 / 75.00	73
2016/2017	NO	25	14	56.00	11 / 78.57	72
2017/2018	NO	22	17	77.27	15 / 88.24	73
2018/2019	NO	35	27	77.14	24 / 88.89	74
Average				**71.29**		**73.20**
2019/2020	YES	21	19	90.48	19 / 100.00	83
2020/2021	YES	39	31	79.49	31 / 100.00	83
Average				**84.99**		**83.00**
together		190	143			

Source: own

Table 1 shows that the survey was carried out on a sample of 190 listeners, of which 70.52% (average) were actively involved in the educational process. In the continuation, the author will focus on the difference between the number of listeners who achieved the set goal and received coaching in the educational process, and the number of listeners who achieved their goal and were not involved in the educational process through coaching.

Ninety-three other staff members were teaching without coaching in a five-year period. On average, 71.29% of listeners were active in all years included in the survey. Based on the sample, when coaching was not involved, listeners who actively participated in the education process did not successfully complete all tasks in the time available to them. The highest percentage of successful tasks was 88.89% in the 2018/2019 academic year. The listeners' grade or percentage achieved on average for the completed tasks was also measured. The share of the average of all performed tasks thus amounted to 73.20%, which is the average rating of the grade very good (8).

For the last two years of study, the lecturer decided to include the teaching method of coaching with all the previously mentioned tools in the educational process. Fifty listeners were actively involved in this process. On average, 84.99% of listeners were active in both years when the provider carried out the educational process with the

help of coaching. In this process of education, based on the sample and a period of two years, one sees that all listeners who actively participated in the process of education successfully completed all tasks in the time they had at their disposal. With this, the teacher, the coach, received confirmation that they had made the right decision regarding the introduction of a new method in the educational process. The listeners' average grade or percentage achieved for the completed tasks were also measured. The share of the average of all performed tasks thus amounted to 83.00%, which is the average grade of very good (9) and is almost 10% higher than the percentage was when the teaching method of coaching was not included. At this point, it is important to mention that before the 2020/2021 academic year, this subject was carried out both remotely and live from the very beginning. So, the COVID-19 situation, in which we found ourselves in 2020, did not affect the educational process itself. It only influenced the implementation of the final exam (assessment of theoretical knowledge), which was conducted remotely in 2020/2021, via the Sava Exam Browser[2] online tool.

Given that the sample is small, the t-test statistic or the listener's t-distribution can be chosen to confirm the set hypothesis H1. With 95% certainty or a 5% level of risk, one can say that between 74% and 93% of listeners, all populations who will be involved in the educational process in the future with the help of coaching, will successfully complete all tasks.

Based on the results of the quantitative analysis, hypothesis H_1 was confirmed: *The number of listeners who achieve the goal and receive coaching in the educational process is greater than the number of listeners who are not involved in such an educational process.*

A teacher can check the level of their authority by reviewing what percentage of the tasks are done by active listeners at a given time. If this percentage is higher than 80%, then the teacher has a strong and healthy level of authority; if the percentage is between 50% and 80%, then the teacher has a good level of authority; but if the percentage of completed tasks is below 50%, the teacher's level of authority is weak (Žunec, 2021, p. 107). The percentage of average tasks performed when the teacher introduced the method of coaching into the educational process averaged 83% in

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[2] It should be mentioned that the teacher, coach, already evaluated the listeners during the educational process in a combination of practical knowledge (project work, seminars, and evaluation, which accounted for 35% of the final grade) and relationships (participation in the forum, activities in the Trello tool, which accounted for 5% of the final grade), and finally with the assessment of theoretical knowledge (written part of the exam, which accounted for 60% of the final grade).

both years, which means that this teaching method is also effective in raising the teacher's level of authority.

5.2   Results and Findings of the Empirical Research – Introduction of the Csikszentmihalyi Flow Model

In this quantitative study, the descriptive method was used as a basis, drawing on information from foreign sources mostly. A survey was used to collect data, and a questionnaire was used as the research instrument.

Data were collected using an anonymous questionnaire, which was intended for listeners, who attended the Mathematical Modelling[3] subject at the Faculty of Science and Mathematics at the University of Maribor. The listeners answered the survey questionnaires in the 2019/2020 summer semester and the 2020/2021summer semester via the Trello tool[4].

In the 2019/2020 academic year, 15 listeners participated in the survey. In the 2020/2021 academic year, 13 listeners participated in the study. The sample included 28 listeners – a small sample. The sample will be used to infer for the population, so inferential statistics will be discussed. All listeners were involved in coaching that was conducted through the educational process. The author also used the GROW model in the implementation of coaching. The study focused on the individual listener (basic unit), who participated in the process, and measured at what stage of implementation the GROW model reached flow (flow is the variable, which is descriptive and nominal). The author did not focus on gender, field, or level of study, so demographics were not the subject of the survey.

At the beginning of each phase of the GROW model implementation, each listener was asked the same question: In which part of the emotional state graph are you currently located? The listeners were able to choose from the following emotional states: anxiety, worry, numbness, boredom, relaxation, control, flow, and awakening. In exploring the concept of flow, Table 2 shows how listeners experienced it after individual stages of the implementation of the educational process. All other possible emotional states are left aside.

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[3] The author of this paper was involved in this course as a coach and not as a lecturer.
[4] We used it as a support tool for the GROW model tool. Using the Trello board, the listeners monitored their own progress and the progress of the whole group (i.e., the year) in acquiring knowledge.

Table 2: Number and percentage of listeners who achieve flow by stage

Academic year	Fi	Fi - the first phase of the implementation of the GROW model	Fi%	Fi – the second phase of the implementation of the GROW model	Fi%	Fi - the third phase of the implementation of the GROW	Fi%	Fi - the fourth phase of the implementation of the GROW model	Fi %
2019/2020	15	4	26.67	7	46.66	9	60.00	15	100
2020/2021	13	3	23.07	5	38.46	8	61.54	13	100
Total fi	28	7	25.00	13	46.43	17	60.71	28	100
Total % fi%			24.87		42.56		60.77		100

Source: own

From Table 2, one can deduct that the emotional state of flow in listeners as they moved from the first phase to the next phase of implementation of the GROW model increased. In the final phase, flow was achieved by all listeners, i.e., all listeners in the coaching process were motivated to complete their obligations in the course, which in turn meant that they all completed the tasks in the allotted time. Thus, all the listeners achieved the goal they set together with the coach at the very beginning of the educational process. The teacher also achieved the goal, because by introducing coaching in the educational process, they achieved confirmation that the chosen teaching method was correct and appropriate.

In the continuation, for clarity, Figure 1 is used to show the share of listeners who, after individual phases, achieved flow in a comparative period of two years.
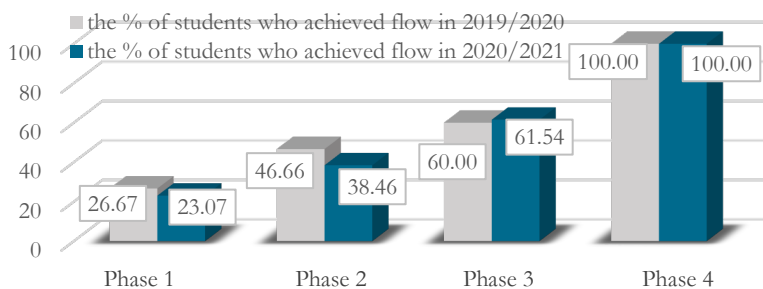
Figure 1: Proportion of listeners with flow
Source: own

In both years 24.87% (average) of listeners reached flow in the first phase, 42.56% in the second phase, 60.77% in the third phase, and all listeners (100%) reached flow in the last phase. The average of both years was also calculated, after all phases. Thus, on average, 57.05% of listeners reached flow after all phases.

Given that the sample was small, the t-test statistic or the listener's t-distribution was chosen to confirm set hypothesis H_2. With 95% certainty or 5% risk, one can say that 75% of listeners in all populations who will be involved in the educational process with the help of coaching in the future, will achieve flow by the end of the goal they set.

Based on the results, using quantitative analysis of a small sample, hypothesis H_2 can be confirmed: *Listeners who receive coaching in the educational process have a positive experience.*

5.3   Results and Findings of the Conducted Empirical Research – A Questionnaire for Listeners

In Chapter 5.1, the author concretized that a teacher could examine the level of his or her authority by checking the percentage of tasks performed by the listeners involved in the education process. In this case, the teacher had a strong and healthy authority with the introduction of coaching in the educational process, as the average percentage of the tasks performed was 83% in both years.

Žunec (2021, p. 121) gives five more specific suggestions for strengthening the lecturer's authority: (i) the lecturer is always an example to the listeners, (ii) they give clear instructions, (iii) they communicate regularly with the listeners, (iv) they give clear feedback, and (v) when problems occur, they immediate and subject to discussion. The lecturer, who is a coach, considers all five specific proposals for strengthening authority in the process of education with the teaching method of coaching with the listed tools. And if what is written is true, then the lecturer who is also the coach, has a strong and healthy authority. For this to be the case, the mentioned was tested based on questionnaires (the measuring instrument), which were given to the listeners after the educational process was completed. The results of the quantitative analysis are listed below.

Vavra (1997, p. 152) says that descriptive statistics serve as an illumination of respondents' actual assessments on individual basic issues. Descriptive statistics also enable us to learn about all the fundamental characteristics of the answers.

Therefore, for each individual year measured on an interval scale, the following is demonstrated:

1. Arithmetic means or average values → serve as centre of gravity statistical measures of centrality, based on which we estimate the dispersion of individual variables and the average level.
2. Standard deviation → serves to estimate the dispersion of individual variables and the average level (Malhotra & Birks 2003, p. 354).

To summarize, the arithmetic mean of the mean values was used as the basic mean value, which is calculated from all the total data (Bastič, 2006, p. 7). The standard deviation was used for the second statistical measure. The standard deviation is equal to the square root of the variance and is shown in the same units as the composite variable and its arithmetic mean. In summarizing Bastič's idea (2006, p. 7), one can state that the standard deviation is used as a measure of the value of the arithmetic mean, which means that the smaller the standard deviation, the smaller the differences between the actual values of the composite variable and its arithmetic mean (Bastič 2006, p. 7).

For all seven years, after completing the educational process, she used questionnaires to obtain feedback from the listeners on their satisfaction with her way of working. The survey questionnaires completed by the listeners remained anonymous. The listeners defined up to 14 statements/questions based on the 5-point Likert scale (1 – never, 2 – rarely, 3 – sometimes, 4 – often, 5 – always).

Table 3 shows descriptive statistics for determining the average grade of the teacher for a period of seven years. As the above was studied, the listeners were asked to indicate their degree of agreement with the 14 statements.

The descriptive statistics show that the lowest value of the grade (3.95) was achieved by the teacher in the first academic year (2014/2015). The highest value of the estimated grade was reached in 2020/2021, which is 4.58. The highest dispersion of answers (standard deviation) was also achieved in the first year of the educational

process, namely 2014/2015, which means that respondents differed the most in their answers according to this indicator. The lowest value of the standard deviation was reached in 2019/2020 indicator, which means that there were the smallest differences in the answers of the respondents. Also, the descriptive statistics show that, on average, the teacher's assessment increased when she included coaching in the educational process. Namely, it rose by as much as 0.52%.

Table 3: **Descriptive statistics for determining the average teacher score from 2014 to 2021**

Academic year	The educational process includes coaching	Number of participating respondents – number of questionnaires resolved F_i	Average teacher rating	Standard deviation	Average assessment per study course
2014/2015	NO	11	3.95	0.92	3.87
2015/2016	NO	24	4.02	0.85	4.11
2016/2017	NO	14	4.09	0.84	3.88
2017/2018	NO	17	4.05	0.87	4.01
2018/2019	NO	27	4.07	0.87	3.94
Average			**4.04**	**0.87**	**3.96**
2019/2020	YES	19	4.53	0.75	3.96
2020/2021	YES	31	4.58	0.82	3.87
Average			**4.56**	**0.79**	**3.92**
Together		143			

Measured on the Likert scale from 1 – never to 5 – always.

Source: own

The teacher therefore analysed her level of authority in a way that checked the percentage of the average grade from the listeners who completed the questionnaire. As this percentage was higher than 80% (at the time of the introduction of coaching it was as high as 91.2%), the teacher/coach had strong and healthy authority. However, in focusing on the percentage of the average grade in the entire field of study in the last two years, one finds that it was 78%, which means that teachers in the entire field of study had good authority. Based on the results of the analysis, hypothesis H_3 can be concluded and confirmed*: The teacher who practices coaching acquires healthy authority.*

6   Conclusions

Every teacher should:

(i)   have enough knowledge and be professional;
(ii)   be emotionally intelligent;
(iii)   use common sense;
(iv)   have a passion and energy for the work they do;
(v)   be disciplined;
(vi)   assess the knowledge of the listeners both theoretically and practically;
(vii)   have courage in making decisions; and
(viii)   be proud of themself and of the listeners.

The advantages for listeners who participated in the educational process, which included coaching, can be seen mainly in:

(i)   encouraging ongoing work;
(ii)   tracking one's own progress;
(iii)   quickly identifying potential problems;
(iv)   faster progress towards completed tasks; and
(v)   feedback from the professor, coach.

Based on the study, the hypotheses H_1, H_2 and H_3 were confirmed. The thesis and the key research question were empirically verified, and it was found that the teacher and the listener, with the help of coaching, made significant progress in achieving the set goal. With the confirmation of all the research hypotheses, the fundamental thesis of the study can also be confirmed.

However, we must all be aware that with the help of coaching, which could be included by all teachers in the educational process, we should not expect perfection. However, we should expect progress. Progress in teachers and progress in listeners. If we stick to this mindset, it will eventually become part of our daily activities. If listeners feel respected, they will be willing to give more of themselves; not necessarily, but the probability is significantly higher. Let us be guided by a thought from Aristotle, who says: "What we repeatedly do, we are. So, excellence is not an act, but a habit."

In other words, being great is not a skill, but it should become a habit. And whoever fails to strive for improvement will eventually cease to even be good. The essence of our contribution is that both teachers and listeners realize that with the help of coaching, they progress more and more every day, until they reach their goal and can take control of their own achievements.

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The Scope, Inclusion, and Experiences of International Teachers with a Migrant Background in Slovenian Schools

Mihaela Brumen, Matjaž Duh, Jerneja Herzog,
Tomaž Zupančič

University of Maribor, Faculty of Education, Maribor Slovenia
mihaela.brumen@um.si, matjaz.duh@um.si, jerneja.herzog@um.si,
tomaz.zupancic@um.si

Abstract The paper introduces the scope, form, inclusion, experiences, self-perception, and difficulties of international teachers (with a migration background) in the Slovenian educational environment. The quantitative-qualitative study was carried out within the European ITTS project (entitled International Teachers for Tomorrow's School-System Change as an Opportunity for Intercultural School Development and Mutual Learning). Data were obtained using an online questionnaire for school principals and a semi-structured interview for international teachers. The results showed that not many international teachers (with a migration background) were integrated and employed at Slovenian schools. School principals welcomed and supported the integration of international teachers (with a migration background) into the Slovenian school system. The international teachers reported positive relations and collaboration with their colleagues as well as with the school administration. However, their professional educational qualifications were often not fully recognized by Slovenian schools. Not mastering the Slovenian language and the culture of the country hindered access to employment. The results obtained should assist Slovenian school policymakers and educators in reconsidering the possibilities for professional re-integration and continuing the professional development of these teachers in Slovenia.

1   Introduction

The professional re-integration of international teachers (with a migration background) who have recently arrived in a new school setting is a challenge for countries all over the globe. Putjata (2017, p. 14) has established that global transnational mobility opposed by a monolingual and monocultural mindset at school has led educational researchers across the world to call for a multilingual and multicultural turn. Niyubahwe, Mukamurera and Jutras (2013, p. 280) emphasize that the re-entry of international teachers (with a migration background) into the teaching profession of the host country is beneficial not only for recently immigrated teachers but also for the children of immigrant families. They are perceived as bridge-builders between students, teachers, parents, and the school community, and as experts on multilingualism and intercultural communication (Putjata, 2017). Erel (2010) also points out that positioning immigrant teachers not as refugees in need of help but rather as experts and equals to their colleagues could at the same time help to enhance economic integration and prevent the chronic underemployment of new migrants.

A review of research on international teachers (with a migration background) in other countries (e.g., Israel, Canada, Australia, USA) shows very few studies on their professional re-integration into the host country's school system. Researchers are faced with a restricted data corpus (Jhagroo, 2016; Niyubahwe et al., 2013; Putjata, 2017; Yoon Young, 2018); therefore, their findings offer only impressions of the situation rather than generalizations that could be beneficial for their socio-professional integration into the new school environment. However, Jhagroo (2016) notes that these findings cannot be generalised because one's experience of practices is individual and personal in nature, while also depending on the host country's school context. The findings of the studies (Myles et al., 2006; Schmidt, 2010; Schmidt et al., 2010) indicated that international teachers' existing competences were not taken into consideration in the hiring procedures in the new country, although they had university diplomas or extensive teaching experience acquired in their country of origin. Niyubahwe, Mukamurera and Jutras (2013) also remarked that international teachers who were competent in the required subject were not hired in a permanent position.

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Slovenia also faces with the question of how to integrate the children of migrants and asylum seekers into the regular Slovenian school system. From the viewpoint of integration, learning Slovene as a second/foreign language is important for these children. This is set out in Article 82 of the Migration Act (2011) and the Basic School Act (1996), which guarantee immigrant children (who have a residence permit in the Republic of Slovenia) the right to compulsory primary education and Slovene language assistance. In recent years, the school milieu has indicated that "radical systemic changes in school organization will be needed so that the newly prepared guidelines can be properly implemented. With these changes, it will be necessary to (further) educate Slovene and international teachers so that they can adapt to the new teaching system" (Knez, 2009, p. 8).

Moreover, the question also arises of how to register and activate international teachers (with a migration background), among asylum seekers in particular, to teach immigrant children in Slovenia, their host country. In accordance with the Rules on the Education of Teachers and Other Experts in Education (2011), all Slovenian teachers, including international teachers, must master the Slovene Standard language, have certain teaching competences and qualifications, and pass a final professional exam. Potential candidates who acquired their teaching education competences in their country of origin may initiate the procedure of recognition of their professional qualifications. This service falls under the jurisdiction of the Ministry of Education. The conditions of employment in the field of education are the same for all teachers except that international teachers need a residence and work permit.

In the Slovenian context, only one paper deals with the professional re-integration of international teachers into the school system. Marijanca Ajša Vižintin (2009) describes a project which, besides teaching Slovene as a second/foreign language, introduced teaching of the language of origin (Macedonian and Albanian) and the cultures of immigrant children in Slovenia. The teaching was presented from the perspective of three international teachers who immigrated to Slovenia, two from Albania and one from Macedonia, and their integration in the specific school setting.

This paper focuses on the form, inclusion, experience, and self-perception of international teachers (with a migration background) as part of a new community. Jhagroo (2016, p. 56) states that "offering the teachers a platform for their stories to

be heard, their feeling of value may be rekindled. In addition, engaging in reflective narrative through recollections of one's past experiences within a present context may be professionally beneficial in giving the teachers an opportunity to reflect how their own background and experiences may influence on their practice."

2   Methodology

2.1   Background to the Research Approach

To understand the immigration context in Slovenia and the process of collecting the international teachers' contact information (with a migration background), some statistical data are first presented. According to the Statistical Office of the Republic of Slovenia (SORS, November 2021), 2,107,126 people live in Slovenia. Of this, only 8% are people of other nationalities, which (according to Eurostat, 2019) places Slovenia among the last quarter of EU countries in terms of the total number of immigrants per population.

The annual trend shows a growing number of immigrants in Slovenia (e.g., on 1 January 2020, there were 156,351 foreign citizens in Slovenia, and a year later, on 1 January 2021, there were 168,651 (Statistical Office of the Republic of Slovenia, 2021). Most people immigrate to Slovenia from the former Yugoslavia. In 2019, 78.5% of all immigrants who came to Slovenia came from that area. The largest share of immigrants from the former Yugoslavia in 2019 consisted of people from Bosnia and Herzegovina (56.9%), Serbia (16.3%) and Kosovo (14.2%) (SORS, 2020). Immigrants come to Slovenia for economic reasons because of their desire for a better life.

With the purpose of examining the integration of international teachers (with a migration background) in the regular school system in Slovenia, we contacted all public pre-primary, primary and secondary school principals. With the help of official intervention by the Ministry of Education, a short questionnaire was sent to all official e-mails of the public schools (approximately 100 pre-schools, 400 primary schools, and approximately 100 secondary schools). One of our aims was to record the process schools need to undertake to employ international teachers (with a migration background) and to collect the personal (e)-contacts of those teachers who

would be able to complete the final version of the questionnaire. However, only 78 school principals completed the questionnaire.

Furthermore, more than 10 different non-governmental cultural organisations from former Yugoslavia, based in Slovenia, were also contacted. These cultural and arts organisations create conditions for the long-term sustainability of various cultural, educational, and artistic practices of people coming, for example, from the Republic of Serbia, Bosnia and Herzegovina, Macedonia, or Albania. Also, several individuals were addressed (e.g., colleagues at the Ministry of Education and other educational institutions, individual teachers) who could help us find international teachers (with a migration background) in Slovenia. However, we received no answers from these cultural organisations, while the individuals we contacted were unable to provide us with the contact details (e-mail, addresses) of any international teachers in Slovenia. These individuals reported that they knew people who had moved to Slovenia when they were young and who had completed their education here and now work as teachers, or they recommended that we contact international teachers who came to Slovenia from Western EU countries or the USA.

We then turned to other non-governmental organisations who offer support to immigrants (e.g., from Afghanistan, Pakistan). Their contacts reported that they did not possess information on the professions of immigrants residing here in Slovenia and did not know if any of them worked as teachers in their host country. They also pointed out that most immigrants living here are just passing through Slovenia with the goal of settling and finding employment in one of the western countries (e.g., Germany, France, Great Britain).

2.2   The Purpose and Objectives of the Study

The purpose of the quantitative-qualitative study was to examine the **scope, form, inclusion**, and **situation** of international teachers (with a migration background) in the regular school system in Slovenia. The study also examined the **perceptions and experiences** formed by these international teachers (with a migration background) as well as **the difficulties and obstacles** they encountered in their integration into the Slovenian educational environment.

Based on the results obtained, the purpose of the study was to consider the possibilities for re-integration and the continuing professional development of these teachers in the Slovenian school environment.

2.3   Research Questions

Our research was based on the following research questions:

RQ1: What were the forms of participation, cooperation, type of employment and qualifications of international teachers (with a migration background) over the last five years in Slovenian schools?

RQ2: What experiences do international teachers (with a migration background) have in everyday Slovenian school life and what additional support do they receive?

RQ3: How are international teachers professionally integrated and involved in school activities?

RQ4: What difficulties/obstacles do international teachers face in their integration into the Slovenian educational environment?

2.4   Research Methods and Data Processing

The first part of the quantitative study was based upon a descriptive and causal-non-experimental method of empirical pedagogical research, involving an online questionnaire for school principals.

The second part relied on a qualitative methodological approach, utilising semi-structured interviews. With the help of this interview, we offered the interviewees, international teachers (with a migration background), the opportunity to describe, in their own words and feelings, their own perceptions and experiences in their field of work (Vogrinc, 2008). Their comments provided a multitude of perspectives and experiences of integration and teaching in the Slovenian classroom, while at the same time offering more in-depth insights into international teachers' authentic classroom situations.

The respondents' answers were analysed at the descriptive level and with the help of inferential statistics. The semi-structured interviews were analysed using ranking categories.

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2.5   Instruments

In agreement with the Ministry of Education, data were collected using an **online questionnaire** (1ka) for (pre)primary and secondary school principals in Slovenia. The study was conducted between February and April 2021.

The **semi-structured interviews** were conducted and analysed in September 2021. The aim of the semi-structured interview was to record the experiences and perceptions of professional integration and involvement in Slovenian schools from international teachers from different (marginal) geographical areas, especially from non-European countries (e. g., Syria, Afghanistan).

The results are illustrated in tables, using frequency distributions (f, f%).

Ranking categories were used to analyse the semi-structured interviews.

2.6   Research Sample

205 principals of Slovenian (pre)primary and secondary schools responded to the questionnaire. Only fully completed answers were included in the statistical analysis; the final research sample was 78 (n = 78).

From the Slovenian principals, (only) two contact e-mail addresses for international teachers employed in their schools were received: one was from Slovakia and the other was from Croatia. We wanted to interview them in person, but they did not respond to our e-mails, despite several e-mails being sent to them.

Since we were unable to collect the e-mail addresses of international teachers from the Slovenian school principals, we then contacted the Slovenian Government Office for the Support and Integration of Migrants. However, five e-contacts for international teachers with a migration background were received: three from Turkey, one from Iran and one from Syria, which were subsequently invited to participate in the semi-structured interview. Only two of them responded to our e-mail and were willing to take part in the interview, one from Turkey (under 30 years of age, a resident in Slovenia for 4 years) and one from Iran (40 – 49 years of age, a resident in Slovenia for 2 years). They were both teachers of English as a foreign

language. The interviewee from Iran commented: *"I was an official English teacher in my country. I asked the employment office in Ljubljana to help me find a job as an English teacher, but they couldn't. I'll be happy if you help me with that."* From their answers in the interview, we concluded that they had had no experience with teaching in Slovenian schools, neither of them was employed, and they were therefore unable to describe their everyday school-life experience. As stated by the interviewees, the certificate of proficiency in Slovene was an obstacle for them if they wanted to be employed at a school.

Only one international teacher, from Madagascar, was willing to take part in the semi-structured interview. Her answers are summarised in section 3.2.

3   Results and Discussion

The results are presented in two parts. First, the quantitative analysis of the answers to the **online questionnaire** is given. Then, the results of the **semi-structured** interview with the international teacher (with a migration background) are illustrated.

3.1   Analysis of the Online Questionnaire

First, the authors were interested in school principals' experiences with international teachers (with a migration background) in their schools and how many of them have participated in the Slovenian school environment. The questions addressed the last five school years. The results are presented in Table 1.

Table 1: Frequency distribution of the participation of international teachers in schools over the last five years

Participation in schools	School year					
	2020-21		2019-20		2018-19	
	f	f%	f	f%	f	f%
Participated	6	60	2	20	1	10
Did not participate	55	81	0	0	1	1
	2017-18		2016-17		Total	
	f	f%	f	f%	f	f%
Participated	0	0	1	10	10	100
Did not participate	0	0	12	18	68	100

As evident from Table 1, among the 78 schools that participated in the study there were 10 that employed international teachers between 2016 and 2021. One international teacher was employed in the 2016-17 and 2018-19 school years, two in 2019-20. There were 6 more international teachers employed in the 2020-2021 school year. The results over the last five years demonstrate that only some Slovenian schools employed international teachers (with a migration background).

The authors were also interested in the number of international teachers participating in schools. As indicated in Table 2, all school principals involved in the study answered that fewer than 3 teachers participated in schools in the last five years. In most cases, one international teacher per school was involved.

Table 2: Frequency distribution of international teachers participating in schools in the last five years

Number of international teachers	School year									
	2020-21		2019-20		2018-19		2017-18		2016-17	
	f	f %	f	f %	f	f %	f	f %	f	f %
Less than 3 teachers	6	60	2	20	1	10	0	0	1	10
More than 3 teachers	0	0	0	0	0	0	0	0	0	0

Furthermore, the school principals were asked what forms of cooperation they had implemented in their schools with international teachers. The data is illustrated in Table 3.

Table 3: Frequency distribution of the form of cooperation according to the school year

Forms of cooperation	School year					
	2020-21		2019-20		2018-19	
	f	f%	f	f%	f	f%
Supporting students in their studies	0	0	0	0	0	0
Teaching as a regular obligation at school	4	67	1	17	0	0
Language support, help in communication at school	1	100	0	0	0	0
Other	0	0	0	0	1	100

| Forms of cooperation | School year | | | |
| | 2017-18 | | 2016-17 | |
	f	f%	f	f%
Supporting students in their studies	0	0	0	0
Teaching as a regular obligation at school	0	0	0	0
Language support, help in communication at school	0	0	0	0
Other	0	0	0	0

In the last five years, the form of cooperation of international teachers in schools has largely taken the form of **teaching** (all) students or offering language support in **communication** with others (e.g., peers, teachers, parents).

As evident from Table 4, the most common type of employment in the schools involved in the study was full-time employment (43%). One international teacher worked as a part-time teacher, one received a fee, and one participated at the school as a volunteer. However, 36% of respondents chose the option "other" to this question. Their open-ended answers revealed that they have been employed as international teachers from Western European countries, such as Great Britain, France, Germany, Italy or Spain, teaching these languages to students. Some principals also answered that they had immigrant students attending their schools but no immigrant teachers.

Table 4: Frequency distribution of the type of employment of international teachers in schools

Type of employment	f	f%
Full-time employment	6	43
Part-time employment	1	7
Fee	1	7
Volunteer	1	7
Other	5	36

The authors also wanted to know which qualifications international teachers needed in order to participate and teach in schools, or how the conditions for the cooperation with these teachers were set up. The results are presented in Table 5.

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Table 5: Frequency distribution of the type of employment of international teachers in schools

Qualifications	f	f%
Additional teacher training in the host country.	2	13
Gained the suitable education in the country of origin and was sufficient to work in the Slovenian school.	5	33
None of the above.	5	33
Other:	3	20

As *indicated in Table 5 the* school principals stated that 5 (33%) of the international teachers (with a migration background) had acquired a suitable educational qualification in their country of origin to work in a Slovenian school. Two (13%) of them needed additional teacher training in Slovenia in order to teach, five (33%) and three (20%) principles chose the answers "none of the above" or "other". In the open-ended option, two principles wrote: "*The teacher has learned Slovenian and passed a professional exam. The international teacher had obtained a relevant qualification in her country of origin, but it was not fully recognized. She then studied at the Faculty of Education, University of Primorska, and received a relevant qualification that led to her employment as a preschool teacher.*"

Next, the authors wanted to know which language was most frequently used for communicating with international teachers in (pre)primary and secondary schools. As evident from Table 6, Slovene (75%) was the most frequently used language. However, three principles chose the answer "other" and mentioned that other languages, such as Serbo-Croatian, were also used.

Table 6: Frequency distribution of language of communication in schools between international teachers and school staff

Language of communication	f	f%
English	0	0
Slovenian	9	75
Other	3	25

At the end of the questionnaire, the respondents were given the opportunity to write a comment or simply add their own views on the topic. One the headmasters' comments is especially worth highlighting: "*I support employing international teachers with the immigrant experience because we desperately need them, both the students and the teaching staff. It would be much easier for all of us.*"

The comment indicates that school principals welcome and support the integration of international teachers (with a migration background) in the Slovenian school system because of the linguistic and cultural diversity of school students.

3.2   Analysis of the Semi-Structured Interview

The second part of the study includes a semi-structured interview with one international teacher (with a migration background). In line with the research questions, the authors were interested in the type of employment and the contract the interviewee had, the form of activity and involvement at a current school, acceptance and support among the staff, and her perception of everyday school life. Since Slovenian students and teachers do not have much experience with migrant teachers and their inclusion in our educational environment, the interviewee's personal experience and involvement in everyday school life is summarized below.

Interviewee

The interviewee came from Madagascar. She was a teacher of French at three secondary, public schools. She worked as a part-time teacher (50% and more). She had been working at her current schools for more than 5 years, renewing her contract every new school year. At the time of the study, she was employed as an independent teacher with appropriate knowledge of the content, didactics, and teaching methods in her subject. She enriched the content of French lessons, introducing cultures, customs, traditions, and language, and she complemented the work of a Slovenian teacher of French as a foreign language. She states: "*My work as a language teacher is perhaps different from that of my teacher colleagues because teaching a language really requires a contact with a native speaker who adds value to the learning, which a Slovenian teacher cannot do. I am not disqualifying the work of my Slovenian colleagues at all. On the contrary, our work, our methods, our approaches are complementary.*"

The interviewee taught the subject independently, sometimes accompanied by an experienced teacher and, if required, received help with teaching. She interacted with other teachers and also parents. She used Slovene when talking with parents and was regularly involved in school life. She attended staff meetings, school trips, and reflected on and promoted the diversity of the students in the classroom. Her

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professional duties and activities were similar to those of local teachers in her country of residence.

She felt accepted and comfortable among the staff, could always ask a colleague for advice, and could contribute her own ideas among the teaching personnel. She was asked by colleagues for her opinion and feedback on the school's work, and she felt valued by the principal, staff and students. Her international background was appreciated and valued. She was proud that her students achieved excellent results on various examinations and at language competitions.

The interviewee received support in team teaching, materials and in-service training. However, she would have appreciated more support in learning Slovenian (the language of the host country). She could have used support in her everyday schoolwork, especially in the preparation of and reflection on teaching lessons, classroom management, extra-curricular tasks, and orientation at school. She also pointed out that the formal requirements/acceptance of degrees is a barrier for her to work as a teacher in Slovenia. She said: *"I do not receive the real 'price', value, salary for the work I do. It is my colleagues who get the points for the projects I propose, organize, and carry out. They get career advancement and not me. I would not like to take the place of the Slovenian teacher but would like to work with him/her to support the students, to bring the added value to the classroom. "*

As an international teacher, the experience and competences she brought to her professional life differed from those of her Slovenian colleagues. She noted that Slovenian classes were more homogenous than in her country of origin and, in her opinion, the question of identity is also different in both countries. She commented: *"My vision of life in Slovenia is different from that of my Slovenian colleagues because I chose to live here, and I 'have' to make effort to adapt myself to the habits that are not mine. For them, every situation is 'normal' and 'logical'. So, in first-hand: what is normal and logical is not for everyone.*

For me, the classes are rather homogenous contrary to those in my country. As a result, Slovenian students and teachers all think more or less the same and do not see other culture. For example: If we had students of different origins, different religions in the same class (at least half of them), we would treat the question of identity differently (a theme for the language class to deal with)".

4   Discussion and Conclusions

The results obtained through the quantitative-qualitative research indicate that few international teachers (with a migration background) are integrated and employed in Slovenian schools. Despite efforts in contacting various institutions, Ministries, non-governmental organisations, individuals, and school principals, the authors could not collect the contact information (e-mail) of other migrant teachers in Slovenia who were willing to share their experiences about everyday Slovenian school life. Only one international teacher was willing to participate in the semi-structured interview. Moreover, the findings reveal that if international teachers (with a migrant background) are employed at Slovenian schools, they tend to come from Western European countries as foreign language teachers, or from the countries of former Yugoslavia. Medarić et al. (2021, p. 4), in their paper on integration of migrant children in Slovenian schools, claim that Slovenia remains largely a country of transition. According to their research data, Slovenia is not a desirable and/or final destination for migrants from a global migration perspective, as it is geographically small, politically less recognized and not economically attractive enough (ibid.).

More precisely, the school principals' answers in the quantitative study show that only 10 Slovenian schools have employed international teachers (with a migration background) over the last five years – these numbers demonstrate that fewer than three teachers (usually just one) have participated in one Slovenian school per school year. Other studies from Canada and the USA (Deters, 2006; Niyubahwe et al., 2013) also report that international teachers (with a migration background) find it very difficult to find a school that will give them the opportunity to prove themselves. Schmidt, Young, and Mandzuk (2010) noted that systematic discriminatory hiring practices are one of the main obstacles faced by immigrant teachers who want to resume their teaching careers in Canada.

Furthermore, according to the school principals' answers in this study, teaching as a full-time employee at school was the most frequently used form of cooperation among migrant teachers in Slovenia. The principals also stated that almost half of them (43%), working at schools, had been consistently employed. In addition, the study also revealed that the international teaching qualifications for cooperation in schools were often not fully recognized in the Slovenian education system, meaning that along with passing a Slovenian language exam, international teachers also

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needed to complete additional teacher training courses in order to receive a relevant qualification.

Furthermore, the respondents from Iran and Turkey stated that none of them had been employed in a school and were therefore unable to describe their everyday school-life experiences. To get a job at Slovenian schools, all teachers must master the Slovene standard language, have certain teaching competences and qualifications, and pass a final professional exam. Both interviewees fulfil the requirement of having teaching competences in their home country. However, the certificate of proficiency in Slovene is often an obstacle to international teachers being employed at schools, as stated by the interviewees. The authors see a problem in this, as there is only a small number of international teachers (with a migration background), who work in Slovenian schools and who are able to offer support to immigrant students, therefore, the authors recommend loosening (language proficiency) legislation in order to ease their path to employment.

According to Slovenian legislation (Rules on the Teaching Certification Examination, 2006), permanent staff in education need to pass a final professional exam, which alongside content and teaching methods also evaluates the candidate's knowledge of Slovene. Teachers cannot be regularly employed in a Slovenian educational institution if they do not speak Slovene fluently. The assessment of Standard Slovene in the oral section of the final professional examination is based on the standards set out in the *Catalogue of Knowledge of the Slovene Language for the Professional Examination* (Križaj-Ortar et al., 2004). The catalogue states that "the basis for determining the candidate's knowledge of Slovene, acquired during the candidate's internship or training in schools, is mainly the mentor's and school principal's assessment of the candidate's oral and written assignments or activities" (Križaj-Ortar et al., 2004, p. 3). Currently, there is no legal document that determines the level of language proficiency of Slovene (e.g., B1, B2 or C1), according to the Common European Framework of Reference for Languages, (Council of Europe, 2020), needed to teach in schools. The only document the principals are required to follow is the above-mentioned catalogue of knowledge.

Other studies (Elbaz-Luwisch, 2004; Lefebvre et al., 2002; Myles et al., 2006; Niyubahwe et al., 2013) also indicate that failure to master the language and the culture of the country could hamper access to employment. For example, Lefebvre,

Legault, and De Sève (2002) report that the French language test could be an obstacle for gaining access to employment for many immigrant teachers in Canada.

From the open-ended questions one may conclude that Slovenian school principals welcome and support the integration of international teachers (with a migration background) into the Slovenian educational system. They are aware of the fact that these teachers may act as role models, help immigrant students to integrate into the school system, and contribute to multilingual and multicultural education (Niyubahwe et al., 2013).

The responses from one international teacher (with a migration background) revealed that she mostly taught content or offered language support in communication with parents, other teachers, or students. She reported no differences in teaching approaches or classroom management and stated that she enjoyed positive relations and collaboration with her colleagues, as well as with the school administration. She did not feel socially isolated at school. Some studies in Israel (Remennick, 2002) or in Australia (Peeler & Jane, 2005) do exist, however, highlight a lack of cooperation and support on the part of school counsellors, colleagues, and parents.

There are various key factors, which support the social and professional re-integration of international teachers (with a migration background) into a new school: recognition of their professional competences leading to a teaching permit and long-term employment, the quality of collaboration and cooperation between teaching colleagues and school administration, and acceptance from the (general and school) community as well as the students' parents (Niyubahwe et al., 2013; Schmidt et al., 2010). Bearing in mind the potential for a shortage of teachers in the long run in Slovenia, the authors herein see the opportunity for international teachers to fill in this deficit. Therefore, we recommend developing guidelines or recommendations for principals, teaching staff, and international teachers themselves for their professional transition into Slovenia and elsewhere, especially in terms of employment legislation, overcoming linguistic and cultural barriers, offering supplementary funding for continuing teacher training programs, workshops and re-certification, developing (bilingual) websites for teaching and social resources, supporting teacher practices, mentorship experiences and networking.

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In conclusion, the quantitative-qualitative study (which, owing to a limited number of responses from school principals, presents only impressions, not generalizations) has brought to light certain practices and obstacles regarding the social and professional re-integration or transition of international teachers (with a migration background) into schools in Slovenia. Regarding this issue, the small number of international teachers integrated in schools and studies in Slovenia and globally, have been highlighted. However, the diverse teaching tasks and practices that international teachers are engaged in and their cooperation with other teaching staff enhance the quality of education and working conditions in schools.

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Innovative Forms of Learning and Teaching: Students' perspective

Mateja Vrečič, Anita Zupanc, Maja Hmelak
University of Maribor, Faculty of Education, Maribor Slovenia
mateja.vrecic1@guest.arnes.si, anita.zupanc4@guest.arnes.si,
maja.hmelak@um.si

Abstract This article presents innovative forms of learning and teaching that hold great importance in the process of promoting student creativity, which is crucial in the process of an individual's professional development in the modern society. In doing so, particular emphasis was placed on project learning, distance learning and online learning. The empirical part is based on a quantitative research method. The survey questionnaire was completed by 69 students in the field of preschool education. The purpose of the research was to determine to what extent and how students use innovative forms of learning in their studies, and the extent to which professors use innovative forms of teaching. Emphasis was also placed on the satisfaction of students who experienced such working methods. The results show that students rarely use innovative forms of learning but find them important. They also consider the role of the professor in the use of innovative forms of teaching to be important, as well as the professor's creativity in distance work. Based on the findings, additional training and distance learning opportunities with an emphasis on innovation and creativity in teaching can be critically considered, as well as incentives for the use of innovative forms in independent learning.

1   Introduction

Throughout its existence, the internet has given rise to new activities and changed the implementation of traditional activities. With the advent of e-commerce, e-health, e-shops and the like, the bulk of things have moved to the internet and electronic media (Bregar, 2013). "An important area of application of ICT is education. ICT is changing all types of education (formal, non-formal and informal), not only for the younger generations ('digital generations'), but also for the adult population ('digital immigrants') and opening up to education /…/, with more creativity in learning and acquiring knowledge and with more innovative approaches in adapting educational services /… (ibid., 10.)."

Social interactions are hard to avoid since they take place everywhere. This is particularly impossible in education. Without interaction, teachers would not have to teach, and students would not be able to learn. Social interaction also involves teamwork, as at least two actors are always involved. However, their role in education is constantly changing therefore a lot of adjustment is needed. With the help of technology students can browse through needed information at school and at home. Therefore, the purpose of this paper is to explore what learning methods are being used in this flood of information.

1   Social Interaction and Ways of Learning

1.1   Definition of Social Interaction

Social interaction encompasses the processes that take place between two individuals (verbal and nonverbal communication, relationship building, information exchange, forms of behaviour and actions) (Ule, 2005). It is important in learning, as it can raise the learning potential and strengthen work energy. Whalley (2002) believes that a web of interactions creates a collaborative learning environment, wherein information, knowledge, encouragement, and mutual assistance are transferred between participants.

Cognition is very important in social interaction, as it allows us to exclude from all the information received which is important to us. Social interaction is also important in learning, where three forms of cognition that affect learning can be

distinguished. The first of these is imitation, which is the first step towards social interaction and encompasses, above all, learning by example. This is more accurately described in literature as imitating the behaviour of others. This is followed by experiential learning, which is largely unconscious. At the conscious level, however, we would call this learning through experience. We are only aware of important and recurring stimuli with the help of which we shape our own experiences. We store experiences in memory and recall them when we need them. The last form is constructive learning, which comprises language, consciousness and self-awareness (Tomc, 2008).

Social phenomena are emergent and disjunctive, which is why we cannot observe them. "We can observe only individual actions, while the social phenomenon is an emergence that is formed at the level of the population of diverse actions and can only be accessible to us as an interpretation" (Tomc, 2008, p. 14).

Social interactions are also important in terms of collaborating, growing up and creating your own personality. Through these interactions people can learn a lot and share experiences, which allows us to grow into good, hard-working, responsible individuals, who are capable of teamwork based precisely on these interactions. Interactions also allow us to empathize with others, understand their feelings, and identify with others in any given situation.

Teachers have the opportunity to determine the degree of social interaction through their way of working. They can direct learners to work in pairs, small learning groups or to practise teamwork. They can encourage competition, joint problem solving or helping weaker learners.

1.1.1   Traditional and Modern Ways of Learning

Traditional learning is considered a constructivist approach, wherein students passively accepted knowledge from their environment. There are many theories of learning, but "the latest definitions are based on basic assumptions and define learning as a relatively permanent change in behaviour resulting from individual activity and experience and interaction with content, consideration of experiences /…/, from which a student gains knowledge and basic experience" (Cindrić et al. 2010, p. 62 in Bilič, 2011, p. 201). In our information society, where the time for

acquiring knowledge is getting shorter and more and more information is available on the internet, school practices are also changing. Namely, students come to classes with technological devices (mobile phones, computers). Pensky (2009) points out that there is lesser interest in the traditional way of teaching and more in browsing websites. That is why it is necessary to revive the efficient use of technology, resulting in students working more actively during lessons. Based on the above, Siemens presents a new theory for the needs of students, which he calls connectivism (Bilič, 2011, p. 202). Connectivism "focuses on dynamic, diverse, unlimited sources of knowledge that are constantly responding to change, and an environment that encourages self-activity and the process of lifelong learning" (ibid.).

As with all things, learning with the help of information and communication technology has its advantages and disadvantages. Some of the advantages are diversity (diversity of opinions), independence, interactivity, and openness in terms of an adaptive approach to learning. Students can also express themselves personally (through blogs, vlogs, forums, etc.) and gain new insights with peers abroad. However, there is one major problem, for in this flood of information it is difficult to distinguish correct information and extract its essence (Bilič, 2011, p. 203).

The traditional roles of the learner, teacher, learning technology and learning content have changed with e-learning and require careful planning of the learning environment and process as the teacher steps into the background and the learner interacts with the learning content. Rebolj (2008) believes that we must nevertheless create artificial social elements in order to give students a sense of belonging to a particular group. She mentions certain building blocks that can be placed electronically in the e-environment to create a sense of coexistence in a group: "imitation, transmission of suggestions, establishment of sympathies and antipathies and identification, social pressure, support and also mutual barriers." It is necessary to create social structure in the group with the possibility of mutual influence, which can be achieved through all forms of group work, "tasks that require communication, evaluation of products of others, project lessons, etc." (ibid., 64).

1.1.2 Flipped Classroom and Flipped Learning

"Flipped classroom is one of the newest and most popular learning models that include technology" (Jensen et al., 2014, p. 1). This learning model is redirected first to out-of-class work and then to classroom work. In flipped learning, students and students first look at the material at home and come to class with possible problems and questions. The teacher then leads the debate and provides additional information about the subject. The main purpose of flipped learning is for students to watch pre-prepared videos, recordings of lectures, and other learning content uploaded or provided by the teacher. In the classroom, they also tackle concrete problem solving and mutual interaction, therefore their participation is much more active. According to the constructivist model, learning consists of two phases: the first phase, in which students acquire understanding and knowledge of the content, and the second phase, in which they know how to use and evaluate this acquired knowledge in new situations. In the traditional model of learning, these two phases are facilitated for students, since teachers provide them with the content themselves, and the students' only task is homework. In the flipped model, however, students are responsible for reviewing the content before coming to class, and only then does the teacher's work begin, which facilitates evaluation in new situations. As this is a relatively new model of learning, studies and researchers are not unanimous on whether this is a good working method or not. In any case, the role of students is more active than in the traditional model (Jensen et al., 2014, p. 1–2). Flipped learning is integrated into the teaching method, and therefore success is usually attributed to learning alone. Schwarzzenberg et al. (Eryilmaz & Cigdemoglu, 2018, p. 2) mention "that the success of flipped learning depends to a large extent on providing the conditions for active learning."

In flipped learning, each individual's level of motivation plays an important role, as it helps to achieve the desired goals. Students who are internally motivated are more involved in classroom work and have the autonomy to learn content independently, which they later discuss. Both external and internal motivation play an important role in flipped learning. We have already mentioned the role of internal motivation, while external motivation refers to the desire to be rewarded, to avoid punishment, and is manifested primarily in behaviour. An example of external motivation is student alignment and external reward. Self-control and integrated regulation are reflections of internal motivation (Zainuddin, 2018, p.77).

Active learning is emphasized in all new or newer learning methods, especially in flipped learning.
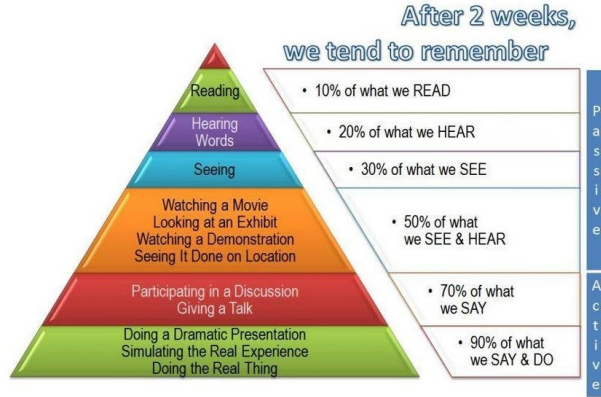
Figure 1: Representation of active learning

Source: Giorgdze, M., & Dgebuadze, M. (2017). Interactive teaching methods: challenges and perspectives. IJAEDU- International E-Journal of Advances in Education. 544 – 548. https://doi.org/10.18768/ijaedu.370419.

The Figure 1 shows that with the help of active learning we remember up to 70% of what is said and up to 90% of what we say and do. Thus, with the help of active learning and gained experience, we remember much more than with passive learning, which includes sitting and following what the teacher says. In passive learning, we remember only 10% of what is read, 20% of what is heard, 30% of what is seen, and 50% of what is heard and seen.

2.1.3   Online Learning

Owing to the influence of technology, learning in school in the traditional way no longer has the same function as it used to. Technology and social networks are becoming more widespread, leading to the teacher no longer being a transmitter of knowledge, but rather a motivator and guide. More and more students, as well as students in primary and secondary schools, have been using the internet for information.

Namely, social networks contain information that help educators upgrade their careers, as well as information about things that we are interested in. Many teachers thus use participatory social media, also called personal learning networks. These

networks involve a system of impersonal connectivity and research for the needs of information learning, ideas and information exchange. These are mainly educational blogs, wikis, and podcasts, including Twitter, Edmodo and Facebook (Viser et al., 2014, p. 397).

Dewey (1938) describes interaction as an integral part of the educational process that occurs when a student converts the information provided to them. The interaction between human and non-human actors explored by Dewey was upgraded by Laurillard (2000), who argued that university education should go beyond access to information and include collaboration with others (teachers, students, content) to help personal understanding (Anderson, 2003, p. 130–131).

Facebook and Twitter are social platforms where users can ask for interests on the wall (board) and get an answer from others. "These platforms provide knowledge building and sharing where teachers can find support in large groups that bring together answers to find the best solution" (Trust, 2014, p. 133–134).

In Slovenia, there are several thousand members in teacher groups on Facebook, e.g.:

Teachers to teachers (5,600 members): The group is intended for teachers and for those who teach to share materials, experiences, opinions, and advice.

Young teacher (6,400 members): It covers the fields of education, state exam (questions, materials, commissions, etc.), traineeships, regulations, teaching preparations, salaries, promotions, etc.

Slovenian teachers (3,600 members): The group is intended for the exchange of opinions and information for all those who teach in Slovenia and for teachers of Slovenian communities abroad.

Classroom teachers (9,900 members): A group for primary level teachers and students studying primary education.

These and many others empower (e.g., students of education, novice teachers and those with many years of practice), inspire, help to find innovative forms of work, concrete examples from practice and give the opportunity to interact with colleagues from all over the country.

2.1.4   Project Learning

Project learning is defined by Thomas (2000) as a model that organizes learning through project work. He lists the following five main features of project-based learning that have positive effects on participants (Gülbahar & Tinmaz, 2014, p. 310):

- Project-based learning is of central importance, and it does not stem from the curriculum.
- Projects based on project learning focus on issues and problems that lead students to think about core concepts and principles.
- They encourage students to think constructively.
- Project-based learning depends largely on the students.

Projects are realistic and not just school-based Heckendorn (2002) also explained that projects based on project-based learning require much more work, a longer time to complete, and are complex in nature. Project learning focuses on the final product and the experience we gain during the process itself. The main task of the teacher is to offer a good choice of topics, and the projects themselves are the responsibility of the students, as well as the division of tasks. Therefore, project work is important both on a personal and on a group level (Gülbahar & Tinmaz, 2014, p. 311). There are several phases in project work and learning, which must be completed within a certain time frame. In the first phase, planning and organising work is important, and it is crucial for the student's success. In the initial phase, the teachers or professors are also important because they help students with additional questions to organize. To find a suitable procedure for their project work, they advise brainstorming or the "de Bono" technique (6 hats), with the help of which they come up with a suitable solution for a given problem. Finally, the target audience, which includes peers as well as parents and the principal, is also important, depending on the topic of the project. During the project work itself, students learn responsibility, independence and discipline. They also learn how to make an

organizational plan, what steps to implement, how to strengthen mutual communication and mutual self-esteem, and how to learn teamwork. However, consultations are important for the teacher, as they offer an insight into the work itself, and the teacher can then offer help and check whether the student's way of working is good (Bell, 2010, p. 40–42).

Project-based learning contains an integrative view of motivation and leads to new student interests in projects. Through asking and raising questions, discussing ideas and focusing on the problem, it allows students greater and regular interest and concentration. There are two ways of proceeding in project work: first, the use of questions, and second, the use of an issue to serve as a guided activity and which causes a series of effects that leads to the final product. Students are both responsible for creating the problem as well as the treatment and the product itself. In no case, however, can the question be so limited that the results are known in advance (Blumenfeld et al., 2011, p. 371–372).

2.2   Teachers' Creativity and Their Role

In the age of growing information technology on demand, the need for a new way of learning is even greater. Some teachers are already embarking on using new teaching methods and connecting to professional learning networks (PLN) (Trust, 2014, p. 133). PLN is a system that interconnects and supports non-formal learning. It allows teachers to focus on global support networks that prevent isolation and promote independence. There are two types of PLN, namely data aggregation and social media connections (ibid.). Through this, they can also connect with other teachers around the world, providing support, help, sharing advice, feedback and collaborative opportunities. PLN allows teachers not only to do the above, but also to gather information on various websites and organize browsing, so they are always up to date with the latest learning and teaching techniques. The most popular PLN sites are Edmondo, Classroom 2.0 and The Educator's. These provide an analysis of how teachers use PLN for learning and communication (ibid.). Classroom 2.0 and The Educator's are very similar sites that allow chat features, blogs, and own posts. Both have a main forum for discussion. They also include forums for individual interest groups. Edmondo is the most widespread of the three. It contains easy and transparent page navigation, each member can join a study group, and the latest posts are visible immediately so there is no need to browse for new posts. Edmondo

is not an oversized browser but has a page of 12 themed communities where members share information and resources, as well as get feedback on the same subject (Trust, 2014, p. 136).

2.1.1   The Role of Teachers

The roles and responsibilities of teachers are constantly changing. Above all, they are determined by curricula, knowledge standards, rules, student diversity and new technology. In all of this, however, teachers have too few learning opportunities and flexibility in learning and working in a period of rising technology. Many teachers do not believe that professional development can help them with the changing work in the workplace. Due to the large volume of work, teachers themselves began the search for learning opportunities. Teachers use information and communication technology to educate themselves informally. In doing so, they learn from others, engage in collaboration, experiment, seek information, and engage in activities outside of school. In non-formal education, teachers are more independent and focus on the topics that interest and benefit them in their work. Teachers have long been the main source of knowledge, but this area has been replaced by information technology, so the way of working, teaching and learning has changed (Trust & Horrock, 2016, p. 4). It requires teachers to have ICT skills, which can come as an incentive from the management, who plans the acquisition of e-competences in an organized manner. At the same time, teachers themselves are responsible for the development of these competencies, which can be acquired by participating in various free online tutorials, webinars, mass online Arnes (and other) courses, courses at the National Education Institute of the Republic of Slovenia for professionals, members in various online communities, etc. (Zavašnik et al., 2021, p. 4).

2.1.2   The Professional Development of Teachers

The professional development of professors is just as important as the professional development of other staff (educators and teachers). Professional development itself combines a personal point of view with development that professors acquire through their studies and through experience while working at the institution (Hmelak, 2018, p. 91).

Many principles are important for professional development, which many authors have defined in more detail for educators and teachers, and these can also be generalized to the professional development of professors. Vonta (2005) describes ten basic conditions for professional development. He highlights the very beginning of professional development, which begins with education and professional training and continues with individualization and differentiation of approaches based on the diversity of approaches to professional development. He further emphasizes the importance of the individual reflecting on their practice and work, and of analysing the implications of certain approaches. It is also very important to work with a team, which offers shared experiences and more successful self-evaluation and awareness of strengths and weaknesses. Teamwork is extremely important in professional development, as professors do not work alone, but together with an assistant. This also reflects cultural collegiality expressed through common goals, sharing responsibility for success and continuous improvement (Hmelak, 2018, p. 48-50).

"Professional development takes place gradually and goes through several stages, the first is definitely the decision for a particular profession" (Hmelak, 2018, p. 50).

Professional development is not only reflected in the delivery of material, but also through personal motivation and ambition, which is visible in the number of publications of articles and other work. A professor who is constantly developing their professional development not only improves their acquired knowledge, but also acquires new knowledge that they can include in their subject.

Electronic portfolios are increasingly being used as a tool for showcasing development, since "it enables transparency of process continuity (e.g., learning, personal professional development, quality assurance) and results. It is proven to promote the development of competencies, reflection and improvement of their own work, teamwork, work in an interdisciplinary team and participation in professional communities" (Istenič Starčič, 2007, p. 78).

3   Empirical Part

3.1   Purpose of the study

The purpose of the study was to determine the extent to which and how students use innovative forms of learning in their studies, and the extent to which professors use innovative forms of teaching. The students' satisfaction with this way of working was also of interest.

3.2   Research Methods

The article is based on theoretical starting points, focusing on the impact of information technology on teaching, new approaches to learning, and the role of the teacher and their creation in the flood of technology.

In the empirical part, a quantitative research method was used. A structured questionnaire was distributed among students of Preschool Pedagogy at the Faculty of Education at all three universities in Slovenia.

There were a few issues with data collection. Of the 151 people who clicked on the survey, only 69 people completed it. The reason could be possible technical issues, the short time of the survey questionnaire and remote work, and students possibly not responding to our request.

The sincerity of the answers could be another possible issue.

4   Results and Interpretation
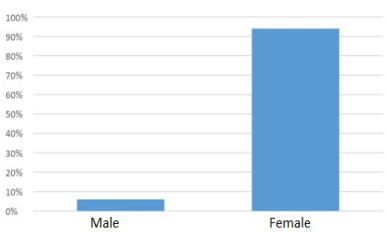
Figure 2: Number of participants by gender
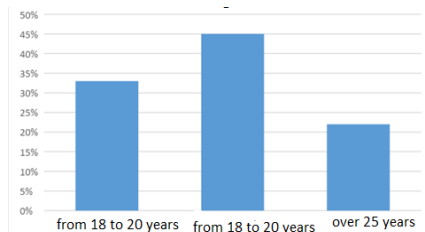
Figure 3: Age of participants

As stated above, 69 people completed the questionnaire. Of these, four were men, representing 6%, and 65 women, representing 94% of all respondents, as can be seen in Figure 2.

Figure 3 shows that most respondents were aged between 21 and 25, as many as 45%. The lowest number of participants was over 25 years of age, 22%, which was to be expected, as the survey was conducted by students.
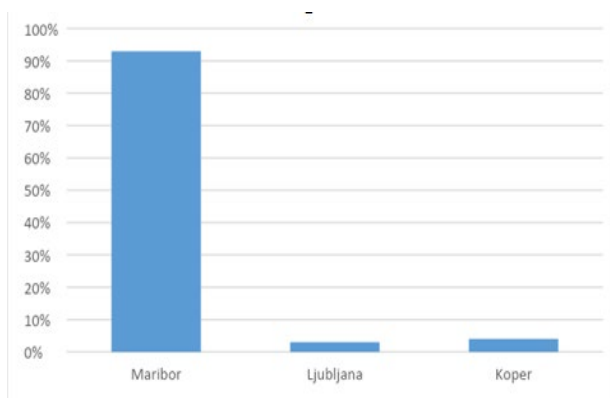
Figure 4: Place of study

When asked which university they attended, the majority of respondents indicated Maribor, as many as 93%. Thus, the results are only relevant for the Faculty of Education in Maribor. The least indicated Ljubljana, as can be seen in Figure 4.
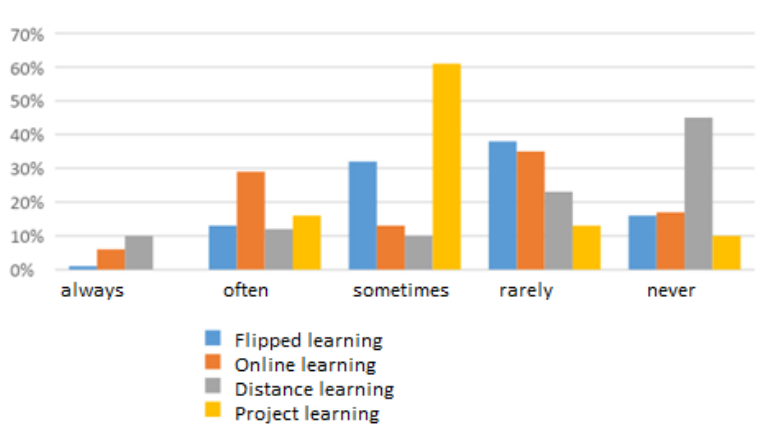
Figure 5: Using innovative methods in one's own work (before COVID-19)

The students said that they sometimes used project-based learning (61%) in their work, while they never used distance learning before the pandemic (45%) (see Figure 5). Online learning was used often by 29, while flipped learning was rarely used (38%).
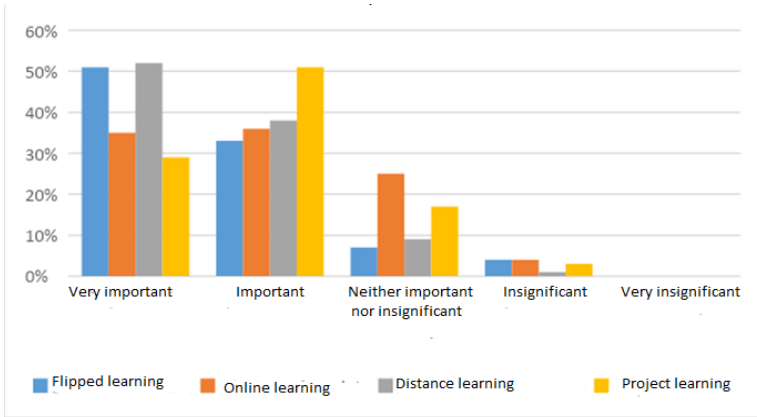
Figure 6: The importance of the role of the professor

As can be seen in Figure 6, students found the role of the professor very important in flipped learning (51%) and distance learning (52%), while the role of the professor was less important in online learning (36%) and project learning (51%).
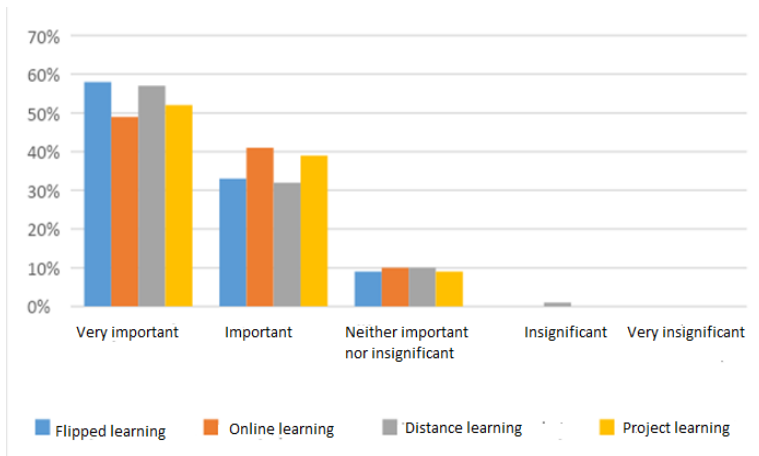
Figure 7: The importance of active student participation

The students considered active participation to be very important in all innovative forms of work: 58% for flipped learning, 49% for online learning, 57% for distance learning, and 52% for project-based learning (Figure 7). The latter confirms the above-mentioned theory of connectivism (Bilič, 2011, p. 202).
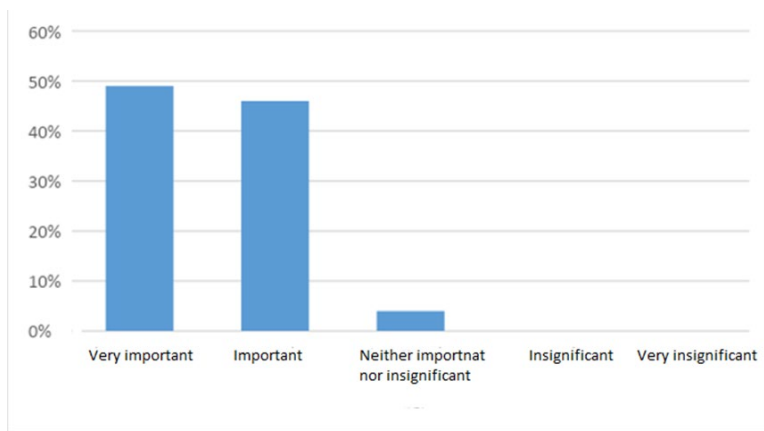
Figure 8:. The importance of the creativity of the professor

The students rated the professor's creativity as very important (49%) and important (46%). Of the respondents, 4% were undecided (see Figure 8). The high percentage confirms the fact that the creativity of professors is important and desirable, which is also reflected in their integration into professional learning networks (PLN) (Trust, 2014, p. 133).
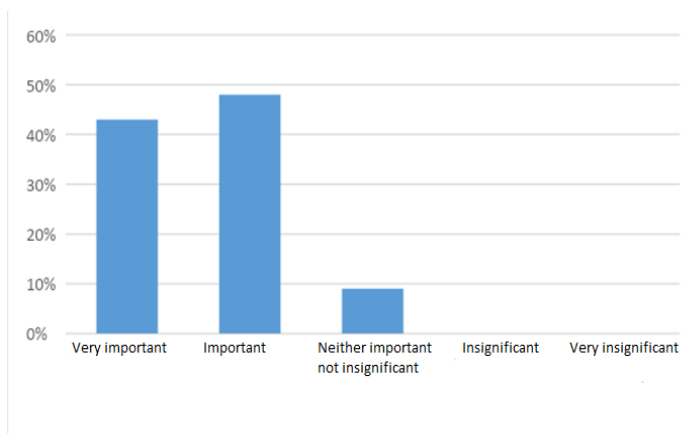
Figure 9: Education of professors in the field of ICT for their own professional development

The students believed that the professor's education in the field of ICT was important for their professional development. As many as 48% of students were of this opinion, while 43% of students thought it very important. Of the students, 9% defined the importance of ICT education as neither important nor insignificant (Figure 9).

The use of information and communication technology (ICT) in learning and teaching increases access to information and has a significant impact on the development of teaching. At the same time, it allows individuals and communities to communicate whenever they want. Lack of ICT equipment can be one of the barriers that affect the accessibility and use of it at work. The professional knowledge of professors, their persuasions, and the skills they use in their work, in addition to the use of ICT, are important for professional work and development (Charalambos & Glass, 2007, p. 87).
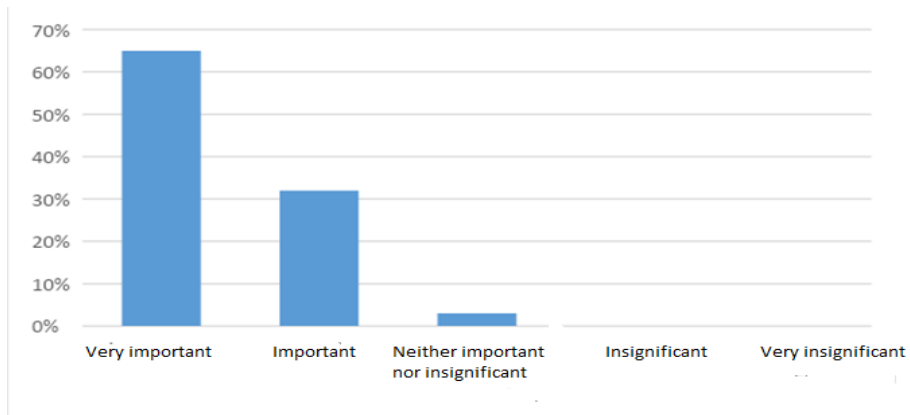
Figure 10: Professors' professional development and satisfaction with the profession

The students believed that the professors' satisfaction with their profession was important for their professional development (Figure 10). While more than half of the students found this very important (6%), just under a third found professors' professional development and job satisfaction important (32%). Of the students, 3% were undecided about the importance.

Živković (2013) states similar results; namely that professors themselves see professional development as important, especially for their career advancement and pedagogical work (Živković, 2013, p.150).

5 Conclusion

In this review article, some possible methods for conducting lessons and lectures have been mentioned, in which students participate more actively, thus remembering more contents. By being actively involved in their work and engaging in various project- and team- work, students gain communication skills, expand their research areas and knowledge, are much more confident and show more self-initiative in their work. Distance learning with pre-prepared lectures and the use of various platforms is interesting mainly because students engage with the lectures when they have time, they can watch them several times and they arrive prepared for the lesson. Following this, the teacher can upgrade the knowledge the students have already gained, lead discussions or prepare other interesting topics related to the topic. This requires great work ethic and motivation of the teachers to explore new methods of learning and teaching. In the future, more research should be devoted to this topic, as the influence of media and technology is growing, and the learning system will have to adapt accordingly. Much has been written about practicing learning through movement, but there is very little (Slovenian) research on the purpose of distance learning, on the preparation of pre-prepared lectures, and on the use of Twitter or Facebook as a learning tool. Recently, the most important topics are flipped learning and flipped classroom, which however have not yet entered the educational system in many countries. Flipped learning, as well as project- and team- work and distance learning, strengthen social interactions that are not as personal as face-to-face contact but can still work well together. It would be interesting to delve into this topic, as we believe that we would discover a myriad of methods that are much more functional, more interesting, and that attract the attention of young people to remember sooner and know how to interconnect things.

Numerous studies show that online learning can be very successful in connection with the traditional way of teaching. The biggest hurdle in online learning is the time it takes to complete modules through online learning, while also pointing out the importance of monitoring which factors lead to success through online learning (Smart & Cappel, 2006, p. 201).

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DEVELOPMENT OF PRIMARY SCHOOL TEACHERS' COMPETENCES IN PROMOTING A HEALTHY LIFESTYLE AND WELL-BEING IN CHILDREN AGED 6 TO 12

JOCA ZURC,[1] CAMILLA LAAKSONEN[2]
[1] University of Maribor, Faculty of Arts, Maribor, Slovenia
joca.zurc@um.si
[2] Turku University of Applied Sciences, Faculty of Health and Well-being, Turku, Finland
camilla.laaksonen@turkuamk.fi.

Abstract Primary school teachers are one of the largest professional groups in education. Their competences cover a wide range of knowledge, abilities, and skills. However, the curricula for teacher education rarely contain topics related to children's health and lifestyle. The purpose of this study was to gain an insight into the role of primary school teachers in supporting a healthy lifestyle and the well-being of children. A systematic literature review with meta-analysis was implemented on a sample of $N = 37$ studies. The results showed that teachers have a significant role in strengthening physical and mental health in schoolchildren aged between 6 to 12. School-based mental health promotion programs were statistically significantly more often implemented by primary school teachers undergoing special training for program implementation ($p = .025$). In their early school years, children are susceptible to establishing a long-term healthy lifestyle. Hence, the development of health promotion competences should be a priority in the curriculum of teacher education.

1   Introduction

As one of the fundamental human rights every child in Slovenia has the right to preventive health care (Uradni list RS, št. 19/98). Studies have proved that children with better health achieve better academic outcomes and better health in later life (Langford et al., 2015). Even short health promotion programs within the regular school curriculum could benefit the schoolchildren's physical and mental health (Volanen et al., 2020) and their cognitive and academic performance (Singh et al., 2017). Several Cochrane reviews have published findings of some of the most prevalent areas of health promotion in schools, such as encouragement to regular physical activity and improvement of physical fitness (Dobbins et al., 2013; Demetriou et al., 2015; Schüller, & Demetriou, 2018), dietary behaviour (Racey et al., 2016), preventing substance use (Carney et al., 2016; Thomas et al., 2013), mental health awareness (Salerno, 2016), and prevention of unintended pregnancies (Oringanje et al., 2016).

Undoubtedly, school settings play a crucial role in protecting and encouraging healthy development in the school-aged population. However, there is still a substantial gap in studies to assess the impact of health promotion programs on health-related outcomes in schoolchildren (Singh et al., 2017). Moreover, the curricula of teacher education globally rarely contain topics related to children's health and lifestyle. Therefore, the purpose of this study was to gain an insight into the health promotion programs provided by a primary school teacher during the early years of a child's schooling.

1.1   Health Education and Health Promotion in the School Setting

Health education and health promotion for children and young people have a long tradition worldwide, especially in Japan (Yamauchi et al., 2019) and Finland (Laaksonen, 2012). In Japan, a "Yogo teacher" is defined as "a special licensed educator who supports children's growth and development through health education and health services on the basis of principles of health promotion in all areas of educational activities in school" (Yamauchi et al., 2019, p. 81). A Yogo teacher is considered teaching staff, not necessarily a health professional, who undergoes a university education offered by various institutions, such as teaching

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education, health sciences education, physical, or nutrition education (Yamauchi et al., 2019).

On the other hand, a school nurse in Finland is defined as "a public health nurse that provides preventive and curative health care services to schoolchildren" (Laaksonen, 2012, p. 25). The Finnish concept of school nursing is grounded on the priorities of check-ups for children's growth and development, screening for infectious diseases, and physical health. From this point of view, the Finish concept is closely related to the Slovenian concept of preventive health care defined by the national Rules on Carrying out Preventive Health Care at the Primary Level (Uradni list RS, št. 19/98).

The main purpose of the ZDAJ – Zdravje danes za jutri [engl. NOW – Health Today for Tomorrow] program, as the core preventive health care program for children, adolescents, and students in Slovenia, is dominantly oriented towards health protection, reducing mortality, morbidity, and disability, and to the monitoring of children's and young people's health. Preventive medical examinations with screening for early assessment of risks are in the foreground. Consequently, the only providers of the ZDAJ program are medical institutions, physicians, registered nurses, and other health-related professionals (e.g., clinical psychologists, speech therapists) (Uradni list RS, št. 19/98). Unfortunately, the regulations do not include teachers in schools, where a significant part of a child's health experience occurs. Hence, the role of pedagogical science and practice should be carefully studied and considered.

1.2 Teachers' Education for Promoting a Healthy Lifestyle and Well-Being in Slovenian Children

At the beginning of the 1990s, the Faculty of Education and the College of Health at the University of Ljubljana offered the first university degree in health education. The program followed a two-year college education in nursing and comprised four semesters with 15 different courses, integrating educational and health sciences. In the curriculum, emphasis was placed on nursing (215 hours[1]), education for health (120 hours), research methodology (150 hours), and management in nursing (145

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[1] All hours are teaching hours. One teaching hour is 45 minutes.

hours) (Pahor, 1998). Although the international strategies for health promotion, quality of life, and longevity initiated the degree program in health education at the University of Ljubljana (Pahor, 1998), it seems that more substantial reasons originated from the lack of nursing education. The nursing society tried to develop a university degree in nursing and not a particular education program for professionals in promoting better health in schools. It is suggested that this was one of the significant reasons that the study program was offered only for four academic years.

Despite its short period of running, the Slovenian study program in Health Education had a significant impact on the education of teachers, specialised in promoting a healthy lifestyle and wellbeing in schools and healthcare. Among the first professors of the program, Kališnik (2003) emphasized that health education requires professionals with a university education, who successfully integrate knowledge in healthcare and pedagogy.

The first generation of graduates[2] was evaluated by Pahor (1998). She used a mixed methods triangulation approach with a quantitative survey (n = 49) and qualitative interviews (n = 34). The cohort was observed three times: at the beginning of their studies, at the beginning of their second year, and at the end of their studies. Pahor (1998) reported that most students participated in the program part-time. Therefore, balancing a job, school, and family obligations was the main struggle for the participants. The participants highlighted appreciation for the study program, which helped them in the areas of personal development, self-confidence, empathy to themselves and others, greater tolerance, a sense of responsibility, and critical thinking. Ten years after enrolment, Kališnik (2003) repeated the survey on the same group. The graduates still expressed a strong belief in their study program from the broader sense of knowledge and encouragement for lifelong education. They expressed regrets related to the discontinuation of the study program and a strong need for systematisation and recognition of their profession in the Slovenian health and school system. In his work, Kališnik (2003) mentioned the new curriculum for health education, intended to be run in the early 2000s. However, the study of health education so far has not been revived. Therefore, the issue of teachers' competences

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[2] Enrolled in the 1993/1994 academic year.

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for promoting a healthy lifestyle and well-being in children remains in need of new systematic research.

1.3   The Purpose of the Study

Following this research gap, the study aimed to evaluate school health promotion programs for students aged between 6 to 12. All analysed programs were implemented by their class teachers and/or changes in the school curriculum. Of primary interest were the main characteristics of the programs, e.g., area of health, methodology, target groups, duration, and follow-ups. Second was an evaluation of the effectiveness of the programs on children's health. Lastly, the differences according to the provider and school grade were statistically analysed.

2   Systematic Literature Review

A systematic literature review with a meta-analysis approach based on the classification of the review types by Sutton, Clowes, Preston & Booth (2019) was implemented. The literature review was conducted in the following three stages: 1) Collecting data from peer reviewed journals; 2) Evaluating the obtained data based on the inclusion and exclusion criteria, and 3) Analysing the data with statistical methods.

2.1   Methodology

The EBSCOhost and PubMed databases were selected for a systematic literature search. PubMed included a high level of publications based on randomized controlled trials (RCT), and publications on school-based interventions were strongly represented on EBSCOhost.

The first data search resulted in 854 articles. After careful evaluation of the collected articles through the inclusion and exclusion criteria (Table 1), the final sample of 37 studies was selected for the literature review.

Table 1. Inclusion and exclusion criteria for the systematic literature review

Category	Inclusion criteria	Exclusion criteria
Area	health-related programs	learning difficulties, problem behaviour; topics unrelated to health
Target group	primary school children, aged 6 to 12; general population	children not within the age limit; children with special needs or chronic conditions
Settings	primary schools	programs in healthcare, the community, research institutes, other organisations
Provider	primary school teachers	external experts (e.g., health professionals, dietitians, kinesiologists, psychologists)
Results	reporting the effects of the program on the child's health	screen studies; evaluations; interventions without results on health effects
Type of article	research article, completed study with methods, results and a discussion	study protocols, review papers, conference proceedings, PhD dissertations, grey literature
Language	English language, available full text	other languages, abstracts
Database search	EBSCOhost, PubMed	other bibliographical databases, other sources

Table 2: Methodology of the school-based health promotion programs included in the review

Methodology		n	%
Research design	Randomized controlled trial	22	59.5
	Quasi-experimental design	5	13.5
	Pretest-posttest design	3	8.1
	Controlled intervention	7	18.9
Country of the HPP implementation	United Kingdom	7	18.9
	USA	5	13.5
	Germany	4	10.8
	Switzerland	3	8.1
	Australia	3	8.1
	China	2	5.4
	Denmark	2	5.4
	Pakistan	2	5.4
	Others	9	24.4

Legend: HPP – health promotion program.

Table 2 shows the methodological characteristics of the school-based health promotion programs included in the systematic review (n = 37). The school-based health promotion programs were implemented around the globe. However, 59.4% of the reviewed programs were implemented in Western countries. Moreover, almost two-thirds of the programs (59.5%) were implemented by RCT design, which is recognized as level 1 or the highest-quality level of scientific evidence and "may be given the greatest weight when determining the impact, the results should have

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on practice" (DeVries, & Berlet, 2010, p. 207). Similarly, the quasi-experimental and controlled interventions were evaluated on methodological levels 2 and 3 as high quality and reliable scientific evidence.

Meta-analysis of the reviewed articles was conducted using statistical methods, such as descriptive statistics for attributive variables (frequency, percentage) and numerical variables (mean, standard deviation). Owing to the data being unevenly distributed, a nonparametric Mann-Whitney U test and Cramer's V test were used. Cramer's V replaced a measurement from the chi-square test when conditions for analysis were not satisfied (more than 20% of cells had expected a count of less than five, and the minimum expected count was lower than 1.00). All statistical analyses were implemented in IMB SPSS Statistics, version 28.0.

2.2   Results of the Meta-Analysis

Fifteen different areas of health promotion were recognized within 37 school-based health promotion programs included in the review (Figure 1). The most popular were interventions promoting a healthy lifestyle, such as a balanced diet and regular physical activity (37.8%). They were followed by programs attempting to prevent cardiovascular disease, e.g., metabolic syndrome, obesity, high blood pressure, anaemia (21.6%). Other prevalent programs focused on mental health promotion, including quality of sleeping and substance abuse prevention (18.9%) and infection control programs (8.1%). Overall, they covered a wide range of areas of health, such as oral health promotion, fall or injury prevention, and improving overall growth and physical fitness.

Table 3 presents the main characteristics of the school-based health promotion programs. Most of them (64.9%) were provided within the regular school curriculum or because of changes in school policy. Only 35.1% of them reported special training and teaching material for teachers who delivered the programs.
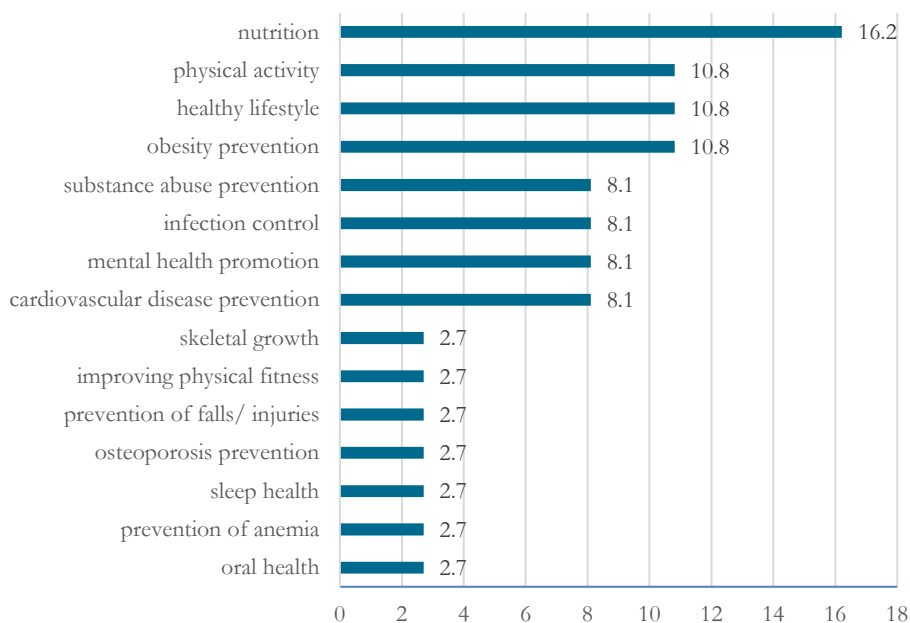
Figure 1. Areas of school-based health promotion programs.

Source: own

Table 3: Methodology of the school-based health promotion programs included in the review

Characteristics		n	%
Program provider	Changes in school curriculum	24	64.9
	Specially trained teachers	13	35.1
Area of health	Physical health	30	81.1
	Mental health	7	18.9
Target group	Children	31	86.5
	Children and families	1	2.7
	Children and teachers/school	3	8.1
	Children, families, and school	1	2.7
Participants' grade level	1st grade (6.5–7.0 years)	2	5.5
	2nd grade (7.5–8.0 years)	6	16.2
	3rd grade (8.5–9.0 years)	8	21.6
	4th grade (9.5–10.0 years)	7	18.9
	5th grade (10.5–11.0 years)	8	21.6
	6th grade (11.5–12.5 years)	6	16.2
		Mean	**SD**
HPP duration (months)		12.2	13.7
Number of follow-ups		1.68	1.25
Time of the first follow-up (months after HPP)		7.78	12.02
Time of the last follow-up (months after HPP)		14.46	16.87

Legend: SD – standard deviation; HPP – health promotion program.

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Of the analysed school-based health promotion programs, 81.1% were dedicated to promoting physical aspects of health and 86.5% of them targeted merely children. Most of the programs were implemented in the 3rd and 5th grades of primary school. However, there was a balanced implementation of programs between the 1st (43.3%) and the 2nd (56.7%) educational cycles of primary school.

The numerical variables in Table 3 show that an average school-based health promotion program was carried out for about one year, with at least 1 or 2 follow-ups after the cessation of the program. The first follow up, which measured the health promotion program's effects on children's health, took place around eight months after the intervention, and the last follow up more than one year after the intervention. However, all numerical characteristics of the health promotion programs showed a high standard deviation reflecting a wide range of durations and follow-ups in the analysed health promotion programs in primary schools. The authors were also interested in any statistically significant differences in characteristics of the school-based health promotion programs relating to their providers and participants' grade levels (Table 4).

Table 4: Differences in characteristics of school-based health promotion programs according to provider and school grade

HPP Characteristics	HPP provider* Cramer's V (p)	School grade** Cramer's V (p)
Area of health	**.367** **(.025)**	.004 (.982)
Target group	.255 (.494)	.417 (.092)
Research design	.074 (.977)	.071 (.980)
	Mann-Whitney U test (p)	Mann-Whitney U test (p)
HPP duration (months)	155.000 (.975)	1.500 (.129)
Number of follow-ups	148.500 (.778)	3.000 (.248)
Time of the first follow-up (months after HPP)	135.500 (.499)	5.500 (.866)
Time of the last follow-up (months after HPP)	142.000 (.650)	6.000 (1.000)

Legend: HPP – health promotion program; * differences in HPP between the implementation within the regular school program and implementation by specially trained teachers; ** differences in HPP implementation between the 1st and 2nd educational cycles in primary school.

Cramer's V test and the Mann-Whitney U test did not prove statistically significant differences in most of the characteristics of the implemented school-based health promotion programs, according to the type of provider and the participants' grade at school (Table 4). However, one statistically significant relationship existed concerning the area of health. School-based programs dedicated to the promotion of mental health were statistically significantly more often implemented by a specially trained teacher than the physical health promotion programs (Cramer's V = .367, p = .025). Specially trained teachers delivered 71.4% of all mental health promotion programs, and only 28.6% were within the regular school curriculum. Moreover, 91.7% of all health promotion programs implemented by the regular school curriculum were oriented towards physical health content, such as obesity prevention, infection control, and cardiovascular disease prevention. It seems that health promotion programs in the first educational cycle are more likely to target other groups besides children, such as families, peers, teachers, and the community. Of all programs targeting multiple groups, 80% were implemented in the 1st educational cycle. However, most programs in all grades target children (86.5%). Therefore, Cramer's V did not show statistically significant differences in the target groups (p = .092).

Table 5: Differences in effectiveness of school-based health promotion programs according to provider

Effectiveness	Total sample (n=37)		Changes in school curriculum (n = 24)		Specially trained teachers (n = 13)		Cramer's V (p)
	n	%	n	%	n	%	
Reverse effect	1	2.7	0	0	1	7.7	
No effect	8	21.6	4	16.6	4	30.7	
Partial/moderate effect	12	32.4	9	37.5	3	23.1	.379 (.258)
Positive effect	13	35.2	10	41.7	3	23.1	
Strong positive effect	3	8.1	1	4.2	2	15.4	

Legend: SD – standard deviation; HPP – health promotion program; p – statistical significance.

As with previous findings, the effectiveness of school-based health promotion programs did not show any statistical significance according to the intervention provider (Table 5). More than three-quarters of the health promotion programs provided by school teachers within the regular curriculum achieved positive or moderate effects on children's health (79.2%). This figure was slightly smaller for programs provided by specially trained teachers (46.2%). However, health

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promotion programs in school implemented by specially trained teachers showed a more comprehensive range of effects, from strong positive effect (2 studies) up to reverse effect (1 study). Moreover, Cramer's V (.274, p = .594) did not show any statistically significant differences in effectiveness according to school grade.

In taking a more in-depth look into the school-based health promotion programs that achieved no success or even reverse effects on children's health revealed exciting and unexpected findings, summarized in Table 6. Firstly, only one study among the analysed health promotion programs implemented on primary school children showed reverse effects on their health (Assaré et al., 2016). The rest of the eight analysed programs reported no effects after the cessation of the program. Secondly, all nine health promotion programs in Table 6 showed a similar assessment from the view of the intervention provider. Four of the programs (Chan et al., 2012; Rappaport et al., 2013; Thériault et al., 2014; Taylor et al., 2013) were provided within the regular school curriculum or in changes in school policy/regulations, and five of the programs were delivered by a specially trained teacher (Assaré et al., 2016; Challen et al., 2014; Kipping et al., 2014; Rousham et al., 2013; Tymms et al., 2016). According to their provider, these findings confirmed comparable effectiveness, as presented in Table 5.

Moreover, the school-based programs in Table 6 were engaged in various areas of health, e.g., cardiovascular disease prevention, promotion of healthy lifestyle and nutrition. The findings revealed an interesting fact: two of all three common infection control studies included in the review were placed in the group with no effects (Thériault et al., 2014) or reverse effects (Assaré et al., 2016).

Finally, some of the authors, for example Chan et al. (2012), tried to explain the low effectiveness of their intervention with methodological biases, such as nonrepresentative sample, short duration of the program or inadequately submitted experimental factor (e.g., small dose of dark chocolate). However, findings in Table 6 showed that school-based health promotion programs with no or reverse effects could be found within the duration of 18-hours (Challen et al., 2014) and up to five years (Assaré et al., 2016), within a small sample of 34 participants (Taylor et al., 2013) and up to programs with more than 8000 participants (Rappaport et al., 2013).

Table 6. School-based health promotion programs with reverse or no effect

Name of the HPP (author, year, country)	Area of health	Methodology	Results – effectiveness
SCORE-study (Assaré et al., 2016, Switzerland)	infection control	5-year CRT, 1-year follow-up (n = 75 schools)	the infection intensity among schistosomiasis mansoni-infected children was slightly higher in the 1-year follow-up compared to the baseline
UK Resilience Programme (Challen et al., 2014, United Kingdom)	mental health	18-hours QE, 1- and 2-year follow-ups (n = 2844 children)	no effects on signs of depression or anxiety
ChocHealth for Kids! (Chan et al., 2012, Australia)	blood pressure control	7-weeks RCT (n = 194 children)	similar systolic and diastolic blood pressure, anthropometry, and well-being on completion
AFLY5 - the Active for Life Year 5 (Kipping et al., 2014, United Kingdom)	healthy lifestyle	1-year CRT, concluding follow-up (n = 60 schools, 2221 children)	no significant effect on physical activity, sedentary behaviour, or vegetable and fruit intake
Nutrition education intervention (Rappaport et al., 2013, USA)	obesity	2-years CRT, 6- year follow-up (n = 10 schools, 8186 children)	no long-term effect on the incidence of remission of overweight/obesity with up to 2 years beyond the end of the intervention; obesity increased by 3%
Effects of iron supplements for schoolchildren in a remote area of north-west Pakistan (Rousham et al., 2013, Pakistan)	nutrition	12- and 24-weeks CS (n = 948 children)	no positive effect of iron supplements given 1 per week for 12 weeks or 2 per week for 24 weeks on the prevalence of anaemia in schoolchildren aged 5 to 17
Food Dudes programme (Taylor et al., 2013, United Kingdom)	nutrition	16-days QE, 3- and 6-month follow-ups (n = 8 schools, 34 children)	no positive effects on changing children's vegetable and/or fruit consumption
Health hygiene education program (Thériault et al., 2014 Peru)	infection control	4-months CS, 4-month follow up (n = 18 schools, 1088)	no significant difference between intervention and control groups in control of Soil-transmitted helminth (STH) infection
MOVE-project (Tymms et al., 2016, United Kingdom)	physical activity and well-being	6-weeks CRT, 6-month follow up (n = 75 schools, 1494 children)	no significant effects on physical activity and well-being of schoolchildren aged between 11 to 14

Legend: CRT – cluster-randomized trial; CS – controlled study; QE – quasi-experimental study.

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3   Discussion

The systematic review showed that health promotion programs in primary schools are dominantly implemented through the regular school curriculum, without any additional costs or teacher training. Usually, the health-related programs are carried out for one school year with one or two follow-ups on after the intervention. The meta-analysis identified some crucial characteristics of school-based health promotion programs.

First, the health promotion programs in the systematic review mainly targeted dimensions of physical health, somewhat opposite to the suggestions that schoolchildren mostly report emotional or social problems and might benefit from interventions targeting these areas (DeSocio & Hootman, 2004; Sourander et al., 2008; Laaksonen et al., 2008). A similar comparison can be found in the systematic review and meta-analysis by Langford et al. (2015). They found a high prevalence of health promotion programs dealing with nutrition, physical activity, and healthy lifestyle and much fewer dealing with mental health issues.

Second, the findings revealed the significant fact that the structure of the health promotion programs does not differ according to grade level. However, there were slightly more target groups in health promotion programs implemented during the first three grades of primary schools. Li et al. (2013) showed that targeting more groups, such as children, their parents (home environment) and teachers (school environment) are effective combinations in addressing sleep behaviour and improving children's school performance.

Third, the successful school-based health promotion programs had an adequate duration and number of follow-ups. For example, the study by Assaré et al. (2016) implemented a follow-up after five years. The study findings showed an increased level of infection among children in the follow-up compared to the baseline level. The reverse effect of this program could be explained by the lack of interventional activities between its cessation and the follow-up. Much like in pedagogy, the repetition of health promotion is crucial for optimum outcomes in children's mental and physical health. It seems that analyses of follow-ups and their timing are strongly related to the effectiveness of health promotion programs, which should be investigated in future studies.

Fourth, positive effects on children's mental health and physical health were reported in interventions provided by teachers who were specially trained in pre-intervention (e.g., Bothe et al., 2014; Fairclough et al., 2013). This crucial finding should be considered in teacher education with an effort to increase their competences for promoting schoolchildren's healthy lifestyle and well-being. Our findings align with Kališnik (2003), who emphasized that care for health in the population should matter to social and humanities experts as well as to health professionals. Pedagogical theory and practice could significantly contribute to schools' high-quality health promotion programs and their positive effects on children's mental and physical health.

Finally, the study has many methodological strengths, such as the high quality of the studies under review, the age homogeneity of the studied group, and the inclusion of different countries and continents. However, the last is also related to the study limitation in that it reflects diverse social-cultural backgrounds, schools and healthcare systems. Future studies should extend their focus from the effectiveness of the programs to the teacher's opinions, perspectives and needs in providing health education and promotion in schools.

4   Conclusion

Primary school teachers have a significant role in promoting a healthy lifestyle and well-being among the children in their class. Our systematic review showed that mental health promotion is much less present in schools than programs focusing on healthy lifestyle, infection control, and cardiovascular disease prevention. Therefore, future teacher education should prioritize developing their competences in mental health promotion and the encouragement of a child's cognitive, emotional, and social development. These contents should have a visible place in the curriculum for teacher education.

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Chapter 3

CHALLENGES IN PRESCHOOL EDUCATION

MANAGEMENT OF AN EDUCATIONAL INSTITUTION – THE PRINCIPAL'S PERSPECTIVE

VIOLETA VALJAN VUKIĆ,[1] MAJA GULIN[2]

[1] University of Zadar, Department of Teachers and Preschool Teachers Education, Zadar, Croatia
vvukic@unizd.hr
[2] Kintergarten Šibenska maslina, Šibenik, Croatia
majagulin12@gmail.com

Abstract The theoretical starting point of this paper are the competences and key tasks of the directors of institutions for early and preschool education. The development of many different professional competences is necessary when dealing with the complicated tasks of a principal. This paper presents the results of research conducted on a sample of principals from institutions for early and preschool education, municipal and privately funded, from the Šibenik-Knin and Zadar counties, relating to the assessment of competences and prescribed key tasks in the management of the institutions. Respondents assessed all competences as extremely important for the quality implementation of the process of leading and managing an institution for early and preschool education. The results showed that the respondents assessed most of the key tasks aimed at the organisation of educational work, as well as tasks and activities aimed at employees, parents and the community, as significant in the performance of their work. Therefore, it is necessary to continue to insist on new forms of education for principals of early and preschool educational institutions, where with the help of various examples, indicators and concrete situations from practice, principals will gain the necessary dose of new knowledge and competences for better management.

1   Introduction

Interest in studying the phenomenon of leadership and management within institutions, companies or corporations in the contemporary world is growing. Almost daily, experts and owners of companies conduct various studies to answer the questions of what quality leadership is and how to realize it. Many of them point out, with good reason, that leadership is an important segment when aiming at gaining advantage over competing companies or institutions. That is surely one of the reasons why world investments today are growing in the development of quality leadership. In the field of early and preschool upbringing and education a relatively small number of studies have been reported in Croatia in reference to leading and managing institutions. The application of new insights into leadership and management methods began primarily in the school system, and, accordingly, there are more articles and research papers studying leadership and management in schools compared to those studying the same in preschools. Leadership is an unavoidable part of everyday human communication, thus the driver of good or bad interpersonal relationships. Starting in the twentieth century, leadership and leading became the topic of studies, and all of these confirmed that the process of leading includes a series of dimensions, and that it is an extremely complex process in which the following components are of great importance: the profile component of the leader, management of human potentials which, among others, include motivation, selection, awarding, interpersonal relationships, introduction of changes and the constructive solution of resistance following change, communication, and continuous improvement to the quality of the process.

The principle of modern, quality management of an institution assumes a principal, who will have a clear personal identity, will know how to design the vision and mission of the institution they run, and who will know how to get the most from their employees, since encouraging teamwork is something that is absolutely taken for granted. The principals of institutions for early and preschool upbringing and education find themselves in a contemporary world of technological change and strategic management, facing growing challenges, while formal education still does not give them sufficient knowledge and competences. In such a context, the role of a preschool institution principal becomes increasingly challenging and becomes an imperative for principals.

In European countries, the process of expert training for principals of educational institutions is conducted in various ways. Ulf (2016, p. 61) discusses an example of mandatory training for principals whose "training should start immediately after a principal has taken on a new function". Sentočnik (2012, according to Vican et al., 2016) emphasizes that at the initiative of the Ministry of Education in Slovenia a *School for principals* was opened in 1995, the tasks of which were licensing and monitoring principals and holding expert conferences intended for the lifelong education of principals. The school was among the first of its kind in Europe[1].

In a study that was performed on 672 principals of upbringing and educational institutions in the Republic of Croatia, the needs of the continuous professional development of principals were examined. From the sample, 86% of the participants thought that principals needed additional training for managing upbringing and educational institutions, while 46% emphasized the need for training prior to taking on the function of principal. Of the principals, 39% thought that it was sufficient to learn while performing their task (Radeka, 2016, p. 85). The results of the TALIS (Teaching and Learning International Survey) study indicated that only one quarter of principals stated that they had participated in preparation for the function of principal (Rogić & Karamatić Brčić, 2016).

1.2 The Competences Necessary for Principals of Early and Preschool Upbringing and Education

To achieve the successful functioning of an institution for early and preschool education, the principal must have certain competences to perform this demanding professional task, which implies the continuous development of said competences. Numerous authors point out the importance of lifelong learning, indispensable in confronting the growing number of challenges. Lifelong education is defined as "the column of all formal and informal education activities throughout life that develop and enrich knowledge, skills and competences (independence and responsibility) at the personal, citizen, social or professional plan; combines initial education and continuous professional development, as well as all other forms of education aimed at satisfying personal interests" (Radeka, 2016, p. 95).

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[1] That school was not among the first of such type in Europe.

Staničić et al. (2016, p. 9) emphasize that the principal of such an institution is responsible for lifelong work and the task results of the institution, as well as the work of every single employee, taking care of the quality standards of each individual activity and group of activities within the basic upbringing and educational processes, and lastly, providing the materials needed for working conditions. In this context, the functions and activities of the principal and the circumstances in which they are realized become more complex, and the level of their professional competences becomes more complex. According to Staničić (2006, p. 153) the competences a principal of an upbringing and educational institution should have can be divided into the following five categories:

- Expert-pedagogical competences, which imply knowledge of upbringing and educational processes.
- Competences in the area of interpersonal relationships, which refer to the desired characteristics of an individual in working with people.
- Organizational and developmental competences, which refer to knowing how the organization and education system functions.
- Administrative competences, which include knowledge of the affairs of the kindergarten as an institution.
- Work-executive competences, which refer to the vision and determination, and the principal's optimistic attitude towards achieving defined goals.

It is, however, important to differentiate the formal and real competences of a person in a determined area of activity. Formal competences are proved with documents, while real competences are also partially proved with documents. It is possible to establish most of these by duly following an individual's course of work and assessing their results and behaviour in work situations (Staničić, 2006, p. 176). Seme Stojnović and Hitrec (2014) indicate the problems related to the non-inclusion of competences necessary for the leadership and management of such an institution during the legal procedures of choosing a principal. Knowledge and skills in the field of leadership and management are not demanded, therefore the question of introducing appropriate selection methods is raised. The same authors state that during the selection process for a principal in Croatia, the person's formal competences are first assessed and "the professional capacity is still not required for the position and role of principal even though professionalism is valued more and more" (Seme Stojnović & Hitrec, 2014, p. 104). In the Strategy of Education, Science

and Technology from 2014, the proposals for licensing and training principals are stated, whereby the following is needed: "defining the role of the principal, issuing documents that regulate their work, developing competency standards for principals, creating legal preconditions for the institutionalization of their education, designing educational programs, accrediting organizations that will implement them, and developing a system for licensing and evaluating the work of principals" (Vican et al., 2016, p. 102).

2 Research methodology

2.1 Research Task and Objective

The objective of the study was to establish how principals of institutions for early and preschool upbringing and education run an institution in terms of the prescribed key tasks and how they asses the value of specific competences. In line with the research objective, the following tasks were defined:

- Determine the socio-demographic characteristics of the participants (gender, age, level of education, years of work experience in the profession, and years of work experience in the position of principal), their acquisition of professional knowledge in the field of leadership and management during their studies, and their involvement in additional training in the field of leadership and management and preschool upbringing and education.
- Examine the principals' opinions on competences important for leadership and management.
- Examine whether the principals participate in all fields of institution leadership and management prescribed in the key tasks of the principal.

2.2 Research Hypotheses

The authors began with the following assumptions:

H1: The participants will positively assess the competences from the field of work of principals.
H2: The participants participate in all fields of institution leadership and management prescribed by the key tasks for principals.

2.3   Research Instrument

A survey questionnaire was constructed for the needs of the study, and it was divided into several units. In the first part of the survey, the participants answered general questions (gender, age, years of service in the profession and the position of principal, level of education). The second part of the questionnaire consisted of questions on acquiring the professional skills of leadership and management during initial education, as well as data on the inclusion of the participants in additional training in the field of leadership and management. Our goal was to establish how many participants were satisfied with the development of their leadership and management skills acquired in additional training during their employment. In the third part of the questionnaire, the participants assessed to what extent single competences were important in a principal's work, whereby a claim was defined for each competence. Likert's scale of five degrees was used for the assessment (1 – I completely disagree, 5 – I completely agree). In addition, the participants estimated how many key tasks there were, also using Likert's scale (1 – it does not refer to me at all, 5 – it refers to me completely).

2.4   Participants and Procedure

The sample included principals (n = 18) from preschools, municipal and private kindergarten institutions, in the Šibenik-Knin and Zadar counties. Ten preschool institutions were selected from each county, and the questionnaire was sent to their addresses in electronic form with the request to participate in the study. Five surveys were sent to preschool institutions in Šibenik-Knin county, Tisno (1), Vodice (1), Knin (1), Drniš (1), while seven were sent to Zadar County (7), Pag (1), Biograd (1), Nin (1). Two principals did not take part in the survey, and the final sample consisted of 18 participants. The study was conducted during June and July 2019., and the survey was completely anonymous.

3   Results

3.1   The Structure of Participants with Reference to Their Socio-Demographic Features

The total number of participants (n = 18), 94% were women, and 6% were men, shows how the female population dominated in the sample, i.e., institutions for early and preschool upbringing and education in the two counties mentioned were almost all run by women. Numerous authors point out that the position of principal in institutions for early and preschool education in the Republic of Croatia is, as a rule, "reserved" for women. This is confirmed and stated by Seme Stojnović and Hitrec (2014, p. 49), who say that in preschool institutions in the Republic of Croatia, the head positions are taken "in high percentage by females. We encounter a similar situation worldwide: the leading positions are predominantly male, except when it comes to preschool institutions."

The age structure of the participants was as follows: 5.5% of the participants were between 20 and 30, 33% were 31 to 40, 28% were 41 to 50, and 28% were aged between 51 and 60. Only one participant was over 60 (5.5%). Therefore, the smallest number of participants were aged between 20 and 30, and over 60 (11%), while the largest number (89%) was aged from 31 to 60 years of age.

The structure of the participants related to work experience in preschool institutions is shown in Figure 1. The first two categories from 1 to 5 and from 6 to 10 years of work service in the profession were not present in any of the participants, which is justifiable for the first category, since one of the conditions for selecting a principal is five-years of work experience in preschool institutions. Following this, 39% of the participants had between 11 and 20 years of experience, 33% of them had between 21 and 30 years of experience, while 22% had between 31 and 40 years of work experience. Only one participant (6%) had 40 years of experience in the profession.
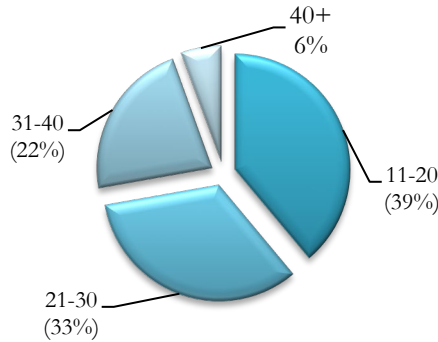
Figure 1: Work experience in the profession
Source: own.

In terms of work experience as principal, 39% of the participants had between 1 and 5 years of experience, and 33% had between 6 and 10 years of experience. Following this, the number was lower; 22% of participants had 11 to 20 years of experience, the same had 21 to 30 years of experience, while one participant (6%) had more than 31 years of experience as principal (*Figure 2)*
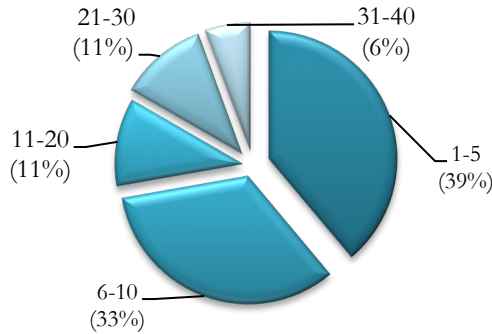
Figure 2: Work experience as principal
Source: own.

In terms of education, 11 participants (61%) were in possession of a two-year degree in preschool upbringing, three participants (17%) had completed a three-year professional preschool upbringing study program, and none of the participants were in possession of a degree from the pre-graduate university program of Early preschool upbringing and education. Four participants (22%) had graduated from graduate studies in Early and Preschool upbringing and education. Therefore, the

number of principals having completed a two-year preschool study program in the Šibenik-Knin and Zadar counties was significantly larger than those that completed other study programs.
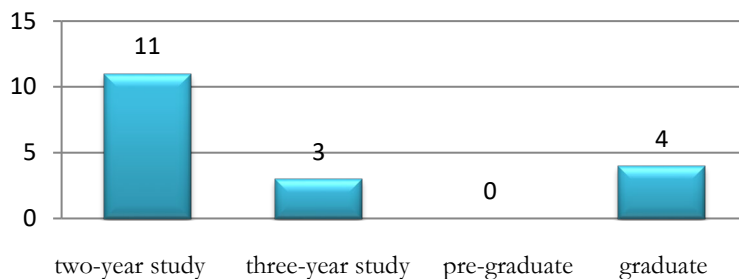
Figure 3: Level of education
Source: own.

3.2 Acquiring Knowledge and Skills in the Leadership and Management Area

The objective of our study was to establish whether the participants had the possibility of acquiring knowledge and skills in the field of leadership and management during their initial education or through additional training.
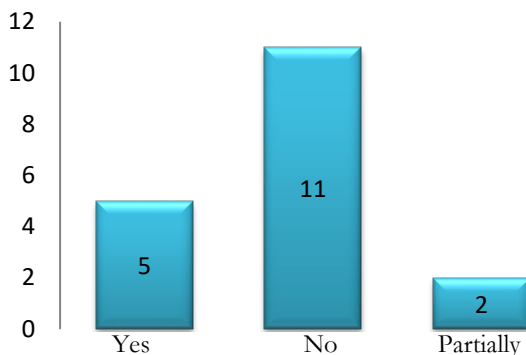
Figure 4: Leadership and management skills during studies
Source: own.

During formal education, 28% of the participants acquired professional competences in the field of leadership and management, and 11% of them only partially. However, 61% of the participants confirmed that they had not had the

opportunity to acquire knowledge and skills in this area during their studies (*Figure 4)* In comparing these data with those shown in the previous chart, it is clear that they refer to the participants who completed a two-year program in preschool education, whose study program did not provide instruction on the development of these competences. Nonetheless, it is clear that the role of principal in the past did not imply such extensive knowledge in the field of leadership and management, as is the case in recent times. However, because of the need for acquiring knowledge and competences in this field, and for better and more successful performance of their function, 72% of the participants had attended additional education in this area, while 28% of them had had no additional education in this area (*Figure 5*).
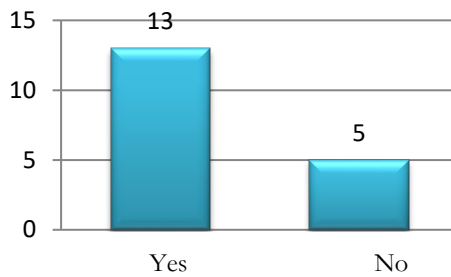
Figure 5: Additional training in leadership and management
Source: own.

Even so, from the data in *Figure 6* one can conclude that it concerns those participants who confirmed that they had acquired the mentioned knowledge during their formal education. The percentage of participants who had completed additional training in the field of leadership and management was significantly larger than those who had not. The results confirm that, as a rule, almost all principals had been insufficiently educated in the field of leadership and management when taking on management duties. They needed new knowledge in this field since they had never had the opportunity to acquire it during their studies.

The course, organized by the Ministry of Science and Education and the Agency for Upbringing and Education, had been attended by 72% of the participants, and the training for post-graduate specialist studies for principals of upbringing and educational institutions had been attended by 6%, while 22% of the participants chose the "other" category but did not state the type of training nor the organizer. Therefore, most of the participants were directed towards obtaining competences in the field of leadership and management in preschool institutions organized and

conducted by competent institutions, while only a small number of participants chose other types of education. The authors examined the extent to which the participants were satisfied with the professional leadership and management skills acquired in additional training. Of the 18 participants, 11% were extremely satisfied, 44% were mostly satisfied, 28% were neither satisfied nor dissatisfied, and 17% were extremely dissatisfied.

Training Ministry and Agency Post-grad.spec.stud. Other

Figure 6: Training in leadership and management
Source: own.

3.3   Assessment of the Importance of Principal Competences

In this study the authors wanted to establish how principals assessed the importance of single competences for their work. The competences were taken from the Standard for Principals in Upbringing and Educational Institutions, while in 2016, with the cooperation of the National Centre for External Assessment, they were drawn up by an expert group. The participants assessed to what extent the mentioned competences were important, according to their opinions on the work of principals. The answers are shown in *Table 1*.

Table 1: The opinions of principals on the importance of competences needed for their tasks

Principal competences	Disagree	Mostly disagree	Partially agree	Mostly agree	Totally agree	Total	
	%	%	%	%	%	%	M
Planning and programming work	5	11	17	39	28	100	3.72
Work assessment	6	11	17	33	33	100	3.78

Principal competences	Disagree	Mostly disagree	Partially agree	Mostly agree	Totally agree	Total	
	%	%	%	%	%	%	M
Environmental analysis	0	11	5	17	67	100	4.39
Quality insurance	6	0	0	33	61	100	4.44
Organization of teamwork	0	0	0	17	83	100	4.83
Work in institution counselling with educators and parents	0	0	6	22	72	100	4.67
Communication-presentation skills	0	0	5	28	67	100	4.61
Human resource management	0	0	0	33	67	100	4.67
Legal regulation implementation	0	6	0	22	72	100	4.61
Financial management	0	0	6	33	61	100	4.55

the participants' answers for every single competence were analysed. All the participants generally (17%) or completely (87%) agreed that the competences related to the organization of teamwork in an institution for early and preschool education were the most important, which was confirmed by the highest value of the arithmetic mean (4.83). Furthermore, with a similar value of the arithmetic mean (4.67), this was followed by human resource management competences with 67%, with which 33% of the participants fully agreed. Advisory work with educators and parents was assessed as an absolutely significant competence by 72% of the participants, while 22% of them mostly agreed, and only 6% partially agreed with its importance. Legal regulation implementation followed, which had the same arithmetic mean value (4.61) as communication-presentation skills. In 94% of the participants, legal regulations were mostly (22%) or completely (72%) important for the successful performance of a principal's function, but for 6% of the participants these were not of special importance. However, 95% of the participants stated that communication skills were extremely important for the position of preschool principal, while only 5% declared them partly important. In relation to how competences connected to financial affairs (M = 4.55) were important for running an institution, 94% of the participants assessed that they were mostly (33%) or completely (61%) important, while for only one of them (6%) they were partially important. In the last category of the scale, the institution environment (M = 4.39) was assessed by 84% of the participants as mostly (17%) or completely (67%)

important, while some participants partially (5%) or mostly (11%) assessed it as unimportant. Competences of principals in the field of planning and programming within the institution (M = 3.72) and the evaluation of educational work had the lowest values of the arithmetic mean (M = 3.78). Of the participants, 67% assessed environmental analysis as an important competence, 17% of them partially agreed, and the same number mostly or completely did not agree. The work assessment, which in professional training is often pointed out as an exceptionally important competence for planning further work, was seen as mostly and completely important by 66% of the participants, but for 34% of them it was partially, mostly or completely insignificant. The participants assessed all competences as extremely important for the quality implementation of the process of leading and managing an institution for early and preschool education. The participants (n = 18) mostly answered positive and stated that all competences were important for principals. No participant decided to organize teamwork and the management of human resources on a scale (no, mostly not, partially), which distinguished these from other competences, for which the participants gave negative responses. Based on the obtained and analysed results, the first hypothesis, which assumed that the participants would positively assess the importance of the principal's competences, was verified.

3.4 Assessment of Participation in the Realization of a Principal's Key Tasks

Besides competences, the Standards for Principals of Upbringing and Educational Institutions lists several key tasks. The participants were offered twelve options, where they assessed to what measure they participated in the tasks' realization on the Likert scale (1 – it does not refer to me at all, 5 – it refers to me completely). The key tasks were divided into two tables; the first one referred to activities directed towards the organization of upbringing and educational tasks (12 key tasks), and the other referred to activities directed towards employees, parents and the community (8 key tasks).

Table 2: The principal's key tasks involving work organization

As principal of a preschool institution…	Doesn't apply to me at all	It mostly doesn't apply to me	It partly applies to me	It mostly applies to me	It completely applies to me	Total	
	%	%	%	%	%	%	M
I participate in creating the vision and mission of the institution.	6	0	0	11	83	100	4.83
I participate in creating strategic documents.	0	5	0	28	67	100	4.55
I plan activities and projects in the institution.	0	0	39	39	22	100	3.83
I follow the implementation of planned activities and projects.	0	0	34	33	33	100	4.00
I assess all work in the institution.	0	5	17	17	61	100	4.33
I (self)assess my own work.	0	5	6	28	61	100	4.44
I introduce innovative methods and work techniques.	0	5	28	28	39	100	4.00
I analyse and assess the upbringing and educational process.	0	6	28	22	44	100	4.06
I participate in introducing new programs.	0	5	11	17	67	100	4.44
I manage material and financial affairs.	0	11	5	28	56	100	4.28
I follow and enforce lawfulness in the work of the institution.	0	0	6	11	83	100	4.78
I ensure the conditions for optimal functioning.	0	0	6	11	83	100	4.78

Of the total number of participants, as many as 83% estimated that three key tasks related entirely to them. These were shaping the vision and mission of the institution (M = 4.83), monitoring and implementing the legality of the work (M = 4.78), and ensuring the conditions for optimal functioning (M = 4.78). Of the participants, 67% also assessed the participation tasks of drawing up strategic documents (M = 4.55) and introducing new programs (M = 4.44) as tasks that were completely related to them. The tasks of self-assessment of their own work (M = 4.44) and the assessment of all work in the institution (M = 4.33) were assessed by 61% of the participants as applying to them completely. Among the participants, 56% assessed that the work of managing material and financial affairs in the institution (M = 4.28) related completely to them, but there was still 28% who stated that it mostly applied to them. A somewhat greater dispersion of answers came with the claims related to the

analysis of the upbringing and educational process (M = 4.06), where 66% of the participants stated that it applied to them completely or partially, and 34% stated that it was mostly or partially unrelated to them. The tasks of monitoring the implementation of planned activities and projects, as well as the introduction of innovative methods and work techniques, which have the same value of the arithmetic mean (M = 4.0), were assessed by most respondents as those that mostly or completely applied to them. Moreover, 66% of the participants agreed that the first task fully applied, while 67% agreed that the second task fully applied. Nonetheless, 34% or 28% respectively assessed these tasks as only partially applying to them. The lowest value of the arithmetic mean (M = 3.83) was held by the task of planning activities and projects in the institution, where only 22% of the participants assessed that it applied to them completely, and 39% that it mostly applied to them, while 34% claimed that it only partially applied to them.

The principal's key tasks aimed at employees, parents and the community are shown in *Table 3* and analyzed below.

Table 3: Key tasks of principals directed towards employees, parents, and the community

As principal of a preschool institution...	Doesn't apply to me at all	It mostly doesn't apply to	It partly applies to me	It mostly applies to me	It completely applies to me	Total	
	%	%	%	%	%	%	M
I plan employment according to the specific needs of the institution.	0	0	17	11	72	100	4.56
I select candidates for employment.	5	11	0	56	28	100	3.89
I follow and analyse the work of employees and manage the process of their advancement.	5	6	17	28	44	100	4.00
I organize and follow the professional development of employees.	0	11	17	17	55	100	4.17
I participate in creating the culture of the institution.	0	0	11	28	61	100	4.50
I organize various forms of cooperation with parents.	0	11	28	39	22	100	3.72
I cooperate with community stakeholders.	5	6	1	22	56	100	4.17
I affirm the identity of the institution in public.	0	5	6	17	72	100	4.56

Of the participants, 83% mostly (11%) or completely (72%) agreed that employment planning according to the specific needs of the institution was the key task of principals of institutions and that it applied to them (M = 4.56). An identical value of the arithmetic mean pertained to the statement on the affirmation of the identity of the institution in public, including cooperation with the media, which was confirmed by 89% of participants, however two participants (11%) stated that it did not apply to them or did so only partially. On the tasks of participating in shaping the culture of the institution (M = 4.50) and developing a collaborative atmosphere and trust, 89% of the participants declared that these were key tasks that mostly (28%) or completely (61%) applied to them. Only 11% agreed partially. An identical assessment, according to the arithmetic mean value (M = 4.17), was given by the participants on the key tasks in realizing cooperation with shareholders in the community and in organizing and following the professional development of employees. Concerning cooperation with the community, 78% of the participants claimed that it applied to them, while 22% believed that it did not apply to them or did so only partially. Moreover, 72% of the participants assessed monitoring and analysing the work of employees and conducting the process of their advancement as tasks that mostly or completely applied to the principal. Concerning the selection of candidates for employment, 85% of the participants assessed it as a key task of the principal, while 16% did not agree (M = 3.89). The lowest mean value (M = 3.72) referred to the organization of various forms of cooperation with parents, where 61% of the participants assessed this as mostly or completely the task of the principal, and 39% of the participants negated it or confirmed it partially.

It is, therefore, necessary to continue to insist on additional educational programs for principals of educational institutions, where they would have the opportunity to acquire the necessary knowledge and develop competences in the field of leadership and management.

4   Conclusion

This study was aimed at examining the leadership and management skills by principals of institutions for early and preschool education. Through an anonymous questionnaire, the opinions from principals of institutions for early and preschool education on the competences important for leadership and management and their participation in the areas of prescribed key tasks were examined. The study was

conducted on a sample of 18 principals of preschool institutions, municipal and privately funded, from the Zadar and Šibenik-Knin counties. The results indicated that the sample was dominated by women. The largest number of participants were between 40 and 60 years of age, with work experience in the profession between eleven and thirteen years, and as principals from one to ten years (72%). In terms of level of education, the sample was dominated by participants who had completed a two-year study program on preschool education and who had not acquired any knowledge in the field of leadership and management during their studies (61%). However, to be more successful in performing the function, 72% of the participants had participated in additional classes organized by the Ministry of Science and Education and the Agency for Education in this field, and many were exceptionally satisfied (55%) with the acquired competences. Even though most of the participants had completed a two-year study program on preschool upbringing, it was encouraging that they were aware that through their lifelong education they had the possibility of obtaining new competences and ensuring quality functioning in the field of leadership and management and were thus actively involved in improving.

In assessing the importance of principal competences, the participants rated human resource management and work with educators and parents as the most important (M = 4.67), along with the competences of conducting legal regulations and communication-presentation skills (M = 4.61). Numerous authors agree that the role of the principal of such an institution in the field of human resource management is of immense importance because it assumes a series of activities, from finding quality people and caring for their personal and professional development, to providing for their satisfaction within the institution (Špiljak & Modrić, 2009). Therefore, in this study the participants' assessments wherein the management of human resources was emphasized as the most significant competence was not surprising. Last in the assessment of the importance of individual competences was the evaluation of work (M = 3.78) and planning and programming (M = 3.72). In assessing their participation in the realization of key tasks aimed at the organization of their work, the highest ranking was shaping the vision and mission of the institution (M = 4.83), monitoring and enforcing the legality of the work of the institution, and ensuring conditions for optimal functioning (M = 4.78). However, the implementation of planned activities and projects (M = 4.00) and their planning in the institution (M = 3.83) were the lowest ranked tasks of the principal in the area of work organization. In assessing the key tasks of principals, focused on employees, parents and the

community, the largest number of participants pointed out the following key tasks: employment according to specific needs and affirmation of the institution's identity in public (M = 4.56), and participation in shaping the culture of the institution (M = 4.50).

The study provides concrete answers from practice, but a survey conducted on a larger sample of principals of early and preschool education institutions from other counties in the Republic of Croatia would contribute to making better and more meritorious conclusions on how principals assess the importance of competence and what they do most. In conclusion, principals of early and preschool education institutions in modern society no longer receive adequate educational preparation because they face numerous tasks that the leaders of large corporations also face. It is obvious that the process of running an upbringing and educational institution has significantly changed during the given period, making it necessary to continue to insist on additional educational programs for principals of educational institutions, where they would have the opportunity to acquire the necessary knowledge and develop competences in the field of leadership and management.

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Changes in the Conditions of Pre-School Education in the Czech Republic in Relation to the Pandemic

Radmila Burkovičová,[1] Karin Fodorová,[1]
Michaela Cocca[2]

[1] University of Ostrava, Faculty of Education, Department of Preprimary and Primary Education, Ostrava, Czech Republic
radmila.burkovicova@osu.cz, karin.fodorova@osu.cz
[2] Texas A&M University, College of Education & Human Development, San Antonio, United States of America
michaela.cocca@gmail.com

Abstract The study aimed at identifying the changes in the educational conditions of pre-school children in kindergartens in the Czech Republic in relation to the coronavirus pandemic and finding out the educational experiences gained as a result of the changed conditions. A standardized open-ended interview was used in the study. The sample consisted of 17 pedagogical staff and was selected based on convenience. The findings identified 1) changes in the distance education of pre-school children in kindergartens in the following areas: the form of education; its rules; the availability of digital technology; its ease and implementation; cooperation with parents; children's participation; the objectives and content, and their implementation in activities; the evaluation of teachers' activities with children; the evaluation of the form of education; and 2) the pedagogical workers' experience with pre-school distance education in the mentioned areas. The discussion focused on the rules of distance education of pre-school children and the availability of digital technology.

1   Introduction

The education of children in the last year of pre-school education, i.e., the year before starting primary schooling, is compulsory in Czech kindergartens. The conditions for children's education are set out in the national, basic curriculum document, the Framework Education Programme for Pre-school Education (RVP PV) (MoE, 2018). However, with the emergence of the COVID-19 virus, these conditions have changed. From the beginning of 2020 until 11 March 2020, kindergartens in the Czech Republic implemented a program called restricted operation, where, unlike in the higher education levels, the government did not issue any binding instructions to close kindergartens and the physical presence of children was allowed.

Between 11 March 2020 and 30 April 2020, all types of kindergartens throughout the country were closed. The move was taken by the Ministry of Education (MoE) based on the finding that most children had stopped attending kindergartens across the country, as parents were concerned about their children contracting COVID-19. For the same reason, heads of kindergartens and principals demanded them to be closed. Another reason was the closure of the kindergarten that otherwise delivered food from its kitchen to other kindergartens. In many cases, this was a coordinated move by the principals and heads for one or a combination of the above reasons, depending on local conditions.

In the Czech Republic, the obligation to provide education to children belongs to the kindergarten and the implementers are the kindergarten teachers. The closure of kindergartens placed teachers, through no fault of their own, in a new situation that they had not known about in advance and thus could not prepare for. This situation was also new for the parents. They had to deal with how to keep their pre-school child occupied all day, how to educate them and combine it with their personal and professional responsibilities in the changed conditions, including the support of older children in their education.

This paper aims to present the identified changes in the educational conditions of pre-school children resulting from the closure or reduction of kindergarten operations during the coronavirus crisis and indicate educational experiences gained by the teaching staff in the changed conditions.

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1.1 Organisation of Children's Education During the Closure or Reduction of Kindergarten Operations

If the majority of children with compulsory pre-school attendance cannot be present in person at the kindergarten, the kindergarten is obliged to provide distance education for these children and adapt the provision of education and feedback to their conditions. This situation may arise in accordance with the provisions of Section 184a of the Education Act (MoE, 2004a) (1) due to an emergency measure declared under the Emergency Act, or (2) due to the ordering of an emergency measure under a special law, (3) or due to the ordering of a quarantine under the Public Health Protection Act, which is what the COVID-19 situation corresponded to.

The goal of distance education is that no child be left out of the educational process and that each child be involved according to his or her individual abilities and conditions in the home environment. The kindergarten chooses the method of distance education regarding its material and technical equipment and adapts the method of providing distance education to the children's conditions. Activities with the child in distance education can take place online or offline.

Under normal public health conditions, children in their last year of kindergarten are prepared for primary school in what we could now call offline education. Children are given small-scale homework tasks that make use of the natural conditions of the children's home environment to reinforce, deepen, and extend their knowledge, as well as their intellectual and manipulative skills. These are mainly practical tasks, creative work, and the application of knowledge and skills in practice. A child may be given the task of preparing a meal for their parents when they come home in the evening; picking strawberries in the garden; watering the flowers; changing the water in their rabbit's water bottle; giving milk to their cat; picking flowers in a meadow, finding a picture in an encyclopaedia, etc. "The advantage of offline education is the absence of the need for technical equipment and digital competence of children or parents." (Ministry of Education, 2021, p. 4).

In online education, parent cooperation is more necessary than in the regular course of education. Generally, their presence is essential. They must participate in the child's education in terms of organization, answering their children's questions,

explaining, and guiding them in direct online contact using digital technology. In asynchronous learning, parents and children perform the tasks set at a time of their choice and at a pace suitable for the child. Performing the tasks is therefore voluntary. Given the age of the children, the teachers give the parents tips on thematic activities suitable for the home environment via an agreed communication platform.

Online learning is not a preferred method in pre-school education due to the developmental characteristics of children. Its function is merely complementary. The teacher can be synchronously connected with the child at a certain time in the same virtual location and be engaged in the same activity. It is very important that the children always receive some feedback from the teacher on the tasks and activities they have carried out and completed to encourage and motivate them. Just as we primarily organise the educational environment under standard conditions, i.e., with focus on attention length and interest, online education should be directed in the same manner.

Since distance education is compulsory for pre-school children, it is necessary to record their attendance. A duration of up to 30 minutes per week is recommended, provided that the child's family has the necessary technical equipment. Children can work on and explore various topics in their environment with their parents and then share the findings with others. This can also promote social contact between children, the kindergarten, and families.

Each of these educational forms has advantages and disadvantages, so it is recommended to combine them appropriately. Changing forms leads to the appropriate motivation and activation of the child. Distance education takes place in accordance with the RVP PV and the education program of the particular school, but because of the circumstances it is not implemented to its full extent. It is desirable for teachers to be able to create a varied range of developmental activities for all children, purposefully individualised, based on an assessment of the individual's educational progress, which best meets their current developmental needs. The actual way of organising the children's education through distance learning has been and will continue to be decided by the principals, who consider the legislation, the current possibilities and the school's conditions.

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1.2 Parameters for Children's Education Concerning Kindergarten Teachers

All kindergarten teachers had to fulfil their duties at the time of the closure or reduction of kindergarten operation. According to Sec. 22(a) of the Pedagogical Staff Act (MoE, 2004b) the pedagogical staff was obliged to be at the employer's workplace at the times specified in the timetable of their direct teaching activities. At the same time, however, the possibility that the teacher could agree with the principal to perform work tasks from a different place in the case of distance education, which is established under Sec. 2 of the Labour Code, was not excluded, and this also applied to teachers who were in quarantine (Parliament of the Czech Republic. (2006).

1.3 Ensuring Communication Between All Actors Involved in the Child's Education

In addition to the teachers, the kindergarten staff who need to pass on information to the parents are the principal and other pedagogical staff, i.e., the speech therapist, the teaching assistant, the school assistant, as well as the head of the school canteen and the school economist. During the online education of children, information should be conveyed in a concentrated manner, grouped thematically, with determined time and frequency of communication, and it should preferably be sent out on weekdays, during working hours and well in advance.

For communication among all actors, a common communication platform with uniform common rules needs to be chosen and agreed upon, and this also needs to be incorporated into the school rules. Effective communication between all actors is essential for all parties to fulfil their roles. The role and duty of parents is to support their child and strengthen their intrinsic motivation to fulfil their obligation to learn, in this case through distance learning. If teachers designate a specific type of online service as the official communication channel, it is necessary to address cases where the child's parent does not have the necessary equipment.

For children in compulsory pre-school education, it is important to maintain the continuity of social ties and communication with peers and their teacher so that the transition to primary school, even with a digital learning method, is as effective as possible.

1.4   The Current Situation

The coronavirus situation has significantly affected education of all types and at all levels. During its course, some educators decided to research selected features and their impacts on the school network. For example, Pavlas et al. (2021) report that current digital technology or low-quality internet connections were major barriers to online education in 24% (out of 1,000) of the kindergartens surveyed; 7% of kindergartens stated the lack of digital competence of teachers as a reason for the absence of online education. Other findings suggested that activities being offered regularly led to more frequent and intensive contact with children's guardians; kindergartens with fewer children, especially one-class kindergartens, made more frequent use of face-to-face contact and communication and had feedback on the success of education from the parents' perspective. An essential piece of information is that the principals expressed the belief that the central institutions had forgotten the pre-school segment and that neither sufficient information nor elementary methodological support were provided for kindergartens (Pavlas et al., 2021).

2   Methodology and Methods

2.1   Design

To identify the changes in the conditions of children's education in kindergartens in the Czech Republic following the closure or reduction of kindergarten operations during the coronavirus crisis and find out what educational experiences were gained by the pedagogical staff in the changed conditions, a mixed approach was employed. Furthermore, content analysis and descriptive statistics for relative frequencies was applied.

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2.2   Sample

At the time of our investigation, increased sanitary measures were still in place in the Czech Republic. Kindergartens were closed to the wider public coming from the outside environment. Thus, the sample was selected based on convenience, consisting of 17 kindergarten pedagogical staff. The participants can be divided into two subgroups: a) management, which includes seven (41.2%) head teachers and four (23.5%) principals, as the ones responsible for the conditions of pre-school children's education in kindergartens; and b) six (35.3%) female teachers (*Figure 1*).
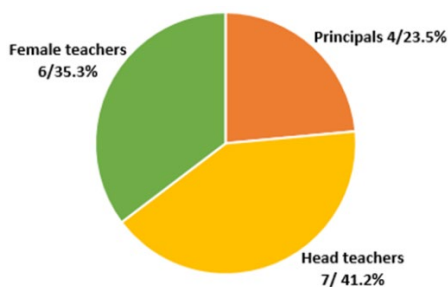
Figure 1: Employment position.
Source: own.

The respondents' level of education was examined next. Eight respondents had completed secondary education; three respondents had obtained a bachelor's degree in Kindergarten Teaching; one respondent had obtained a bachelor's degree in Special Education; and one respondent had obtained a doctoral degree in Pedagogy. Four respondents had obtained a university degree in a program other than those listed here (see *Figure 2*).

In terms of place of work, the largest group of respondents was from the Zlín Region (47.1%); followed by the Moravian-Silesian Region (23.5%); the Pardubice Region accounted for 17.6% of respondents, one respondent was from the South Moravian Region, and one from the Olomouc Region. The largest group of kindergartens were two-class kindergartens (29.4%), followed by three-class (23.5%), six-class (17.6%), four-class (11.8%), one-class (5.9%), seven-class (5.9%), and ten-class kindergartens (5.9%). There were 15 kindergartens that followed a regular education program, two that followed the Start Together educational program, and one kindergarten that followed Montessori pedagogy.
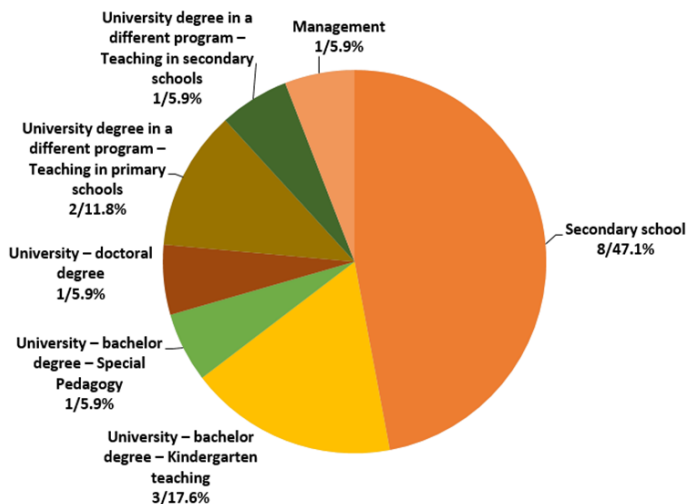
Figure 2: Respondents' Obtained Level of Education.
Source: own.

2.3   Instruments and Procedure

The data was collected using a standardized open-ended interview. The respondents were asked the following research questions:

- – In what ways and how have the educational conditions of pre-school children changed because of the COVID-19 pandemic?
- – What experiences have you gained as a result?

The study took place at the workplace of each participant with only one researcher attending the session and recording the answers. The respondents were informed of the aim and purpose of the study and provided consent to record their answers using a voice recorder. They were informed that their responses could be as long or as short as they liked. To ensure anonymity, the participants were assigned codes U1 to U17 for further analysis and were asked to provide comprehensive answers to the above questions. To allow the respondents to be as explicit as possible, the questions were presented in printed form and they were asked to read, think and share their

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opinions on the first question and then move to the following one. The time it took the respondents to answer varied, ranging from 20 to 43 minutes.

2.4   Data Analysis

Data analysis consisted of several steps and was conducted using ATLAS.ti8 and SPSS24 for both the qualitative and quantitative approach, applied respectively. In the first steps, all meetings were transcribed for further content analysis. Consequently, the transcribed text was segmented into ideas units (Jacobs & Morita, 2002). An open-coding approach (Emerson et al., 1995) was also used to identify any other issues that might have been addressed, sorting them into topic categories. In the second step, all categories were analysed by running simple descriptive statistics for relative frequencies. To ensure coding reliability, all data was coded by two independent researchers, with the inter-observer agreement being established at 93% for all data sources.

3   Results

The analysis revealed four main unit ideas: a) changes in the educational conditions; b) conditions of distance learning; c) experience with distance learning; and d) recommendations. Below, the topic categories are further described along with their relative frequencies.

a) Changes in the educational conditions were found in the following areas in particular:

- − Form of education
- − Distance learning rules
- − Availability of digital technology

The **forms** of distance education were diverse; 11.8% of respondents educated children in their kindergartens via mobile radio, 23.5% through Facebook, 23.5% would send materials to parents via email, and 23.5% uploaded educational material on the kindergarten website. Some respondents (23.5%) delivered education assignments personally to the child's parents. 5.9% of respondents mediated educational content through Google, and 17.6% through mobile phone.

In each kindergarten, the **rules** for education were formed according to the currently identified social, economic, and other conditions of the children's parents and the conditions of the kindergarten. According to seven respondents, the person responsible for distance education and the creation of rules for distance education in kindergartens was determined by the principal. Another seven respondents said that the rules were set by the primary school principals, of which the kindergarten was a part. Three respondents said that the rules were set in the kindergarten in collaboration with the teachers and/or by the head teacher.

The rules included the implementation method, i.e., a form of distance education either offline or online. It also included provisions delineating which age groups the distance education was for. Only 41.2% kindergartens prepared educational materials for children with compulsory pre-school attendance, and 58.8% of them prepared educational materials for all age groups. Following this, 23.5% respondents stated that education was voluntary for children, while 58.8% of respondents reported that they had noticed changes in the conditions of education in an addendum to the School Code, and 41.2% of respondents said that they had not noticed any changes in the educational conditions. The rules for the educational conditions set at the beginning of distance education did not have to change for any of the 17 respondents throughout the course of kindergarten closure.

For distance education, the respondents used **digital technology**. The pedagogical staff had not thought about the sufficient availability of digital equipment in kindergartens until the onset of distance education, especially in the last year of pre-school education. In this vein, 10 respondents stated that their kindergarten was sufficiently equipped with this technology for the distance education form they had chosen, and seven reported that their kindergarten was not sufficiently equipped.

The respondents added that the kindergarten heads were not interested in the needs of the kindergarten or whether they were equipped with digital technology to ensure good conditions for distance learning. Only one respondent stated that the kindergarten head was interested in whether the teachers had everything they needed to provide distance education for the children, while 10 respondents plan to equip themselves with digital technology in the future. At the same time, five respondents stated that they needed to be trained in IT skills. In contrast, 12 respondents did not have this need.

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b) The respondents also evaluated other areas regarding the **conditions of distance education**, namely:

1. ease, implementation;
2. cooperation with parents;
3. participation of children in education;
4. goals, content of education and their implementation in activities;
5. feedback; and
6. mode of education.

A total of 16 (94.1%) respondents evaluated the ease of distance education as smooth. Only one respondent faced a problem in one socio-economically disadvantaged family that did not have any digital technology at home through which the learning process of their child could be implemented.

According to all respondents, the whole educational process, its effectiveness, and success was primarily dependent on good cooperation with parents. Cooperation with parents was praised by 16 respondents; parents had cooperated to the extent required by them. The same number of respondents reported that parents also expressed satisfaction with the established cooperation with the kindergarten teacher during distance learning. According to one respondent, parents were not satisfied cooperating with the kindergarten teacher and other staff, explaining that there were few misunderstandings, but the parents were very critical. And one respondent complained about the cooperation with parents, commenting that they had absolutely not been interested in their child's distance learning.

Thanks to the close cooperation with parents, the respondents were able to continuously evaluate the children's participation in the activities and the results in their education. In the online format, parents, grandparents, or other authorized individuals were present when using digital technology and became part of the evaluation of the children's activities. Parents brought the completed tasks to the kindergarten in person. This form of transferring learning outcomes was predominant. The evaluation of the tasks completed by the children was sent to the parents via email. The participants reported that they recorded the children's attendance during distance learning, i.e., the age group selected by the kindergarten

at a certain time and attended by the teachers. Non-attendance was monitored, and all 17 respondents required a proper excuse from the children's parents.

All respondents planned the goals and content of the educational activities to meet the educational objectives in all the educational areas as per the RVP PV curriculum and focused on developing all of the children's competencies. They planned and implemented activities aimed at developing children's memory, attention, pre-math, speech, language, motor art and work skills, and logical reasoning, all in the online mode. During distance learning, the respondents (n = 17, 100%) created a lot of educational material that they are going to keep for future use.

During distance learning, the respondents were involved in the evaluation of children's activities and 41.2% respondents indicated that their lessons were observed by the principal during this time. All the respondents expressed that the feedback and the opportunity for peer consultation, in which they verified their planned educational activities and their implementation in the field but also inspired each other, was significant feedback for the distance learning they were implementing.

All respondents also evaluated the offline mode of delivering education as more challenging for both the children and their parents. It was not implemented by 47.1% respondents. This was also because the parents were not prepared for this form of education and were not equipped with digital technology in their homes. Furthermore, the respondents thought about what was more beneficial from their point of view for the children's education. Following this, eight of them said that the best form of education for the child was the offline mode, two of them said that it was face-to-face contact, two thought that a combination of both forms of distance education was the most beneficial, and one said that it was the online form.

c) All respondents commented on the **experience** gained by pedagogical staff through the distance teaching of pre-school children, relating to:

1. process, form of distance learning;
2. difficulty of distance learning;
3. rules and time required for preparation;
4. advantages and disadvantages of distance learning; and

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5.   recommendations for the future.

Some of the respondents' experiences have already been shared in response to the first part of the question (in what ways and how the educational conditions of pre-school children have changed following the COVID-19 pandemic).

–   According to all respondents, the whole process and its effectiveness and success was mainly dependent on good cooperation with parents.
–   All respondents evaluated educating children in the offline form as difficult for them and for the parents, and for this reason it was not implemented by 47.1% respondents.
–   Another of the respondents' experiences was the awareness of the importance of **rules** for distance learning and their appropriate setting. 47,1% respondents stated that if clear rules are set and these are thoroughly presented and explained to parents, the education process works well.
–   The respondents also commented on the time demand when setting up distance learning. They spent 8 to 10 hours preparing classes (35.3% of respondents).
–   Based on their experience, 70% respondents expressed only one advantage of distance learning, namely personal improvement in working with digital technology. During distance learning, in one respondent's facility, a Google classroom was created. The respondent stated that the form of distance learning was appropriate, purposeful, and beneficial for everyone involved in this form of education.
–   All 17 respondents mostly lacked face-to-face contact with the children.
–   Of the respondents, 5.9% also commented on the loss of privacy.

d) Based on their experiences, the respondents also made **recommendations** for distance learning in kindergartens in the future:

–   One respondent recommended the establishment of Google classrooms in kindergartens for contact with parents, to link the online and offline educational forms.
–   One respondent expressed a recommendation for the Ministry of Education to inform parents about their obligation to cooperate with the kindergarten in distance learning in children with compulsory pre-school

attendance, and to further explain to parents the meaningfulness of this form of education.

– One respondent expressed that it would be appropriate to establish uniform rules for distance learning for all kindergartens.

– One respondent also expressed the request to help socially disadvantaged families with the provision of digital technology for children to be able to participate in distance learning.

– All respondents recommended equipping the kindergartens with digital technology.

– Four respondents requested training for teachers in the skills of working with digital technology, thus broadening their competencies for this form of education.

4   Discussion

Until now, pre-school children have never been educated through distance learning, and in the modern history of the Czech Republic it has never happened that kindergartens have been closed, even during various (child) epidemics. As a result, kindergartens did not have any time to prepare for or discuss the conditions and forms of implementing distance education for children, nor did they receive any methodological support from the Ministry of Education, like pedagogical staff at other school levels had. Thus, the pedagogical staff had to effectively adapt and organise all the conditions for the new form of distance education and its course in their kindergarten themselves, in compliance with the strict sanitary measures laid down by the Government. In order to understand the changed conditions and gained experiences throughout this unique period, our study investigated and analysed the opinions of 17 pedagogical staff working in kindergartens within the Czech Republic.

As per educational conditions in general, the authors learned that the predominant number of participants used digital technology to present pedagogical content to children. Most teachers used more traditional means of delivery, such as e-mail, mobile phone or website, and only five of them used more current platforms, such as Google or Facebook. With the use of technology, the teachers also addressed the important issue of IT availability. Of the respondents, 41.2% declared that their workplaces were not sufficiently equipped with IT. Digital technology is usually

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purchased by kindergartens from their budget for operation allocated by the kindergarten head. Operations vary from one region to another, hence the possibilities for purchasing equipment for possible digital technology do as well. Therefore, kindergarten pedagogical staff were right to feel marginalised in ensuring the conditions and the fulfilment of their new obligations. Furthermore, not all families were sufficiently equipped with IT technology, hence education was mostly delivered in an offline mode.

For any form of education to run smoothly, kindergartens must have a school code in place. Given that distance learning is compulsory for children in the last year of pre-school education, the rules should already be elaborated in the code. It is interesting to note that the rules for distance learning had only been incorporated in the school code in some of the kindergartens and did not have to be changed in the places where they were established. In connection with the call for training teachers in the use of digital technology, the question is whether with the development of digital competencies in teachers in the future there will be a time for a more thorough elaboration of the rules in the school code.

Regarding gained experiences, this situation was beneficial in creating much needed new teaching material and improving the teachers' skills in working with digital technology. The teachers also benefited from observations, discussions, and support from other colleagues. On the other hand, this situation also brought loss of privacy and a lack of social contact. This condition also highlighted an already known fact – education delivered distantly, offline, in most circumstances through non-interactive activities, requires very good cooperation among all educators and parents.

5 Limitations

One of the limitations was the relatively small number of respondents, which, unfortunately, was affected by the quarantine regime. Nevertheless, the small sample size was balanced by the fact that the respondents were from several regions of the country, thus the authors could obtain varied data, as operation is usually region dependent.

6   Conclusion

Distance learning in the Czech Republic was ordered for kindergartens by the Ministry of Education quite suddenly, without any possibility for preparation or support. This change was a consequence of the rapid spread of the COVID-19 virus, as well as the measures of the government and the Czech Health Station, which are still in force. This study identified changes in the educational conditions of pre-school children that were reflective of changes in education forms as a result of these measures, and so the results of the study are actionable and possibly ongoing. They addressed specific situations in a range of pre-school settings determined by their location and size, varied organisation of operations and demands from managers, teachers, and parents. The analysis of the responses also provided further information related to distance learning in kindergartens. After the end of the emergency situation following to the coronavirus epidemic, it would be advisable to repeat the study.

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The Modern Challenges of Teamwork in Kindergarten

Maja Hmelak, Karin Vučak, Tomaž Bratina
University of Maribor, Faculty of Education, Maribor Slovenia
maja.hmelak@um.si, vucak.karin@gmail.com, tomaz.bratina@um.si

Abstract The article discusses teamwork as an important segment of quality educational work in kindergartens. In modern society, full of everyday challenges and many innovations, team (co)operation with the aim of quality educational work is essential. The theoretical part presents teamwork and tandem work in all dimensions, i.e., how they are formed, the problems that occur within the above, and members' roles. The study on teamwork was conducted among educators and assistant educators in kindergartens in Pomurje and Austrian Styria. The authors investigated the factors that lead to team formation, the frequency of various causes of team inefficiency or inefficiency in the implementation of activities within the teamwork, as well as possible conflicts and reasons for their emergence. The authors were interested in how a team is formed and the possible problems in its operation, with an emphasis on the comparison between the work in Slovenia and the work in Austria. The study showed that the differences between Pomurje and Austrian Styria lie mainly in the concept of the tandem itself and the reasons for forming a team.

1   Introduction

In everyday life, connections between kindergarten staff, who have a significant impact on children, can also be forged through teamwork and tandem work. Both are ways of interacting based primarily on constructive cooperation and problem solving. For success within teamwork and tandem work it is essential to build good relationships that affect all team members and consequently the children within the department. However, we must not ignore the emergence of conflicts in mutual relations, which must be resolved in an ongoing basis. When resolving conflicts, the responsibility is often transferred to another member or the mistake is not acknowledged, which makes the conflict more difficult to resolve. Problems in teamwork include not only the above-mentioned causes, but also the incorrect and inappropriate distribution of roles among members in tandem and teamwork, which causes additional failure.

2   Definition of Team and Teamwork

Different definitions of teamwork can be found in the literature, some of which are presented in more general terms, while others mainly relate to different areas of teamwork in practice. Planning educational work can be equated with planning a whole life in kindergarten. The educator, with the support of an assistant educator, plans educational work on the basis of theoretical knowledge and observations of the developmental characteristics of the preschool child, so professional training is extremely important for quality educational work and the individual's optimal development (White Paper on Education in the Republic of Slovenia, 2011). In the pedagogical encyclopaedia, teamwork in education is defined as a way or form of activity performed by a group, i.e., two or more pedagogical experts who cooperate directly and equally with each other and have a common goal (Polak, 2012). However, other, slightly different notions and definitions of teamwork are also emerging. A team is also presented as an organizational formation, which, however, consists of goals within which tasks are designed. These tasks are aimed at team members. Team members interact on the basis of communication and the mutual exchange of information, knowledge and experience (Lepičnik et al., 2015).

Bečaj (1995, p. 27) defines a team as: "Any number of people connected by an effort to achieve a certain common goal. In order to be successful, they need to communicate with each other, create different roles and related tasks, appropriate

rules of conduct that are general and apply to all team members." Everard and Morris (1996) say that a team is: "A group of people who can successfully solve any task they undertake. Successfully means in the time available and with economically used internal and external available resources." Poljak (1980) is of the opinion that teamwork is primarily the involvement of employees who are experts in the work of the school community in terms of skills and knowledge, and that this is an integral part of schoolwork; hence, the very need for joint preparation for work, including joint work division, joint management and analysis.

In foreign professional literature, the definition of teamwork and teaching is based on Schaplin, who says that teamwork is a type of lesson organization that presupposes staff and associated students, leaving the team with joint responsibility for all or part of the activities (Polak, 2009). Work, which is understood as teamwork, is a way in which we seek and develop educational phenomena in kindergartens; where we consolidate forms of knowledge and values, both personal and social, which arise as a result of successful and effective teamwork (Stevanovič, 2001). The definitions of teamwork differ over time, but they still have similarities and common features, the most prominent of which are, defining a team as a group of people, the goals and desire of which are successful implementation and planning. However, the success of implementation can be understood in various ways, in our case from the point of view of society or from the point of view of the individual.

The preschool teacher is one of the team members who takes care of all or part of the activities. Within the team, the educator's work requires bettering their competencies in various areas of knowledge, which every educator should master. As a result, their superiors' expectations, as well as those of the children's parents, are very high. However, we must not forget our colleagues, i.e., other professionals who in their own way demand constant development of one's professional personality. Among the various factors that affect teamwork in kindergarten, there are those that emphasize the individual and their attitude to improving, analysing and critically evaluating themself and their work. This requires an ongoing review of one's own work and a willingness to discuss critical issues. Successful teamwork in kindergarten also requires the field of communication (Golčer, 2014). A team is therefore a group of members who are either experts or closely related members who connect with each other and work closely together. The educator within the team performs at least three roles in their profession, namely the role of a person, the role of a civil servant, and the role of an expert. In the role of a person, they have

different expectations and ideas about what they want to achieve through education. It is especially important that they are able to function in relation to others, i.e., not only in relation to students, but also in relation to colleagues and parents. In the role of a civil servant, they receive a certain payment, for which they must fulfil certain tasks and follow rules. In carrying out their work, the educator is also committed to the profession. As an expert, they must work in the field of education as well as the education of students. It is their duty to build their own educational concept so that they will be able to plan educational work because parents and children have the right to know which educational concept is being used (Peček Čuk, 2009). The equation of teamwork and tandem as a concept appears often, which is inadequate in theory and practice. A tandem consists of two people, an educator and an assistant educator, or two educators who intertwine their roles in an equal way, work in a coordinated manner, plan educational work as a team, and thus carry out and evaluate activities, and they affect each other in a professional manner. The members of the tandem must cooperate in the kindergarten in providing an adequate amount of time for explanation, conversation, description, storytelling, etc. In this way, they provide the child with a stimulating learning environment for their holistic development (Polak, 2007). In addition, we should not ignore the fact that, regardless of whether we are talking about a team in a department (two people) or a team between departments and a kindergarten (several people) or a team between other institutions and kindergartens, they are united by common characteristics (Lepičnik Vodopivec, 1996).

2.1   Team Building

According to Maček (2014), the process of team building is crucial. The beginning of forming teams goes back to the basic sources of motivation for teamwork; this is related to the psychological needs that the individual must meet. We have the need for security, the need for acceptance, the need for self-actualization, and the need for confirmation and recognition. In addition, the formation of a team cannot take place without the cooperative attitude of the members.

Team building appears in different ways in different literature, wherein similarities and differences can be noted. Most often, experts refer to the American psychologist Barry W. Tuckman, who worked intensively on the definition of four important stages in team development. He believed that all teams must go through four stages of development in order to be successful. These stages follow each other in a certain

order, but the duration itself is not predetermined, as it can vary between teams. Tuckman defines four stages, namely the stage of forming, the stage of storming, the stage of norming, and the performance itself. Within this, it is important to note that the stages are focused on the development of relationships between individuals, and not so much on tasks and content, so that it is possible to form a successful, long-term team (Polak, 2009).

The basic resource for team building is also related to the psychological needs of each of the individuals. Polak (2009) cites the following psychological needs intended for team building:

- The need for security: compliance with the rules ensures security in the team, but if one's needs are not met, one feels threatened. These needs are the need for dependence, stability, order, freedom from fear, etc.
- The need for self-actualization: it is the need of a greater order that directs one to realize and become that which is possible.
- The need for acceptance: the very feeling of acceptance is important for dealing with problems and conflicts that are part of teamwork. An individual feels rejected when a need is unmet.
- The need for confirmation and recognition: these are the needs for self-esteem, self-confidence, independence, and freedom. Meeting these needs leads to a sense of self-confidence and ability.

However, we should not ignore the fact that it is not only members and their motivations or desires for teamwork are important for team building, but it is also the behaviour of team members. Bales, a sociologist, studied the behaviour of group members. He listed six problem areas that include both directions of behaviour, i.e., positive and negative (Polak, 2007):

- the area of integration (showing solidarity or also expressing opposition to other members);
- the area of supervision and management (making proposals or also expressing needs for ideas);
- the area of orientation (directing members or also the need for guidance);
- the area of tension in relationships (showing tension or also releasing tension in the team itself); and
- the area of evaluation (evaluation, expression of the need for evaluation).

With the described problem areas, it is possible to identify or study the processes in a group and not only the content of group work this way.

2.2   Creating Rules in a Team

For the successful and efficient implementation of tasks and duties in teamwork and for successful education within teamwork, certain rules are required, the observance of which leads to the interconnectedness of members and ensures successful education. The rules that guide and regulate the work of team members are designed considering all the specifics of each team, and a consensus is reached by all its members (Bečaj, 1997). In each group, it is necessary to create rules for teamwork among team members. It is the formulation of teamwork rules that leads to long-term useful work. Rules within a team cannot and should not be created from the outside but should be designed considering all the specifics and characteristics of the team members (Polak, 1999).

Based on Polak (2007), team rules are divided into the following four categories:

- – rules relating to the work of the group; not complying with or adhering to the rules affects the achievement of the common goal;
- – rules setting out views and beliefs; the correctness of beliefs is usually judged more by coherence;
- – rules that determine the way of group interaction; they ensure the fair distribution of benefits and prevent conflicts; and
- – rules that determine the hairstyle, dress and other aspects of appearance; allow a clear identity.

We find that the rules in a team are formed in the very process of social interaction. Some rules are co-created by the individuals within the team, while others are already in place and are only respected and followed by team members. Full satisfaction of the members' individual needs cannot be achieved, as the goals differ depending on the individual (Polak, 2007).

Group rules can thus be formulated in the following ways (Polak, 2007):
- – by agreement between the members of the group;
- – by adopting pre-established rules of conduct;

- spontaneously;
- from similar personal views and interests without any special arrangement; and
- by mutual rapprochement and influence.

Rules within a team can also be divided into formal and informal rules, which are related to the formal and informal roles of members and are intertwined. They can be written or unwritten. For formal groups, where formal rules apply, these are clearly defined by obligations and duties, and penalties are set in advance for non-compliance (Bečaj, 1997; Havelka, 1980). Rules within a team determine the special experience of teamwork, as it is a process of creating an internal rule of behaviour in the team, which with the topicality of the entire content (e.g., facing expectations, attitudes, problems focusing and in orientation, different norms) provides a large set of cognitive, motivational, emotional and communication processes (Polak, 1999). Thus, we find that every rule is a kind of restriction. We are willing to stick to every rule as long as it brings us certain benefits and desirable goals. If we disregard and do not comply to the rules, we violate them. By doing so, we can achieve an unpleasant psychological state, condemnation, and even hostility from other people, etc.

3   Teamwork in Kindergarten

The curriculum for kindergartens largely emphasizes the autonomy of kindergartens, educators and assistant educators. The document follows modern curricula in the world and thus emphasizes the professional responsibility and at the same time the autonomy of educators and assistant educators and cooperation between them (Dolar Bahovec & Golobič, 2004). The Curriculum for Kindergartens from 1999 is a Slovenian national document that covers the basis of preschool education in kindergartens. It covers the objectives of the curriculum for kindergartens as well as the principle of team implementation and the planning of preschool education. In addition, it also covers the principle of the professional development of professional staff in the department, between departments and within the kindergarten, etc. The Curriculum for Kindergartens (1999) focuses on the role of adults, i.e., educators, assistant educators, and other professionals (counselling and management staff in kindergartens). Throughout history, the role of the assistant educator has also changed; the assistant educator not only looks after children at work, as was once the case, but also participates in the educational process and its implementation.

They also cover and focus on team planning and implementation, which envisages cooperation between professionals. With the proper implementation of teamwork, it is possible to effectively develop the ability to understand oneself and others, the ability to consider diversity and participate in groups, recognize emotions, transfer knowledge from different fields, regardless of the team members' interests, develop independence, develop imagination, etc. (Kindergarten Act, 1996). Teamwork runs from the planned activities to the end result. The result can be achieved through mutual work in tandem, which contributes to the conditions for the development and learning of the individual, the ease of presenting content, the appropriate content, the time, space organization and professional development, reducing the likelihood of failure and errors, etc. (Zore, 2008).

3.1   The Role of Team Members and Mutual Communication

Team members take on different tasks in a team. At the level of the different tasks assigned by the team itself, we can talk about the diverse roles of the members. These roles are linked to their job, to their professional competencies, and at the same time to the type of education. However, each professional in a team can perform several different tasks at once. When different roles are combined, some are more pronounced and others less so. Thus, the basic condition for the successful operation of a team is primarily related to the clear division of roles and tasks to be accepted and implemented by team members. If each of the prescribed roles is represented, teamwork can be successful (Baumgart, 1997). Depending on the level of the task, a team member can be one of the following (Polak, 2007):

- an initiator, who initiates events, provides further incentives;
- a summary or conclusion designer, who selects, combines, and connects ideas;
- a clarifier, who determines what members actually think, their understanding of others, and who explains the incomprehensible; and
- an information seeker or mediator, who gives and seeks information in various ways that help to realize the task.

We find that the tasks of team members are interconnected and complementary, which ultimately leads to successful teamwork. By connecting ideas and encouraging, certain understandings and conclusions are formed between individual members, which contribute to success in achieving the set goal.

Members can also perform different tasks in different teams. Praper (2001) lists three types of teams:

- interdisciplinary teams (characterized by cooperation between team members, close connection and communication, and creativity);
- multidisciplinary teams (members perform demanding work and extensive tasks, roles and responsibilities are clearly defined, members do not work closely with each other); and
- transdisciplinary teams (close connections, individuals maintain their individual side and specific differences).

The basic conditions for the successful operation of a team are the clear division of roles between team members, wherein members should accept and feel comfortable and safe, as well as clear goals that make sense to the individual, and open, honest communication and democratic leadership (Eichhorn et al., 1998). Based on different levels of support activities, team members can express themselves as those who express their emotions within the team, perceiving team mood, positive and negative emotions and relationships, and helping members articulate their emotions. A team member can also express themself as a communication facilitator. In this case, all members have the opportunity to express their opinion. As a facilitator, a member of the team can be friendly, warm and responsible to others, while actively listening to and accepting the opinions of others. Last but not least, a team member can be a maintainer of harmony, directing members to express and resolve inconsistencies and conflicts within the team. We find that the success of teamwork in the distribution of roles among team members is based on flexibility and by achieving balance (Polak, 2007).

3.2   Team Efficiency and Inefficiency

Good communication is the fundamental basis of successful teamwork. Each member of the team is responsible for efficiency, so it is important that team members agree on a type of communication (Polak, 1999). Often, precisely communication itself is ineffective, which affects the inefficiency of the team. According to Marjanovič Umek and Fekonja Peklaj (2008), an inefficient team is characterised by competitive communication, disobedience, and non-recognition of the ideas of others, while an effective team utilises communication characterized by harmonious action, based on active listening and the desire to understand. In

accordance with the formation of the team, we must follow the team behaviour that proves to be effective in practice and for which we are almost certain that the end result will be an effective team. An individual's personal readiness is the key to successful teamwork. All negative expectations, feelings and thoughts lead to the inhibition of communication, which may result from an individual's negative experience with other teamwork or their personal unwillingness to work in a team.

Brajša (1993) distinguishes three basic types of teams, according to their effectiveness:

- – *successful teams*: team members work together more successfully and better, developing common new, different and better solutions and results;
- – *unsuccessful teams*: within these teams, members have poorer joint work, they work as if they were working individually, teamwork limits them and prevents them from exploiting their potential; and
- – *average teams*: team members do not work more successfully and better than they would if working individually, and they do not develop their own team creativity.

In general, we can also distinguish between highly efficient and inefficient teams. Highly effective teams are also considered to have special characteristics, such as genuine and open communication, clear and positive goals, a well-designed way of monitoring, controlling and also solving problems, motivating all members, and also emotional security and creativity. On the other hand, there are ineffective teams. They are not characterized by the characteristics we identified in an effective team. Quite the opposite. They are characterized by unclearly distributed roles, unclear goals and intentions, inappropriate decision-making and poor management, overlooking the needs of other members, the lack of necessary feedback, etc. (Polak, 2009).

4   Conflicts and Problems in Teamwork

As in life itself, problems arise in kindergarten that need to be accepted and solved. Ineffective communication and problems occur in the case of disrespect, threats, commanding in a negative way without explanation, criticism without a proposed solution, and derision, among others. Organizational barriers are also a big problem, as the activity in the kindergarten is not properly regulated. In the case of vaguely defined roles in a team, and therefore also roles in a tandem, there is a mixing of

roles or exclusion of certain individuals and thus dissatisfaction with work, which leads to conflict within the tandem and consequently within the team. In addition to all the reasons we have listed, we must not neglect individuals' personal reasons for not wanting to find a solution or get involved in teamwork, such as the distrust of others, personal introversion, the perception of fear, fear, and personal threat. The most common problem in teamwork occurs in the relationship between the educator and the assistant educator. Reasons can vary, but it is important to mention the difference in personality, flexibility, need for control or sympathy. Fear is also a common occurrence in teamwork. This can stem from fear of failure or embarrassment stemming from pedagogical errors (Polak, 2007).

However, sometimes, for various reasons, conflicts and problems in the team are not resolved. This makes the work and fulfilment of tasks in the team difficult. Interpersonal contacts are worse because individuals do not understand each other, do not support each other, and do not help each other. This can have a very negative effect on the children present if the conflicting behaviour is noticeable. If conflicts within the team are resolved, some specifics of the team situation must be considered. All conflicts must be resolved within the team, and all those involved in the conflict must be present while resolving the conflict (Polak, 1999). Owing to unresolved conflicts, work within the team is difficult, which in turn leads to failure at work. This also worsens the quality of interpersonal relationships; individuals do not understand each other at work, do not support each other and do not help each other. There is tension, which leads to feelings of doubt and fear. Conflicts must therefore be resolved within the team in the presence of all members, otherwise the team members' trust may be jeopardized (Polak, 2007).

Marjanovič Umek, Fekonja Peklaj and Bajc (2005) emphasize the importance of conflict resolution. In resolving conflicts, the method of cooperation must be followed, since in this method, the team members confront each other, process the conflict, talk openly, and then find the best way to a solution together. To resolve conflicts in a team, we need to include the following steps:

- clarifying the characteristics of the conflict and finding the causes;
- analysing the impact of the conflict on other areas, such as joint work;
- expressing understanding for the resolution of the conflict;
- involving external people to help resolve the conflict (e.g., a counsellor);
- explaining the expected changes; and

–   identifying the changes and the benefits that they will bring.

Team members can resolve conflicts in a variety of ways. Jovan (1987) cites negative ways of resolving, such as avoiding conflict, forming a coalition, invoking authority, leaving the team, overcoming and pressuring, persuading people to make decisions, compromising members so that they abandon their positions. Brajša (1993) lists the methods by which we resolve conflicts: the method of compromise, the method of cooperation, the method of adaptation, the method of competence, and the method of avoidance. Brajša understands the method of cooperation as the only possible way of real conflict resolution in a team. The bottom line is that team members should face conflict, talk openly about it, and then find the best solution.

5   Methodology

Objectives and research questions
The study identified differences and similarities in the understanding of the importance of teamwork and tandem work among professionals in kindergartens in Pomurje and Austrian Styria.

The following research questions guided the study:

–   What factors (causes) lead to team building?
–   What is the frequency of reasons for the inefficiency of the team, i.e., teamwork?
–   How often do conflicts occur within a team and what are the reasons for them?

Research sample

The study covered 109 educators and assistant educators from the Pomurje region and the neighbouring country of Austria. Of these, 50.5% were staff members from Slovenia and 49.5% from Austria. According to the professional structure, 56% of the sample were educators, 31.2% were assistant educators, and 12.8% were other professionals. 33% of respondents were aged under 30, 31.2% of respondents were aged between 31 to 39, 31.2% of respondents were aged between 40 to 49, and 9.2% of respondents were aged 50 and over.

Data collection procedures

Data were collected in the 2018/19 school year. Data were collected with the help of questionnaires, which were distributed among the participants in the study. First, a sounding survey was conducted, using a questionnaire to correct errors and omissions in the structure of this form of question. This was followed by the preparation of a questionnaire in Slovene and German, which included closed-ended questions on various aspects of teamwork. The authors examined the factors of team formation, motivation for teamwork, reasons for team inefficiency, and the causes of conflict within a team.

Data processing procedures

The collected data were processed using SPSS statistical software. The statistical methods of descriptive statistics and selected non-parametric tests were used to analyse the rating scales.

6 Results, Interpretation, and Discussion

The authors first present data on the reasons for forming a team.

Table 1: Team formation factors

Team formation factors		Respondents		
		Slovenia	Austria	Total
Easier implementation of activities	f	13	14	27
	f %	23.6	25.9	24.8
Professional complementarity	f	38	0	38
	f %	69.1	0,0	34.9
Interest in joint work	f	0	34	34
	f %	0.0	63.0	31.2
Friendly relations	f	4	6	10
	f %	7.3	11.1	9.2
Total	f	55	54	109
	f %	100.0	100.0	100.0

There is a statistically significant difference between respondents on the factors that cause the formation of a team by country ($\chi^2 = 8.474$, P= .004). The results show that when answering the question about the factor reason for forming a team, only

23.6% of respondents from Slovenia and only 25.9% of respondents from Austria answered that easier implementation of activities was a factor in the reason for forming a team (*Table 1*). As many as 69.1% of respondents from Slovenia believed that professional complementarity was a factor in forming a team, while no respondent from Austria were of the opinion that this was the reason for forming a team. As many as 63% of respondents from Austria expressed interest in working together as a factor that was the reason for forming a team. Furthermore, only 7.3% of respondents from Slovenia and 11.1% of respondents from Austria answered that the reason for forming a team was friendly relations.

The difference in factors for the cause of team building is not necessarily present only in different countries, it can be present in different kindergartens since individuals' views on the importance of the cause for team building will vary.

In the continuation data on the importance of the psychological needs of team members in their motivation for teamwork and the differences in this by country is presented.

Table 2: Assessment of the importance of the team member's psychological needs in their motivation for teamwork

	Average rank
The importance of the need for security	2.75
The importance of the need for self-actualization	2.58
The importance of the need for acceptance	2.75
The importance of the need for confirmation and recognition	1.91

In analysing the participants' assessment concerning the importance of psychological needs for teamwork shows that the most common are the need for acceptance and the need for security as psychological needs, which are most important for the participant in teamwork. The authors believe that the acceptance of other people is an important value and that individuals should accept other people, because only in doing so can one be included in and embraced by society. These needs are followed by the need for self-actualization. The need for confirmation and recognition is the least common psychological need, which is surprising, as it is often noticeable in practice that recognition and confirmation of the success of a particular activity is an extremely important motivator for further teamwork (*Table 2*).

The results in the *Table 3* show that when asked about the greatest importance of psychological needs in relation to the country, only 18.2% of respondents from Slovenia and 29.6% of respondents from Austria chose the psychological need for self-actualization, while 41.8% of respondents from Slovenia and 37% of respondents from Austria chose the psychological need for acceptance. Following this, 27.3% of respondents from Slovenia and 26.4% of respondents from Austria chose the importance of the need for security. The need for confirmation and recognition was of the least importance to the participants from both countries.

Between the need for self-actualization and the need for acceptance, we can talk about statistically significant differences regarding the maximum value of psychological needs of an individual in a team according to the country ($\chi^2 = 3.853$, P= .048 in $\chi^2 = 3.671$, P= .009).

Table 3:. The importance of psychological needs by country

The importance of psychological needs		Respondents				
		Slovenia	Austria	Total	χ^2	P
The need for self-actualization	f	10	16	26	3.853	.048
	f %	18.2	29.6	23.9		
The importance of the need for acceptance	f	23	20	38	3.671	.009
	f %	41.8	37.0	39.4		
The importance of the need for security	f	15	14	29	1.101	.950
	f %	27.3	26.4	26.9		
The importance of the need for confirmation and recognition	f	5	4	9	1.546	.672
	f %	9.1	7.4	8.3		

The authors believe that all these needs are the key reasons for forming a team, because without them the individuals in the team would not be successful. Polak (2009) also cites psychological needs that are the reason for team building: the need for security that ensures security in the team, ensures compliance with the rules; the need for self-actualization that guides a person to follow and realise opportunities; the need for acceptance, which is important for dealing with problems and conflicts that are part of teamwork; and the need for confirmation and recognition, which leads to a sense of self-confidence and ability.

Table 4 presents data on the frequency among causes of inefficiency in a team i.e., teamwork.

The most common causes of inefficiency within a team and teamwork are inadequate professional education and distrust of individual members, followed by the influence of kindergarten management, the mood of the children. and parental interference in the work of professionals.

In analysing the frequency among causes of inefficiency in a team or in teamwork according to age, the authors found that respondents aged 30 and younger mostly attribute it to inadequate professional education and inadequate communication between team members (see *Table 6*). The least common reason is the influence of the children's mood. Respondents aged between 31 to 39 attribute the distrust of an individual member in the performance of the entire team as the most common cause, while parental interference in the work of professionals in the team is the least chosen cause in this age group.

Respondents in the age range of between 40 to 49 see the largest common cause in the influence of the children' mood, and the least common causes are inadequate professional education and inadequate communication between team members. Respondents aged 50 and over attribute parental interference in the work of professionals as the most common cause of team failure. However, they most rarely see inadequate communication between team members as the cause. From the stated one can conclude that ideas about the occurrence of causes of inefficiency in a team or in teamwork differ significantly depending on age. Especially in comparing the youngest and the oldest respondents, there are differences in the experience of employees according to age.

Table 5: Frequency of causes of inefficiency of a team i.e., teamwork

	Average rank
The influence of kindergarten management	3.40
Team members' varying views	2.71
The influence of the children's mood	3.29
Parental interference in the work of professionals in the team	3.12
Inadequate professional education	4.62
Distrust of a member	3.85

Table 6: Frequency of causes of inefficiency of the team i.e., teamwork, according to age

The importance of needs	Average rank					
	Up to 30 years	From 31 to 39 years	From 40 to 49 years	50 years and	χ²	P
The influence of kindergarten management	58.50	54.69	53.67	47.30	1.474	.688
Different views of team members	56.14	56.78	51.90	53.85	0.986	.805
The influence of the children's mood	53.63	49.03	61.31	61.95	3.730	.292
Parental interference in the work of professionals in the team	65.81	41.59	53.71	65.45	4.871	.002
Inadequate communication between team members	69.94	52.44	44.88	39.25	4.920	.001
Inadequate professional education	71.03	48.82	46.86	41.90	4.952	.001
Distrust of an individual member in the performance of the entire team	57.36	64.59	44.81	43.45	3.924	.020

There are statistically significant differences between the reasons for team inefficiency and age regarding parental intervention in the work of professionals working in a team (χ^2= 4.871, P= .002), inadequate communication between team members (χ^2= 4.920, P= .001), inadequate professional education (χ^2= 4.952, P= .001), and in response to the distrust of an individual member in the performance of the entire team in (χ^2= 3.942, P= .020). In view of the above, the authors agree with the above-mentioned answer about inadequate communication, as disobedience and disturbances in the communicative system lead to failure to carry out activities, which can also be observed in literature and in citations from various authors. Surprisingly, opinions differ statistically significantly in terms of professional education. Namely, the authors believe that all professional workers

should be sufficiently qualified to perform their work and also have the appropriate education to perform it.

An inefficient team is therefore characterized by competitive communication, disobedience and non-recognition of the ideas of others. An individual's personal readiness is the key to effective teamwork (Marjanovič Umek & Fekonja Peklaj, 2008).

Table 7: Frequency of occurrence of factors for the emergence of conflicts within the team

	Average rank
The emergence of conflicts due to organizational barriers	3.08
The emergence of conflicts due to communication barriers between team members	2.96
The emergence of conflicts due to unprofessional connections between participants in the team	3.42
The emergence of conflicts due to the distrust of participants within the team	3.80
The emergence of conflicts due to fear and threat to participants within the team	4.11
The emergence of conflicts due to undefined roles in the team	3.62

The results show that conflicts most often occur because of fear and anxiety among participants within the team, which can also result in distrust between participants within the team. Communication barriers between team members are less of a factor for the emergence of conflicts, although in practice we often find that communication is one of the most common barriers to the emergence of conflicts between team members.

Table 8: Frequency of occurrence of factors within the team by country

Cause of conflicts	Average rank	
	Slovenia	Austria
The emergence of conflicts due to organizational barriers	56.87	53.09
The emergence of conflicts due to communication barriers between team members	46.25	63.90
The emergence of conflicts due to unprofessional connections between participants in the team	49.44	60.67
The emergence of conflicts due to distrust of participants within the team	48.37	61.75
The emergence of conflicts due to fear and anxiety among participants within the team	52.55	57.50
The emergence of conflicts due to undefined roles in the team	50.73	59.35

The results of the research on the frequency of factors for conflicts within the team by country (*Table 8*) show that in Slovenia, the most common factor are conflicts due to organizational barriers, while in Austria, it is the occurrence of conflicts due to distrust of participants within the team and conflicts due to communication barriers between team members. Conflicts due to communication barriers between team members are the least common in Slovenia, while in Austria, conflicts due to organizational barriers occur rarely. This indicates a complete contrast in the respondents' answers on the frequency of occurrence of factors concerning the emergence of conflicts within the team between the two countries.

Polak (2007) states the most common causes of team conflict. These are mainly interpersonal barriers, personal confinement, mistrust, unclear definitions of roles, organizational barriers, and personal barriers such as, anxieties, personal threats, fear, etc. However, the author does not define which of the needs are the most important for an individual, so it can be concluded that the frequency of factors for conflict varies from individual to individual, and consequently, from country to country.

7 Conclusion

In our society, teamwork and tandem work build bridges between adults. These bridges manifest as interactions between participants, constructive cooperation, as well as problem solving. Therefore, the first point of interest was the reason for forming a team. It turned out that the most common cause among Slovenian respondents is professional complementarity, while among Austrian respondents, the interest is to work together. Although the respondents joined teams mainly for professional or work reasons, according to the results of the study, they also satisfy their psychological needs in cooperation and teamwork; the most common needs they indicated were for security and acceptance.

Building a team is a complex and time-consuming process of developing relationships between participants. The process of stabilizing a team also requires time in which, according to Rot (1983), a certain team must go through the following phases: the cohesion development phase (i.e., cohesiveness), the testing phase (interpersonal relationships are formed and roles are divided and rules set), the stability phase (interpersonal relationships are consolidated and work is done effectively and successfully), and the conflict phase.

The success of the team depends primarily on the reasons for its formation, the successful division of roles, and the work within the team. Of course, a team can also be unsuccessful. The study showed there are several reasons for this, and all of them were identified by the respondents as key factors in the study. These are mainly the influence of kindergarten management on the work of the team, differing views within the team, the influence of the children's mood, parental interference in the work of professionals in the team, inadequate professional education, and distrust of a member. All of these also increase the frequency of conflict in the team, which we must resolve if we want to ensure the existence and successful operation of the team in the future.

The study highlighted only a few factors related to the formation and operation of a team, thus the topic needs to be explored in more detail. Since a team offers both professional and psychological (personal) support to an individual and is important for both the professional and personal development of an individual, it would make sense to repeat the study from time to time to continuously monitor possible changes, and also expand it to a larger sample.

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Competence Development in Early Childhood Education: Task-Based Learning and Project-Based Learning in Slovenia, Slovakia, and the Czech Republic

Barbora Loudová Stralczynská,[1] Eva Koželuhová,[1]
Marta Licardo,[2] Ana Tina Jurgec,[2] Nika Golob,[2]
Sabina Šinko,[2] Mária Vargová,[3] Zlatica Huľová,[3]
Jozef Benyak,[3] Darja Antolin Drešar[2]

[1] Charles University, Faculty of Education; Prague, Czech Republic
barbora.loudova@pedf.cuni.cz, eva.kozeluhova@pedf.cuni.cz
[2] University of Maribor, Faculty of Education; Maribor, Slovenia
marta.licardo@um.si, ana.jurgec1@um.si, nika.golob@um.sin sabina.sinko@um.si,
darja.antolin@um.s
[3] Catholic University in Ružomberok, Faculty of Education, Ružomberok, Slovakia
maria.vargova@ku.sk, zlatica.hulova@ku.sk, benyak.jozef@gmail.com

Abstract The paper focuses on the development of teachers' competences in pre-primary education in Task-based Learning (TBL) and Project-based Learning (PBL). It presents the objectives and first results of the Learning by Doing – Attainment of Basic Competences in ECEC project supported by the ERASMUS+ Programme. The project aims to support the theoretical basis of TBL and PBL and their implementation in pre-schools in Slovenia, Slovakia, and the Czech Republic. The paper presents theoretical backgrounds and the analysis of data obtained in the pilot, which focused on pre-school teachers' existing experience in TBL and PBL. The study shows that verbal and demonstration methods still predominate in the practice of teachers from the research sample. The PBL method was mostly used by Slovenian teachers, and many respondents showed a misunderstanding of the basis of both methods and their use. Some of the obstacles mentioned were the insufficient expertise of teachers, size and diversity of the classes, material conditions, and lack of time.

1   Introduction

The Council of the European Union has highlighted the importance of key competences and basic skills because international student assessment results show that more than one in five students in the EU has insufficient proficiency in basic skills. Therefore, teachers at all levels of education, especially teachers in early childhood education (ECE) and primary education, should be able to provide high-quality education for all, and educational systems should support teachers in implementing competence-based teaching and learning approaches (Council of the EU, 2018).

At the beginning of their careers, many newly qualified or inexperienced teachers experience the complexity of their role and face daily challenges to their skills and abilities acquired during teacher education, and their self-confidence decreases (Mahmood, 2013). ECE teachers, at this early stage of their careers, need appropriate support to master challenging situations, to experience job satisfaction (Keller-Schneider, Zhong & Yeung, 2020; Fantilli & McDougal, 2009, Klassen & Chiu, 2010), and to fulfil children's needs for learning and the development of important basic skills in ECE.

In 2020, the *Learning by Doing – Attainment of Basic Competences in ECE* project was launched and financed by the ERASMUS+ Programme. The project aims to support the theoretical basis of task-based learning (TBL) and project-based learning (PBL) and their implementation in pre-primary education in Slovenia, Slovakia, and Czech Republic, especially for recently qualified teachers. The aim of this project is to improve ECE teachers' competences through introducing innovative approaches and practices and to ensure the comprehensive development of children's competences. This will be achieved by supporting ECE teachers in gaining knowledge on how to efficiently implement TBL and PBL. The project partners will develop a toolkit for ECE teachers, which will support educators in enhancing their teaching practices and techniques, knowledge, competences, and tools for applying TBL and PBL effectively. Additionally, the aim is to integrate the features of the methodology and training into curricula for ECE students from partner universities.

The paper focuses on the development of teachers' competences in pre-primary education in Task-based Learning (TBL) and Project-based Learning (PBL). It presents theoretical backgrounds and the results of the analysis of data obtained in the pilot within the *Learning by Doing* project, which focused on pre-school teachers' existing experience with TBL and PBL.

TBL and its implementation in ECE

The theoretical basis of Task-based Learning (TBL) is the pedagogical theory of constructivism (Steffe & Gale, 2012). The main idea is that children learn during activities prepared by the teacher, however the learning process is focused on the children's activities, and the teacher takes the role of a facilitator. The tasks are connected to real-life situations and contexts, learning is usually in groups or pairs, and construction of meaning is the central focus. During TBL, the activities are designed by the teacher and implemented or led by the children. These tasks should motivate children, engage their attention, and present a challenge for intellectual, creative, ethical, physical, social-emotional or language development. It is important that tasks have specific learning goals and the outcomes can be built upon at a later stage of the task circle (Willis, 1996). When designing a task, it is important that the task is related to real-world experiences (e.g., exchange of personal information, problem solving, judgment or evaluation, experiments, planning, reasoning). The teacher should lead the children to complete the task, and both should know when the task is completed. Assessment of learning is related to the outcome of the task (Skehan, 1996).

The two general types of tasks are open and closed tasks. Open tasks are more loosely structured, with less specific goals, for example comparing memories of holidays or exchanging opinions on a topic. Closed tasks are highly structured and have very specific goals, with precise instructions and information given. Other types of tasks come midway between closed and open. For example, logic problems can have a very specific goal but different ways of achieving the goal. In general, the more specific the goals, the easier it is for children to evaluate their success and the more likely they are to get involved with the task and work independently. It is often the goal and outcome that provide the motivation for children to engage in the task, which then becomes their learning opportunity (Willis, 1996).

Each task has a task circle, which includes 3 steps or phases: pre-task, task cycle and review. The pre-task phase includes advance preparation, introduction of the topic, motivation, and creating interest in doing a task and giving task instructions. The task cycle has three stages: a) the task, b) the planning stage, and c) the report stage. The task can be listing, comparing, ordering, sorting, problem solving, experience sharing or creative tasks and mixtures of several task types. Good task cycles should be planned in such a way as to give the children a feeling of being successful. Tasks should also be designed to bring out and develop children's natural talents and skills. In ECE (age 1 to 6), children are not always able to plan a presentation and complete the report stage, so the teacher can decide which stages of the task cycle are appropriate in any given learning situation. The review is the third step in the TBL process. Once the children have completed the task and have reported about the task, then it is time for a review. The purpose of this step is to examine the accuracy of the completed task and to check whether the learning goals and outcomes have been achieved. During TBL, the teacher should take on the role of facilitator, make sure that all the children are doing the right task, encourage all the children taking part in the task, allow the children to make errors, and act as timekeeper (Willis, 1996; Skehan, 1996; Tsamir et al., 2010).

TBL helps children to interact spontaneously, provides language learners with opportunities to learn vocabulary, emphasizes the active participation of the children, improves children's self-confidence in using and applying new knowledge in the task context, and enables children to present different perspectives as well as develop meaningful discussion (Newton, 2001; Ellis, 2003; 2009).

PBL and its implementation in ECE

Project-based learning (PBL) is a model in which learning is organized around projects (Thomas, 2000). Project learning is considered a form of situational learning and is based on a constructivist view of education. John Dewey (1859-1952) put forward the idea that children and students learn better when their knowledge is real, meaningful, usable, and connected to practical life (Barron et al., 1998). The opportunity to solve real and practical problems leads to a deeper interest for the child, an increase in the motivation to learn and thus to better learning outcomes compared to traditional teaching methods. In the traditional approach, knowledge is

passed from the teacher to the child; the child is passive or follows the teacher's instructions exactly.

In contrast, projects are complex tasks based on challenging questions or problems that engage children in design, problem-solving, decision-making, or investigative activities. They give children the opportunity to work relatively independently over an extended period of time and deliver realistic products or presentations at the end. They may take a tangible form (e.g., a product, object, book, etc.) or an intangible form (e.g., a theatrical performance, class trip, etc.). The diversity of defining characteristics is accompanied by the lack of a universally accepted model or theory of PBL (Thomas, 2000). In recent research, Hovey and Ferguson (2014) pointed out that there are different interpretations of PBL with different characteristics, such as problem-based learning, inquiry-based learning, problem solving, and open-ended problem solving. In addition, activity-based learning and discovery learning encompass similar characteristics. While the former definition focuses on a child-centred learning process, the latter emphasises skill development alongside knowledge acquisition and the crucial task of planning, including task design and question complexity and autonomy (Hábok & Nagy, 2016).

In current pedagogical practice, we sometimes encounter a misunderstanding of project learning. Sometimes teachers confuse a project day that focuses on a specific theme (e.g., Earth Day, Milk Day, etc.), where all the actions and activities of the day relate to that theme, with project learning. This one-off project day, which is worked out in detail by teachers with assignments and materials, cannot be called project-based learning. According to Lev et al. (2020), teachers approach PBL in three phases. First, they develop and plan the project. Second, they carry out the project with the students. Finally, they reflect on the project. For example, Larmer et al. (2015) talk about four phases in relation to PBL: the launch of the project; building knowledge, understanding, and skills; product development, critique, and review; and product presentation. They separate the second and third phases primarily because older students may decide during PBL that they need more information and return from the third phase to the second and then continue again. Within ECE, the understanding and use of 3 phases is sufficient.

During PBL, the child learns from their own direct experiences, not indirectly, and the teacher takes on the role of an advisor, not a director. This leads to a fundamental change – the child participates with the teacher in directing the whole project. It is the children's project – the children feel responsible and play a key role in the successful implementation of the project (Lev et al., 2020).

The key person for the successful use of the project method is the teacher. The teacher plans the educational activities based on the children's interests and needs and must be able to listen to them and respond appropriately to their suggestions. In this way, the teacher no longer takes on the traditional role of teacher and assumes a consultative role. In PBL within ECE, the impetus for the project may be a stimulus from the teacher, a suggestion from the children, or a reaction to the current situation (Lev et al., 2020).

First of all, the teacher must be able to demonstrate the educational goal that has been set based on a curriculum document and present it to the children in the form of a real problem to be solved. The activities planned to solve the problem need to meet the set educational objectives. At the same time, however, the children must be enabled to pursue their own goals, which is the main objective of the project. In PBL, other partners besides children and teachers can be involved in education, such as parents, grandparents, experts in a particular field (e.g., beekeepers, masons, gardeners) or institutions.

2   Methodology

The requirements of the *Learning by Doing* project included the creation of a methodological publication, so it was necessary to find out what experience the teachers from the partner pre-schools had with TBL and PBL and how they understood these concepts. For this purpose, a semi-structured questionnaire was created with the aim of answering the following research questions:

Q1: What educational methods do pre-school teachers most often use when teaching children?
Q2: What experience do pre-school teachers have with the use of PBL?
Q3: What experience do pre-school teachers have with the use of TBL?
Q4: What challenges do pre-school teachers identify when using PBL and TBL?

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Q5: What help would pre-school teachers welcome in implementing PBL and TBL within their schools?

The questionnaire contained a total of ten sections. The first four focused on the classification of the respondent (their country, the length of their practice, their level of professional qualification). One section of questions in the questionnaire was scaled, and the remaining sections were open. The key questions in the questionnaire were open questions, to which the respondents were able to write long answers. The questionnaire was sent electronically to teachers working at university partner pre-schools in their national language.

The pre-schools in partner countries were selected on the basis of an assessment of the quality of pedagogical work by the universities involved in the project and were examples of pre-schools with high pedagogical quality that implement innovative pedagogical approaches and serve as model workplaces in their region. However, it is worth noting that pre-school institutions in Slovenia, Slovakia and Czech Republic have varying traditions of implementing both methods.

The total number of respondents was N = 24 (ten from Czech Republic, eight from Slovenia, and six from Slovakia). The questionnaire mainly provided data for qualitative analysis. Due to the small sample of respondents, the quantitative data obtained through the questionnaire was analysed at the descriptive level. The participants' answers to the open questions were analysed using thematic analysis (Flick, 2006; Švaříček & Šeďová, 2014). The respondents' answers were first open coded; the codes were created ad hoc. and then grouped into categories. Five categories emerged in the thematic analysis. To strengthen the reliability of the findings, the descriptions of the categories are supported by direct quotations from the pre-school teachers' responses.

3   Results

The results will be presented in two parts. The first part focuses on the use of educational methods prevalent among the participating teachers. In the second part, the results of the thematic analysis will be presented.

What educational methods are most commonly used by pre-school teachers?
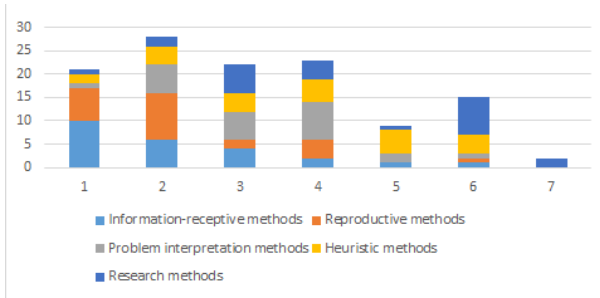
Figure 1: Frequency of using methods in pre-school education on a scale of 1 to 7
(1 – daily use; 2 – several times a week; 3 – at least once a week; 4 – at least once a month; 5 – less than once a month; 7 – methods are not used)
Source: own.

The respondents' answers indicated that the educational methods in which the pre-school teacher is leading the pedagogical practice predominate. In the practice of pre-schools, the predominant method is one in which the child is a passive recipient or responds to the teacher's instructions (*Figure 1)*. Methods allowing the child to solve problems and develop their own competences are much less common. In particular, these are verbal methods, where pre-school teachers explain to children, give direct instructions or ask questions. Furthermore, the demonstration method is widely used, where the pre-school teacher shows something to the children or demonstrates a certain activity. The representation of interviews with children on a certain topic, methods of practical activities (musical, artistic, movement and dramatic) and the method of didactic play prepared by the pre-school teacher are very common (see *Table 1*).

Table 1: Overview of the use of specific methods on scale a scale of 1 to 7
(1 – daily use; 2 – several times a week; 3 – at least once a week; 4 – at least once a month; 5 – less than once a month; 7 – methods are not used)

Educational methods		1	2	3	4	5	6	7	∑
	Telling children	12	3	8	0	0	1	0	24
Verbal methods - monologue	**Narration**	17	4	3	0	0	0	0	24
	Explaining the phenomenon, procedures	11	4	9	0	0	0	0	24

Educational methods		1	2	3	4	5	6	7	∑
	Enter the procedure or rules of the game	16	6	2	0	0	0	0	24
	Verbal description of the activities carried out	12	3	3	4	0	1	1	24
Verbal methods - dialogue	**Conduct dialogue in a group**	15	5	2	2	0	0	0	24
	Asking questions	17	5	0	2	0	0	0	24
	Looking for information in educational texts (e.g., an encyclopaedia)	1	6	5	5	6	1	0	24
	Search for information in fiction (e.g., pictures)	1	6	3	9	2	1	1	24
	Work with tables, graphic views, and schemas	2	1	1	4	8	6	2	24
Demonstration methods	**Observation of objects and phenomena**	4	8	7	3	0	1	1	24
	Demonstration of subjects, activities, experiments, models by the teacher for the children	2	6	10	1	3	1	1	24
	Foreshowing illustrations, pictures, photos, or video samples	4	12	4	2	2	0	0	24
Methods of practical procedures	**Music activities**	9	10	3	1	1	0	0	24
	Art and graphic activities	6	7	10	1	0	0	0	24
	Physical activities	13	7	4	0	0	0	0	24
	Dramatic activities	1	10	6	6	0	1	0	24
	Work activities	2	10	5	3	2	0	2	24

Educational methods		1	2	3	4	5	6	7	∑
	Research activities	1	3	4	7	5	2	2	24
Situational and staging methods	**Learning within a specific life situation**	4	5	9	4	0	2	0	24
	Entering roles in a simulated situation	1	9	3	6	3	1	1	24
	Drama	1	4	3	6	6	4	0	24
Methods of didactic games		3	2	2	3	5	6	3	24
Project methods	**Solving a complex problem**	3	2	2	3	5	6	3	24

Analysis of the preferred methods highlighted that many respondents persist in the teacher-centred approach, which considers the teacher a guarantor of the educational process, providing the children with knowledge and skills. Respondents used methods that allow children to discover independently and use their innate dispositions to learn only occasionally or not at all. The pre-school teachers rarely worked as facilitators of the educational process. Although selected pre-schools and their teachers to some extent represent pre-school institutions with high pedagogical quality, the study indicates that they can still further develop their pedagogical approach. This quality improvement could be supported by greater use of educational methods that consistently enable the active involvement of the child in the learning process and fulfil the concept of pre-primary education in the EU and the child-centred approach in ECE (European Commission, 2019).

Pre-school teachers' experiences with TBL and PBL

Thematic analysis revealed four categories, and the experiences in each category of the participating pre-school teachers from the Czech Republic, Slovakia and Slovenia are presented in *Table 2*.

Pre-school teachers' experiences with the use of PBL

Differences resulting from different national experiences were evident in the answers on the use of the project method. While Slovak respondents mostly stated that they did not use this method, all Slovenian respondents gave examples of

project-based learning from their practice. Some Slovenian pre-school teachers provided high-quality examples of PBL, in which children, and even parents, played a significant role in project management and implementation.

Table 2: The four categories

Categories	Theme: Pre-school teachers' experiences with TBL and PBL
	Experiences with the use of PBL
	Experiences with the use of TBL
	The challenges of using TBL and PBL
	Support for the implementation of PBL and TBL

One of the Slovenian pre-school teachers mentioned a project titled *Getting to know the forest*:

"We are planning what we should do with the children … Go to the forest, explore it, collect material and then create something …"

The involvement of parents and the role of children in project management and implementation is evident in another Slovenian pre-school teacher's answer:
"*Bird feeder – On the walk, the children are encouraged to watch birds. Our conversation focuses on the theme of caring for birds. After presenting the problem, the children come up with the idea of making a bird feeder. Together we set the goal of making a bird feeder. What follows is a collection of ideas on how to do this. We involve parents in the project by sharing ideas and collecting materials. The children make a bird feeder and hang it in a visible place so they can watch the birds during feeding.*"

The following is an example of a Slovak teacher's response about implementing project-based learning:

"*I do not apply project learning in my practice.*"

However, it was obvious from some responses that some pre-school teachers understand PBL as the involvement of the pre-school in a specific project (ecological, transport, etc.), which does not correspond to the definition of PBL. The following is an example of a project implemented throughout the pre-school as mentioned by a Slovenian pre-school teacher:

"*Project White rabbit – It's about transport and the environment, about how we should be cycling or walking more than driving. We have been discussing the topic. The children drew the white rabbit. Every day that their parents did not use the car, the child got a reward (a sticker). Every day we talked about the topic, why it is important, the children made suggestions about what we should do …*"

Among the Czech respondents, the term project was in most cases interchanged with the concept of a thematic unit, as illustrated in the two examples below. Additionally, the project was designed and led by the pre-school teacher, without the children's participation in project management.

"*We work with a theme that we look at with children in a variety of ways. Apples; working with a literary masterpiece: rhymes, riddles, songs, poems; working with natural products: picking apples, comparing apples; working with the senses: tasting apples, smelling apples, tasting other apple products; art activities: painting apples, collage; work activities: baking apple pie, cooking apple sauce; dramatic activity: working with the text 'Grandma had four apples' – a play in the role of Grandma, the old man.*"

"*A project on the story 'About the Roosters of the Storm and the Rainbow' (spring theme) that included activities, such as: simple fun movement rooster games, a drama with the teacher in the role of the storm, creating a big grey world so big that the whole class can sit in it … and playing another drama with a strong emotional charge (overcoming fear), singing and recording our own 'rooster and egg' song, producing a short animated film (published). In short, we experienced a play every two days, a shared creation, a shared emotional experience. A long project (two months) inspired just by the story.*" (Czech pre-school teacher)

The examples of the Czech and Slovak teachers' practice and experience given above correspond to research on teachers' approaches to planning educational content in the Czech Republic and Slovakia (Koželuhová et al., 2020; Krejčová et al., 2015). These show that in the current pedagogical practice of pre-schools, activities that are fully planned and managed by teachers are still very common. Although teachers plan activities based on the observation of children's interests, they are not always able to cooperate with children in planning a project and creating situations where children are actively involved in planning activities on a larger scale. Czech and Slovak teachers understand the needs and interests of children, but in practice they still use mostly teacher-led didactic methods, wherein children do not have room for

active participation in the management of activities. We therefore consider this a challenge for the further development of pedagogical practice.

Pre-school teachers' experiences with the use of TBL

Most of the teachers confused task-based learning (TBL) with experiential learning or believed that TBL was any activity in which the child is active and produces something. Research activities appeared in the educational process, but most of them were the pre-school teacher's attempts at explaining content; the child did not participate through direct discovery or by asking questions.

"*We work with the children in activity centres, the children work independently, with their group. For example, the children measure and weigh (e.g., themselves on the topic of the human body) and then write them down.*" (Czech pre-school teacher)

"*The children draw objects from the 'magic bag'. The child recognizes an object, tries to name it, recognizes the colour, and puts it in a box of the same colour. The boxes are ready at the other end of the playroom, the children are carrying, moving the objects. Older children try to identify the function of the object.*" (Slovenian pre-school teacher)

"*Planting plants – Talking about plants (what they need to live), planting the seeds of the plant in the soil, cotton wool, monitoring germination, growth. Examining the growth of a plant: in the light, in the dark, a plant that is watered and one that is not watered.*" (Slovakian pre-school teacher)

On the other hand, among the examples of teachers applying TBL there were activities that one could consider as sub-projects (e.g., submarine construction, knitting). The answers show that both the concept of TBL and the concept of PBL are poorly understood by the respondents.

"*Underwater world – submarine (work with technical documents, drawings, submarine construction, functional equipment, telegraph assembly).*" (Czech pre-school teacher)

The respondents quite often confused the TBL method with other approaches in their pedagogical practice. Activity learning and the active involvement of children in the educational process is a challenge, especially for teachers just beginning their career (Fantilli & McDougall, 2009; Gregory, 2016; Hernandez, 2018; Keller-

Schneider, Zhong & Seeshing, 2020). Another problem is that these teachers often take over the procedures implemented in a given pre-school and that some traditional transmissive approaches persist in pedagogical practice, which make it difficult for children to participate in their education in a truly active way.

The challenges for pre-school teachers when using TBL and PBL

The participants' responses on the challenges they faced were consistent and fell into three categories: (1) inadequate expertise of teachers in various disciplines, (2) external conditions, such as the composition and size of the groups of children, and (3) material conditions. Regarding inadequate expertise, the participants reported lack of specific knowledge of certain fields and inadequate knowledge in using innovative methods for pre-school teaching. The most frequent answers concerning external conditions referred to the large number of children in a group, teaching very young children (1- to 3-year-olds), and integrating children with special educational needs.

In the words of a Czech pre-school teacher:
"*The biggest problem is the large number of children and the integration and care of children with special educational needs and their inclusion in the activities.*"

"*Too many children in a playroom.*" (Slovenian pre-school teacher)

Regarding material conditions, pre-school teachers most often mentioned a lack of teaching materials and tools, and insufficient technical equipment and financial resources.

A Czech pre-school teacher wrote:
"*My obstacle is certainly the lack of information in certain areas and the lack of technical and material resources.*"

A Slovenian pre-school teacher's response encompasses various obstacles faced when using TBL and PBL:

"*Lack of time, lack of knowledge about project work, children who do not speak the language well – they come from different countries, children with special needs in regular groups.*"

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Similarly, Slovak pre-school teachers expressed several obstacles in the use of TBL and PBL:

"*Low age of children (3- to 4- year-olds), little professional literature in this area, little information, no practice with project learning.*"

One of the obstacles the respondents see in the use of PBL is the lack of time to carry out projects within their daily pedagogical duties and work tasks.

"*Perhaps only the time and equipment for the project itself. Usually, we make all the aids ourselves and it is time-consuming. Sometimes we also have a problem with space – where can we put the observed objects or work in progress, which is for a longer period of time?*" (Czech pre-school teacher).

Support for the implementation of PBL and TBL

The respondents agreed that they would welcome methodological materials (guidelines, handbooks, etc.) that would include specific procedures and examples of entire projects, or video demonstrations of TBL and PBL.

One Czech pre-school teacher wrote:
"*I would welcome more publications with practical, even directly described projects. If we as teachers could spend more time on describing and presenting successful projects than on administration, which in my opinion does not result in much. I really liked one project where my colleague recorded a video of a demonstration.*"

"*In practice, I would welcome teaching aids, methodological materials, software on project teaching.*" (Slovak pre-school teacher).
"*Methodological books with examples, different materials.*" (Slovenian pre-school teacher)

"*Methodological materials, teaching aids, demonstration of project design.*" (Slovak pre-school teacher)

The pre-school teachers expressed a desire to share practical experience through mutual meetings with other colleagues. The respondents also felt the need for professional development in relation to pedagogical methods, such as seminars linked to practical demonstrations.

"*I would appreciate an inspiring seminar on project learning, especially when it comes to outdoor teaching.*" (Czech pre-school teacher)

"*Seminar, literature on specific types of learning, …*" (Slovak pre-school teacher)

"*Seminars, training in task-based and project-based learning, demonstrations by colleagues in kindergartens.*" (Czech pre-school teachers)

In addition, regarding the support needed to implement TBL and PBL, pre-school teachers pointed out that they would appreciate special teaching aids (projectors, microscopes, magnifiers, etc.).

"*Material and technical aids (projector, printer, etc.), sets for research activities and experiments (microscopes, etc.).*" (Slovak pre-school teacher)

"*Teaching materials, aids (audio-visual equipment, research kits), …*" (Slovenian pre-school teacher)

The data obtained is an important starting point for an international project, however, it also shows that (1) both methods are used to a limited extent in selected pre-schools and (2) pre-school teachers have less experience and knowledge of both methods. This is the case even though the selected pre-schools are considered to be high-quality and progressive institutions in the project countries, and the authors expected more high-quality implementation of TBL and PBL.

4   Discussion

In pre-primary education, the teachers direct their efforts to ensuring that the child is not only a passive recipient, but an active participant in the educational process. The results highlighted that although teachers do not initially have a comprehensive

knowledge of PBL and TBL, they are looking for ways to implement educational processes that follow children's interests and needs.

Intuitive, receptive teachers respond to the child's current needs; however, they do not always understand the correct approaches to PBL and TBL. The traditional way of learning is often prevalent in practice, especially relying on a teacher-led didactic approach. Teachers often lean towards traditionalism if they have very diverse groups of children and if they are not able to find a suitable teaching method.

The study was based on our previous professional and practical experience. The questionnaire was compiled and modified based on discussions with several experts in the field. Considering the objectives of the study, the research sample is relatively small, therefore the authors are not generalising the research results to the entire research set. The data was analysed qualitatively. Despite its shortcomings, the study has pointed us in the direction in which we should focus our next efforts.

The research results presented in this paper confirm findings from other studies (see, e.g., Sumarni et al., 2021). For example, they show that a comprehensive understanding of PBL and TBL is still lacking in practice. As stated by Lev et al. (2020), time and space need to be devoted to professional discussion that can help to remedy these shortcomings. In addition, resources (published articles, methodologies, and other professional literature) that develop professional discussion about the importance of the child as an active creator of their own learning are as essential as sharing examples of good practice.

5   Conclusion

This paper presents the initial results of the *Learning by Doing* project. The results show that teachers do not often use methods wherein the child can independently discover and use their developing abilities. The authors continue to see the potential for the professional development of teachers in their practice. The participating teachers expressed their interest in new approaches and methods that are aimed at children's attitudes, interests, initiative, and activities in which children can express what they are interested in doing and what knowledge they want to develop further.

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Chapter 4

CHALLENGES IN THE EDUCATION OF STUDENTS WITH SPECIAL NEEDS AND GIFTED STUDENTS

Professional Development in Teaching Students with Special Educational Needs in France, Germany, Denmark, and Scotland

Davor Vukelić, Siniša Kušić, Anita Zovko

University of Rijeka, Faculty of Humanities and Social Sciences, Rijeka, Republic of Croatia
dvukelic@student.uniri.hr, skusic@ffri.uniri.hr, anita.zovko@ffri.uniri.hr

Abstract Contemporary teaching, among other things, emphasises the importance of inclusive education for students with special educational needs (SEN). The prerequisite for promoting inclusive teaching is an adequately trained teacher. The aim of this paper is to present and analyse the teacher professional development systems and programs for working with students with SEN. France, Germany, Denmark, and Scotland were sample countries selected for the analysis, all of which have high-quality SEN teacher training systems. The analysis identified certain similarities regarding legislation, decentralisation of in-service teacher training systems, heterogeneous platforms, program types, program content, program holders, lecturers, forms of teaching, teaching methods, and formalisation of in-service training certification for teachers. Based on the analysis results, it is necessary to consider possibilities for implementation of the identified examples of good practice from the sample countries in Croatia, considering the contextual factors.

1   Introduction

Educational professionals have numerous tasks, among which one promotes inclusive education for students with special educational needs (hereinafter SEN). The ability to perform such a task implies several competences teachers do not acquire adequately through their initial education, especially considering the rapid expansion of knowledge in teaching and educating students with SEN. Given the above, teachers are compelled to partake in lifelong training activities. For example, the analysis conducted by Vukelić, Zovko, and Vlah (2020) confirms that initial teacher education is deficient in the number of class hours dedicated to the topic of ADHD. This paper aims to present and analyse professional development systems and programs that enable teachers to improve their competences for working with students with SEN in four countries – France, Germany, Denmark, and Scotland. The analysis components are the organisation of the system, legislation, and the duration, content, teaching methods, and forms of teaching in SEN teacher training programs. The countries above are examples of good practice because their legal regulations clearly define teacher professional development, and they offer various teaching programs and methods, which were the reasons for selecting the four countries for this analysis.

2   Professional Development in Teaching Students with SEN in France

Teacher education in France incorporates a three-year undergraduate study program and an additional two-year teacher education program (MEEF) that combines theoretical instruction and practical work in classrooms under the mentorship of university professors. MEEF offers teacher specialisation in the field of student inclusion (e.g., INSPE – Institut national supérieur du professorat et de l'éducation, Université de Nantes, 2021). After their initial education, teachers in France can attend various forms of teacher training on SEN.

Teacher training in France is further specified and defined by the law For a School of Trust, which stipulates teachers devoting 18 hours of the school year to pedagogical counselling and support and 9 hours to professional development (Journal officiel de la République française, 2019). Furthermore, teacher education and training for developing and improving the competences necessary for working with students with SEN is also regulated by the School Adaptation and Schooling

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of Students with Disabilities (ASH) (European Commission, 2018). Teacher training in France is defined by the National Training Plan (PNF), based on which local administrative districts create an Academic Plan for Continuing Training (PAF) (European Commission, 2018). One part of the PNF is dedicated to promoting inclusive school policy, including 13 topics related to inclusive education (Ministére de l'education nationale de la jeunésse et des sports, 2020b).

2.1 Initial Teacher Education and SEN Teacher Training

Although the French Republic is divided into departments, the entire country is very centralised along with its bodies responsible for making decisions about teacher professional development. However, each decision is implemented by units within regions, departments, counties, cantons, cities, and municipalities.

Even during their initial education, teachers are trained to work with students with SEN by attending a six-hour module dedicated to inclusion. Teachers are also offered specialisation in inclusion during the second year of their graduate studies. The teaching methods used in initial education programs are presentations, experimentation, observation, critical review, collaborative and cooperative learning, action research, practice analysis, and creating and using a digital workplace.

There are structured programs with a professional certification that are especially prominent, like the Professional Aptitude Certificate to Inclusive Education Practices (CAPPEI) and the university graduate program. Such programs include preparing teachers for working with students with many types of SEN (cognitive impairment, poor spatial and temporal awareness, difficulties in oral and written expression, motor skill disorders, perception and attention deficits, social communication disorder, autonomy disorder, hearing impairment, visual impairment, autism spectrum disorder). The program's specifics, designed by the National Institute of Training and Research for the Education of Young People with Disabilities and Adapted Teaching (INSHEA), are activities and teaching methods that include writing article abstracts, case studies, analyses of documents, and critical reviews.

2.2   SEN Teacher Training Programs

An SEN teacher training program worth mentioning is the CAPPEI, consisting of four courses organised in modules. The four courses last a total of 400 hours, during which teachers acquire the theoretical foundations of the education of students with SEN, elective modules, practical classes, and the nationalisation of the program. The CAPPEI program includes three exams that cover teaching students with SEN, reflective teaching, presentation and elaboration of documentation created based on teaching students with SEN, and student self-reflection before a committee on their role and competences in inclusive education (Le Bulletin officiel de l'éducation nationale, 2017).

Some forms of professional development offered by training and research institutes in inclusive education are higher education programs like the university graduate program. The duration of such a program is three weeks (a total of 105 hours). In order to obtain a diploma, the student is required to pass a written exam during each session and write article abstracts, case studies, analyses of documents, and a critical review. Also, the same institutes offer numerous training courses for teachers and expert associates who work with students with SEN in schools (Formation Continue – Catalogue 2020/2021, 2020).

Furthermore, teachers in France have the opportunity for professional development through online platforms of the Ministry of National Education, Youth and Sports (Eduscola, Inclusive School Cap). Such platforms are designed to provide tools for the assessment of and learning about the needs of students with SEN and to offer methodological and content individualisation according to precisely defined SEN. These platforms also organise training (e.g., topic: Managing students with attention deficit disorder) and offer the locations of the nearest training programs for teachers in their closest geographical area (Ministère de l'éducation nationale, de la jeunesse et des sports, 2020a).

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3 Professional Development in Teaching Students with SEN in Germany

Initial teacher education is dual and takes place at faculties of pedagogy and education within higher education studies (undergraduate and graduate studies lasting between 8 and 14 semesters) and practical work in a classroom environment (lasting between 12 and 24 months) organised by an institute for teacher education. After both parts, students take the state licence exam. During their undergraduate and graduate studies, students can choose a teaching career in SEN (European Commission, 2020d). After initial education, teachers in Germany are offered various forms of in-service training in SEN.

It is worth emphasising that teacher training in Germany is regulated by the legal regulations of the Federal Republic of Germany, which apply to the entirety of Germany, but also by the legal regulations of individual federal states in Germany.

According to the Law on Teacher Training and Examination in the State of Brandenburg (Gesetz- und Verordnungsblatt für das Land Brandenburg, 1999) and Teacher Training for the School of Diversity (Die Stimme der Hochschulen, 2015), in-service training must take into account the inclusive requirements of education.

3.1 Initial Teacher Education and SEN Teacher Training

One of the specificities of the German education system, and thus the teacher professional development system, is decentralisation. Legislative recommendations are issued at the national level, but there is a strong autonomy among the federal states regarding the organisation of the initial education and the professional development of teachers.

Through their initial education, teachers are offered adequate professional development in SEN if they choose to work in schools with students with SEN. Future teachers improve their competences through two courses on the pedagogy for SEN with a total value of 120 ECTS credits (90 + 30). Some of the topics the courses cover are the following: students with intellectual disabilities, learning difficulties, behavioural disorders, speech therapy, hearing impairment, and motor skill disorders. Teachers can also improve their competences for working with

students with SEN through a preparatory service that strengthens their practical skills (Ludwig-Maximilians Universität München – Münchener Zentrum für Lehrerbildung, 2020).

Furthermore, Germany has a structured vertical organisation of teacher professional development for working with students with SEN through what they term advanced studies, which are organised as four six-month courses. Advanced studies enable formal progress in the level of education and significant strengthening of competences for working with students with SEN. The teaching methods and forms of teaching used in the training programs include lectures, seminars, study groups, conferences, study trips, in-course assessments, online courses, working with students with SEN, independent learning, writing a diagnostic report, and writing and presenting case reviews. The content of advanced studies includes didactics and inclusion, social framework of inclusion, basics of inclusive pedagogy, and involvement in the context of quality and school (Universität Koblenz – Landau – Zentrum für Fernstudien und universitäre Weiterbildung, 2020).

3.2   SEN Teacher Training Programs

In Germany, teacher professional development is organised and conducted by in-service training institutes, state academies, scientific institutes for in-service training (European Commission, 2020a), state and local school authorities, school offices, centres for school quality and education, universities, higher education institutions, and schools. These institutions conduct teacher training both onsite and online through several days of formal lectures, workshops, seminars, practicums, discussions, study groups, conferences, study trips, and in-course assessments. Also, every school can register for teacher training in various topics that are offered and organised by a particular institution. While attending all the above courses, teachers are exempted from teaching obligations with full pay, which is approved by the school principal or the competent school body (European Commission, 2020a). Some of the topics they cover are as follows: ADHD, psychological counselling for autism spectrum disorder and socioemotional difficulties, qualifications for special education, basics of diagnostic procedures in SEN, children's self-regulation, inclusive settings, inclusion, managing heterogeneity, and educational inequality (Universität Kassel – Zentrum für Lehrerbildung, 2020; Zentrum für Schulqualität und Lehrerbildung (ZSL), Baden-Württemberg, 2020).

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Universities also offer multiannual teacher training in inclusive education. One such example is the University of Potsdam, which offers teacher training lasting two and a half years. The program consists of 26 modules, and each module consists of 15 hours of seminars, 15 hours of working with a group of students, independent learning, writing two seminar papers, writing a diagnostic report, and writing and presenting two case reviews (Institut zur Weiterqualifizierung im Bildungsbereich an der Universität Potsdam, 2020).

The most structured formal teacher professional development system in Germany are advanced in-service training modules in inclusion. Each module contains four six-month courses (one semester each), and each course consists of four smaller modules, totalling 15 ECTS credits. After completing all obligations and activities, the participant receives a Certificate of Advanced Studies. This system enables a vertical possibility of advancement because after acquiring the certificate, it is possible to further improve one's skills and obtain a Diploma of Advanced Studies worth 30 ECTS points, a Master of Advanced Study worth 60 ECTS points, and a Master of Science worth 90 ECTS credits (Universität Koblenz – Landau – Zentrum für Fernstudien und universitäre Weiterbildung, 2020).

4 Professional Development in Teaching Students with SEN in Denmark

Initial teacher education in Denmark spans eight semesters of a professional undergraduate study program conducted at university teacher training programs. The program ends with completing a final bachelor project (European Commission, 2020c). Compulsory courses and specialisation prepare future teachers for working with students with SEN (Københavns professions højskole, 2020). After initial education, teachers in Denmark are offered various forms of in-service training on SEN.

The Danish Union of Teachers emphasises that all Danish schools must have qualified employees who advise teachers and that all Danish teachers should have the opportunity to continuously develop their competences for working with students with SEN (Danmarks Lærerforening, 2019). The Act of Higher Education (adult continuing training system) emphasises that improving personal and

professional competences is the primary purpose of in-service training, which is necessary, since teachers work in a rapidly changing inclusive educational environment (Lovtidende, 2017).

4.1   Initial Teacher Education and SEN Teacher Training

Compulsory courses within initial education prepare future teachers in Denmark for working in an inclusive environment. Teachers also have the opportunity for additional training in inclusive practice by choosing some of the modules on offer. The teaching methods and forms of teaching used are interactive lectures, presentations, project work, practicums, observation, research, case studies, and work in study groups. Through lectures, practicums, seminars, and independent learning, the graduate studies enable teachers to understand various dimensions of inclusive education, improve interventions for inclusion, run educational institutions, and conduct scientific research (Københavns professions højskole, 2020).

The teacher training system in Denmark is parallel to the initial teacher education system. However, future teachers can only join the formal in-service training system after a certain level of initial education. Academic, graduate, and master's teacher training levels have equal credit values – 60 ECTS credits. This organisation of the system is undoubtedly one of Denmark's most important specificities in teacher professional development (Danmarks Evalueringsinstitut, 2009).

4.2   SEN Teacher Training Programs

Formal teacher professional development is organised through a structured in-service training system[1] . After teachers graduate, they can further attend an academic (Academy Profession Degree), graduate (Bachelor's Degree), and master's level (Master's Degree). All three programs yield up to 60 ECTS credits. These three forms of teacher training should not be confused with the Danish initial education system, whose titles are very similar or almost the same in English – vocational education (Academy Profession Degree) worth 120 ECTS credits, university

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[1] Based on the private correspondence with the Department of Professional and Vocational Higher Education of the Ministry of Higher Education and Science and with the Danish Agency for Higher Education and Science, both institutions issued such a statement.

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undergraduate studies (Bachelor's Degree) worth 180 ECTS credits, professional undergraduate studies (Professional Bachelor's Degree) worth between 180 and 240 ECTS credits, and graduate studies (Master's Degree) worth between 120 and 180 ECTS credits. It is important to emphasise that all the aforementioned professional development programs enable teachers to improve their skills in inclusive pedagogy by training in the field of theory and practice of special pedagogy, scientific research in this field, and special pedagogy (Børne-og undervisningsministeriet, 2020).

Also, teachers can improve their skills in inclusive education through courses and online education, through teamwork, presentations, workshops, simulations, practicums, academic programs, programs for developing teacher competences, and counselling organised by governmental and non-governmental organisations and Danish universities.

5   Professional Development in Teaching Students with SEN in Scotland

Initial teacher education in Scotland is organised as a four-year (eight semesters) undergraduate combined program leading to an honorary degree in primary education (European Commission, 2019), within which students can specialise in inclusive practice. During the third year of the program, students attend an advanced education module twice a week regarding inclusion and a specialisation module dedicated to inclusion worth 40 ECTS credits. In the eighth and final semester, students conduct research closely related to their chosen specialisation (University of Stirling, 2020). After graduation, teachers undergo a probation period (lasting 190 days or, more flexibly, 270 days) to register with the General Teaching Council for Scotland (2020b). After initial education, teachers in Scotland are offered various forms of in-service training in SEN.

Teacher professional development in Scotland is based on the Teaching Scotland's Future (TSF) program, and the Strategic Board for Teacher Education (SBTE) regulates the implementation process of TSF recommendations (European Commission, 2020b). One of Scotland's founding documents in the field of teacher training was published in 2001 titled Teaching Profession for the 21st Century, which recommends that teachers attend training for 35 hours in one year (United Kingdom Web Archive, 2001) through programs organised by local communities,

their collaborating associations, schools, and universities (The General Teaching Council for Scotland, 2020a).

5.1   Initial Teacher Education and SEN Teacher Training

Initial teacher education in Scotland is organised through a four-year undergraduate combined program in which students can choose an advanced education module and a specialisation module for inclusive practice (University of Stirling, 2020).

The lifelong learning and professional development of teachers in Scotland are regulated by law. All institutions perceive teacher professional development to be necessary for the intensive transformation of the educational process and almost compare its importance with the importance of initial teacher education.

Education in Scotland is highly inclusive . This statement is confirmed by the fact that teacher training on inclusion is implemented through initial teacher education where, as part of four-year undergraduate teacher studies, there are compulsory courses and entire modules, whose content is inclusive education.

Teachers are trained through accredited courses and workshops, lectures, seminars, self-evaluation, action and research learning, school visits, collaborative learning, participation in working groups, planning and implementation of interdisciplinary learning, experiential learning, reading and self-education, online learning, professional conferences, problem activities, discussions and group learning, case studies, videoconferences by leading experts, and documentaries. Teachers also improve their competences by writing review papers and professional papers and conducting scientific research. One of the specific forms of teacher training is modular learning with a badge that involves logbook keeping (The General Teaching Council for Scotland, 2020c).

The formal type of teacher professional development includes acquiring a postgraduate certificate after 12 months of in-service training, acquiring a postgraduate diploma after 24 months of in-service training, and acquiring a master's degree after 36 months of in-service training. The content of these programs prepares teachers to work with students with SEN (inclusive pedagogy, dyslexia, autism, visual impairment, hearing impairment) (University of Aberdeen, 2020).

The specificity of the Scottish teacher professional development system is the existence of the governmental organisation The General Teaching Council for Scotland (GTCS), which creates and edits the teacher register in Scotland, defines professional standards for all teachers, defines accreditation programs in initial teacher education and teacher professional development, advises the Scottish Government in the field of education, and maintains the quality of the teaching profession in Scotland through rigorous regulatory processes. This type of organisation that focuses on the quality of the teaching profession and teacher competences is necessary in every modern country (The General Teaching Council for Scotland, 2020c).

5.2   SEN Teacher Training Programs

SEN teacher training programs in Scotland are implemented through numerous teaching methods and forms of teaching. All teachers registered in GTCS are required to attend in-service training regularly based on an annual training plan and to keep records with material evidence. GTCS has created a series of measures that enable teachers, schools, and local communities to obtain formal recognition and awards, which encourages teachers to attend in-service training programs intensively, and also encourages universities, schools, associations, non-governmental organisations, and local communities to create quality teacher training programs (The General Teaching Council for Scotland, 2020c).

Professional development programs leading to formal certification include programs, where teachers can obtain a postgraduate diploma, postgraduate certificate (90 ECTS credits), or a master's degree (180 ECTS credits). The programs are combined with workshops, lectures, seminars, problem-based learning activities, discussions, and group learning (Moray House School of Education and Sport, 2020; University of Aberdeen, 2020).

As part of the Education Scotland government agency, the National Improvement Hub enables school staff to improve their skills and student learning outcomes by offering self-evaluation frameworks, resources for research, teaching, evaluation, examples from practice, and support through online learning. The form of specific training offered by this organisation is modular learning with a badge that includes logbook keeping, which can be helpful for a school employee during employment

and professional advancement, validation of the training process by GTCS, and professional discussion (Education Scotland, 2020).

6 Conclusion

This paper presents examples of good practice regarding teacher professional development in special educational needs. The paper emphasises the differentiation of the educational systems in four European countries and presents an analysis of the systems and teacher professional development programs for working with students with SEN, focusing on their positive characteristics.

The *Table 1* compares the systems and programs for SEN teacher training in the four countries analysed.

Table 1: Comparison of elements of SEN teacher training systems and programs in France, Germany, Denmark, and Scotland

Elements of the teacher training system	France	Germany	Denmark	Scotland
Organisation of the system	- possible formal teacher training for working in inclusive education - possible different types of additional training organised by governmental and non-governmental institutions and organisations	- vertically organised state and local school authority – highlighting jurisdiction of each school authority - certain federal states also have vertical formal teacher training - possible different types of additional training organised by governmental and non-governmental institutions and organisations	- parallel and vertical formal teacher training after initial teacher education - possible different types of additional training organised by governmental and non-governmental institutions and organisations	- vertical formal teacher training after initial teacher education - possible different types of additional training organised by governmental and non-governmental institutions and organisations
Legislation	- centralisation of legal regulations (only minor decisions under local government regulation)	- decentralisation of legal regulations (central state laws provide only frameworks for teacher training)	- centralisation of legal regulations (only minor decisions under local government regulation)	- centralisation of legal regulations - the teacher agrees with the school principal on an

Elements of the teacher training system		France	Germany	Denmark	Scotland
		- additional legislation for teacher training for inclusive education (ASH)	- additional legislative recommendations for teacher training for inclusive education		individual training plan based on the state legal framework
Teacher training programs	Duration	- from 105 to 400 hours	- from 1 semester to 6 semesters; from 6 months to 3 years; from 15 ECTS credits to 90 ECTS credits	- 6 modules – total of 60 ECTS credits	- from 12 months to 36 months; from 90 ECTS credits to 180 ECTS credits
	Content	- cognitive impairment; poor spatial and temporal awareness; difficulties in oral and written expression; motor skill disorders; perception and attention deficits; social communication disorder, autonomy disorder; hearing impairment; visual impairment; autism spectrum disorder; learning; brain development; specific learning disorders; pedagogical implications of cognitive theories; neuropsychology; occupational therapy; assessment; tools for developing a collaborative network	- didactics and inclusion; social framework of inclusion; basics of inclusive pedagogy; inclusion in the context of quality and school	- planning and implementation of inclusive initiatives; development of inclusive culture; pedagogical knowledge and research; pedagogical practice; social and cognitive developmental disorders; social and scientific theoretical foundations; theoretical, institutional, and special pedagogical perspective on special education	- basics of inclusive pedagogy; basics of research in inclusive pedagogy; audiology and audiometry; foundations of international child protection; issues and strategies for assessment, teaching, and learning (visual impairment); language and communication; inclusion of children with hearing impairment; specific learning difficulties: dyslexia
	Teaching methods	- frontal form of teaching; practical classes (working with students with	- lectures; seminars; independent learning; tests	- combination of lectures, seminars, and project work through classes	- combination of workshops, lectures, (group) seminars, problem-

Elements of the teacher training system	France	Germany	Denmark	Scotland
	SEN); reflective teaching; presentation of documentation; teacher's reflection on their role in inclusive education and methodological and methodical knowledge in the field of inclusive education; writing article abstracts; writing case studies; document analysis; writing critical reviews		conducted at a school, online classes, or independent work at home	based learning, discussions, group learning, collaborative research, group projects

Firstly, the authors noticed an explicit and elaborate legal framework based on which the entire system is built. Framework decisions are stipulated at the national level, whereas specific legal regulations and implementation of local and national decisions are regulated through supervisory bodies at the local level.

Furthermore, it is important to emphasise the strong potential of initial education in teacher training on SEN in all countries analysed. This potential is realised through compulsory and elective courses but also through possible specialisation.

Moreover, heterogeneity of content, types, program holders, platforms, lecturers, teaching methods, and forms of teaching were observed in all analysed countries. Such a multidimensional approach considers the interests and potential of all teachers trained to work with students with SEN.

Likewise, in the analysed countries teachers receive certificates and diplomas at the end of the training program, which is very useful for employment or professional advancement. Formal certification is enabled thanks to the high level of structure and fluidity of the in-service training systems in the analysed countries.

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In comparing the SEN teacher professional development systems in the four analysed countries (France, Germany, Denmark, Scotland) with the Croatian system, one notices a visible difference in the potential of initial education, structured in-service teacher training systems, training certification, variety of methods, and program holders of such forms of training.

Vukelić, Zovko, and Vlah (2020) point out that the initial education study programs attended by future lower and upper elementary school teachers offer a very small number of compulsory and elective courses and modules dealing with students with SEN and students with ADHD. Initial teacher education does not include a form of SEN teacher specialisation.

Furthermore, teacher training programs for graduate teachers in all fields, including the field of SEN education, are organised by the Croatian Education and Teacher Training Agency and the Ministry of Science and Education, which represent a strong centralisation of professional development activities. Such training programs usually last one day and do not result in formal certification that would have positive repercussions on the employment or promotion of teachers. For example, Croatia offers no teacher specialisation program for working in an inclusive environment, as provided by the CAPPEI in France, academic, graduate, and master's teacher training levels in Denmark, or advanced studies in Germany. It is the structured system in the analysed countries that enables high-quality SEN teacher training, as well as formal certification.

What needs to be emphasised is the poor utilisation of the potential of universities in in-service teacher training. In almost all four countries analysed, universities are the holders of teacher training, since they are the holders of the latest scientific knowledge that needs to be conveyed to the teaching community. Greater involvement of universities in the organisation of teacher training programs would raise the heterogeneity of platforms, programs, content, forms of teaching, and teaching methods.

Given the above, it is proposed that the conclusions on teacher professional development in the four analysed countries are implemented in the SEN teacher training system in the Republic of Croatia, considering the contextual factors. Indeed, the importance of initial education should not be neglected in training

teachers for working with students with SEN, which is a segment the analysed countries utilise very well.

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SPECIAL EDUCATORS AND THEIR COOPERATION WITH THE SCHOOL MANAGEMENT IN THEORY AND PRACTICE?

MONIKA MITHANS, MILENA IVANUŠ GRMEK
[1] University of Maribor, Faculty of Education, Maribor, Slovenia
monika.mithans1@um.si, milena.grmek@um.si

Abstract A special educator can participate in all the activities of the school counselling service and is most effective in those related to the organisation of the lives of children with special needs. The authors monitored the cooperation between special educators and school management, as part of a qualitative study using semi-structured interviews, in the context of which the special educator's tasks are defined in the Programme Guidelines for Primary School Counselling Service (2008), as well as how they cooperate with school management in terms of how many other tasks they perform together. The authors found that special educators enjoy the trust of management. The results revealed the operation areas of the school counselling service wherein cooperation between the special educator and school management was evident. The results of the study suggest the basis for further scientific research on the cooperation between school management and the school counselling service.

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1   Introduction

Counsellors are undoubtedly an important and inseparable part of the school system (Bezić, 2008; Gregorčič Mrvar & Šarić, 2018; Vogrinc & Krek, 2012), which, owing to the interdisciplinary nature of the work, requires the integration of various professional profiles (Gregorčič Mrvar & Šarić, 2018).

In today's primary school, the work of a counsellor can be performed by psychologists, counsellors, social workers, social educators, and special educators in accordance with Article 67 of the Organisation and Financing of Education Act (1996). Beside the aforementioned law, the profile of counsellors in primary school is also defined by the *Rules on the education of teachers and other professionals in the educational programme of the primary school* (2011). In addition to the already mentioned profiles, also master professors of special and rehabilitation pedagogy, and masters of supervision and inclusion pedagogy profiles are included.

All professional profiles in the counselling service are equal, and cooperation among them is important, as each contributes with their expertise to a successful project of assistance and/or cooperation (Programme Guidelines, 2008).

This paper focuses on the area of cooperation between a special counsellor and school management. The authors were interested in special counsellors' opinions on cooperation with the school management with regard to the tasks defined in the Programme Guidelines (2008). As the number of students with special needs increases in our primary schools, special counsellors not only perform counselling work, but also render additional professional assistance.

As part of the study, the authors directed their attention to the differences between special counsellors who are employed as counsellors, and those who are employed as teachers of additional professional assistance (hereinafter the additional teachers).

2   Defining the Counselling Service and Its Tasks

The formal framework for the work of the school counselling service is the Organisation and Financing of Education Act (1996) and the basic conceptual document, on which school counselling work is based in Slovenia, is the Program

Guidelines for Primary School Counselling Service (Program Guidelines) (2008), which are separately designed for each subsystem (kindergarten, primary and secondary school, and student dormitory). The general starting points set out in the first part of the Programme Guidelines are the same for all subsystems and define the objectives and purpose of the counselling service, as well as the basic principles and the types and areas of activity. The second part of the guidelines for the counselling service in primary schools (Programme Guidelines, 2008) deals with the areas of work of the counselling service and its basic tasks. Counsellors choose priority areas of work and form an annual work plan based on them.

According to the Program Guidelines (2008), the basic educational goal of the school, and thus the basic goal of the counselling service, is to provide opportunities for a child's optimal development. Therefore, according to Resman (1999), counsellors are the ones who help students in their growth, school, and personal development, and who create opportunities for a productive lifestyle. They are the key actors who help children and adults (teachers and parents) to resolve various situations related to relationships, learning, and educational issues (Gregorčič Mrvar et al., 2020b).

The basic purpose of the counselling service is to use its expertise to aid all participants in the educational process in order to help them to be successful in achieving their educational goals. Owing to the nature of the work, and the complex connection between pedagogical, psychological, and social issues, the work of the school counselling service is interdisciplinary and requires the participation of counsellors with various professional profiles (Programme Guidelines, 2008).

The basic functions of the school counselling service, set out in the Program Guidelines (2008), are counselling, consultation, and coordination. Its core activities focus on relief activities, including development and prevention, as well as planning and evaluation activities.

Through these basic tasks, the counselling service cooperates with all participants in the educational process in the fields of learning and teaching, school culture, education, climate and discipline, physical, personal and social development, schooling and vocational guidance, and in the field of socio-economic hardship (Programme Guidelines, 2008).

The same guidelines apply to all profiles of counsellors, but their work differs considerably from one profile to another, as each profile involves problem solving according to specific expertise. Thus, the special counsellor offers help to students mainly from the special-pedagogical point of view.

3   The Special Educator as a Counsellor

Kavkler and Tancing (2000) state that a special educator can participate as a counsellor in all activities of the basic school counselling service and is most effective in activities related to the organisation of the lives of children with special needs.

As part of their support activities, they advise children with special needs on the choice of methods, approaches, and learning aids that could enable the children to learn more successfully. The special educator also advises teachers on forms of work, aids, and professional literature for the more effective teaching of children with special needs and participates in the development of individualised programs. They work with parents to find effective learning organisation and planning strategies, learning techniques, and appropriate learning aids. They prepare classes for parents and teachers, and coordinate work among all those actively involved in the care of children with special needs (Kavkler & Tancing, 2000).

In development and prevention activities, the task of the special educator is to analyse the current situation regarding the integration of children with special needs to help plan changes and improvements in this area (Kavkler & Tancing, 2000).

The special educator also actively participates in the activities of planning and evaluating the education of children with special needs (Kavkler & Tancing, 2000).

Next, the areas of activity for the tasks of a special educator and counsellor, which are intertwined with the tasks of the school management, will be examined.

4   Intertwining of Counselling Service Tasks and School Management

The school consists of four main subsystems, including the counselling service, which, as a distinct minority, has no formal power (Bečaj, 1999). However, despite being professionally autonomous in its work, it is nevertheless subject to the control

of the school management, which is supposed to supervise the fulfilment of the tasks defined in the Guidelines (Chata & Loesch, 2007; as cited in Vršnik Perše, 2008). The position, role, and program of the counselling service largely depend on the expectations of the management, its way of running the school, the vision of the school, and the management's understanding of the role of the counselling service (Gregorčič Mrvar et al., 2020a).

Gregorčič Mrvar et al. (2021) reveal that research conducted so far shows that the cooperation of the school counselling service with various actors in the educational process is good.

The Program Guidelines (2008) identify key areas and the related tasks of the counselling service. The tasks that include cooperation between the counselling service and the school management are presented below[1]. Special emphasis is placed on the tasks of a special educator.

In the field of school culture, education, and climate and discipline, the task of the school counselling service is to provide the conditions to shape an appropriate culture and climate at the school, to actively participate in the shaping of school order, and in planning and implementing teacher education with modern educational/disciplinary approaches (Programme Guidelines, 2008).

Regarding physical, personal and social development, the task of the school counselling service is primarily to plan, organise, and carry out teacher training in cooperation with the management (Programme Guidelines, 2008). Kavkler and Tancing (2000) see the special educator's role in this field as being mainly in cooperation with the school management to shape the policy of including children with special needs in everyday life.

In the field of schooling, counsellors mainly work with management to form the school's annual work plan (Programme Guidelines, 2008), which also determines the work of the school counselling service, the school's integration activities, cooperation with parents, teacher education, and cooperation with external research institutions and counselling centres (Basic School Act, 1996). All these areas are

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[1] The results of the analysis of the cooperation between the special educator and school management in the field of learning and teaching are not presented in this paper.

crucial for creating a supportive environment for children with special needs, therefore the involvement of special educators in their shaping is essential.

As part of vocational guidance, the school counselling service, together with the management, coordinates vocational guidance activities, plans teacher training in the field of vocational education, and creates a space with information for planning educational and career paths (Programme Guidelines, 2008). In vocational guidance, special educators are those who, in cooperation with the management, ensure that all activities related to this area are also adapted to the special needs of students. Their job is to provide students with tailored instruments, counselling techniques, materials, and training programs, as Zunker (2012, as cited in Medič, 2015) stated that the goal of career counselling for children with special needs is to make the most of their potential.

In the field of socio-economic distress, the school counselling service cooperates with the management in shaping programs to help students with learning difficulties in challenging socio-economic conditions. They are actively involved in projects to find and provide maximum support for continuing education to students from socially disadvantaged and deprived families and to help develop plans to solve financial problems, and so on (Programme Guidelines, 2008).

5   Empirical Study

5.1   Purpose of the Study

The theoretical part of this study presents the areas of operation and the intertwining of school management tasks and the counselling service in general, as the Programme Guidelines define the tasks regardless of the professional profile of the counsellor. The authors have highlighted the areas of cooperation with the management, which, because of their professional qualifications, would be most easily performed by special educators. The aim of the study was to uncover the areas of cooperation, as defined by the Program Guidelines (2008), where special educators work with management, and how they evaluate this cooperation.

5.2 Research Method

The authors used a qualitative approach characterised by focusing on smaller parts of education, and this was tied to smaller groups and individuals (Sagadin, 2001). A descriptive method of pedagogical research was used, more specifically, a case study. Cooperation between the school management and the special educators was monitored using semi-structured interviews.

5.3 Research Sample

The sample was chosen purposively. Four special educators from four primary schools in different regions were chosen. Regions included the Drava Region (Podravska), the Lower Sava Region (Posavska), the Central Slovenia Region (Osrednjeslovenska), and the Carinthia Region (Koroška). The schools that were selected enrol between 298 and 906 students. The authors chose everyday cases that, owing to their averageness, represent the situation studied (Vogrinc, 2008). The respondents were special educators, professors of special and rehabilitation pedagogy, and professors of defectology, who perform counselling work in schools and/or cover the implementation of additional teachers (hereinafter the term "special educator" will be used for all profiles).

In the third and fourth primary schools, the special educators also worked as counsellors besides being additional teachers. The special educators at the first and second primary schools were employed as additional teachers, who, because of the nature of their work and the needs of everyday life, were actively involved in the implementation of counselling services, especially in the areas of working with students with learning difficulties and special needs.

Besides the special educator, the counselling service team at the first primary school also included a psychologist and a social counsellor. At the second primary school, the special educator also had a psychologist and educator in the team. Besides the special educator, the team at the third primary school consisted of another special educator and two social counsellors (one employed part-time). The fourth primary school had a special educator in the team, as well as another special educator (counselling work and additional teacher) and an educator only performing

counselling. Counselling at this school was distributed among all members of the active professional staff.

5.4   Data Collection and Processing Procedures

In the current study, the authors wanted to take a more an in-depth look at the subject, therefore, a qualitative approach was used. To conduct the semi-structured interviews, a protocol containing ten sets of content was prepared, which consisted of open-ended questions. The introductory set of questions referred to the basic data of the research sample (number of students at the school, education, composition of the counselling service).

In the second part, the authors were interested in how the special educators assess cooperation with the school management (obstacles and initiatives for cooperation, management support, autonomy of action). In the third part, the authors were interested in how important the special educators find their work or how they assess it. The fourth set of questions referred to the cooperation between special educators and the school management in the field of learning and teaching, while the fifth focused on the field of school culture, education, climate, and order.

The sixth set of questions referred to the cooperation between special educators and the school management in the field of physical, personal, and social development, the seventh referred to the cooperation between special educators and the school management in the field of schooling, while the eighth referred to the cooperation between special educators and management in the field of vocational guidance, and the ninth referred to the cooperation between special educators and management in the field of tackling socio-economic hardships. In the tenth set, the authors were interested in which areas of work special educators feel most competent and in which they feel the greatest deficit, in accordance with the Program Guidelines (2008).

Before starting the study, a research plan had been designed. With the help of the analysis of the Program Guidelines (2008), the authors defined the areas of cooperation between management and special educators and formulated questions based on them.

The study was conducted in December 2019. The survey was followed by the preparation of transcripts. Based on the definition of the problem and areas of cooperation between the special educator and the school management, as well as on the literature review, a list of codes was prepared before starting, and a deductive approach was used with regard to the analysis of the data (Vogrinc, 2008), in which the presence of certain codes was presented.

5.5   Results and Discussion

All surveyed special educators worked in a team consisting of various profiles of counsellors. Special educators at the first and second primary schools performed the work of additional teachers, and special educators at the third and fourth primary schools, besides the additional teaching hours, also performed the work of a counsellor.

Given the answers it was clear that special educators who are not employed as counsellors are also actively involved in the work of the counselling service. Namely, their active involvement has a positive effect on the creation of an inclusive climate, and thus on the optimal development of children with special needs.

5.5.1   Cooperation of the Special Educator with School Management

The surveyed special educators assessed their cooperation with the school management as good and correct. One special educator assessed their cooperation with the management as very good, and they pointed out that their cooperation was regular and effective.

The initiative for cooperation usually comes from special educators – the counselling service. A special educator from the second primary school mentioned that the initiative depends on the contents of the problem or task.

In a survey conducted by Gregorčič Mrvar and Šarić (2018), counsellors assessed their cooperation with management as good.

Three special educators did not perceive obstacles for cooperation, one stated that obstacles occasionally appear as a result of the school management not knowing the professional field. Nevertheless, all involved special educators receive support from the school management, which listens to the proposals of the school counselling service, takes them into account, and supports them in front of other professional associates of the school. Also, most of them were satisfied with the possibility of participating in school activities. The answers of the third special educator implied that she was increasingly approached by teachers with requests for help in adapting materials and assessments of knowledge for students with special needs.

As one of the most important tasks of the school counselling service performed by special educators, the surveyed professionals included care for the optimal development of children with special needs, detection of, and assistance to, students with learning difficulties, diagnosing children with special needs, and cooperation and counselling for parents and teachers.

5.5.2   Cooperation Between the Special Educator and Management in School Culture, Education, Climate, and Order

In terms of educational importance (Blažič et al., 2003) school ranks immediately after the family, so it is understandable that all surveyed special educators are actively involved in education at their schools. They pointed out that in all schools an educational plan group has been formed for preparing this scheme, and everyone, including teachers, participates in its formation by submitting proposals.

All special educators also participate in deciding on educational measures. Special educators, who are not employed as counsellors, participate in deciding on educational measures only with regard to students for whom they provide additional teaching.

At the first and second primary schools, the special educators pointed out that in cooperation with the management they ensure an appropriate culture and climate at the school, mainly through acting preventively by conducting various workshops. Proposals for the education content made by the entire team are submitted to counsellors, who then submit them to the management.

When discussing the planning and implementation of professional education in this field, special educators, who also perform counselling work, cooperate more actively with the management. In cooperation with the school principal, they seek relevant training courses and make suggestions to the management. Like their colleagues, they also prepare internal training courses for teachers to get acquainted with social games and other preventive activities, which can be used to establish a good classroom climate.

At the fourth primary school, the special educator pointed out that in cooperation with teachers and management, they had created new forms of educational activities and consequences for violating the rules from first to fourth grade, thus supplementing or changing the rules of the school. As members of the counselling team, special educators at the second and third primary school also participated in the formation of school rules.

5.5.3 Cooperation Between the Special Educator and School Management in Physical, Personal, and Social Development

The experiences of special educators in this field also vary. The first special educator did not participate in the planning and implementation of professional training in this field. However, another special educator, with the approval of school management, conducts a lecture or workshop at least once a year, which is related to specific learning difficulties and their consequences for students. In cooperation with other members of the counselling service and the management, they discuss students with special needs and their specialties and strengths with the entire teaching staff every August, who make suggestions for adjustments and the effective implementation of the educational process.

The third and fourth special educators in this field actively cooperate with management in the planning and implementation of training courses. These sessions then go ahead both in the context of annual planning, and in the planning of lectures that need to be conducted owing to the problems that are faced during the school year.

The fourth special educator also said that she joined the management in training that year, wherein she became even more familiar with this topic, and now she will be able to bring this field closer to other employees. The counsellors prepare one training session or workshop on this topic At least once a year. In collaboration with other counsellors, they prepared a manual for classroom hours, which is of great help to teachers in planning classroom lessons that serve as prevention, as well as having a curative effect.

5.5.4   Cooperation between the Special Educator and the School Management in the Field of Schooling

Most special educators are actively involved in the preparation of the school's annual work plan; only the special educator at the first primary school does not participate directly (only by submitting proposals within the staff team), as this is the responsibility of a counsellor-psychologist.

At the second primary school, the special educator submits her proposals for the education plan to the management, as part of the formation of the annual work plan, and actively participates in the self-evaluation plan.

At the third and fourth primary schools, the special educators cooperate with the management by preparing contents for the operation of the school counselling service in cooperation with other members of the staff, which is determined by the Basic School Act (1996) as a mandatory part of the school's annual work plan. Subsequently, the annual work plan of the counselling service is coordinated with the management. They are often involved in other areas as well, i.e., teacher training, the school fund, children with special needs and learning difficulties, cooperation with parents, and so on.

The third special educator also indicated cooperation with the management in the retraining of students.

5.5.5 Cooperation Between the Special Educator and School Management in Vocational Guidance

From the given answers the authors learned that the surveyed special educators mostly do not lead vocational guidance in schools, as this task is performed by other professionals.

Another special educator pointed out that she does not carry out vocational guidance directly but is active in vocational counselling for students with special needs and their parents, on which she reports only to management.

Only at the third primary school does a special educator lead the field of vocational guidance independently. She coordinates the work in this area with the principal and reports to him.

5.5.6 Cooperation Between the Special Educator and School Management in Tackling Socio-Economic Hardships

The field of socio-economic hardships at the first primary school is covered by a psychologist. Depending on the situation, and if the student who attends additional teaching classes needs help, the special educator turns to a psychologist, who then looks for solutions in cooperation with the management and others involved.

The special educator at the second primary school pointed out that the nature of her work enables her to gain a detailed insight into the child's possible distress in the school or home environment. She first informs the school counsellor and, if necessary, the school management about these observations, and contributes to the solution with proposals in which she also includes the child's wishes and opinion. She also pointed out that the management regularly encourages all employees to identify potential student problems and to inform the counselling service in a timely manner.

The third special educator said that this area falls entirely within her work obligations. She addresses all problems in cooperation with the school management. She also cooperates with the management in the allocation of subsidies by the school

fund and in a framework of cooperation with the Social Services. In more complex cases or problems, the management is also present at meetings with parents.

At the fourth primary school, the special educator stated that, in agreement with the management, she regulates matters in this field for students from first to fourth grade. She independently conducts interviews with parents, assists in writing applications for subsidies, participates in the organisation and coordination of additional assistance to students, proposes inclusion in various summer camps, and cooperates with the Social Services. She reports only to the management on all matters. In more demanding cases, the management is also involved in problem solving.

Solving socio-economic hardships depends on the nature of the problem, the scope of the school counselling service, and the representation of profiles in it, as well as the division of work within the school counselling service.

5.5.7   The Special Educator's Competence and Autonomy in Defined Tasks

All the special educators involved in the study included working with students with special needs among their main tasks, and therefore evaluated their work as important for the functioning of the educational process, as they play a crucial role in establishing an inclusive environment. All of them also highlighted the connecting role of the special educator, as they represent a bridging link between the student, and the parents and teachers.

The special educator at the second primary school highlighted their role in preventive action and in ensuring equal opportunities for all students, regardless of their needs. She emphasised the need to reorganise the work of special educators, which should be 'shifted to the class', where they would be actively involved in direct work in the class and use their expertise to actively contribute to establishing a stimulating learning environment for all.

The fourth special educator said that she sees the counselling service as a connecting link between all participants in the educational process.

The special educators who work as additional teachers pointed out that they are familiar with the *Programme Guidelines for the counselling service in primary school*, but their main guideline is provided by the nature of the work they primarily carry out, and most of all by the *'Instructions for educational programs with adapted implementation and additional professional assistance for a nine-year primary school'* (2003). Nevertheless, both of them believed that they had extensive knowledge in the field of learning and teaching and, of course, all areas related to working with children with learning difficulties and special needs. They felt the biggest deficit in working with parents and solving socio-economic hardships, and they would like additional training in this field.

The special educators, who work as counsellors, pointed out that they feel the greatest deficit in solving socio-economic hardships, and the special educator from the fourth primary school also pointed out the field of vocational guidance, which is not one of her duties.

All special educators in the survey were of the opinion that they could be professionally autonomous in their work, and that the school management trusts them and accepts their professional proposals.

5.6   Conclusion

Over the years, all counsellors have become an indispensable part of the educational process (Privošnik & Urbanc, 2009). In order to be successful at their jobs, it is vital to work in an interdisciplinary way, which manifests as cooperation between various professional profiles of counsellors. Their collaboration with other professionals and management is crucial for the successful running of the counselling service as a whole (Programme Guidelines, 2008). The same can be concluded from our study, as all involved special educators are members of a team of counsellors, who successfully solve the problems of everyday educational life and cooperate with the management.

From what was said, one can deduce that the surveyed special educators are actively involved in the complex work of the school counselling service. This connects pedagogical, psychological, and social issues, and is carried out through assistance, and development and prevention activities, as well as planning and evaluation activities (Programme Guidelines, 2008).

The authors noticed differences between the special educators who were employed only as additional teachers, and those who also performed the work of the counselling service. This is a logical consequence of the fact that they perform different tasks in accordance with the workplace, and that the general starting point and basis for counselling work services are the Program Guidelines (2008). However, the basis for the work of additional teachers are the *Instructions for educational programmes with adapted implementation and additional professional assistance for a nine-year primary school* (2003).

In the field of school culture, education, and climate and order, there is also the preparation of an educational plan, and all professionals are included in it, in all schools. The differences between special educators arise in terms of participation in the imposition of educational measures, as additional teachers participate in this procedure only if there is a student involved to whom they offer their assistance within their additional teaching hours. There are also noticeable differences in the planning of professional education with special educator-counsellors actively cooperating with the management.

Also, in the field of physical, personal, and social development, special educators – counsellors and management – actively participate in the planning of education, while special educators – additional teachers – do not participate in it.

Special educators – counsellors have a more visible role in creating the annual work plan of the school, since they have to prepare the operational contents for the school counselling service. Special educators – additional teachers only participate in planning through the team or special assignments (self-evaluation).

Vocational orientation is independently led by only one special educator – counsellor, as another professional associate is in charge of this area at the fourth primary school. At the second primary school, a special educator – additional teacher leads vocational guidance for children with special needs, as she knows them extremely well, due to the nature of her work.

Special educators – additional teachers in the field of socio-economic hardships cooperate with the management regarding students to whom they offer assistance.

The interviews imply that the special educators – counsellors are trained to perform the duties of the counselling service, and they feel autonomous and professional in their work. Special educators who perform additional teaching are also actively involved in the work of the counselling service, but mostly in connection with students with learning difficulties and special needs, thus actively contributing to a positive school climate.

The authors found that special educators can be professionally autonomous in their work and that they enjoy the support of the management. All special educators felt working in a team of counsellors was an advantage, since they could perfectly complement each other in an interdisciplinary way.

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Structure as an Element of Effective Learning

Monika Rajšp

Centre for Hearing and Speech Maribor, Maribor, Slovenia
monika.rajsp@csgm.si

Abstract For children, structure is safety. To achieve optimum functioning and progress, the quantity and types of structuring need to be adapted to an individual's needs. While implementing the TEACCH method, elements of arranging the working environment, activity systems, visually structured tasks, and visual timetables were introduced. The study was based on a random research sample – a heterogenous group of preschool children with special needs, included in the special needs program, who have speech and language disorders of varying intensity and associated deficiencies (mental disability, autism, long-term illness, mobile impairment). To carry out the study, a qualitative method of pedagogical research was used – a case study. Prior to the implementation of the TEACCH method, a descriptive evaluation of the children's functioning in various areas (flexibility, anxiety, social skills, communication and independence) was done with the help of assessment criteria. After three months of actively using the TEACCH method, another evaluation was done, which confirmed the system's positive effects. The author noted that the observed children experienced progress in all five key areas. The biggest improvement was seen in their adjustment capabilities, the smallest in coping with anxiety. The implementation of structured teaching in the department turned out as successful and effective.

1   Introduction

"There is nothing so unequal as the equal treatment of unequals."

Aristotle

Children with special needs (also) strive to be successful, but their environment is often inadvertently designed to prevent them from making optimal progress. Through adaptations and encouragement, it is possible to ensure that children with special needs remain successful (Sousa, 2007). Children with special needs are therefore included in appropriate educational programs and are provided with appropriate assistance (Placement of Children with Special Needs Act, n. d.). Among other things, the Centre for Hearing and Speech Maribor implements an adapted education program for preschool children, which includes listening and speech rehabilitation and the upbringing, care, and education of deaf and hard of hearing children, children with speech and language disorders, and children with autism spectrum disorders (Centre for Hearing and Speech Maribor, n. d.).

Structure, which is an important element of effective teaching (Mesibov & Shea, 2008), is adapted to the needs of children. As part of structured teaching, it is necessary to properly physically arrange the space, introduce visually structured tasks and systems of activities, and to structure time.

The purpose of the study, conducted in the section of the adapted educational program for preschool children, was to determine the impact of the introduction of structure (elements of the TEACCH system) on five key areas of children's functioning – adaptability, expressing anxiety, development of social skills, communication, and independence of children with different types and levels of deficits, obstacles or disorders.

2   Structured Teaching According to the TEACCH Method

A structured life and environment are especially important for children with autism spectrum disorders, as it helps them learn and prevents problematic behaviours. The amount and type of structure the child needs depend on the child. It is imperative that we gradually reduce the need for structuring, as the long-term goal is to increase the child's flexibility (Whitaker, 2018).

The importance of structuring:

- Language problems make it impossible for a child to understand what is expected of them. It is easier to convey a message to the child if we do not rely solely on the spoken word. In this way, we also contribute to the child's independence.
- A lack of understanding people's feelings, their intentions and motives, makes prediction impossible. Structuring (routines and lists) reduces worries and frustrations that result from dealing with people.
- Understanding and anticipating what will happen and in what order is of great concern. Children with autism spectrum disorders have problems with sense of time, sequence, and representation.
- Structuredness (and consequently predictability) helps to reduce the child's fear, which can reduce their need for routines, rituals and obsessions. Ensuring structuring satisfies the need for sameness (Whitaker, 2018).

In the TEACCH method (Treatment and Education of Autistic and related Communication-handicapped Children) it is essential that the requirements are adapted to the children and the given situation. It is crucial that the child knows exactly what the task is and what follows when they complete it. It is important that the child has an activity schedule and that the tasks are presented visually (Hannah, 2009).

Structured teaching according to the TEACCH method has two equivalent goals, namely, to teach the child as many skills as possible, according to his or her developmental abilities, and to provide an understandable environment through which the child can understand the expectations of the environment. This approach is also an educational technique and method of organizing a stimulating environment (Mesibov & Shea, 2008). It is characterized by reducing fear and, at the same time, improving motivation, attention and independence (dependence on the adult is reduced). It is especially helpful for children who are disorganised, inattentive, or dissatisfied, as well as if we want to teach them to complete one or more tasks on their own, or to acquire new skills when they do not (yet) understand what we require of them (Hannah, 2009).

This method of structured teaching is suitable for long-life use at home, school, kindergarten, work, and recreational activities anywhere and anytime, for people of different ages and developmental abilities (Mesibov & Shea, 2008). The participation of professionals in educational institutions with families and vice versa, the up-to-date exchange of information, and monitoring children's functioning are important (Mesibov & Shea, 2008).

2.1   The Physical Arrangement of Space

Factors that prevent a child from functioning properly need to be identified – sometimes the environment can be regulated to avoid them. Even quiet music can mask the noise of cars at night and allow a child to sleep peacefully (Whitaker, 2018). By structuring the environment, one strives to achieve a reduction in distractions and confusion that prevent the child from understanding what is required of them; removing triggers or temptations that could cause difficult behaviour; providing ongoing visual instructions and reminders to facilitate the understanding of requirements (Whitaker, 2018). Physical structure and organization allow the classroom/playroom to be clear, interesting, and manageable (Mesibov & Howley, 2003).

Figure1: Corner for exercising the speech apparatus
Source: own.

Figure 2: Marked toy storage areas
Source: own.

By providing the appropriate structure, some of the child's essential problems are addressed effectively and directly. The requirements for the child's comprehension and use of language and memory are reduced, and his or her visual abilities are well utilized (Whitaker, 2018).

Especially for younger children, it is advisable to create a connection between a particular activity and the space, which in practice means that we create physically separate spaces for "independent work, group activities, play, personal care and more" (Whitaker, 2018). The child thus knows exactly what is going on where and develops the habit of behaving in a particular manner in an environment without the adult repeating instructions and exercising control (Whitaker, 2018). In playrooms and classrooms, where separate spaces cannot be provided, one can provide visual instructions for a specific activity, e.g., for lunch, we use a tablecloth of a different colour than for activities like painting. Gadgets for activities are always stored in the same places, in specific boxes, which we only bring out when it is time for that activity. You can easily cover certain gadgets (like a computer or a TV) with a

tablecloth when you do not need them. If a child has problems with one of the utensils intended to reduce his or her fear, then the child might not know or be able to decide where to go. This reduces the likelihood that the child will dawdle and disturb others. We can mark the limits of the space that the child can use – stop them at the line and afterwards reward them for doing so.

Thus, the line becomes a reminder, the child learns to respond because they remember the reward. It is also important to label lockers and storage spaces with symbols, pictures or words, which can prevent behavioural problems and contribute to independence, as the child knows exactly where things are stored or where certain toys are found (Whitaker, 2018).

Figure 3: An activity system for toilet use
Source: own.

In rooms adapted to the needs of children with autism spectrum disorders, one may create individual, partitioned workstations for independent work. To arrange a work corner at home, it is important to position it away from occupied spaces, doors, windows, and other sources of disturbance – preferably next to an empty wall. If it is possible to make a barrier (by moving furniture), this is a very good solution,

otherwise one can use a large cardboard box. If this is not possible, the boundaries of the work area can be marked with a tablecloth or tape (Whitaker, 2018).

2.2 System of Activities

Tasks need to be physically organized by creating a framework that guides the child through the task. This strengthens the child's independence and reduces the need for help and adult supervision. A set of instructions with photos is important, especially for tasks that have a certain sequence (cooking, going to the toilet). It is much easier for a child to tidy up the table if they have separate and marked containers for cutlery, glasses and plates. Toys can be stored in baskets, placed next to each other from left to right, and in this order, we teach the child to play with the toys and then put them away (Whitaker, 2018).

Activity systems complement schedules that state the sequence of activities. This is an effective way of organizing individual (special) activities. There are several different ways to individualize activity systems, while their effectiveness varies from child to child. It is important for the child to figure out what needs to be done, understand how much needs to be done and in what period, and monitor their progress. Regardless of the level of ability of children or students, materials must be clearly marked and arranged (Mesibov & Howley, 2003).

2.3 Visually Structured Activities

Tasks or activities must be supported visually or concretely in order to be clear, meaningful and understandable. Visual instructions are important to help understand what is expected of children. Visual organization is needed, because the child's attention is sooner redirected when the material is disorganized, while visual clarity ensures that the child recognizes the most important components and characteristics of the task (Mesibov et al., 2004).

Tasks without a visual or physical component/support are often unsuccessfully solved by children with autistic disorders, as such tasks are not important enough for them; they do not attract their attention (Mesibov et al., 2004).
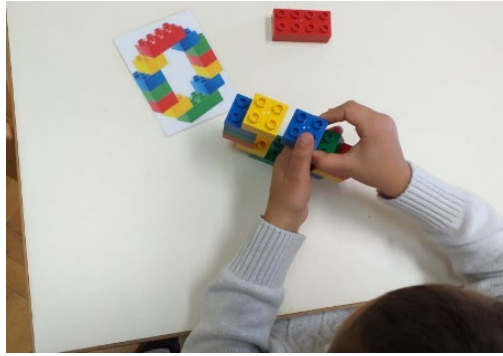
Figure 4: Assembling the cubes according to the visual template
Source: own.

Figure 5: A visually structured activity – sorting by colour
Source: own.

2.4 Structuring Time – Routines and Schedules

Physical structure thus helps children understand, where certain activities take place and what function a particular space has, while visual schedules cover sequences of events, explain which activity follows, and when and in what sequence (Schopler et al., 1995), and help the child to function more independently. With such activities we structure time, enable easier understanding (for visual learners), and strengthen the feeling of security, because children know/see, what activity is taking place and what follows. With these predictions, visual schedules reduce fear of uncertainty and, at the same time, motivate children to complete more difficult tasks, as these are more enjoyable for the children (Berložnik et al., 2014).

Children with autism spectrum disorders have a great need to know what is happening in the moment and what follows. They have problems with sequences and timing. This is often the reason for them repeating the same questions (Whitaker, 2018). They find it difficult to cope with change and they become upset at unexpected events. They are anxious when confronted with the unknown and as such, they find it difficult to organize themselves (Hannah, 2009).

Some children have an extraordinary ability to remember the time of the event, but do not have a sense of time, so it is important to consider the order and modes of the activity – the sequence of steps and how to perform the individual steps of the activity. Desired behaviours and developing independence can also be achieved by helping the child understand what is happening and anticipate what will happen (Whitaker, 2018).

Routine is important for children with autism spectrum disorders so that they know how things are done and in what order (Whitaker, 2018). Basically, routines are typical events of the day. They are "activities, events, behaviours, repetitive habits" (Jurišič, 2018). The level of detail and consistency depends on the child. Some need consistency only in the routines of getting up and going to bed, others need routines throughout the whole day. It is important that the parent is the one who establishes the routine, as otherwise it can be very distracting if the child learns the course of the day and insists on it (Whitaker, 2018).

Routines provide children with "structure and order, predictability and safety" (Jurišič, 2018), but they also provide good learning opportunities.

Figure 6: Visual schedule before the morning snack
Source: own.

Figure 7: Visual schedule from the morning snack until it is time to go home
Source: own.

Whitaker (2018) provides useful guidelines for establishing routines:

- It is effective to establish independent routines as soon as possible. Assistance to children with autism spectrum disorders must be systematically abolished, as they are very prone to becoming dependent on foreign aid.
- The least intrusive stimuli should be used to encourage a certain sequence of behaviours – visual (gestures) are more desirable than verbal and verbal more than physical.
- When the help is annulled, it is recommended to cancel the last step first (e.g., when the child is putting on their trousers, we guide the movements of the hands and in the end, we let the child pull up the trousers by themself).
- Routines create predictability and help the child understand the meaning of the activity – where things are going and what is essential. Once they are familiar with all the steps, they can start showing signs of expectation or even take the initiative for the next step.
- Routines help the child to cope more easily with transitions between activities.
- If school activities take place in a predictable pattern, children with autism spectrum disorders perform better. Situations that are a normal part of school life (asking for help, tidying up at the end of the class, finding your place, etc.) require special routines.
- Through individual activities, a child with autism spectrum disorders is assisted by their personal routine (despite the fact that the class has a fairly detailed schedule).
- Social stories are useful for explaining the individual steps of a routine.

Sometimes the visual schedule for routines needs to be changed because we want to or because circumstances force us to. It is useful if the child prepares for the possibility of change in time – occasionally changing the order, omitting small steps, adding changes. This gives us a sense of what challenges await the child and parent (Whitaker, 2018).

Visual schedules are a method that "allows the child to negotiate and helps them remember the stimulus, but they are also essential for structuring time" (Whitaker, 2018). Many children with autism spectrum disorders and other disorders do not understand the concept of time. At the same time, they also have problems in communication, including understanding verbal instructions and explanations (Larkey, 2006).

Visual schedules are one of the main methods of the TEACCH approach. They are very common in classrooms in the United Kingdom. A priority area is addressed, namely visual skills, to deal with a typical problem area for the child, like anticipating future events (Whitaker, 2018). With schedules, we effectively improve the planning of activities, and thus the independence of children. Schedules also facilitate transitions between activities and spaces (Jurišić, 2016).

A child who is familiar with their daily routine is more relaxed at school because they see it (in pictures or words). Schedules are also effective at home, as they give the day structure, and the child does not feel that the day is going unplanned (Hannah, 2009).

Whitaker (2018) provides guidelines for creating visual schedules:

- When creating visual schedules, we choose a system that the child understands – pictures, symbols, drawings or printed words.
- For children who do not respond to images, objects that are directly related to a particular activity and represent it but are not actual objects from the activity (e.g., a box of cereal represents lunch time), can be used.
- It is necessary to create a connection between the activity and the picture (symbol). The child is shown the picture at the beginning of the activity that even attracts their attention during the activity. Simple and consistent language is used. Let us define what we do. When a child shows signs of expectation, we know that they understand the picture (e.g., we show them

a picture of a park, the child grabs their shoes and a jacket).

- Because children find it difficult to understand that something is coming to an end, it is helpful to develop a routine that clearly indicates the end of the activity. The word "end" should be clearly emphasized, and the child should be encouraged to put away the accessories and move the picture into the space (box, envelope) containing completed activities.

- Once the child understands the choice of symbols, an understanding of the concept and phrase "first… then…" begins to develop. This is a useful step when a less popular activity is followed by another, more interesting one for the child. We choose a fixed place for the schedule, paste two pictures in order (top-bottom/left-right), help the child to take the first and look at the second, while explaining the order.

- Gradually introduce a schedule that includes more time (half a day, all day). The child should be encouraged to check what is coming and thus become more independent. This is a very useful strategy, especially if the child is worried about future events and asks about them.

- Pictures with prizes or favourite activities can be included when the child understands short schedules. This gives the child the assurance that they will still be able to engage in their favourite activities, as well as seeing when this will happen.

- Routine in the use of schedules is important – we introduce the child to the use of the schedule at the beginning and end of the activity. It is best to start by using a schedule in the place the child is used to, putting away the picture of the completed activity and taking the new one that follows. Older children can use portable schedules (spiral folder, symbols on a ring, etc.).

The schedule helps the child in their organization – in dressing, preparing for school, in their evening routine. Activity schedules are also effective for weekly tasks (shopping, going to the library, etc.). It is reassuring for the child to have a weekly schedule placed in a prominent place and updated regularly. We also teach children to perform tasks independently with schedules and lists of instructions – the child must test them accompanied by an adult, as it is important that the child is given clear, gradual and unambiguous instructions (Hannah, 2009).

Visual schedules help to develop everyday life skills (Alberto et al., 2005, in Spriggs et al., 2015), in physical activities (Cannella-Malone et al., 2013, in Spriggs et al., 2015), behavior regulation (Bryan & Gast, 2000, in Spriggs et al., 2015), vocational skills (Rouse et al., 2014, in Spriggs et al., 2015), leisure skills (Blum-Diamaya et al., in Spriggs et al., 2015), and academic skills (Spriggs et al., 2007, in Spriggs et al., 2015).

Faherty (2000), in Davies (2010), and Cramer et al. (2011) finds that the use of visual schedules reduces anxiety and increases adaptive abilities.

Lack of control or predictability can lead to problems during transitions, increased reliance on the adult, and the occurrence of unwanted behaviours (Banda & Grimmett, 2008, in Spriggs et al., 2015). Dettmer et al. (2000, in Connelly, 2017) state that children who use visual schedules are less likely to show unwanted behaviour when we expect something from them. Visual schedules are a strategy that also prevents unwanted behaviour and especially during transitions.

The use of visual schedules has also been found to be effective in developing expressive and receptive communication skills, attention, organization, and memory (Quill, 1995, in Spriggs et al., 2015). The effect of visual schedules is also noticeable in the development of social skills, which are too often concluded to be spontaneously teachable. It is paramount to experience the child as an important member of the community (Riedl et al., 2009, in Cramer et al., 2011).

Visual schedules are thus an essential aspect of a structured environment and are a common practice in many classrooms for children with special needs, especially those who have problems with organization, working memory, or changes in routine (Spriggs et al., 2015). Their main purpose is to prepare the child for the next activity or step within the activity (Waters et al., 2009 and Van Laahorov et al., 2010, in Knight et al., 2014). In principle, a less pleasant activity is followed by a desired or more enjoyable one, which increases the child's motivation to complete the former (Rabian, 2005, in Spriggs et al., 2015). They ensure the predictability of planned activities (Spriggs et al., 2015) and help achieve maximum independence (Duttlinger et al., 2013, in Spriggs et al., 2015).

3   Empirical Part

3.1   Purpose

The purpose of the empirical research was to examine the impact of the use of elements of structured teaching on the functioning of children in an adapted educatinal program for preschool children. The author was interested in how the introduction of appropriate physical arrangement of space, activity systems, visually structured tasks, and schedules affects the flexibility, anxiety, development of social skills, communication, and independence of children. Our goal is that children with communication and other problems learn to use the elements of structured teaching, which help them function on a daily basis.

Objectives:

– Introduction and adoption of the use of elements of structured teaching.
– Exploring the adaptability, anxiety, communication and social skills, and independence of children before and after mastering the elements of structured teaching.

The research questions based on the research objectives were as follows:

– Do the children included in the adapted educational program for preschool children feel calm, safe, and follow the activities – are they flexible?
– Do the children enrolled in an adapted educational preschool program have anxiety problems?
– Do the children included in the adapted educational program for preschool children communicate properly and are they successful in social skills?
– Are the children included in the adapted educational program for preschool children mature for their age?

3.2   Methodology

Research Method

In the research process, a qualitative method of pedagogical research was used – a case study. Based on the assessment scale, the functioning of children in various fields (adaptability, anxiety, social skills, communication, independence) was assessed descriptively before the introduction of elements of structured teaching, and after three months of active use, the success of the introduction of these elements in the group was determined.

Research Sample

The study was based on a non-random sample of a heterogeneous group of preschool children with special needs in an adapted educational program for preschool children at the Centre for Hearing and Speech Maribor. The observed group consisted of four children in the adapted educational program for preschool children at the Centre for Hearing and Speech Maribor, from September 2019, aged 4 to 6 years, one with a severe speech and language disorder, one with a severe speech and language disorder and suspicion of an autism spectrum disorder, and two with moderate speech and language disorders, one with a mild mental disability and a suspected autism spectrum disorder, and the other with long-term illness and mobility impairment.

The Process of Gathering Data

The children, or rather their behavior, was observed, while the data were recorded with an assessment scale and used to describe it descriptively, before the use of elements of structured teaching and again after three months of active use.
Data Processing Procedures

In the study, the focus was on the behavior of the observed children and on the use of the introduced elements of structured teaching. The author observed the effectiveness of the method – the introduction of elements of structured teaching.

3.3   Results and Interpretation

The functioning of the children included in the research sample was assessed before the introduction of structured teaching elements and after three months of active use. The author observed and assessed 5 key areas of interest, namely: adaptability, expressing anxiety, social skills, communication, and independence. The progress made was presented by introducing elements of structured teaching. The author examined the research questions and interpreted the resulting differences in the children's functioning.

The Success of the Introduction of Elements of Structured Teaching by Individual Area

The children's performance was assessed descriptively, based on the results of the evaluation scale, using the following criteria:

- less successful (1),
- successful (2),
- very successful (3).

Table 1: The performance of the observed children in adaptation before and after mastering the use of elements of structured teaching

	ADAPTABILITY	
	Before using the elements of structured teaching	After mastering the use of elements of structured teaching
N	Very successful	Very successful
B	Less successful	Very successful
D	Successful	Very successful
L	Less successful	Very successful

In all children, the use of elements of structured teaching was effective in their adaptive abilities. A child diagnosed with only a speech and language disorder showed a high level of adaptability even before the introduction of elements of structured teaching in the kindergarten class, and the other three children were significantly influenced by it. The children with severe speech and language disorders and suspected autism spectrum disorders, and the children with moderate speech and language disorders, long-term illness and mild mobility impairment made the most progress in flexibility.

Table 2: The performance of the observed children in coping with anxiety before and after mastering the use of elements of structured teaching

	ANXIETY	
	Before using the elements of structured teaching	After mastering the use of elements of structured teaching
N	Very successful	Very successful
B	Less successful	Very successful
D	Successful	Successful
L	Less successful	Successful

The child who had no problems with flexibility also did not have problems with anxiety. The child with a moderate speech and language disorder and a suspected autism spectrum disorder showed the same level of anxiety as before the observation, while the other two children progressed. The most progress was shown in the child with a moderate speech and language disorder, long-term illness and mildly impaired mobility, while the child with a severe speech and language disorder and a suspected autism spectrum disorder also dealt with anxiety successfully.

Table 3: The performance of the observed children in social skills before and after mastering the use of elements of structured teaching

	SOCIAL SKILLS	
	Before using the elements of structured teaching	After mastering the use of elements of structured teaching
N	Successful	Very successful
B	Less successful	Successful
D	Less successful	Successful
L	Less successful	Successful

All of the observed children progressed in the field of social skills, in which three children were less successful and one successful before the introduction of elements of structured teaching. The child with a severe speech and language disorder was very successful in social skills.

Table 4: The performance of the observed children in communication before and after mastering the use of elements of structured teaching

	COMMUNICATION	
	Before using the elements of structured teaching	After mastering the use of elements of structured teaching
N	Successful	Very successful
B	Successful	Very successful
D	Less successful	Successful
L	Less successful	Successful

All of the observed children also progressed in the field of communication, two became very successful in communication (the child with a severe speech and language disorder and the child with a moderate speech and language disorder, long-term illness and a mild mobility impairment), two were successful (the child with a moderate speech and language disorder, a mild mental disability and a suspected autism spectrum disorder, and the child with a severe speech and language disorder and a suspected autism spectrum disorder).

Table 5: The performance of the observed children in independence before and after mastering the use of elements of structured teaching

INDEPENDENCE		
	Before using the elements of structured teaching	After mastering the use of elements of structured teaching
N	Successful	Very successful
B	Successful	Very successful
D	Successful	Very successful
L	Less successful	Successful

The use of elements of structured teaching helped the child with a moderate speech and language disorder, a long-term illness, and reduced mobility to become very successful in independence, the child with a moderate speech and language disorder, a mild intellectual disability and a suspected autism spectrum disorder maintained their level of independence, while the child with a severe speech and language disorder and a suspected autism spectrum disorder progressed and became successful.

From the presented data of the children's performance in five key areas (adaptability, anxiety, social skills, communication and independence) before the introduction of elements of structured teaching and after their adoption, it is clear that the observed children progressed in all five key areas. The most progress was seen in the area of flexibility, with as many as two children (a child with a moderate speech and language disorder, a long-term illness and a mild mobility impairment, and a child with a severe speech and language disorder, and a suspected autism spectrum disorder), who were failing before the introduction of structured teaching being very successful after three months. The least progress at the group level was shown in dealing with anxiety. The child with a moderate speech-language impairment, a mild mental disability, and a suspected autism spectrum disorder was not able to improve their ability to cope with anxiety, while the child with a moderate speech-language impairment, long-term illness, and a mild mobility impairment advanced the most.

Before the introduction of the elements of structured teaching, two of the children were unsuccessful in adapting and one was successful – all three made progress in this area. One of the observed children was very successful in the beginning. In expressing anxiety, two were unsuccessful, both progressing. Two of the children remained at the same level; one had no problems with anxiety, the other remained otherwise successful in this area, but no progress was observed. All four observed children advance in social skills; three were initially less successful and became successful, one very successful. In the area of communication, all children progressed by one level; also in independence.

The child with a severe speech and language disorder and a suspected autism spectrum disorder progressed in all five areas of observation: adaptation, expression of anxiety, social skills, communication, and independence. Globally, the child's functioning changed significantly for the better, and the greatest improvement was shown in their adaptive abilities. In the long run, one may expect even greater progress from the child, as they use the elements of structured teaching very effectively and independently.

The child with a moderate speech and language disorder, a long-term illness and a mild mobility impairment also progressed in all observed areas. Mostly in the abilities to adapt and to express anxiety. It took time for the child to accept and adopt the novelty in the playroom, but also to internalize its use.

The child with a moderate speech and language disorder, mild intellectual disabilities and a suspected autism spectrum disorder progressed in all areas except in expressing anxiety, where their abilities were stagnant, but the author will continue to pay attention to this area and work with the family to achieve progress.

In the child diagnosed with several severe speech and language disorders, the author observed progress in three of the five areas: social skills, communication, and independence. From the beginning, they had no problems with the ability to adapt and to express anxiety.

The child with a moderate speech and language disorder, a long-term illness, and a mild mobility impairment advanced the most, as opposed to the child with typical signs of an autism spectrum disorder and a severe speech and language disorder. The least progress was seen in the child with a moderate speech and language disorder, a

mild mental disability, and a suspected autism spectrum disorder. There was also less progress in the child with a more severe speech and language disorder, but they were already very successful in adapting at the beginning and did not have any problems with anxiety. The child with a moderate speech and language disorder, mild intellectual disabilities, and a suspected autism spectrum disorder, who was often absent, still has considerable potential for progress. It may be that the child's absence was the cause of slower progress.

2   Conclusion

The implementation of an adapted educational program for preschool children is largely individualized; the content, organization and the method of implementation are adapted. Numerous approaches are introduced at work, often including elements of structured teaching, which effectively influence the development of social skills, adaptability, communication, and independence, while reducing feelings of anxiety. All of this is important for reducing challenging behaviour. Structured teaching, according to the TEACCH method, is based on physical organization, activity systems, visually structured tasks and daily individual schedules.

The aim of the study was to examine the effects of the introduction of elements of structured teaching on the above-mentioned skills and feelings of children with special needs in the preschool period, whose basic deficit is in the field of speech and language.

The goals of the study were achieved – the author introduced elements of structured teaching and the children mastered them; they explored the adaptability, anxiety, communication, social skills, and independence of children before and after mastering the elements of structured teaching. Based on the research conducted, the author found that elements of structured teaching contributed to the better functioning of children in all five key areas. The greatest progress was observed in the ability to adapt, and the least progress was seen in coping with anxiety.

The introduction of structured teaching elements in the class of an adapted educational program for preschool children was successful and efficient, as only one child did not show progress in one of the observed activities, much like before the first observation and filling in the assessment scale. To some extent, this can also be explained by the fact that the child was absent for a long time, so in the future, the

author will try to make up for the lost time and help the child to progress in this area.

It should be noted that the elements of structured teaching, according to the TEACCH method, were effective in all the observed children. They all have problems of varying intensity in the field of speech and language, as well as associated problems, obstacles or deficits (mental development disorders, suspected autism spectrum disorders, long-term illness and mild mobility impairment). Among other things, the author wanted to show that a structured environment is important and effective for all children, not just children with autism. Also, in the kindergarten class of the adapted educational program in which the children were observed, the long-term goal is set to minimize the amount of structure over time and strengthen the adaptability of the children as much as possible.

Interactive visual supports that allow dissemination and long-term use should be considered in the future. They face a number of challenges related to current tools and practices. The use of group screens, personal mobile devices and personal recording technologies can replace many classic methods and improve the quality of work (Hayes et al., 2009). The most important thing is to derive from children, find their strengths, enable them to make the adjustments they need, and adapt the methods of working with them – for optimal development and progress in all areas. At the same time, it is crucial that professionals are also flexible and willing to learn to find the positive aspects of the technology available to us.

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Evaluating the Use of the EGIFT Program in Pre-Service Teacher Educatio

Neža Podlogar, Urška Žerak, Mojca Juriševič

University of Ljubljana, Faculty of Education, Ljubljana, Slovenia
neza.podlogar@pef.uni-lj.si, urska.zerak@pef.uni-lj.si, mojca.jurisevic@pef.uni-lj.si

Abstract Teacher education in giftedness and teaching gifted students is crucial, as teachers are key to supporting gifted students in school. The European Gifted Education Training (EGIFT) online educational resource provides learning experiences aimed at improving professional competence in gifted education. For the present study, EGIFT was evaluated in the framework of the Gifted students in school elective course for 34 undergraduate students from the Faculty of Education at the University of Ljubljana. The students generally reported having positive experiences with EGIFT, indicating that the contents were informative and interesting. They proposed different ideas about how its contents could be used in teaching practice. The main suggestions for improvement were equalizing the difficulty of questions in quizzes, the use of the Slovene language for better understanding, and more interactive videos. Overall, the evaluation revealed that EGIFT is a suitable enrichment tool in the curriculum of gifted education for preservice teachers. It is particularly useful in remote learning settings and for individual study.

1   Introduction

The use of effective provisions (in-school and out-of-school activities) for gifted students shows long-term benefits in gifted students' increased achievement in specific areas, their development of interests, and other elements of motivation, productivity, creative thinking, and career goals (Booij et al., 2017; Delcourt, 1993; Hébert, 1993; Lubinski et al., 2001). All this is possible through educators possessing the appropriate education on and knowledge of how to support the education and development of gifted and talented children and adolescents. However, research shows that this is often not the case and that educators lack the knowledge and skills to identify and meet the needs of gifted students (Hudson et al., 2010; Troxclair, 2013; VanTassel-Baska & Johnsen, 2007; World Council for Gifted and Talented Children, 2021). Consequently, educators may have misconceptions rooted in the traditional understanding of giftedness and the gifted (Sękowski & Łubianka, 2015; Tourón & Freeman, 2017), and they may have difficulty accurately identifying gifted students and applying differentiation strategies (VanTassel-Baska et al., 2020).

For these reasons, teacher education in giftedness and teaching gifted students is crucial, because teachers are key to supporting gifted students in school. It should include state-of-the-art, research-based best practices in the field of gifted education (VanTassel-Baska & Johnsen, 2007; World Council for Gifted and Talented Children, 2021). In initial teacher education, this can be on a compulsory or optional basis. European countries have no uniform system for teacher education in giftedness (Cseh, 2011; EURYDICE, 2006; Mönks & Pflűger, 2005). In Slovenia, the topic of gifted education is integrated within the broader framework of psychology and pedagogy courses and offered as an optional subject (Cseh, 2011; Juriševič, 2011; 2020).

Sękowski and Łubianka (2015) point to other additional resources for disseminating knowledge about gifted education in Europe. Institutions, such as the European Council for High Ability (ECHA) and the European Talent Support Network (ETSN), enable researchers, teachers, psychologists, specialists in education, and parents from Europe to share their knowledge and experiences. The European Council for High Ability (ECHA) organizes specialist training courses for working with gifted students in several countries (although not in Slovenia), but these courses are not free of charge. Increasing one's knowledge about gifted education is also

possible through literature on the psychology of high ability. In Europe, the *High Ability Studies* journal is dedicated to these topics.

Although some educational programs for teachers on gifted education exist, there are still significant deficits. These educational programs are rare, usually not free of charge, and do not follow the holistic and broad perspective of gifted education, which is recognized as an important global principle for professional learning in gifted education (World Council for Gifted and Talented Children, 2021).

In addition to the lack of teacher education programs in the field of gifted education, there is also lack of evaluation of teacher education programs in general, as well as in gifted education (Plunkett & Kronborg, 2021; Rogers, 2007; Reid & Boettger, 2015; Reid & Horváthová, 2016; Weilguny et al., 2011), although some evaluations of training programs exist (e.g., Fraser-Seeto et al., 2015; Sayı, 2018). Fraser-Seeto et al. (2015) investigated teachers' awareness and willingness to engage with a self-directed professional development package, and the findings suggest teachers' lack of knowledge and uptake.

Some positive outcomes of teacher education programs in gifted education have been reported in empirical research, namely changes in attitudes (Plunkett & Kronborg, 2011; 2021; Vreijs et al., 2017), improvement in equitable identification practices (Gallagher & Gallagher, 2013), and planning for curriculum modification (Reis & Westberg, 1994; Westberg & Daost, 2003).

For the above reasons, it is important that educators have access to high-quality programs for educating gifted students. High quality can be achieved through the evaluation of such programs.

1.1 The EGIFT Program

Professional development and training for teachers in gifted education at preservice and in-service levels is very important but is often neglected or insufficient. One measure to address this problem was to develop a freely available and easy to use online open educational resource, called Online Programme for Teachers of Gifted Students in Regular Classrooms (EGIFT: European Gifted Education Training, n. d.). This was an Erasmus+ funded project developed by European experts in gifted

education aimed at the delivery of continued professional development opportunities to teachers at a primary or elementary school level, in the field of gifted education. EGIFT was built upon a body of educational practices and research that has been developed by a number of institutions across Europe.

This online educational resource consists of five individual strands, which cover all important topics on gifted education: the identification of gifted students, their lived experience, the social-emotional support of the highly able, differentiation strategies for mainstream classes, and the development of curricula suited to gifted students. Each of these five strands is underpinned by three guiding principles: addressing underachievement in gifted students by helping them reach their potential, addressing equality of access to such differentiated instruction for all students from diverse backgrounds, and the support of students who are multiply exceptional – students whose high abilities are coupled with other special educational needs. The structure of the EGIFT program is shown in *Figure 1*. Each strand is divided into four units, each unit taking approximately one hour to complete. The online program is designed to be interactive, including written texts, videos, additional reading suggestions, and quizzes.
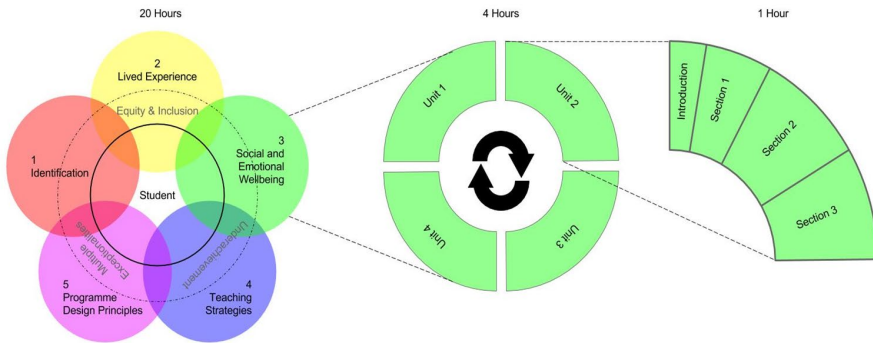
Figure 1: Structure of the Online Programme for Teachers of Gifted Students in Regular Classrooms (EGIFT)
Source: EGIFT: European Gifted Education Training, n. d.

1.2 The Present Study

With current advances in technology and digital literacy, the online environment offers new opportunities for professional preparation and learning in gifted education. With the onset of the COVID-19 pandemic, this transfer of the learning

setting from traditional to remote education was even faster and more urgent. Accordingly, the study process at the university level also changed, and emergency remote teaching (Hodges et al., 2020) was introduced in the 2020/21 academic year. This seemed like a good opportunity to implement the EGIFT online program in the elective course on gifted education called *Gifted students in school*. User experiences and responses to the EGIFT online program remain unclear, as there is no published research that has examined these issues.

Therefore, the aim of this study was to intensively investigate the implementation of EGIFT and to find out its usefulness and quality in the context of an elective course for university students (preservice teachers). Our research question was: *How does the online EGIFT program work with university students?* The framework for the evaluation of the online educational resource EGIFT was Kirkpatrick's (1994; 1996) evaluation model, which comprises of four essential levels of evaluation, each of which has an impact on the next. The levels are as follows: reaction (with focus on student reactions to the program), learning (with focus on student learning outcomes), behaviour (with focus on student behaviour change), and results (with focus on the program impact).

2 Method

The following research is a case study of the EGIFT program that examined the experiences and preferences of undergraduate students enrolled in the elective university course focused on gifted education. The course was delivered remotely because of epidemic measures. In addition to lectures, the students engaged with the EGIFT program, and presented and discussed its contents in seminar classes. The case study is phenomenological, and it aims to describe and understand the lived experiences of the participants within the given case (EGIFT program).

2.1 Participants

The sample included 34 undergraduate students (preservice teachers) from the University of Ljubljana, Faculty of Education with a mean age of 21.9 years (SD_{age} = 1.0). The majority were female (n = 32). Of all the students, 23 were in 4th (last) year, eight in 3rd year, one in 2nd year, and one in 1st year. They were enrolled in

six different study programs; most of the students being in special and rehabilitation pedagogy (*Figure 2*).
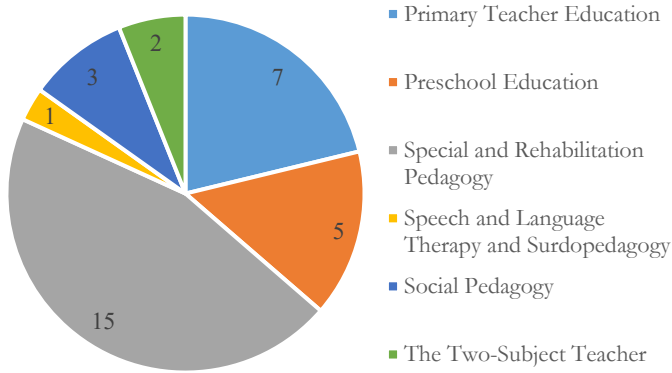
Figure 2: A display of the study programs in which the students were enrolled
Source: own

2.2   Instruments

The EGIFT evaluative questionnaire was comprised of three main areas for assessment. The first area was the online learning environment, which included four items on the ease of use, structure-design, modalities (audio, text, video), and technical characteristics. The second domain was content quality. It included nine items: content clarity, usefulness for learning about gifted education, informative, interesting, text and videos meaningfully cover the topic, clearly defined learning goals, meeting the objectives of the unit, access to resources that enrich understanding of the topic, and question relevance. The third area for evaluation was the usefulness of the program. This included three items on interest/motivation to pursue the topic further, recommendation to others, and transferability/applicability to a personal or professional context. A question on the difficulty of the questions at the end of the unit was added. The students rated various items on a 5-point scale (1 – poor, 5 – great; for the relevance of the questions: 1 – not relevant, 5 – very relevant; for the difficulty of the questions: 1 – very easy, 5 – very hard). Ten optional open-ended questions on these topics were added to supplement the quantitative data. In addition, the authors analysed the qualitative data based on student reports and discussions in the seminar classes.

2.3   Research Procedure

In the 2020/21 academic year, all 34 students were enrolled in the *Gifted Students in School* elective course, which ran for one semester, from October 2020 to January 2021, and was led by the authors of this paper. The course was implemented remotely because of health measures following the onset of the coronavirus pandemic. As part of the elective course, the students had the task of studying certain contents in the EGIFT program. They were divided into 10 groups, with each group consisting of two to five students studying two EGIFT units. Each group presented and discussed the EGIFT contents in the seminar classes, in the same order as they are included in the EGIFT program. At the end of the semester the students also prepared written reports and completed the evaluative questionnaire on their EGIFT experience. The questionnaire was created in the Slovenian 1KA open-source web application (1KA, 2021).

The data analysis consisted of two parts, qualitative and quantitative. The combined three-way qualitative analysis was based on the open-ended questions in the evaluative questionnaire, the students' reports, and the discussions in the seminar classes. The quantitative analysis was based on the evaluative questionnaire. One participant did not complete the evaluative questionnaire, which is why the quantitative analysis included answers from 33 students. Individual scores for online environment (four items total), content quality (nine items total), and usefulness (three items total) were calculated by adding the ratings of the survey items on the 5-point scale and converting the results into percentages. The overall assessment score was composed of all three main areas of evaluation (online environment, content quality, and usefulness).

3   Results

The results are presented according to the individual content areas of the EGIFT evaluation: first, the assessment of the online environment, second the content quality, and thirdly, with the usefulness of the program, concluded with a general evaluation of the program, covering all mentioned areas. The quantitative results from the evaluation questionnaires are presented, supported by qualitative results.

First, students assessed the online environment of EGIFT. The scores of all groups but one were above 75% (*Table 1*), which indicates that the students were satisfied with the online environment. They reported that the program was user-friendly and simple, well-structured (e.g., *Very well structured and meaningfully arranged in a sequence that is easy to follow.*), well-designed, concise, and that the videos presented an added value. They also found some areas for improvement, mainly the video quality and technical issues, and the lack of interactive contents and dynamics in videos (e.g., *Videos could be more dynamic, as this would make it easier to follow.*).

Table 1: Students' assessments of the EGIFT program in general, its online environment, content quality, and usefulness

Strand	Unit	Online Environment (%)		Content Quality (%)		Usefulness (%)		Overall Assessment (%)	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1: Identification	Unit 1&2	83.8	11.1	77.8	13.8	83.3	11.5	80.3	11.0
	Unit 3&4	87.5	11.9	79.4	9.1	81.7	10.0	81.9	8.8
2: Lived experience	Unit 1&2	75.0	20.0	79.3	10.5	62.2	31.5	75.0	16.3
	Unit 3&4	76.7	18.9	85.2	8.4	75.6	16.8	81.3	12.1
3: Social and emotional wellbeing	Unit 1&2	83.3	20.8	82.2	11.1	75.6	3.8	81.3	11.1
	Unit 3&4	81.7	15.3	79.3	6.8	82.2	16.8	80.4	7.3
4: Teaching strategies	Unit 1&2	77.5	3.5	86.7	0.0	93.3	9.4	85.6	2.7
	Unit 3&4	58.8	4.8	60.0	12.4	65.0	22.0	60.6	11.8
5: Program Design Principles	Unit 1&2	82.5	2.9	83.3	8.2	78.3	8.4	82.2	4.8
	Unit 3&4	90.0	8.7	73.3	11.8	64.4	20.4	75.8	12.5

The second area the students assessed was content quality. Nine out of ten groups assessed it as adequate, with mean scores above 73% (*Table 1*). The qualitative analysis showed students reported that the contents were of high quality and meaningful, including many suggestions and examples for teaching talented students (e.g., *The contents are meaningful and useful for teachers and other pedagogical staff. Namely, there are many suggestions and examples that teachers can use when teaching gifted students.*). The students reported that they gained new knowledge, mainly about teaching gifted students, giftedness in general, identification, and the characteristics of gifted students and twice-exceptional students. The two main weaknesses the students

exposed were foreign language (difficulties in translating and understanding certain terms) and missing practices of educating gifted students from their home country.

On a 5-point scale with 1 being very easy and 5 being very hard, the students assessed the difficulty of the questions at the end of each unit. The most frequent answer was 3, which means the questions were not too easy and not too hard. The average scores of all groups regarding the difficulty of the questions are presented in *Figure 3*. The students reported that the questions were good for testing knowledge, getting feedback, and motivating. They also highlighted the evenly covered contents in the questions as positive. Their suggestions for improvement were in using more higher-level questions testing comprehensive understanding of the contents, using the same terms in questions as in the text (e.g., *The questions were difficult to me, especially because the terms used in text and quiz did not match, which is confusing if you are not an English speaker.*), and similar difficulty of the questions in different units.
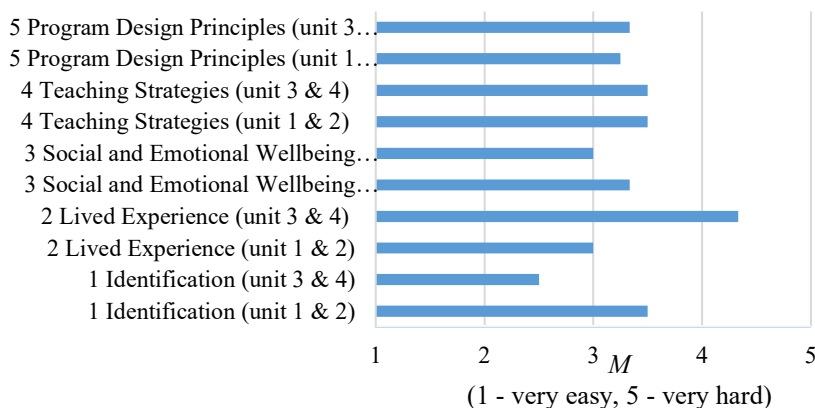
Figure 3: Average difficulty of the questions assessed by the ten groups of students
(1 – very easy, 5 – very hard)
Source: own.

The third area of the EGIFT program evaluation was its usefulness. Seven out of ten groups found it useful, with mean scores above 76% (*Table 1*). The mean scores of three groups were lower but above 62%. The qualitative analysis showed that the students reported the contents were useful for teaching and they could use the knowledge in a pedagogical context when working with gifted students (e.g., *Important topics related to identification and work with the gifted are covered. The program encourages teachers who encounter it to delve into their own concepts and practices while reading*

contents about gifted students. We find this method very appropriate, as it can further deepen our knowledge and thus contribute to better practice of working with gifted students.), to raise awareness and educate other pedagogical workers, to identify gifted students (e.g., *We found many helpful tips on how to create a stimulating learning environment in which gifted students are accepted. We believe that such knowledge is extremely important for future teachers because it will be easier to identify such talented students and encourage them.*), and to evaluate and plan. The students also reported higher self-confidence in relation to working with gifted students.

The authors combined the results of the three areas of evaluation into a general evaluation score (overall assessment). The results are shown in the last column of *Table 1* and in *Figure 4*. The average scores of nine out of the ten groups were above 75%, indicating high overall quality. One group had a lower overall score with a mean of 61%. This group of students rated all aspects of the EGIFT program lower than the other nine groups. This could mean that these specific units were of lower quality or that this group of students had specific individual characteristics, such as rigour. Interpretation must be done cautiously, since the groups were small and consisted of two to five students per group.
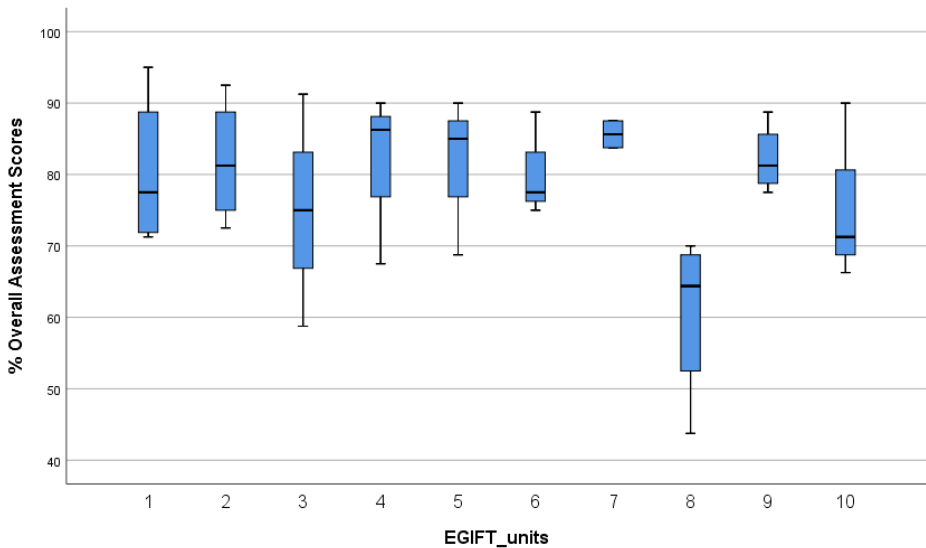
Figure 4: Boxplot of the overall assessment scores of the ten groups of students
Source: own.

4   Discussion

This study documented and evaluated the implementation of the EGIFT Online educational resource in the framework of the *Gifted students in school* elective course for 34 undergraduate students at the Faculty of Education at the University of Ljubljana. The students were generally satisfied with EGIFT in terms of the basic evaluation elements (Kirkpatrick, 1994; 1996), such as quality of content, usefulness, and online learning environment. Since the program covers the most important topics in gifted education and because the students' experiences with it were positive, one can conclude that EGIFT is suitable for educating pre-service teachers about gifted students and incorporating the program into remote teaching with university students. This is important because sufficient knowledge and informed beliefs contribute to appropriate educational provisions for gifted students and prevent the creation of myths about gifted students (e.g., Delcourt, 1993; Hébert, 1993; Lubinski et al., 2001). Sękowski and Łubianka (2015) state that high demands are placed on teachers of gifted students. They are in the role of both master and mentor, which means that they must not only recognize the instructional and educational needs of their students and implement programs to support their potential, but also have a deep knowledge of their teaching subject, giftedness, and gifted education. Westberg and Daost's (2003) findings also suggest that university training is most likely to influence teacher practice, compared to other forms of professional training. For this reason, high-quality initial teacher education is so important, and prospective teachers should receive high-quality gifted education. The EGIFT program proved to be a good addition to the elective course.

Suggestions for expanding or improving the existing program were derived from the qualitative analyses. The most common shortcoming reported by the students was the use of a foreign (English) language and examples and best practices from other countries and contexts. Since the students also attended the elective course lectures and seminar classes, these topics were addressed there, but this remains an area for improvement in the EGIFT program. Evidence-based learning that is also culturally relevant contributes the most to knowledge about teaching gifted students (Plunkett & Kronborg, 2021; VanTassel-Baska & Johnsen, 2007). The second common suggestion from the students was more interactivity. Although they highlighted interactivity as one of the strengths of the program, they also made some suggestions on how to improve it (e.g., more interactive and dynamic videos, highlighted text).

The third suggestion was related to examples and best practices. The students praised the use of several examples and best practices in EGIFT but pointed out that they would like to see even more of them, since they bring them closer to the application of knowledge in practice.

The authors would also like to highlight some of the features of EGIFT that make the program particularly prominent. In Europe and Slovenia, courses on gifted education that are holistic and broad, evidence-based, and free of charge, are rare. EGIFT covers the important topics in gifted education that are research-based and practice-based. It is also free of charge and accessible to anyone with access to a computer, which is important. The results of Burkman's (2012) study on novice teachers' challenges and preferences for professional development also show us why the EGIFT program is especially useful and suitable for pre-service and in-service teachers. The participants ranked teaching gifted students in the top 25% when asked about challenges in the classroom. The most meaningful professional development for them was interactive and cooperative learning.

This study provided insights into the value of implementing the EGIFT program in an elective course about gifted education. EGIFT proved to be a helpful resource for educating preservice teachers about gifted students. However, we must keep in mind that the conclusions of this study are limited to the relatively small sample of 34 university students and 33 survey respondents, who used the EGIFT program for one semester. EGIFT was also not their only source of knowledge, rather it was combined with lectures and seminar classes. The results might be different in a different setting or with a different target group, which would be meaningful to monitor with new cohorts of students. However, it can be concluded that the EGIFT program enhanced the quality of learning and teaching and formed a sound, evidence-based approach to use and even enhance in the future.

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IN BETWEEN SPORTS AND STUDY: GETTING TO KNOW STUDENT ATHLETES BETTER

JANJA TEKAVC

University of Maribor, Faculty of Education, Maribor, Slovenia
janja.tekavc@um.si

Abstract The purpose of this study was to explore adolescent athletes' perceptions of demands, challenges, and adversities they face in their combination of sports and study. The holistic athletic career model (Wylleman, Reints, De Knop, 2013) was used as a theoretical framework. 22 talented adolescent male and female athletes participated in semi-structured interviews to discuss their perceived demands and challenges in their combination of sport and study. Participants expressed their strong commitment to both, sports and education. In comparison with male athletes, female adolescent athletes expressed a greater level of dissatisfaction with their athletic work, strong educational motivation together with highly perceived school-induced stress. Peers (schoolmates, teammates, non-athletic friends) were identified as very influential for young athletes, serving as a source of both, positive as well as negative experiences. Study findings support taking a holistic approach when educating and working with adolescent athletes.

1   Introduction

Over the past decades, research about athletic career development has substantially increased and its focus has been shifted from singular athletic career transitions (e.g., sports career termination) into a holistic, lifespan, multi-level approach (Stambulova et al., 2009). Greater knowledge about athletes' career development resulted in several proposed models of athletic career (e.g., Bloom, 1985; Stambulova, 1994; Stambulova, 2003; Stambulova, 2000; Wylleman & Lavallee, 2004). These models define the athletic career as a succession of stages, which represent a general pattern in the careers of athletes from different types of sports, nationalities, as well as genders. One of the most comprehensive models describing athletic career development is the Holistic athletic career model (Wylleman, et. al. 2013). Following the 'whole-person' and 'whole-career' approach, the model describes characteristics and types of transitions athletes may deal with throughout their athletic career development on different levels of their life, i.e. athletic, psychological, psychosocial, academic/vocational, and financial levels. Career development is described as multifaceted; therefore the athlete is viewed as a person who is engaged not only in sport but also in other life domains (e.g., studies, family, peer relationships). In this essence, athletic career transitions are always related to developmental challenges and transitions in other spheres of athletes' lives (Wylleman & Lavallee, 2004). The holistic athletic career model (Wylleman et al., 2013) divides athletic career into stages that necessarily follow one another: initiation stage, when the athlete is introduced to sports; development stage, when the level of athletic engagement intensifies; mastery stage, in which the athlete reaches the highest level of his/her performance; and discontinuation stage, which reflects the athlete's process of retirement from competitive sport.

During the development stage of athletic development, which usually starts around the age of 15, the athletes narrow their interest in one or two sports and intensify their athletic work by focusing increasingly on the improvement of skills and techniques (Wylleman & Lavallee, 2004). In this period, some of the athletes are recognized as being talented, and the importance of competitions increases. At the academic level, athletes make the transition from primary to secondary school, which is connected to several changes (e.g., in contact with friends, changes in peer social networks, changes in the combination of school and sport, reduction in after-school activities) (Reints, 2011; Salmela, 1994; Wylleman & Lavallee, 2004, Wylleman et al.,

2013). In this stage of an athletic career, athletes are in their adolescence, which begins with biological transitions (e.g., puberty) and ends with cultural and sociological transitions (e.g., enactment of adult roles in society) (Lerner & Steinberg, 2004). In the last decade, however, a new term 'emerging adulthood' (Arnett, 2000) has been used to conceptualize the lives of people from their late teens to their mid-to-late 20s in industrialized societies. This developmental period is a phase of the life span between adolescence and full-fledged adulthood. Adolescence brings significant changes in social, emotional, and cognitive functioning (Arnett, 2004); and represents a critical period of an individual's growth and development in which he/she can acquire the skills, attitudes, and behaviors important for later adulthood (Lerner & Steinberg, 2004). It represents a phase of identity exploration and gaining autonomy, and is accompanied by significant changes in athletes' social interactions (Reints, 2011; Wylleman & Lavallee, 2004). In adolescence, individuals form their self-identity, as well as gain some independence from parents, and shift their social focus to peer groups and adults outside the family (Eccles, 1999; Erikson, 1968).

A particular area of concern in adolescent athletic career development is youth sport dropout (Fraser-Thomas et al., 2008a). Dropping out of a sport refers to the premature termination of an athletic career before the athlete reaches his/her peak performance level in the respective sport (Alferman & Stambulova, 2007). It appears that adolescent athletes are an age group of athletes, particularly at risk for dropping out of the sport for two major groups of reasons: (1) in the development stage, demands of school and their particular sport are increasing; which may lead to the decision to prioritize school education and quit sport; (2) at the end of puberty, performance slumps may occur because there are no longer performance gains due to biological development (Baron-Thiene & Alfermann, 2015). In their prospective study of talented adolescent German athletes, Baron-Thiene and Alfermann (2015) found that almost 30% of adolescent athletes prematurely terminated their sports career within the course of one year. Physical complaints (injuries, higher level of exhaustion, loss of fitness) appeared to be an important reason for dropping out of sport; while higher win motivation and better self-optimization skills supported and enhanced career persistence. Fraser-Thomas et al. (2008b) found that adolescent athletes who dropped out of competitive sports reported having no opportunities for other activities, received limited one-on-one coaching, perceived a lack of athletic peers, rivalries with their siblings, and pressure for sport from their parents. On the other hand, engaged adolescent athletes reported opportunities for other activities,

received one-on-one coaching, had good relationships with their parents, and perceived the positive influence of their friends and siblings. In another study based on findings about dropout and engaged adolescent athletes, Fraser-Thomas and Côté (2009) found that sports involvement can facilitate many positive developmental experiences for young athletes, i.e., related to challenge, meaningful adult and peer relationships, a sense of community, and other life experiences. However, according to dropout adolescent athletes, athletic engagement can also cause some negative developmental experiences, i.e., related to poor coach relationships, negative peer influences, parent pressure, and the challenging psychological environment of competitive sport. Weiss and Ferrer-Caja (2002) found that motivational outcomes linked with higher adolescent athletes' commitment to the sport were: enjoyment of the sport, positive self-perceptions, and an intrinsic motivational orientation. Unlike that, lower commitment to the sport was connected to perceived stress, lower self-perceptions, and lower motivation. According to Weiss (2000), three major motives for adolescents' continuation in sport are: (1) developing and demonstrating physical competence (e.g., athletic skills, physical fitness, and physical appearance); (2) gaining social acceptance and support (friendships, peer group acceptance, and approval and encouragement from significant others); and (3) enjoyment of the sport.

Gender differences can be noticed in adolescent participation in sport and physical activities, with adolescent girls participating in organized sport at a lower rate than boys (e.g., Slater & Tiggemann, 2011). Female adolescent athletes also tend to drop out of sport more often than male adolescent athletes, and at earlier ages (Kirshnit, Keathley, Himelein, & Srigley, 1989). According to Slater and Tiggemann (2011), there are several potential reasons for the observed gender differences in adolescent sport participation, including differences in the availability of sporting options and gender role expectations. Girls stressed that although more sporting opportunities are available for girls than before, general society still reinforces the philosophy that sport and physical activities are masculine pursuits. In a study about reasons for adolescent girls withdrawing from sport (Slater & Tiggemann, 2011), several gender-specific reasons for girls' declining rates of participation in sport and physical activity were identified, i.e. losing interest, lack of competence, and insufficient time. The authors explained that during adolescence the importance of femininity and feminine behavior is heightened for girls, and playing sport begins to appear incompatible with femininity. Gender role expectations seem to create an additional

barrier for girls to participate in sport, since adolescent girls were found to see sport engagement as not being „cool" or feminine (Choi, 2000). In a study about the career development of female soccer players (Gledhill & Harwood, 2015), female athletes expressed having a role conflict between their role as a female soccer player and their role as an adolescent women. Appearance and body image concerns appear as relevant topics for adolescent athletes. Girls were found to express concerns about their appearance and image while playing a sport, as well as concerns over how their bodies might appear in particular sporting uniforms (Slater & Tiggemann, 2010). Differences appear also in adolescent athletes' perceptions of an ideal body: while adolescent boys expressed a general desire to be strong and muscular, girl athletes believed that the ideal female body, in contrast, should not have much muscle, and expressed a fear of becoming too muscly (Hargreaves & Tiggemann, 2006; Krane et al., 2004, Slater & Tiggemann, 2010; Tekavc & Wylleman, 2015). Several adversities were found as being more prevalent among adolescent female athletes in comparison to their male counterparts, e.g. higher levels of exhaustion and physical discomfort (Baron-Thiene & Alfermann, 2015), greater risk for injuries (e.g., Clement et al., 2012; Granito, 2002), and higher prevalence of eating disorders (Bratland-Sanda & Sundgot-Borgen, 2013).

A few studies stressed the importance of psychosocial factors, such as support from parents, coaches, teachers, team-mates, peers, and siblings on the development of adolescent female athletes (e.g., Gledhill & Harwood, 2014; 2015; Tekavc et al., 2014). To facilitate optimal talent development for young female athletes, multiple social agents need to optimally interact. Research suggests that social interaction with peers (both, athletic and non-athletic) seems to be especially important for adolescent female athletes; for example, in Slater and Tiggermann's study (2010), girls expressed the belief that socializing and having free time was more important for girls than for boys and thus may impact on girl's decision to play sport (Slater & Tiggermann, 2010).

Although models of athletic career development do not differ between female and male athletes and predict a similar career path for both, research suggests that female and male athletes will typically have qualitatively different developmental experiences (e.g., Gill, 2001). In this essence, the purpose of the current study was to investigate the impact of gender on adolescent athletes' perceptions of their athletic careers. Our goal was to compare the perceived demands, challenges, and

adversities male and female adolescent athletes in the development stage of athletic career face in different spheres of their life.

2   Method

2.1   Design

In order to investigate the multilevel challenges and difficulties that young athletes face in the development stage of their athletic career, qualitative data gathering with the use of semi-structured interviews was selected. This enabled a full exploration and a better understanding of participants' perceptions and experiences of adversities (Kvale & Birkmann, 2008). The holistic athletic career model (Wylleman et al., 2013) was used as a theoretical framework for this study, guiding the formulation of interview questions and data interpretation.

2.2   Participants

22 junior level talented young athletes (11 males, 11 females) were selected based on recognition as being talented by their sports federations. At the time of the interview, the participants were between 15 and 17 years of age (M = 16.5 years, SD = 0.51). All of the participants were enrolled in a selected sports department at one of the high schools in Slovenia, which offers dual career programs for student athletes. In comparison with regular secondary school programs in Slovenia, such dual career programs for student athletes include a higher level of physical activity in terms of quantity and quality; certain academic modifications, e.g. e-learning, an extension of education when needed; and coordination between academic and athletic activities.

2.3   Interview guide

In accordance with the holistic perspective (Wylleman et al., 2013), the interview guide was developed to allow the participants to describe the adversities they face as athletes from a whole-person perspective. The interview guide was divided into six sections. The first section introduced the purpose of the study to the participants, their right to withdraw from the study at any time, and the precautions taken about the treatment of data, participant anonymity, and confidentiality. In the second section of the interview guide, the participants were asked to provide information

about their age, type of sport, years in the sport, level achieved, school program they were involved in, and categorization status. Sections three to six represented the main part of the interview and asked questions about the challenges and difficulties the athletes were currently facing at the specific level of their development (i.e., the athletic, psychological, psychosocial, and academic levels).

2.4   Procedure and data analysis

In the beginning process of data gathering, we turned to Slovene Sports Association (SSA) asking them to cooperate with the participants' gathering. SSA sent email invitations to all junior-level athletes ages ranging from 15 to 17 years, involved in secondary level education sports departments, who obtained a categorization status A or B; inviting them to take part in a study about athletic career development. For those who were willing to participate, the first author scheduled with them a date for an interview arranged at a mutually convenient time and location. In total, 22 semi-structured face-to-face interviews took place and were conducted by the first author. Although the interviews were semi-structured, the order of sections and questions varied in accordance with the course of the conversation. Also, probes and prompts were used in addition to the interview guide questions to clarify and elaborate on specific points given by the athletes. All interviews were digitally recorded with participants' permission and lasted between 41 and 72 minutes. They were transcribed verbatim, yielding 264 pages of single-line spaced text.

Framework analysis (Spencer et al., 2014) was used to analyze the data. To ensure familiarization with the text, the transcripts were read several times by the first author and initial comments and relevant themes were written. Then, each theme was placed into one of the five levels of the Holistic athletic career model (Wylleman et al., 2013); i.e. athletic level, psychological level, psychosocial level, academic/vocational level, and financial level. Afterward, data contained within each theme was reviewed again to ensure that they have been arranged correctly. The analysis was finalized by a table of themes for each level of athletic career development. Relevant quotations representing good examples for each theme in the study were selected, with some of them later used in the presentation of results.

3   Results

3.1   Athletic level

The athletes pointed to several inadequacies which they perceived in their athletic work. Both, male and female athletes complained about too high athletic demands they need to face, e.g. having too intensive training, and/or too much training per week. Only females complained about the training regime; describing it as too monotonous, not individual enough, and/or not frequent enough to enable them a progression in their athletic performance. Some of the athletes were dissatisfied with the training facilities or daily travels they needed to do to get to their training center. Almost half of the athletes (more females) mentioned missing additional professional support with regards to their athletic career; they mainly identified a physiotherapist, nutritionist, dual career support provider, and an additional coach as such much-needed additional professionals.

Young athletes reported taking insufficient rest; and as a consequence, frequently facing both, physical and mental exhaustion. They complained about not having enough time to rest, facing a lack of sleep, and being frequently tired, especially during stressful periods in school or after important competitions. Female athletes more often declared these problems of insufficient rest and exhaustion. One of them illustrated her frequent exhaustion with the following quote:

Often, I feel exhausted; especially when I have a lot to study for school and have consequently less time to rest. With having two trainings daily, I am tired from both – from school and sport. When in class, it happens to me that I close my eyes and let myself be carried away for a few moments… (Female judoka)

More than three-quarters of the participants suffered from at least one sports injury which disabled them from normal athletic work for a certain period of time. Two female athletes experienced burnout in their recent athletic careers. One of them described this episode with the following quote:

I was tired all the time. I felt like I could sleep for 12 or more hours and not wake up fully rested. My concentration in school decreased, and I had trouble following the lectures. Also, I was sick all the time, like twice per month or so… (Female swimmer)

Young athletes noticed physical changes in the maturation process they were facing and their impacts on their athletic performance. One of the male athletes complained about his later physical development in comparison with other athletes of the same age, which made him less competitive against his mature opponents. Unlike males, female athletes frequently expressed their dissatisfaction with increased body weight and their body composition changes (e.g., increase of fat mass, increased hip circumference). Besides being dissatisfied with these physical changes, female athletes also reported how these changes had negatively impacted their athletic career performance by causing a different weight distribution, coordination difficulties, decrease in flexibility, and loss of explosiveness; all of this resulted in a temporary decrease or stagnation of their athletic results. Female athletes expressed their regrets of not being informed and/or not being prepared in advance about the negative impacts of these normal developmental changes. As illustrated:

While boys are making constant progress as they gain weight, we girls don't. I stagnate on my results for almost a year now. It is quite difficult for me; it frustrates me that I don't make any progress despite all the training and exhaustion I go through. (Female swimmer)

When talking about nutrition (i.e., meal distribution and food selection), three female athletes reported having trouble with keeping (what they understood as) a healthy diet. Athletes who were involved in a type of sport where a special focus is placed on athletes' weight (i.e., judo, taekwondo), reported being frequently under pressure to keep their competitive weight. When trying to reach their target competitive weight, they were forced into strict dieting behavior, which resulted in being hungry, thirsty, and feeling without energy. A female taekwondo athlete illustrated this with the following quote:

You come on a training feeling tired, hungry, thirsty… Your legs feel sore, you are grumpy and absent-minded. In such moments, you would rather skip the training; however, you know that without practice you won't be able to get rid of that last kilogram you still need to lose before the competition.

3.2   Psychological level

Adolescent athletes spoke about the stress they perceived in their lives and identified several sources of stress, connected with their athletic engagement, school obligations, and the difficult combination of both domains. Athletic sources of stress were most often represented by fear of poor performance, and a pressure to succeed coming from different agents, i.e. themselves, their coach, or other people (i.e., parents, peers). Female athletes more often reported being under pressure because of their coach's high expectations of them. Also, they expressed being concerned by the possibility of disappointing others (i.e., parents, coach) with their poor athletic performance; or worrying about what other people, especially their peers, would think about them as athletes, as suggested by the following quote:

For me, the most difficult part of being an athlete is dealing with the possibility of disappointing others with my bad performance, especially my mom and dad. (Female golf player)

For the majority of athletes in this sample, school represented their major source of stress. Gender differences however appeared, with female athletes more often expressing school-connected stress than males, e.g. worrying about school grades.

Female athletes more often than male athletes talked about facing different psychological difficulties. They reported: (1) concentration problems, e.g. struggling to stay focused in sport and/or school, being easily distracted, and/or noticing how daily hassles often negatively influence their athletic performance; (2) motivation difficulties, e.g. fluctuations in their athletic motivation; (3) mood disturbances, e.g. sudden mood changes, emotional instability, impacts of their daily mood on their athletic performance. One of the female athletes illustrated her mood disturbances with the following quote:

Often, I wake up feeling good. But then one little thing would happen and my mood would change completely. That frustrates me because I feel like I cannot control my emotions. (Female track and field athlete)

Two female athletes and one male athlete talked about having extremely high expectations of themselves and their performance, which often resulted in low self-satisfaction or too much self-criticism. While no male mentioned difficulties with

assertiveness, five female athletes talked about lacking assertive behavior and self-confidence in different situations, e.g. in sports, school, or social situations. In concordance with more frequent complaints of psychological disturbances, female athletes more often expressed their wish to work with a sports psychologist.

Only female athletes addressed being dissatisfied with their body appearance. Most of them were dissatisfied with their body sizes and body mass. Two female athletes reported being on a diet at the time of the interview and expressed facing difficulties with their attempts to eat less than normal. They both believed that the pressure for women to keep a low body mass has increased in the past years, both in general society as well as in sports. Some of the girls were frustrated with their athletic figures and would prefer to look 'less muscular and more feminine, especially when socializing with their non-athletic peers. They reported receiving social remarks about their athletic appearance, especially for 'being very muscular' or being 'too big for a female athlete, e.g. "*I receive comments from my schoolmates on behalf of my wide shoulders – some of them say I am turning into man,*" (Female swimmer). While some of the girls didn't put too much attention to such comments, the others believed these remarks negatively affect them.

3.3   Psychosocial level

All athletes placed their parents as the most important people for their current careers. Having difficulties in their relationship with parents was more often mentioned by female athletes, who reported having frequent conflicts with one or both parents (mostly over athletes' obligations, e.g. schoolwork, and house duties); and/or receiving insufficient athletic career support from their parents. They complained that their parents positioned school much higher than sport, or lacked the understanding of their daughter's athletic career, dual career demands, or sport in general as illustrated in the following passage:

I think my father does not believe in the reality of my dreams to become a professional golf player. I mean, it is not that he does not support my athletic work, he does; but I think he sees it more as a hobby. On the other hand, he supports my schoolwork and stresses the importance of having good grades. (Female golf player)

Five female athletes and one male athlete perceived their parents as being too involved in their athletic careers by obtaining high expectations concerning their athletic success or putting them under too much pressure to succeed. Some of these athletes reported that their parents were also professionally involved in their child's sports club, e.g. working as a coach or a club administrator.

Ten participants complained about several negative aspects of their coach's behavior, e.g. giving only negative feedback, shouting, discouraging the athletes, not supporting the athletes or not supporting their dual career investments; having insufficient authority, treating the athletes unequally, and/or not keeping his/her promises. Eight athletes reported their coach was acting unprofessionally by being absent a lot, too passive in his work, not giving them a satisfying amount of feedback about their performance, or forcing them into extreme weight loss.

In their relationship with friends, young athletes' most often identified problem was the lack of time they had for their friends and peers outside sports with female athletes more often complaining over this deficit:

My friends all meet and hang out on Friday and Saturday nights, but I cannot join them although I would like to. I could go out with them on Friday after my training, but I have tournaments on Saturdays, so I can't go, because I need to rest in order to prepare for the tournament. (Female volleyball player)

Two female athletes noted how all of their friends were from sports and how their social network was mainly formed around the sport. They missed having friends from outside of sports and explained that because they spend so much time on their athletic career, they don't have enough opportunities to develop friendly relationships with peers outside of sports. Three girls expressed feeling isolated within their school class; they believed that their frequent absences in school due to their athletic career obligations disabled them from connecting well with other classmates. Female athletes more often than males missed their friends' athletic support while performing and competing, and would prefer a higher level of understanding for their athletic obligations coming from their friends.

With regard to their team relationships, young athletes in this study spoke about conflicts and low cohesion within the team. Some of them perceived a gap existing between old and new players in the team, with older players not accepting the newcomers. Female athletes more often perceived difficulties in their team relationships and talked about tensions with other athletes, girls' gossip, and resentments. These interpersonal conflicts were mainly connected with the team's poor performance, and/or individual team players' negative behavior or lack of motivation. Female team sport athletes believed that conflicts occur more among female athletes than among male athletes. In addition, they believed that conflicts between the players have a greater negative impact on the performance of girls' teams than on boys' teams. They believed that women athletes are more occupied and affected by their interpersonal issues; which illustrates the following quote:

In our team, you cannot say anything to any of our players, because they immediately get upset and affected. If this happens, these things influence the game. This is a team sport, but it is very difficult to play with someone for whom you have negative feelings. (Female handball player)

Considering their intimate relationships; with an exception of one male athlete, only female athletes talked about facing difficulties in this field. Four of them complained that because of their dual career obligations they don't have time for an intimate relationship; and also, how their time constraints of being an athlete and a student withdraw them from possibilities to meet other people. One of them illustrated this with the following quote:

I don't have time for a boyfriend. I am always occupied either with my sport or my school activities. I mean, I could have a boyfriend, but I am either in school, or sleeping/ training/ studying. So there are no real chances to meet somebody interesting. (Female handball player)

While the majority of female athletes didn't perceive the desire to have a boyfriend, four female athletes expressed their wish for an intimate relationship with somebody; preferably also an athlete who would understand their athletic career obligations.

3.4   Academic level

Over a third of participants in this study complained about having too much academic work and obligations. Three athletes were dissatisfied with the secondary education program for student athletes; they perceived that in comparison with their non-athletic peers they receive less academic knowledge. Despite receiving some support for student athletes, six participants estimated their school's organizational support as inadequate and complained about teachers' lack of understanding of student athletes. Some athletes perceived that student athletes are often stereotypically labeled by their non-athletic peers and/or teachers as being less knowledgeable than 'normal' students or being less motivated for school.

The athletes expressed facing challenges when trying to combine their athletic and academic careers. One of the major disadvantages of having a dual career was a constant deficit of time; with more female than male athletes complaining about not having enough time for studying. Because their dual career required a highly energetic input, some athletes complained about the limited amount of energy they were left with. Ten athletes perceived their school and sport as being in a reciprocal relationship; e.g. a bad grade in school negatively influenced their athletic performance and vice versa. More female athletes reported that school activities were taking away their time and energy for sports and that they were sometimes forced to choose between their schoolwork and athletic obligations. One of the females stressed the impact of her parents in this decision to sacrifice training to study with the following citation:

If I have too much work for school, I sacrifice my sport and don't go to practice. My parents told me that 'no school means no training', so I need to take care of my schoolwork. Recently I received a bad grade in one of the subjects in school. As a consequence, I needed to stay at home in the afternoon to study instead of going to the gym. The next day I improved the bad grade, so everything went back to normal again. (Female judoka)

When talking about their academic aspirations and motivation, only female athletes reported having high academic goals. School grades were very important to them and they had high expectations for themselves concerning their academic success. Three female athletes expressed being dissatisfied with their current school success. One male and three female athletes were concerned about their future careers; i.e.

they worried that the sports department does not give them sufficient knowledge, or that their desired subject of study in the future will not allow them to combine studying and sports. Based on the latter, one of the female athletes already decided to continue her education in the USA after finishing high school which would (according to her beliefs) allow her an easier combination of both careers.

4　　Discussion

In the development stage, the athletes' focus narrows to one or two sports, and the amount of training as well as the importance of competitions increases (Bloom, 1985; Reints, 2011; Wylleman & Lavallee, 2004). Adolescent athletes in our study supported this specialization and intensification of their athletic work. However, 27% of them perceived their athletic demands were too intense. Female athletes more often complained about their training regime and/or insufficient rest, as well as experienced significant physical and mental exhaustion, which supported the findings of Baron-Thiene and Alferman (2015) who reported that female student athletes more often experience physical exhaustion and express more physical complaints than males which might also be a reason why female adolescent athletes tend to drop out of competitive sport more likely than male athletes. According to Kristiansen et al. (2012) coaches tend to plan training regimes for female athletes based on male stamina. This might be one of the reasons why female athletes in this study more often complained about experiencing physical exhaustion than males did; as well as a possible partial explanation of why girl athletes perceived a greater amount of dissatisfaction with their coach's work and/or believed that their coach does not understand female athletes.

According to Gledhill and Harwood (2014; 2015), multiple agents (i.e., parents, teachers, peers, team-mates, siblings) need to optimally interact to ensure that an optimal talented development and learning environment is created for young athletes. Adolescent athletes in this study identified their parents, coach, peers, teammates, and siblings as being important for their current position as an athlete; however, they also raised facing difficulties in relationships with all these important others. In comparison with boys, girl athletes more often reported having conflicts with their parents, and/or receiving non-optimal parental support for their athletic engagement; whether as insufficient parental involvement and/or interest in their athletic career; or in contrast, by parents being too much involved in their sport.

Female athletes' parents were usually recognized as being more supportive of their daughter's academic careers rather than athletic careers. According to Hellstedt (1987), parental involvement in their child's athletic career may range from under-involvement through moderate involvement to over-involvement. Whereas moderate involvement seems to support and facilitate young athletes' careers; athletes with disinterested parents are more likely to drop out of the sport, and on the other hand, athletes with overinvolved parents may perceive high levels of parental pressure.

In the athlete-coach relationship, only female athletes complained about the coach's negative behavior. Girl athletes in this study often perceived their coach as unable to see them as a whole person with other important domains (e.g., social life, school) in life besides sport. This supports Gledhill and Harwood's (2015) study where female athletes' coaches were viewed as less competent or confident when it came to the psychosocial development of their players; as well as stresses the notion that coaches' knowledge about female adolescent needs is an important strategy for increasing retention among female athletes (Keathley et al., 2013). Since only two female athletes in this study had a female coach and the other female and male athletes were coached by a male coach, this mixed gender diad (female athlete – male coach) could explain why female athletes perceived greater difficulties in their relationship with their coach, especially in terms of communication and understanding. Research (e.g., Rhodes et al., 2008) shows that in adult-youth mentoring relationships males and females tend to respond differently; with men favouring instrumental support and women placing relatively greater value on interpersonal support and intimacy. These findings together with the current study suggest that coaches' understanding of their female athletes' psychosocial development is crucial for an optimal athlete-coach relationship and female athletes' satisfaction in sport. In understanding young women's development female athletes' coaches must enable their athletes enough opportunities for social interaction with their friends, as well as more 'social' sporting opportunities that are not regarded as 'competitive' by athletes (Slater & Tiggeman, 2010). According to girl athletes in our study, perceived insufficiency in social interactions with their peers (e.g., facing lack of time for friends and intimate relationships, not having enough friends outside sport, and/or feeling isolated from their classmates) was reported as one of the greatest disadvantages of having an athletic career. According to Slater and Tiggemann (2010), socializing and having free time seem to be more important for

girls than for boys and thus may impact on girl's decision to play sports. Female athletes in this study put a great emphasis on their relationship with friends and teammates, especially in terms of getting emotional support and understanding, which supports the observations of Rudolf (2002) who found that the form and function of relationships with important others vary across gender and across development. Especially in female peer relationships and friendships, higher levels of self-disclosure, intimacy, and emotional support were found, while male relationships and friendships mainly base on companionship and joint activity. Adolescent female athletes in this study complained also about insufficient athletic support from their non-athletic peers, which is similar to Gledhill and Harwood's (2015) study where female athletes felt they lacked a peer social support network that would help them to lead a disciplined lifestyle. Since the impact of peers on an individual is particularly strong during adolescence, it is especially valuable when (female) athletes are surrounded by a group of peers with healthy behaviors who understand and support their athletic endeavors. A group of teammates or other athletes who lead a similar way of life can represent an important source of athletic support and social interactions for (female) athletes. As previously found by Reints (2011), having friends in sports among teammates or other athletes appeared as a strong source of motivation for girl athletes. On the other hand, relationships with other athletes or teammates appeared also as a source of conflict and perceived stress among girl athletes, especially in team sports. Unlike males, female athletes in our study often expressed additional concerns related to relationships with other teammates (e.g., frequent gossip, jealousy, interpersonal tensions, and conflicts), supporting some previous findings which say that female athletes' perceptions of playing in the team, conflicts are a frequent topic and mainly refer to athletes' performance and relationships (e.g., Holt et al., 2012; Slater & Tiggemann, 2010). Rudolf (2002) explains these frequent disruptions in young females' social networks with their characteristics of higher levels of self-disclosure and intimacy. Because of girls' reliance on peers for emotional support, conflicts and changes in interpersonal roles are likely to create higher levels of stress among females than males. For coaches and sport psychology practitioners it is therefore very important to understand these issues, to stimulate a positive group atmosphere in female athletes' teams, and to promote optimal and rewarding interpersonal relationships between the players.

It seems that in comparison with male athletes, female adolescent athletes put more attention to their school work, i.e. talking about their school obligations, future educational plans, and concerns connected to these. At the same time, females in comparison with male athletes more often reported experiencing school-related stress. In combining athletic career with school work, they felt a strong reciprocal influence of both domains, both positive (e.g., success in school stimulated success in sport and vice versa) as well as negative (e.g., decreased amount of time left for studying due to athletic obligations). They possessed high academic motivation and aspirations for the future; however, they were worried whether they will be able to combine both domains and also whether their future athletic career would enable their financial security. Participants' dual career perceptions support the notion that adolescents construct their dual careers in different ways (Ryba, Stambulova, Selänne, Aunola, & Nurmi, 2017). We could say that female adolescent athletes' academic identity is strong and that girls seem to invest an equal amount of energy into their academic career as well as athletic career. On the other hand, it seems that male athletes tend to identify more strongly with the athletic role (Brewer & Petitpas, 2017). This is an important notion for all those working with adolescent female athletes, whether as parents, teachers, or coaches; in that supporting female athletes in their dual career investments and providing an optimal setting for females' dual career development is necessary in order to retain them in competitive sport and guarantee them a prosperous future.

There are several limitations in this study, as well as strong points and practical implications for sport psychologists, dual career providers, educational institutions, coaches, and sport organizations. First, this qualitative study offered a high richness of data, both in quality and quantity by taking a holistic approach (Wylleman & Lavallee, 2004). However, the richness of the data is also one of the weaknesses of this study, since the quantity and diversity of the emerged topics prevented us from taking a more detailed inspection and discussion. Future research should therefore try to consider taking a closer examination of some of the themes which emerged in the article in order to gain a better insight into these specific demands and challenges (female) athletes face. Also, both quantitative and qualitative approaches are encouraged to verify the identified demands and challenges as well as to add additional information about the investigated themes. Second, in order to get a better insight into the athletic career challenges of young (female) athletes, it would be worth examining the sample of prematurely drop-out adolescent athletes to

investigate which demands and difficulties prevented them from continuing with their athletic careers. Third, focusing only on demands and difficulties, this study does not identify strategies or competencies adolescent athletes use in order to cope with their athletic career demands and challenges. Future research should therefore focus on investigating young athletes' competencies, necessary for successful career development.
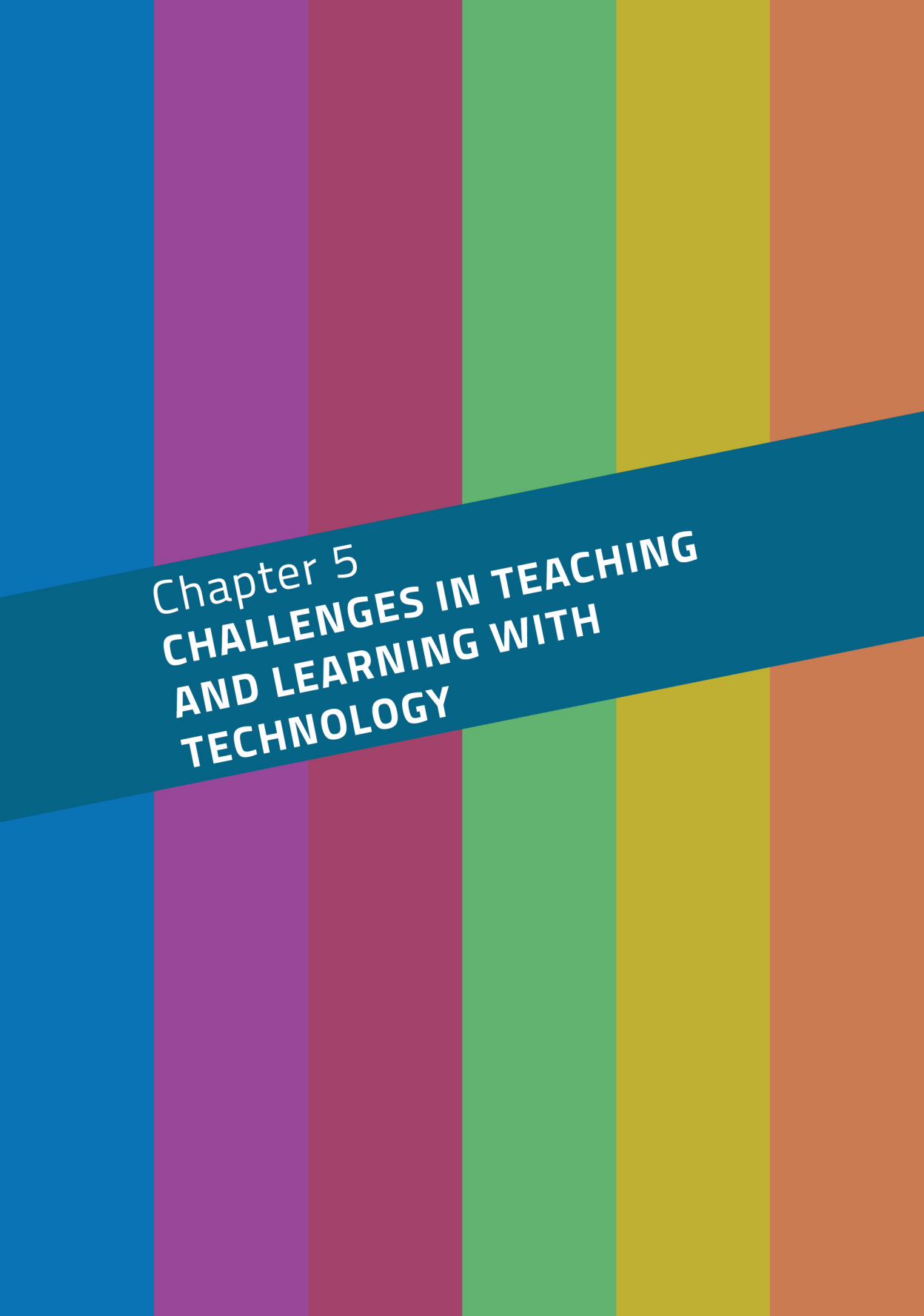
Practical implications can be taken from this study, which is of importance to (female) athletes, as well as to sport practitioners, coaches, teachers, parents, and others who work with them. First, there is a need to educate and therefore prepare the athletes for their athletic career development at all four levels stressing the possible demands and challenges they might face as they progress through their careers. With female athletes, special attention should be given to informing them about the possible effects of physical maturation on their athletic career performance, healthy lifestyle, and physical self-acceptance. This is particularly important for younger female athletes, before entering their adolescence stage. Second, some of the adversities female athletes face throughout their careers are likely to be reduced if their coaches and other sports practitioners would possess an awareness of female athletes' developmental characteristics and their special needs. In this essence, it seems important to educate coaches and other practitioners working with female athletes about young women's development, and equip them with the necessary skills and competencies to successfully address these issues. In conclusion, we hope this article stimulates thinking about female adolescent athletes' specific demands and challenges, and triggers more scientific research and applied practice on this topic.

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Chapter 5
CHALLENGES IN TEACHING AND LEARNING WITH TECHNOLOGY

POTENTIALS OF LEARNING A NEW FOREIGN LANGUAGE USING THE DUOLINGO APP: OPINIONS OF CROATIAN UNIVERSITY STUDENTS

VLADIMIR LEGAC, KRUNOSLAV MIKULAN, PREDRAG OREŠKI

University of Zagreb, Faculty of Teacher Education, Zagreb, Croatia
vladimir.legac@gmail.com, krunoslav.mikulan@ck.t-com.hr,
predrag.oreski@ufzg.unizg.hr

Abstract The introduction discusses the importance of multilingualism and foreign language competences in EU citizens. This is followed by a description of the Duolingo app and of mobile-assisted language learning. The results of earlier research studies by the same authors that dealt with the use of mobile applications in foreign language learning are also discussed, and the requirements that had to be met in the new study are presented here. The authors used a self-constructed French test and asked the participants in the study (students from the Faculty of Teacher Education at the University of Zagreb) what they thought (in a self-constructed short questionnaire, containing 14 statements) about the potentials of learning French as a completely new language through Duolingo app. The results showed that the respondents had an overall positive opinion about the quality and potentials of learning a new foreign language through Duolingo app (it lowers anxiety, it is efficient for learning correct pronunciation, memorizing new words, practicing grammar and structure drills). The conclusion states that the initial hypothesis was confirmed and gives implications for further research.

1   Introduction

Today's European Union can look back on a long history of emphasizing the importance of its citizens' language competences and mentioning multilingualism in its documents. The first discussions on the model of multilingualism started in the 1970s, and in the 1980s, multilingualism started to be seen as a precondition for the peaceful coexistence of different nations. The first document mentioning it was the document referred to as the Homburg Recommendations. The 1995 White Paper on Education and Training was much more important, wherein the European Commission defined the goal that in addition to their mother tongue all European citizens should master two foreign languages (hereinafter FLs) (Filipan-Žignić et al., 2013). Today, multilingualism is one of the main goals of the European Union's language policy and is gaining in importance due to globalization and internalization (Vučić, 2020). As Croatia has been an EU member since 2013, the guidelines of the European Commission and EU documents are binding for it.

In addition to the binding character of EU documents, familiarity with several languages is also important for Croatian citizens because Croatia earns a large percentage of its income from tourism. FLs had been considered an important part of basic education even before Croatia joined the EU. FLs had been obligatory subjects in primary and secondary schools for a long time before Croatia gained its independence in 1992. While in the past German and Italian were universally taught in the north and south of the country, respectively, English has prevailed in recent decades, and today it is the most taught FL (European Commission/EACA/Eurydice, 2017, p. 73).

Although English has become a modern lingua franca, the knowledge of English as a single FL is not enough for Croatian citizens because of the tourist-based character of the Croatian economy. According to the Eurydice 2017 report on the analysis of education and youth policies, French is the second most learnt FL in Europe (European Commission/EACA/Eurydice, 2017, p. 73). That is reason enough for people in Croatia to start learning French as well. The problem with French is that only 0.7% of Croatian students learn it in schools (Nacionalni centar za vrednovanje obrazovanja, 2012, p. 9). The authors of this paper think that smartphone applications like Duolingo could be of great help here, since mobile learning applications have enabled virtually everybody to learn numerous FLs.

In recent years, we have seen a considerable increase in the use of mobile applications specialized for independent FL learning. This paper is based on research into the opinions and practices of students from the Faculty of Teacher Education at the University of Zagreb, Croatia, who used the Duolingo application to learn French. The study presented here dealt with Croatian university students' use of the Duolingo mobile-assisted language learning (MALL) app. Duolingo is free to use and has a large number of downloads in the Google Play Store (currently over 100 million). Its users' average rating is 4.7 (out of 5). The app offers courses in more than 35 languages, including Spanish, French, German, Italian, Russian, Portuguese, Turkish, Dutch, Irish, Danish, Swedish, Ukrainian, Esperanto, Polish, Greek, Hungarian, Norwegian, Hebrew, Welsh, Swahili, Romanian, and English.

Duolingo is a gamified platform. It contains a system of jumping points, which allow users to choose the level at which they want to start learning a FL. Moreover, Duolingo has been found to be visually attractive and possessing of good usability and an element of fun, although researchers have observed some major flaws in its content and pedagogy.

The Duolingo app is safe, and it is marked as PEGI 3: "The content of games with a PEGI 3 rating is considered suitable for all age groups. The game should not contain any sounds or pictures that are likely to frighten young children. A very mild form of violence (in a comical context or a childlike setting) is acceptable. No bad language should be heard" (Pegi, 2021).

The term "gamification" is generally used to denote the application of game mechanisms in non-gaming environments with the aim of enhancing the processes enacted and the experience of those involved. In recent years, gamification has become a catchword throughout the fields of education and training, thanks to its perceived potential of making learning more motivating and engaging (Caponetto et al., 2014).

Gafni, Biran Achituv and Rahmani (2017) conclude that "most of the participants found the MALL Duolingo application enhanced the learning process. The gamification characteristics, ease of use, ubiquity and self-learning facilities had a stimulating effect on the process of learning and contributed to the willingness to continue using the application and to recommend it to others."

A study by Ajisoko (2020) on 19 participating students showed that 89% students strongly agree and 10% agree that Duolingo provides advantages in learning vocabulary. The students felt that Duolingo helped them discover new ideas, gain better understanding, and master vocabulary. The results showed that Duolingo facilitates students in understanding and practicing their vocabulary.

The study by Munday (2016) on two student groups, one group of 46 students at the beginner level and one of 16 students at a more advanced level, both learning Spanish as a second language, showed that 91% of students in the first group found Duolingo easy to use, 82% found it helpful, 80.4% enjoyed using it, and 78.3% were satisfied with the app. The students in the second, more advanced group, found the app helpful (80%), but only 43.8% of the students enjoyed using it, and only 50% of the class was actually satisfied with Duolingo (strongly agree and agree).

Jiang et al. (2020) report their results of a study on 225 participants, who were students of Spanish or French and resided in the United States, had little to no prior proficiency in the target language and used Duolingo as their only learning tool. The results showed that the students reached Intermediate level in reading proficiency but remained at Novice level in listening proficiency (assessed using the American Council on the Teaching of Foreign Languages (ACTFL) reading and listening proficiency tests). The proficiency scores of the participants were comparable with the proficiency outcomes of university students at the end of the fourth semester in language programs as reported in largescale studies. The participants were spending only half of the usual four semesters of university classes. "These findings demonstrate that Duolingo is effective and efficient, in addition to being accessible and free" (Jiang et al, 2020).

The results of an earlier study by Oreški et al. (2018) showed that university students thought that the Duolingo application had more advantages than disadvantages. In this new research being presented in this paper, the authors wanted to examine how university students progress in learning French by means of the same app and to learn what students think about its potentials. The potentials had to be checked with regard to preconditions for successful FL learning offered by the results of modern research in FL acquisition.

One of those preconditions is that FL learning should not cause high FL anxiety. FL anxiety is thought to be a highly debilitating affective factor in FL learning. Anxiety is experienced by FL students both in the classroom (Horwitz et al., 1986) and outside the classroom (Legac, 2019). It hinders students learning in all the stages of the FL learning process (MacIntyre & Gardner, 1994; Mihaljević et al., 2008).

Another important feature of good material for FL learning is that it should not be considered difficult by the students that use it. If it is thought to be difficult, then it lowers the student's motivation and raises their level of anxiety. Motivation is the key factor and the main driving force leading to success in FL learning (Gardner, 2010).

If we want our students to learn French or any other language properly, then they have to learn correct pronunciation in addition to learning vocabulary and grammar patterns. Pronunciation and intonation are a common problem in the early stages of FL learning (Velički, 2006). Therefore, it is important that students think that the course material makes it possible for them to learn correct pronunciation. Problems with learning pronunciation were one of the sources of FL anxiety when English was used outside the classroom (Legac, 2019). It is also known that students with lower levels of anxiety thought that their pronunciation was better than those with higher levels of anxiety (Szyszka, 2011), so it can be expected that if students are learning pronunciation easily by means of an application that their level of FL anxiety will be lower. The acquisition of correct pronunciation is particularly important in the case of French because of desyllabifications, which are traditionally marked as "enchainement" and "liaison" (Defterdarević-Muradbegović, 2008).

Students can only learn a FL well if they have learnt its grammar and have mastered structure drills. If the goal is to ascertain the potentials of a course, it would be advisable to find out what its students think; whether or not the course makes it possible for them to progress in learning grammar and in using structure drills properly.

One of the basic aims of every language course is increasing the number of vocabulary units that students are familiar with. Designers of course materials must always keep in mind the strict conditions for successful vocabulary learning. Only by observing them can real progress be made (Udier, 2009).

The course material and the FL method should keep the intensity of motivation high. This can be achieved if participants in the course think that the materials are entertaining and if they think that they can get quick feedback.

1.1   Description of the Study

This study was a follow-up study to an earlier study that was conducted by the same three authors during the 2017/2018 academic year with a different sample of students from the same institution. That earlier study (Oreški et al., 2019) asked the students to compare two applications for mobile FL learning (Duolingo and Memrise). They were free to choose the language they wanted to study through the apps, and they were not tested. The results of that study showed that student responses were mostly positive: they were very interested or highly interested in learning a FL (83.6%), they liked the gamification quality of the FL applications (80.1%), they learned how to use them quickly or very quickly (85.4%), and they liked the fact that they could use the applications whenever and wherever they wanted (77.6%). On the other hand, only 24% of respondents completely agreed with the statement that they would be able to learn a FL using one or more such mobile applications. In their implications for future research, the authors stated that the results of a possible follow-up study "would have to show whether the high motivational factor expressed by respondents in that study would remain constant in spite of the repetitive nature of exercises present in the said applications" (ibid, 27). In the current study, the same authors wanted to discern whether students from the same institution would be equally satisfied and motivated to learn one particular language (French) for a very short time and to see their achievements in learning the FL after completing a mini course through Duolingo for Schools. Some of the results of this new study are presented below.

Duolingo for Schools is a dashboard inside of a teacher's Duolingo account that allows them to create classrooms and assignments, and to follow students' activity. (…) It brings the Duolingo app into the classroom, with features designed to maximize teacher effectiveness and student learning (Duolingo, 2021). A screen capture of the Duolingo for Schools class used in the experiment is shown in *Figure 1*.
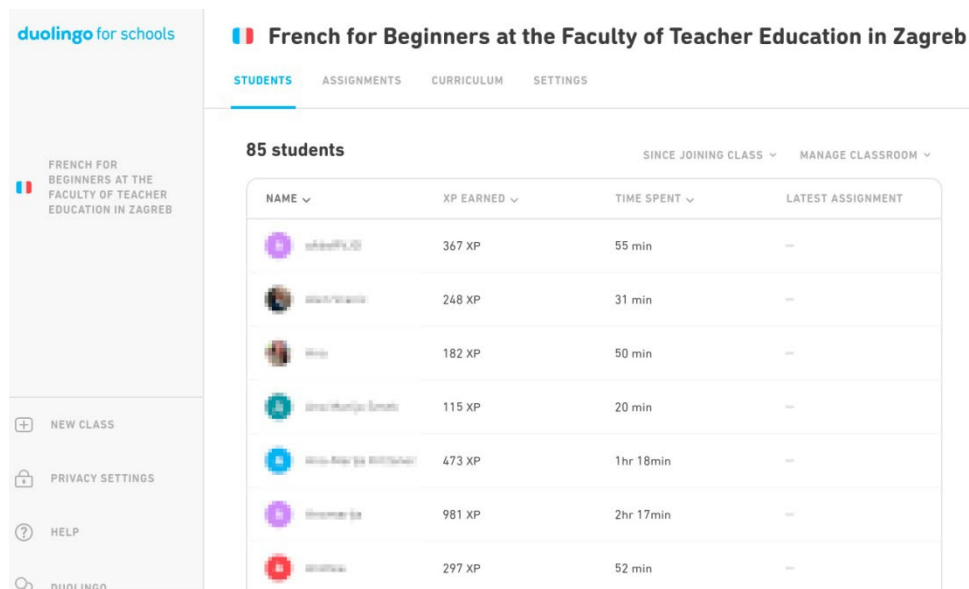
Figure 1: Duolingo for Schools Class
Source: https://schools-v2.duolingo.com

2 Methodology

2.1 Participants

Several figures will have to be given for the number of participants. The number of participants whose complete data were analysed for the purpose of the main analysis of this study was 63. However, the number of students that took part at various points of the experiment was different: 85 students attended the French language course and 66 students filled in the questionnaire. In the main analysis, only those participants were included who took the test and answered the survey after completion of the mini-French course. The analysis of the French test was done on the sample of 66 participants. The reason for these differences in the number of participants lies in the fact that the participants in the study were overburdened with other obligations at the end of the summer term, hence they gave up or they simply lost interest or forgot, although the authors of the study repeatedly asked them, via e-mail, to complete the experiment.

All the participants were students at the Faculty of Teacher Education in Zagreb, which is a constituent of the University of Zagreb in Croatia. Twelve students (19.05%) were studying to become kindergarten teachers (a 3-year study program, ending with a BA degree), 28 students (44.44%) were studying to become primary school teachers of core subjects (Croatian, Mathematics, Science, Music, Art and Physical Education) in primary school grades 1-4 (a 5-year integrated study program, ending with an MA degree), and the remaining 23 students (36.51%) were studying to become primary school teachers of core subjects in grades 1-4 and primary school teachers of English as FL in grades 1-8 (also a 5-year integrated study program, ending with an MA degree). Of the participants, 3.17% in the sample were men and 96.83% were women. The reader whose imminent thought is that female respondents were over-represented in this sample is wrong; on average, female students constitute over 95% of the students at the Faculty of Teacher Education at the University of Zagreb, since the teaching profession in Croatia still mainly attracts women.

At the time of data collection, all the participants in the study were in their early twenties (21 being the average age).

Since this study focuses on the use of technology and emphasizes the practical value of smartphone applications for learning FLs, it seems necessary to mention the use of the information and communications equipment by the students during the experiment. The survey showed that over two thirds of the students (71.43%) used their smartphones, meaning that smartphones are slowly but surely overtaking laptops and computers among university students. Students in this age group seem to use smartphones both for their leisure activities and for their studies.

2.2   Instruments

Two online instruments were used for the purpose of this study: a test and a questionnaire. Both were self-constructed by the three authors of this article.

The test contained five tasks. The first task asked the respondents to complete six sentences. Five of them had to be completed with entire words, and in one sentence only a part of the word was omitted (two letters from the first person of the present indicative of the verb *venir*). Each dot represented an omitted letter from the word.

In task 2, the students had to supply the correct indefinite article for three nouns. In task 3, they had to insert the correct definite article for 4 nouns. In task 4, the participants had to choose the correct answer in six short dialogues, and in task 5, they had to supply three correct present tense forms of the verb *travailler*. The theoretical range was 0-22 points.

The questionnaire contained 22 statements, but only some of them can be analysed for the purpose of this study; namely those 14 that covered the potentials. The statements that were analysed based off on a 5-point Likert scale with values from 1 – I totally disagree, to 5 – I totally agree. The students were also asked to give their comments on the course and the French test for beginners. There were three additional multiple-choice statements about students' biodata.

2.3   Procedure

The experiment and the survey were conducted during from mid-May to mid-June 2019. The students attending regular English courses offered by the first two authors of this article were informed about Duolingo for Schools and the aims of the study. During the last month of the 2019 summer term, the students were asked to do at least three half-an-hour lessons of French in Duolingo for Schools until they had earned 225 app points. This mini course was followed by a 10-minute French test for beginners and a short questionnaire. The students' participation in the experiment, the test, and the questionnaire were voluntary.

2.4   Aim of the Study, Hypothesis and Justification

This new study aimed to see what students from Zagreb studying to become teachers thought about the efficiency of learning a completely new FL by means of the Duolingo app. The following aspects of FL learning were included: the level of difficulty, availability, gamification, mastering the technology of learning, amusement, general efficiency, motivation, FL anxiety, acquisition of correct pronunciation, acquisition of structure drills and grammar in general, acquisition of vocabulary, authenticity, comparison of the experience of this kind of learning with their previous methods of FL learning and the possibility of learning a new language only by means of the Duolingo app.

The starting hypothesis was that Croatian university students studying to become kindergarten and primary school teachers would have an overall positive opinion on the quality and potentials of learning a new FL through Duolingo app.

The authors grounded their hypothesis within the results of their earlier study (Oreški et al., 2019).

3   Results and Discussion

The presentation and discussion of results will be subdivided into two parts. First a short summary of the quantitative (illustrating the number and percentages of students per ranges of achieved points) and qualitative (analysing the sources of student errors) results of the French test will be given. This will be followed by an analysis of the Duolingo app potentials as they were seen by the students in our sample after completing a mini course in French on Duolingo for Schools. The analysis will include illustrations in tables using frequency distributions of values from the questionnaire and mean values with their standard deviations.

3.1   French Test

Table 41 contains quantitative data regarding the French test results. It shows the number of students and percentage of students for five groups of achieved points. About one fifth of the students in the sample (20.63%) achieved low results (between 3 and 5 correct answers). Another group of similar size (a little less than a fifth or 19.04%) were somewhat better (they were within the 6-9-point range). Again, there was one fifth of students with average results (22.23% achieved between 10 and 12 points). Close to one quarter of the students (23.81% of them ended within the 13 to 16 points range) achieved very good results. Only 14.29% of the students achieved between 17 and 21 points, which meant that their performance was excellent. The mean value of achieved points was 10.67, whereby the standard deviation was 4.86. One can conclude that the students in this sample achieved moderate results in French as a FL in this test for beginners.

The qualitative analysis shows that not all the students had successfully mastered the present tense of the verb *être* as they did not know its form for the first-person singular, first-person plural or second-person plural.

Table 1: Number of points on French test

Number of achieved points	Number of students	Percentage of students
3-5	13	20.63
6-9	12	19.04
10-12	14	22.23
13-16	15	23.81
17-21	9	14.29
Mean value:	10.67	100.00
St. dev.:	4.86	

The grading of the students' French accents presented one group of mistakes. Some students seemed to have problems with the French word used to refer to the "left-hand side", likely because of the marking for the French accent *à*, and some of the students in the sample were not quite familiar with the question word *où*. A small group of them seemed not to be able to recall the spelling of *plaît* in the expression *s'il vous plaît*.

The form of the present tense indicative *venir* seemed to be extremely difficult for our students in the sentence where they were asked to say that they come from Zagreb.

The students were expected to have problems with forms of the indefinite and definite articles, as that part of speech does not exist in Croatian. However, the authors were happy to note that they made fewer mistakes with that grammar feature than would normally be expected from native speakers of Croatian.

The students did quite well in choosing the correct answers in short dialogues, e.g.:

> *Ça va bien, et toi?*
> A) *Volontiers.*
> B) *Très bien.*
> C) *Bonsoir.*

3.2   The Duolingo App's Potential

The potentials of the Duolingo app have been analysed through the presentation of the results and the discussion of students' answers from the questionnaire. The questions referred to their opinions on the efficiency of the Duolingo app and its

other characteristics: level of difficulty, the possibility of lowering FL anxiety, efficiency in learning correct pronunciation, structure drills, and new vocabulary. The students were asked to compare the efficiency of the Duolingo app with ordinary and traditional methods of teaching of FLs. They were urged to speculate about the possible advantage of the Duolingo app because of its availability and its gamification. The students had to assess how successfully they had mastered the FL through the Duolingo app, how amusing their learning was, whether or not the app was good for learning grammar, and whether learning was authentic. The assessment also dealt with the app's general efficiency. The students were also required to speculate on the possibility of learning a new language exclusively by using the application in question.

A) The Students' Opinions About the Level of Difficulty of FL Learning Through the Duolingo App

The first statement referred to the level of difficulty of the Duolingo app, stating that "Learning a FL with the Duolingo app is hard" (see *Table 2*). As can be seen from the mean value for this statement (1.89%; S.D. = 0.9) and the percentages of different values (39.68% strongly disagreed and 38.1% disagreed), close to four fifths of the students in our sample disagreed with that statement. No student in the sample strongly agreed with that statement. The difficulty of the FL or the difficulty of the course materials and methods of teaching can cause FL anxiety. What can be gathered from this is that the Duolingo app as course material did not pose as a threat or obstacle in this respect.

Table 2: Perceived level of difficulty of the Duolingo App

Value	Number of students	Percentage of students
1	25	39.68
2	24	38.10
3	10	15.87
4	4	6.35
5	0	0
Mean value:	1.89	100.00
St. dev.:	0.90	

B) The Students' Opinions About the Possibility of Mitigating FL Anxiety when learning French with the Duolingo App

In one question, the students were asked directly about the possibility of lowering FL anxiety through the Duolingo app. The results of that statement are illustrated in *Table 3*, and show that over 60% of the surveyed students agreed with the statement (25.4% strongly agreed and 34.92% agreed). About a quarter of the students (25.4%) were not sure, as they neither agreed nor disagreed with the statement. Only 3.17% of the students strongly disagreed, and 11.11% disagreed with the statement. The mean value for this statement was 3.68 (SD. = 1.08). From the analysis of the question on the level of difficulty, one can confirm even more strongly that the Duolingo app can be successfully used in learning French. The difference in the percentages between the two statements (this one and the one dealing with the level of difficulty) leads us to think that the students thought about other aspects of FL anxiety when they circled their answers on this statement and not only about the difficulty level.

Table 3: Perceived mitigation of FL anxiety

Value	Number of students	Percentage of students
1	2	3.17
2	7	11.11
3	16	25.40
4	22	34.92
5	16	25.40
Mean value:	3.68	100.00
St. dev.:	1.08	

C) The Students' Opinions on the Efficiency of the Duolingo App for Learning Correct Pronunciation

In the eyes of the participants (see *Table 4*), the Duolingo app was thought to be efficient for the acquisition of correct pronunciation, since about three quarters of the students either strongly agreed (31.75%) or agreed (44.44%) with the statement that stated that the Duolingo was excellent for the acquisition of correct pronunciation. This can also be seen from the height of the mean value (4.02; SD. 0.89). Less than 5% of the students strongly disagreed (1.59%) or disagreed (3.17), and less than one fifth of the students in our sample were undecided (19.05%).

Table 4: Efficiency of Duolingo app regarding the acquisition of correct pronunciation

Value	Number of students	Percentage of students
1	1	1.59
2	2	3.17
3	12	19.05
4	28	44.44
5	20	31.75
Mean value:	4.02	100.00
St. dev.:	0.89	

D) The Students' Opinions About the Efficiency of the Duolingo App for Structure Drills

The analysis of the results of the next statement from our questionnaire, presented in *Table 45*, reveals that the students regarded the Duolingo app as being efficient for the acquisition of structure drills, since the mean value was 4.05% (SD =0.79) and more than half of the students agreed (50.79%) while over a quarter (28.57%) strongly agreed with the statement "Learning a FL by means of the Duolingo app was excellent for language structure drills". Structure drills tend to be boring to students, so the results on this statement indicate an important advantage of the researched app.

Table 5: Efficiency of Duolingo app regarding the acquisition of structure drills

Value	Number of students	Percentage of students
1	1	1.59
2	0	0
3	12	19.05
4	32	50.79
5	18	28.57
Mean value:	4.05	100.00
St. dev.:	0.79	

E) The Students' Opinions on the Efficiency of the Duolingo App for Learning Vocabulary

Learning lexemes in French by using the Duolingo app can be very successful, according to the opinion of the students (see *Table 46*), as more than 90% of them strongly agreed (44.44%) or agreed (47.62%) with the statement that inquired about the efficiency of the Duolingo app for memorizing vocabulary statements. The mean

for this statement was 4.3, whereas the standard deviation was 0.63. Nobody in our sample strongly disagreed or disagreed with the given statement.

Table 6: The efficiency of Duolingo app for memorizing vocabulary statements

Value	Number of students	Percentage of students
1	0	0
2	0	0
3	5	7.94
4	30	47.62
5	28	44.44
Mean value:	4.37	100.00
St. dev.:	0.63	

F) Comparison of FL Learning with Duolingo School and with Classic Methods

The students were asked to compare learning by means of this app with other traditional or classic methods that they had come across earlier during their FL learning in terms of motivation. Over 70% of the students (see *Table 7*) thought that learning via the Duolingo app was more motivating than those other methods (31.76% strongly agreed and 41.26% agreed). A considerable number of students (26.98%, or over a quarter of the students in the sample) were hesitant about their agreement or disagreement, since they neither disagreed nor agreed with this statement. There were no students in the sample that strongly disagreed or disagreed. The mean was quite high (4.05; SD = 0.77). Motivation is regarded as a key factor leading to progress in learning. From the aspect of motivation, according to our respondents, using the Duolingo app for learning French in the early stages of learning would lead to success and achievement.

Table 7: Comparison of Duolingo versus classic methods of learning FL

Value	Number of students	Percentage of students
1	0	0
2	0	0
3	17	26.98
4	26	41.26
5	20	31.76
Mean value:	4.05	100.00
St. dev.:	0.77	

G) The Students' Opinions About the Advantage of the Duolingo App Because of Its Availability

Availability is seen by this young generation of millennials as an important advantage of the Duolingo app. The proof for that (see *Table 8*) is that the overwhelming majority (over 93% of the students) circled value 5 (more than a half of the sample – 50.79%) or value 4 (42.86%). Only 6.35% of students in the sample neither agreed nor disagreed with the statement that FL learning with the Duolingo app is important for them because they can learn anytime and anywhere. There were no students who disagreed or strongly disagreed. The mean value for this statement was 4.44 with a standard deviation of 0.62.

Table 8: Perceived advantages of Duolingo app in terms of availability

Value	Number of students	Percentage of students
1	0	0
2	0	0
3	4	6.35
4	27	42.86
5	32	50.79
Mean value:	4.44	100.00
St. dev.:	0.62	

H) The Students' Opinions About the Gamification of the Duolingo App

The new generation of young people tend to yearn to get feedback on their progress in FL learning and like to be rewarded for their effort and praised for their achievements. This can be clearly seen in the figures illustrated in *Table 9*, since over 90% of the surveyed students strongly agreed (58.73%) or agreed (31.75%) with the statement that they like this kind of FL learning because they can follow their level of progress and get points and prizes; much like one would in a computer game. The mean value was very high (4.46) with the accompanying standard deviation of 0.76. There was a relatively small percentage of ambivalent students who neither agreed nor disagreed with the above-mentioned statement. An even lower percentage of the students in the sample (only 3.27%) disagreed with the statement and there was no single student who strongly disagreed.

Table 9: Perceived advantages of Duolingo app regarding gamification

Value	Number of students	Percentage of students
1	0	0
2	2	3.17
3	4	6.35
4	20	31.75
5	37	58.73
Mean value:	4.46	100.00
St. dev.:	0.76	

I) The Students' Opinions About How Successfully They Mastered This Kind of FL Learning

The students were also enormously satisfied with how successfully they mastered learning French by means of the Duolingo app (see *Table 10*); again, well over 90% of them circled values higher than 3; 39.69% opted for value 4, and more than half (52.38%) for value 5. A high mean value of 4.41 with a standard deviation of 0.73 was recorded here. A very low percentage (4.76%) of the surveyed students were irresolute in giving their decision on this statement. An even lower percentage (only 3.17) disagreed with the statement on this statement. Nobody strongly disagreed with it.

Table 10: Perceived levels of mastering the FL through Duolingo app

Value	Number of students	Percentage of students
1	0	0
2	2	3.17
3	3	4.76
4	25	39.69
5	33	52.38
Mean value:	4.41	100.00
St. dev.:	0.73	

J) The Students' Opinions About the Amusing Character of FL Learning by Means of Mobile Apps

That FL learning can be amusing (see *Table 11*) when French is learnt by means of the Duolingo app was thought by over 95% of the surveyed students, wherein 79.37% strongly agreed and 17.46% agreed with the statement that stated that FL

learning with this app is fun. The mean value of 4.76 with a low standard deviation of 0.5 was the highest of all in this section of the questionnaire. An insignificant percentage of 3.17% of the surveyed students were not sure about their decision regarding this statement. Nobody disagreed or strongly disagreed with the statement.

Table 11: Perceived satisfaction levels of FL learning through Duolingo app

Value	Number of students	Percentage of students
1	0	0
2	0	0
3	2	3.17
4	11	17.46
5	50	79.37
Mean value:	4.76	100.00
St. dev.:	0.50	

K) The Students' Opinions About the Efficiency of the Duolingo App for Learning Grammar

The respondents in our sample were quite satisfied with the efficiency of the Duolingo app for learning grammar (see *Table 12*), since the mean value for this statement was 3.44, whereas the standard deviation was 1.01. However, this was the lowest mean value in this section of the questionnaire. Furthermore, one can notice the highest percentage of students that could neither agree nor disagree with the statement that learning by means of the Duolingo app was excellent for learning grammar rules (36.51%). That the students were positively biased about the potential of this app for the excellent learning of grammar rules can be noted in the much higher percentages of students that circled value 4 (31.75%) and value 5 (15.87) than the percentages of those that circled value 2 (12.7%) and value 1 (3.17%).

Table 12: Efficiency level of the Duolingo app regarding learning grammar

Value	Number of students	Percentage of students
1	2	3.17
2	8	12.70
3	23	36.51
4	20	31.75
5	10	15.87
Mean value:	3.44	100.00
St. dev.:	1.01	

L) The Students' Opinions About the Efficiency of the Duolingo App for Bringing Authenticity to FL Learning

That learning French by means of the Duolingo app has similarities with learning a FL in a natural environment is reflected in the high figures registered in the students' answers about the possibility that this app brings authenticity (see *Table 13*). Over 60% of the respondents in our sample were positively biased on this statement. An equal percentage of them agreed and strongly agreed (31.75%) with the statement regarding authenticity. The mean value was relatively high at 3.92, whereby the standard deviation was 0.89. Exactly one third of the surveyed students were not sure about their attitude towards this statement. A very small percentage (3.17%) disagreed, and nobody completely disagreed with the given statement.

Table 13: Perceived efficiency of Duolingo app regarding authenticity

Value	Number of students	Percentage of students
1	0	0
2	2	3.17
3	21	33.33
4	20	31.75
5	20	31.75
Mean value:	3.92	100.00
St. dev.:	0.89	

M) The Students' Opinions About the General Efficiency of Learning a FL by Means of the Duolingo App

The students (see *Table 14*) were quite generous in giving their ratings for this FL learning app, since the mean value of their ratings was 4.11 (standard deviation being 4.11), and over 80% of them gave it a rating of 4 (58.73%) or 5 (26.98%). Of the students, 12.7% gave it a rating of 3 and only 1.59% rated it a 2. Nobody rated it a 1.

Table 14: Efficiency rating of Duolingo app

Value	Number of students	Percentage of students
1	0	0
2	1	1.59
3	8	12.70
4	37	58.73
5	17	26.98
Mean value:	4.11	100.00
St. dev.:	0.67	

N) The Students' Opinions About the Possibility of Learning a New FL Only by Means of the Duolingo App

The students were quite positive about the possibility of learning a FL only through the Duolingo app (see *Table 15*). This can be seen from the mean value for this statement (3.78, whereby the standard deviation was 0.83) and again from the percentages of students that chose value 4 (41.28%) and value 5 (20.63%). One third (33.33%) of the surveyed students were not sure about their attitude towards this statement. Only 4.76% of the students were negative about the possibility of learning a new language only by means of the tested app. Nobody absolutely disagreed about the existence of that possibility.

Table 15: Perceived efficiency levels of learning a FL only through Duolingo app

Value	Number of students	Percentage of students
1	0	0
2	3	4.76
3	21	33.33
4	26	41.28
5	13	20.63
Mean value:	3.78	100.00
St. dev.:	0.83	

The results of this study have confirmed the authors' starting hypothesis that Croatian university students studying to become kindergarten and primary school teachers would have an overall positive opinion about the quality and potentials of learning a new FL by means of the Duolingo app.

4   Conclusion and Implications for Future Research

Croatian university students studying to become primary and kindergarten teachers achieved moderate success in learning French as a new FL after having completed a mini course in the Duolingo app. Their experience was mostly positive.

This study has shown that the FL students using Duolingo think that:

- The learning process with Duolingo is not difficult.
- It can be used to lower FL anxiety.
- It can be efficient for the acquisition of correct pronunciation.
- It is excellent for language structure drills.
- It is quite efficient for memorizing vocabulary statements.
- It is more motivating than traditional methods.
- The app's constant availability is a welcome characteristic.
- Its game-like organization and feedback encourage FL learners.
- The app brings authenticity into the learning process.

In conclusion, the respondents were enormously satisfied with how successfully they mastered learning French by means of the Duolingo app, like this kind of FL learning because they can follow their level of progress and get points and prizes, much like in a computer game and are open to the use of mobile apps and would welcome their inclusion in the teaching process. They have an overall positive opinion about the quality and potentials of learning a new FL and are positive about the possibility that they could learn a FL only by using the Duolingo app.

The results of this study are similar to results of other studies, such as Gafni et al. (2017), Ajisoko (2020), Munday (2016), and Jiang et al. (2020). The students' views and opinions, as well as the fact that they are becoming ever more proficient in the use of such apps, points at the need for FL teachers in general to develop their competences in mobile app usage because it will enable them to introduce these into the teaching process in a meaningful way.

Previous research (cf. Mikulan et al., 2018) shows that the digital competences of foreign language teachers as a whole are not sufficient and that teachers do not keep up with the increasingly rapid development of new technologies. The development of computers, multimedia, and software has gone a long way, which university curricula have not considered.

Today, students in higher education acquire basic IT education, while accepting and using some devices and applications that are informed individually because they are extremely popular among the population (primarily smartphones and applications for them). However, they do not learn much about such devices and applications and their possibilities in learning and teaching FL **at** school, and they rarely use them for these purposes. It is therefore necessary to design a system of lifelong learning that would allow teachers to periodically become acquainted with new technologies and the methods of their use.

The results of this study have shown that the Duolingo app can be regarded as a useful application for FL learning. The researchers believe that it would be necessary to conduct a new follow-up study, which would encompass either this or some other mobile learning applications to learn other FLs followed by a similar test to verify the students' achievements in learning the respective FLs. They think that it should be tested primarily on Italian and Hungarian, as they are mother tongues of two important national minorities in Croatia and because they are the official languages of two neighbouring countries whose citizens also constitute an important share of tourists in Croatia.

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A New Digital Approach to Teaching and Developing Language Skills

Katarina Aladrović Slovaček, Maša Rimac Jurinović

University of Zagreb, Faculty of Teacher Education, Zagreb, Croatia
kaladrovic@gmail.com, masarimac@gmail.com

Abstract Language is an abstract system of signs manifested through the language activities of listening, speaking, reading and writing. Encouraging development of all four language skills is one of the goals of Croatian language (mother tongue) classes at the Faculty of Teacher Education. Since the coronavirus pandemic has affected two school and academic years and caused the transition to online classes at faculties, teachers are facing the challenge of transferring knowledge to students and motivating them to actively take part in developing language skills in a virtual environment, especially the skills of active listening and speaking. Communication with students is made possible using digital tools, but they are less adequate for assessment and monitoring students' progress. Therefore, a study was conducted via online questionnaire on students' satisfaction with online classes, comparing online and physical classes, students' media consumption, reading habits and their use of free time. The results showed that the students were satisfied with online classes, but they preferred face-to-face classes, and they thought that online classes should be more creative and more interactive.

1   Introduction

Changes in the Croatian education system are slow and do not occur in a parallel manner on all the levels of the education system. Some of the key documents in the education policy, such as teaching curricula (the one for gymnasiums dates from 1999 and the one for primary school is from 2006) or the National Curriculum Framework that was adopted in 2010, and then nine years later, the subject curricula are a good illustration. The inability of the system to adjust to changes is evident in Croatian students' results on the PIRLS (2009) and PISA (2018) tests. One of the indicators is the attitude of Croatian students towards Croatian language, which has been negative for years, according to Pavličević-Franić and Aladrović Slovaček (2011) and Miljević-Riđički et al. (2000). Scientists have also identified a problem with our students' functional literacy (Aladrović Slovaček & Čosić, 2018). The *School for Life* program*,* which has been in the experimental stage since the 2018/2019 school year, can be considered as one of the possible solutions for the systemic problems.

However, even though the system is inert, we live in a dynamic world and a fast-changing society. Founding the Croatian Academic Research Network (CARNET) in 1991 and the University Computing Centre (SRCE) in 2007 marked the beginning of the process of digitalization of the education system, which was accompanied by numerous impulses and obstacles. Clearly, digitalization comes with new challenges for the education system and the answer to these challenges was, indisputably, mostly individual and depended on the motivation and competence of teachers and educators. For most teachers, ICT technology was not included in their professional education, but they acquired these competences over the course of their professional development, both formal and informal.

Soon after the outbreak of the pandemic, in March 2020, the decision was made to suspend classes at universities, secondary and primary schools and to suspend day care in kindergartens and continue their classes and educational activities online instead. From that point on, classes in primary and secondary schools, as well as at universities, were held exclusively online. Some kindergartens even started offering their educational content online. Jukić (2017) defines online learning as a relatively new way of distance learning and at the same time as a kind of e-learning. Since online learning is defined as a type of learning in which most of the educational

content is delivered to students via the internet, the authors have decided to use this term as the umbrella term in this study, since it implies both distance learning (despite not being the only form of distance learning) and e-learning. E-learning is understood and used as a term that implies a technologically supported and interactive process between the student and the teacher (Dukić & Mađarić, 2012).

Until the outbreak of the pandemic, e-learning was mostly only present at universities. Activating the C model of teaching, educators and teachers started distance teaching[1] using various digital software, tools and platforms[2], but they were also supported by the Ministry of Science and Education by creating school lessons that children could watch on TV[3].

Even though online teaching and the consequences of using digital teaching tools have been the subject of controversy, so that even terms like digital dementia (Spitzer, 2018) are discussed, the pandemic has made us reconsider and change the way we think about education and pedagogical work. Despite some disadvantages, *online* teaching has a significant number of advantages that we, as practitioners and scientists, have to take into consideration. It is especially important to gain insight into what future educators, teachers and students from the Faculty of Teacher Education in Zagreb think about online classes.

2   Research Methods

2.1   Main Objectives of the Study and the Hypothesis

The primary goal of this study was to examine the attitudes of students at the Faculty of Teacher Education in Zagreb about the quality, advantages and disadvantages of online classes, especially of Croatian language (mother tongue) classes and about how students spend their free time in the context of the pandemic and online learning. In accordance with the primary research goal, the following problems were defined:

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[1] *online* classes
[2] e. g., Yammer, Microsoft Teams, Google, Zoom, Viber, and WhatsApp.
[3] TV School on Channel 3 (HRT 3) and higher grades of primary school on RTL.

1. To examine students' attitudes about the quality of online classes, their level of creativity, use of digital tools and comparison between online and face-to-face classes.
2. To examine students' satisfaction with online classes and their self-evaluation of the quality of student life during the pandemic.
3. To examine students' habits regarding the way they spend their free time and use social networks and 'screens'.
4. To examine students' reading habits and their self-evaluation of their reading competence.
5. To examine whether students' attitudes differ according to their study program: teacher education/early childhood and preschool education.

In accordance with the primary goal and research problems, the following hypotheses were determined:

H_1 – It is expected that students are satisfied with online classes, but it is their opinion that online classes could be more creative, and in comparing online and face-to-face classes, they prefer face-to-face classes because they can establish a closer relationship with their teachers and there are unlimited possibilities for approaching various types of tasks.

H_2 – It is expected that students are satisfied with the quality of online classes, i.e., that they assign it, on average, a very good score, but they are not satisfied with the quality of student life during the pandemic because they feel isolated, with fewer possibilities for collaboration, communication and socializing.

H_3 – It is expected that most students spend a minimum of 2 hours a day on social networks and some students even more than that. It is also expected that students learn foreign languages and read books in their free time.

H_4 – It is expected that students read at least one book a month, i.e., a minimum of 12 books a year. It is also expected that they read paper books; they less frequently read on a screen, and if they read on a screen, then it is newspapers, news, and articles of interest. If they use a digital device for reading books, it is expected to be a Kindle, and the literature, they read in such a way, is expected to be in a foreign language.

Moreover, it is expected that most students have very good or excellent reading competences.

H_5 – It is expected that the students' reading habits in the teacher education study program are better developed and that they on average learn more foreign languages than students in the early childhood and preschool education study programs. Other differences are not expected to be statistically significant.

Data were processed in the SPSS program for statistics. The Kolmogorov Z test showed that the data were not distributed regularly (p < .05), so nonparametric statistical tests were used for analysis to compare the results between two groups of students: teacher education and early childhood and preschool education students. *The Mann-Whitney U test was used to compare these two groups. Apart from SPSS, a computer-linguistics program, *Sketch Engine*[4] for text analysis was used to more easily process the questions that the students answered textually. For the purposes of the study, a frequency dictionary according to textual questions was created to facilitate classification and interpretation of the students' answers.

2.2   Sample Description

The sample included 158 students from the Faculty of Teacher Education in Zagreb. Among the students, some were first, second- and third-year students in the full-time primary teacher education study program (32%), some were first, second- and third-year students in the full-time and part-time undergraduate study program of early childhood and preschool education (46%), and some were students in the full-time and part-time graduate study program of early childhood and preschool education (22%). All categories of students educated at the Faculty of Teacher Education in Zagreb were included in the study. As many as 98% of the participants were women.

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[4] https://www.sketchengine.eu

2.3   Description of the Research Instruments

The study was conducted in June 2021 in the last week of the school year, wherein classes were held entirely online from 1 December 2020 until the moment of filling out the questionnaire. The questionnaire consisted of 15 open and closed questions, which focused on explanations about the quality of online classes. There were a few questions in which students were asked to evaluate the quality of online classes using a 5-point Likert scale, and the quality of their own lives during the pandemic using a 10-point Likert scale. Apart from examining attitudes, the questionnaire contained certain sociodemographic data: the students' class year and study program, and their gender, so that all data could be compared.

3   Results

The first research goal was to examine the students' attitudes towards the quality of online classes, their creativity, the use of digital tools and the comparison between online and face-to-face classes. The results showed that the participants' assessments of the quality of online classes ranged from 1 (very poor quality), which was answered by 0.6% of the participants, to 5 (very high quality), which was answered by 18.5% of the participants (*Figure 1*). The average result was 3.7. Most students evaluated it as very good.
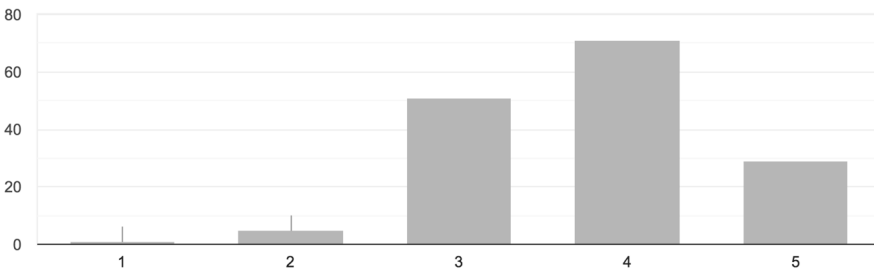
Figure 1: Quality of online classes

In assessing the creativity of online classes, the students used scores from *it was not creative (2)* to *it was very creative (5)*. Most students, 40.4% of them, chose the answer *it was neither creative nor uncreative (Figure 2)*. The average score that students assigned creativity was 3.57 (M = 3.57).
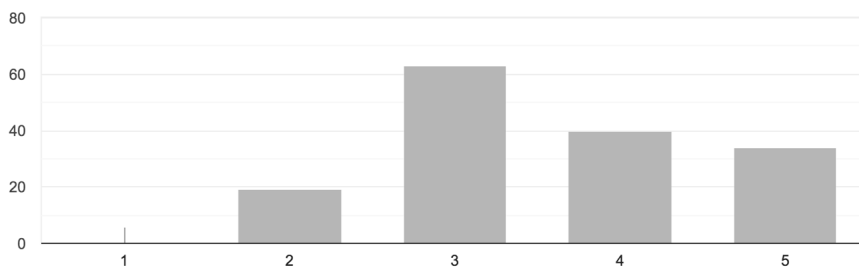
Figure 2: Creativity of online classes

Since most classes were held online (about 85%), the students assessed the use of digital tools during online classes. Most students, 38.5% of them, thought that the use was of high quality, whereas 11% of the students considered the use of digital tools to be of low quality (*Figure 3*).
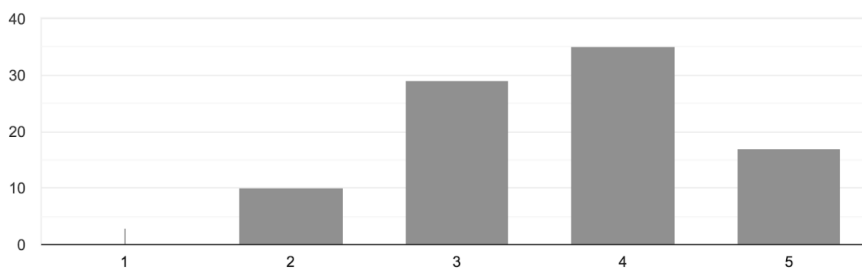
Figure 3: Use of digital tools

There were several open-ended questions in the study, and the following is an interpretation of the answers. In comparing online and face-to-face classes, the students considered online classes to be: more boring (15); more difficult (11); more exhausting (10); simpler (9), more practical (9), easier (9), more demanding (8), more monotonous (8), worse (6), more flexible (6), more relaxed (6), more pleasant (4), more informal (4), cheaper (2), more adaptable (2), more accessible (2), more uniform (1), more boring (1), more fun (1), more efficient(1), more confused (1), more modest (1), more demotivating (1).

Table 1: The students' answers to the question: What would you change in online classes?

Make them more interactive.
Higher level of organisation.
Obligatory use of cameras to facilitate communication and to know who we are communicating with.
Higher level of creativity in classes.
I'd like them to be more interactive, so that we get to know each other better.
More time devoted to practical work instead of lectures.
In my opinion, students should be more active in classes so that their activity is not reduced to only listening.
More creativity, encourage students to take a more active role.
More dynamics in classes, more interaction.
More creativity in teaching, more conversation with students, more everyday examples to facilitate understanding, less content so that we can acquire and learn it better.
More group work, individual work.
More exercises, practical work.
More communication.

The results above confirm the first hypothesis. They demonstrate that students were satisfied with online classes, but in their opinion, the classes were not very creative. When comparing online and face-to-face classes, the students were in favour of face-to-face classes because of the more spontaneous relationship between the teacher and students which, as they stated, they missed very much, but also because it is impossible to implement creative, interactive and engaging communicative tasks that are particularly important in mother tongue (Croatian) classes.

The second research goal was to examine the quality of online classes that were held and the assessment of the quality of student life during the pandemic. The students expressed their satisfaction on a scale from 1 (not satisfied at all) to 5 (very satisfied). On average, the students gave the quality of online classes a score of 3.75 (M = 3.75), i.e., the students were mostly satisfied with the quality of online classes. This score can be compared to the average score they assigned to the creativity of online classes: 3.57 (M = 3.57), and the Wilcoxon test shows a statistically significant difference between these two scores, i.e., that the students were statistically significantly more satisfied with the quality of online classes than with their creativity (*Figure 4*).
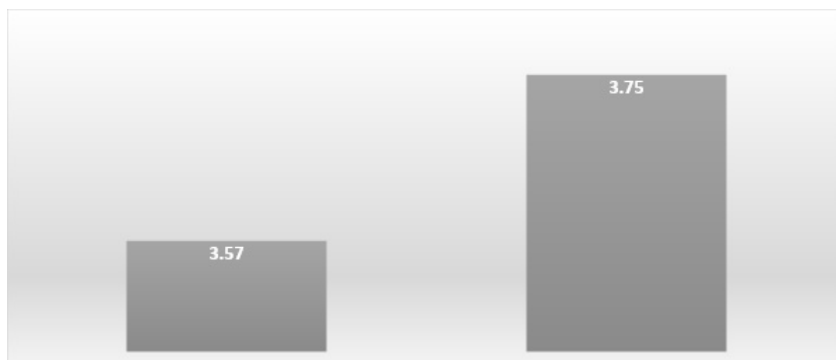
Figure 4: Creativity (M) and quality (M) of online classes on a scale of 1 to 5

A 10-point scale was used for the students' assessment of the quality of their own lives during the pandemic. On average, they assigned a score of 6.45 (M = 6.45) to the quality of their own lives, which means that they were neither satisfied nor dissatisfied with the quality of their lives during the pandemic. Presumably, the assessment depended on the area where they lived, but also on some other circumstances in their lives (*Figure 5*).
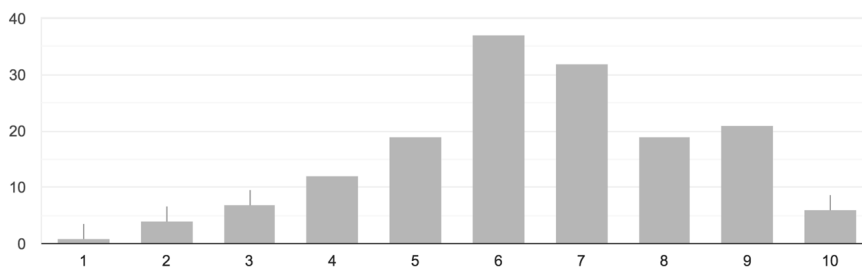
Figure 5: The students' quality of life during the pandemic

The described results to a great extent confirm the second hypothesis – that students are satisfied with the quality of online classes, i.e., that they assess it, on average, as very good (M = 4) on a scale from 1 to 5. Thus, the second part of the hypothesis, that students will assess the quality of their lives during the pandemic as a score of 5 on a scale from 1 to 10, is partly confirmed and can be explained by increased isolation, and reduced possibilities of collaboration, communication and socializing. However, the results demonstrated that the students were somewhat more

optimistic than expected, and the average score they used to assess themselves was 6.45.

The third research goal was to examine the students' habits regarding the way they spent their free time and their use of social networks and 'screens'. In their free time, the students most often socialized with their friends, went for nature walks, watched films and series, drew, hiked, did sports, roller skated, rode bikes, but they also cooked, sewed, played an instrument in a band, played computer games, and expressed themselves in a creative way (mostly manually). About 28.5% of the students spent 2 to 3 hours a day on social networks, 27.8% of them spent 3 to 4 hours, and not an insignificant number of them spent more than 6 hours on social networks. The students were also asked if they study foreign languages in their free time. Of the total number of participants, 38% of them answered that they did not study foreign languages in their free time, 30.4% of them study one foreign language, 13% study two foreign languages, and 19% of the students would like to learn a foreign language, but they lack either time or the financial means to do so.

If one considers all the presented results, the third hypothesis, that most students spend a minimum of 2 hours a day on social networks and some students more than that, can be partly confirmed. Most of the students spent more, i.e., 3 to 4 hours a day on social networks. Moreover, the second part of the hypothesis, that students study foreign languages and read books, can be partly confirmed, since a certain percentage of students do so, but there is a significant percentage of students who engage in other activities.

The fourth research goal was to examine the students' reading habits. The results show that almost 40% of the students read in their free time, but it is interesting that 10% of the students stated that they did not read at all in their free time.

More than half, or 54.5% to be precise, of all the students also claimed to be reading a book at the time of the study. For most of the students, reading was an *escape from reality, relaxation, rest, a source of knowledge and a window to the world.* On average, the students read 5 to 6 books a year, i.e., one book every two months. Most of the students, 60.4%, read only paper books, and 6,6% of them only read books on digital devices, whereas 33% of the students read both paper and digital books. The students mostly used their iPad, smartphone, laptop, or computer to read books in

a digital form. The students also assessed their reading competences on a scale from
1 to 5. More than half of them, 54.9%, thought they had very good reading
competences, about 12% considered their reading competences to be excellent, and
only 5% of the students were not satisfied with their reading competences (*Figure 6*).
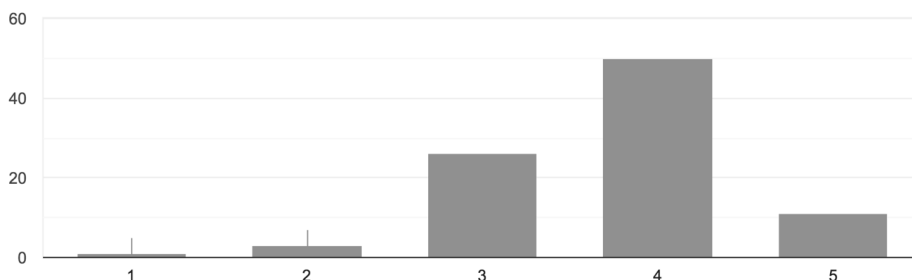
Figure 6: **The students' assessment of their reading competences**

What students most often read on screens are the news, motivational articles, articles
about health and self-help, popular psychology, world trivia, and funny and
entertaining texts, i.e., those that are intended to make you laugh. The results showed
that the first part of the fourth hypothesis, that students read one book a month, is
to be rejected. The second part of the fourth hypothesis, that students mostly read
paper books and read news and other articles of interest in a digital format, is
confirmed. The third part of the fourth hypothesis, that students will mostly use a
Kindle for reading digital books, is rejected, since students mostly use their
smartphone, iPad, laptop or computer. However, the fourth part of the same
hypothesis is accepted, since the authors confirmed that the students assessed their
reading competences as very good.

The fifth research goal was to examine whether there is a difference between
students regarding their study program: teacher education/early childhood and
preschool education. The results show that there is a significant difference in the
students' attitudes towards creativity in teaching online classes, the number of books
read in a year, and the quality assessment of online classes. Early and preschool
education students assigned statistically significantly better scores both to the quality
and creativity of teaching in online classes, while teacher education students read
significantly more books than early and preschool education students, as indicated
by the results of the Mann Whitney U test on the significance level of 5% ($p < .05$).

The fifth part of the fifth hypothesis, that teacher education students will read a significantly greater number of books in a year, is hereby confirmed, but the second part of the hypothesis, that teacher education students will learn foreign languages to a greater extent and more frequently, is rejected. Moreover, the fifth hypothesis did not expect a difference in attitudes towards online classes, their quality and creativity, which is certainly interesting because teachers who teach in both study programs do not differ significantly, but the curriculums of these study programs differ significantly, which might have influenced teaching and creativity in online classes.

4   Discussion and Conclusion

The coronavirus pandemic has brought many changes to education and the need to adapt to new conditions. Although the Croatian education system had been preparing for action in the digital environment for some time, the pandemic accelerated the whole process and made for a readiness test, especially at universities, where teaching in the digital environment has now been active for almost a year and a half. The results of this study are indicators of the success or failure of this way of working and, in addition to expressing satisfaction with teaching in a digital environment, they also portray the students' reading competences, attitudes towards reading in digital form, and time spent in front of screens. All this is not only a consequence of the pandemic situation, but also the way of dealing with the new life and professional situation. Accordingly, the students assessed their satisfaction and self-assessed their own competences throughout the process. The first part of the study was dedicated to attitudes towards teaching in the digital environment. There were two key elements in the students' assessment of online classes – quality and creativity. The disadvantage of online classes, that was mentioned most often, was a lack of interactivity. Spontaneity has become almost impossible in the new circumstances and because the context of teaching and learning has changed completely. The fact is that digital tools offer numerous possibilities for interactivity in online classes (Dukić & Mađarić, 2012) and, as is shown in *Table 1*, interactivity is most often what the students suggested should be improved in online classes, i.e., students being more actively involved in the process. It is, most certainly, one of the directions of improvement that should be considered. *Figure 4* shows, however, that the students were significantly more satisfied with the quality of online classes than they were with their creativity. Moreover, the students did not assess the creativity

of online classes as very good, but they were not completely dissatisfied with it. Many students, 40.4%, chose the answer *neither creative nor uncreative*. The authors are inclined to think that the participants, the students of both study programs, were familiar with more digital tools than their teachers. Apart from that, the authors assume that teachers used the tools that were available (offered, free etc.). Considering the obtained results, the authors concluded that the teachers accepted the challenges of the time in accordance with the possibilities on offer and their own competences. However, from the point of view of the study, a much more interesting question is how participation in online classes will influence the participants and their perception of the educational process and how it will influence their future job and use of e-tools in contact educational work and to what purpose these will be used. The results show that it is still necessary to educate teachers about the possibilities of the digital environment and, accordingly, encourage the use of digital tools in contact teaching to use the potential of everything that can be found online, but also to get closer to students, since they spend most of their free time using screens. Also, it is important to encourage various methods in teaching that are possible live and online, such as breakout rooms in online teaching and group work in live teaching. These are only some of the questions that arise when considering new moments in education. Are students of both early and preschool and teacher education trained to methodically reflect on how they use digital tools? And, if the answer is yes – how is it done? The starting point was that the participants were familiar with many different digital tools and the ways they are used, but working with children, the crucial question is whether their use is methodologically sensible and justified. All these questions are open for debate, as well as those that call for action and changes that are to be introduced into the system, at a much faster pace than has been done so far.

One of the main reasons for quickening the pace of these changes is the time we live in and the fast-changing society and technology, but it is also true that students, future kindergarten teachers and primary school teachers are digital natives (Spitzer, 2018). This fact explains the results of the students' assessment of their quality of life in the pandemic. They belong to a generation that communicates and consumes a great deal of content every day using modern technologies, and they do it for hours. They certainly spend a part of their free time engaged in other activities, as described before, such as learning foreign languages and reading books. It is expected that some participants, who study foreign languages in their free time, understand that

speaking another language and multilingualism are advantages if one is to further develop their linguistic competence. The activity of reading and reading habits are definitely helpful as well. What is a little concerning is that there are students (10% of them) who do not read books at all, and the 40% of those who read, only do it because reading is an *escape from reality, relaxation, rest, a source of knowledge and a window to the world.* Considering the reasons to read, it is not surprising that the participants read news, motivational articles, articles about health and self-help, popular psychology, world trivia, and funny and entertaining texts. On the other hand, they only rarely read fiction (between 5 and 6 books a year). The authors assume that they read professional and scientific literature more because it is also their exam literature. Apart from the limited choice of text types, it is evident that a certain percentage of students, 6.6%, only read books in digital form, whereas 33% of students read both paper and digital books. Why is this information important? Meta Grosman (2013, p. 76) writes: "Numerous European documents about language teaching mention the need for digital literacy even though they are not concerned with digital literacy as a separate form of reading that establishes interaction with a changed text form. With regard to the growing number of digital forms of communication and young 'digital natives', it seems that questions related to electronic literacy will be of utmost importance for the 21st century readers." This points to the need to encourage reading in future educators and teachers precisely because they will be examples to children and students, encouraging their interest in reading. The value of reading a book, both in real and online form, gained its value during the time of the pandemic.

From the results it is evident that future kindergarten and primary school teachers are well-versed in using digital tools, platforms, and systems, but lack systematic knowledge about their implementation and the realisation of the educational content from the point of view of methodology. They single out a lack of interactivity as a major disadvantage of online classes. In the educational context, interactivity implies speaking, listening, and then reading and writing. What this lack of interactivity implies is that all language skills, and some in particular, are neglected.

Bearing in mind that there is no going back and that some positive organisational steps forward were taken as a consequence of the pandemic (for instance, hybrid classes make it possible for children that are ill to participate in class, fulfil tasks, and communicate with their teachers and classmates in real time), one has to consider

what the students' language competences are that are necessary for acquiring educational content in all the various areas.

In this study a relatively small sample showed us some interesting guidelines for the future. This study is also the authors' contribution to raising awareness on the need to master the skills of using digital tools and, even though they do not have all the answers, they believe that they have addressed important contemporary issues related not only to the said awareness but also related to language competences in various contexts. Bearing in mind everything that was obtained in the results, it is important to direct the educational process towards the adoption of the digital environment, the creation of digital content, and their use in teaching at a university. The traditional form of teaching that is mostly present at universities needs to be replaced by more modern and newer forms, which, among other things, include modern digital tools, encourage language competences and reading, and create a good foundation and knowledge that future teachers and educators will pass on to new generations.

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Attitudes of Slovene Fourth-Grade Elementary School Students about Teaching and Learning a Foreign Language with the Support of Information and Communication Technology

Tilen Smajla

Elementary school Pier Paolo Vergerio il Vecchio, Koper-Capodistria, Slovenia
tilen.smajla@guest.arnes.si

Abstract The paper presents the results of quantitative research into the attitudes of young Slovenian foreign language learners towards the learning of a foreign language with the help of information and communication technology (hereinafter ICT). Seven elementary schools agreed to participate, forming a 406-strong sample of 2nd to 4th graders. The students were specifically asked whether they used ICT during their English lessons and for homework. The results show that in the case of gender, the chi square test results showed a statistically significant difference in attitudes towards the use of mobile phones during English lessons and during homework. In the case of class, the regression showed a strong predictor for statistically significant difference. The results should encourage language teachers and policy-makers alike to adjust their teaching methods appropriately and allow for an aimed use of ICT in foreign language class.

1   Introduction

Early language learning has attracted a great deal of attention from academics and practitioners alike, particularly because of the impact of age on the formation of attitudes towards the foreign language (hereinafter FL). The subject was already being addressed in the late 1960s and early 1970s (see Rivers, 1965; Jakobovits, 1970; Lambert, 1972). More recently, Cameron (2001, p. 1) claimed that "foreign language teaching for young foreign language learners differs from teaching for adults or young people." Indeed, young learners are more enthusiastic and livelier than learners, they will often engage in an activity even if they do not fully understand the aims, and they are more concerned about pleasing the teacher than their peers. In the ideal case, effective learning will occur, if "a stimulating and rich linguistic environment is" provided (Winskel et al., 2017, p.142). Winskel et al. further state that "children need to be given many opportunities to be actively engaged and interact with others. This can be quite challenging in the FL classroom, as typically children learning in this context have little exposure to the language outside of the classroom." (2017, ibid.). Young children may also be less self-conscious than older children and adolescents (Lightbown & Spada, 2006; Ellis, 1994). On the other hand, "young learners tend to lose interest quickly and find it difficult to stay motivated and focused" (ibid.). They also "have fewer resources than adults and are less able to analyse language in an abstract way" (Pinter, 2006, p. 17). Therefore, young learners are "not as free as adult learners to make hypotheses about the characteristics of another language" (Pinter, 2006, p. 18).

The early teaching of an FL is a complex psychological-pedagogical phenomenon because it involves many factors that lead to a positive learning outcome, including one of great importance, namely the learner's motivation to learn, if we mention only one of the indirectly important factors that influence the quality of FL competence (Brumen et al., 2015). Moreover, one could state that "motivation is a factor that strongly influences all forms of learning" (Jazbec et al., 2016, p. 126). Other equally important factors are the richness, abundance and constant study of the language (Muñoz, 2016). This is especially important in the first cycle of elementary school (grades 1 to 3), as children begin their educational process as a kind of tabula rasa, which is completely contradictory to the facts. In fact, children enter the process of learning an FL with far more experience of life and the language they are learning (Smajla, 2014). In addition, children have natural abilities that help

them in learning in general and promote the process of learning the FL towards which they have already adopted an attitude (Moon, 2005). Furthermore, MacIntyre et al. (2002, quoted in Mihaljević Djigunović, 2012, p. 57) believe that "young learners vary considerably in their motivation, positive attitude and in the presence or absence of learning difficulties". Teachers or other adults involved in the teaching process should consider the specific behaviour of children and their characteristics when choosing an appropriate teaching approach (Smajla, 2014) or utilize age-appropriate methods and tools. The latter is even more important when discussing the importance of using Information and Communication Technology (hereinafter ICT) in FL class.

2   The Importance of Using Information and Communication Technology (ICT) in FL Teaching and Learning

Information and communication technology has been gradually and somewhat cautiously introduced into FL teaching, a research field that dates it modest beginnings to the 1980s and has since drawn considerable attention (Podgoršek, 2020). Particularly, this is the case with online teaching, which has been in effect in many countries around the world since even before the beginning of the COVID-19 pandemic. Blurton (2002) defines ICT as a "diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information". Winskel et al. (2017, p. 1) claim that in order "for effective language learning to occur, a stimulating and rich linguistic environment is required." That can pose quite a challenge for all stakeholders, let alone for 7–9-year-olds. One way to remedy this problem is to utilise the new technologies to enhance learning by giving children opportunities to interact and engage with native speakers. Beside that, Çakici (2016, p. 73) claims that "research findings over the past two decades provide some evidence as to the positive effects of the use of information and communications technology (ICT) on students." Altun (2015) also claims that using computers, the internet, smart boards, cell phones, video games, music players, etc. for target language learning purposes can raise students' motivation and language awareness. Applying ICT in language learning provides for a more student-centred learning environment. Moreover, Al-Mahrooqi & Troudi (2014) state that by integrating technology into language teaching, teacher-centred understanding and lowering of students' language learning anxiety can be achieved. Students are encouraged to be risk-takers in practicing the target language, as they are digital

natives (ibid.). More importantly, Jayanthi & Kumar (2016) explain the following positive impacts of ICT on FL teaching: availability of materials, students' attitudes, learner autonomy, authenticity, helping teachers, student-centred, and self-assessment. Finally, Jayanthi & Kumar claim that as far as the students' attitudes are concerned, ICTs increase motivation, meaning that students feel more motivated to learn a language, since they display positive attitudes towards language learning when they use computers and learn in a stress-free learning environment (ibid.). On the other hand, ICT fosters learner autonomy, as ICT tools demand learners to take responsibility for their own learning. Students are free to choose the material convenient for their learning styles. Furthermore, ICT provides authentic situations and a real-life learning environment. This sets high standards for the FL teachers and high expectations from various stakeholders, especially since the gap between the highly developed technologies and the classroom methodologies of ICT-supported teaching still proves to be rather vast (Lei, 2010; Jung & Latchem, 2011; Podgoršek, 2015). Considering that the focus of our study is not limited to any particular technology, the general terms of ICT or technology will be used throughout the paper.

2.1 ICT and the Attitudes of Young FL Learners Towards ICT-Supported Language Teaching

The development of technology has had a profound impact on almost all fields, including education (Isman & Dabaj, 2003), and is gaining on importance in FL teaching (Almekhlafi & Almeqdadi, 2010; Dang, 2011; Dogoriti, 2010). Recent relevant research has shown that one of the important factors influencing the perspectives towards technology is attitude (van Braak et al., 2004), which makes attitudes an important factor to consider. Relevant studies have further shown that both English FL learners and teachers alike have positive attitudes toward the use of technology in the FL classroom (Başaran, 2013; Kitchakarn, 2015; Liton, 2015; Mollaei & Riasati, 2013; Uluuysal et al., 2014). Studies in the field of teacher attitudes have also shown that the importance of technology is one of the more important factors in the choice of integrating ICT into instruction (Bullock, 2004; van Braak et al., 2004). If the teacher is not enthusiastic about using ICT in their teaching, they may not be prone to implement it in their instruction. The teacher's positive attitudes towards ICT can spill over to FL learners, which was proved by studies undertaken across the globe (Isman & Dabaj, 2004; Tsai et al., 2001). An overview of the issue

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of the use of ICT in FL teaching is provided by many longitudinal research projects carried out both in Slovenia (Gerlič, 2011) and abroad (Petko & Graber, 2010; Ottestad, 2010, Kresal Sterniša, 2012), covering a wide range of topics. In Slovenia, for example, a relevant study on the use of ICT in German elementary and secondary school classes was carried out by Podgoršek (2011). However, a study focusing exclusively on FL students in the fourth grade of elementary school and their attitudes towards learning an FL with ICT has not yet been carried out. A state-of-the-art analysis of the ICT infrastructure in Slovenian schools, its use, and the ICT skills of FL teachers has already been investigated, as reported by Podgoršek (2015); the role of foreign teachers in FL teaching with ICT has also been thoroughly investigated, as reported by Podgoršek et al. (2019). There is a need for empirical research in the field of ICT use in the FL teaching of young language learners, since so far researchers in the field have mainly focused on studying the attitudes of students in secondary schools and universities.

2.2   Research Questions

Studies have demonstrated that most students have access to computers (Vekiri & Chronaki, 2008) and to the internet at home (Vekiri & Chronaki, 2008). Although this seems not to have been the case in Slovenia in the Spring of 2020, when all pedagogical facilities needed to shut down in-presence teaching and shifted to distance teaching because of the onset of the COVID-19 pandemic. This caused great problems to both students and teachers, mostly owing to the underpreparedness for distance teaching and learning, as well as to the lack of technical support (not all students possessed a desk or tablet computer and not all teachers were prepared for distance teaching). Schools and parents were struggling equally hard to enable the students a quality learning experience, with limited success. There is a common understanding that learning with computers is more interesting and that it provides for better learning conditions for students (Conti-Ramsden et al., 2010; Ari & Inan, 2010). Our study aimed to explore the differences in attitudes towards the use of ICT in language learning with regard to gender and age. Gender plays an important role in the process of attitude formation (Admiral et al. 2014; Heemskerk et al., 2012; Kubiatko & Halakova, 2011; Conti-Ramsden et al., 2010) and is said to have influence over differences in students' experiences and preferences in ICT, and it should be considered when using ICT. The age of elementary school students in the fourth grade may also be a relevant variable, as

well as the class they attend. Consequently, the following research questions were explored:

RQ1: Are there statistically significant differences in the attitudes of 4th grade elementary school students towards the use of ICT in FL 1 learning regarding their gender?

RQ2: Are there statistically significant differences in the attitudes of 4th grade elementary school students towards the use of ICT in FL 1 learning regarding the class they are enrolled in?

3   Method

The study applies a quantitative research paradigm, which employed a survey design to measure the students' attitudes and the extent to which the students use ICT for learning English. The paradigm consisted of a descriptive and causal-non-experimental method of empirical pedagogical research. Our study focused on a pedagogical topic; therefore, the appropriate research method was descriptive. To elicit data for the study, the students responded to the following two parts in the questionnaire: 1) general attitudes towards their FL learning (the first 11 items of the research instrument), and 2) their attitude towards the use of ICT in FL 1 learning (the three additional multiple-choice questions).

3.1   Data Collection

Public elementary schools were randomly selected from a list of schools provided on the website of the Ministry of Education, Science and Sport of the Republic of Slovenia. The schools chosen randomly received a printed detailed description of the study design with its aims, objectives and procedures. The schools that agreed to participate in our study were subsequently sent printed questionnaires. Each FL teacher at the selected schools received printed questionnaires, which were then filled in during English class. There were no specific deadlines for the delivery of the questionnaires. Accompanying disclaimers for parents were sent to the teacher who in turn gave them to the students to take home. Great importance was given to the anonymity and confidentiality of the study. The author provided a stamped envelope that was then sent back to the researcher by regular post.

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3.2 Research Instrument

The research instrument applied in the study was an AMTB adapted from Gardner (1985). AMTB or Attitude/Motivation Test Battery was originally developed to test attitudes and motivation for teaching French as a second language in Canada. The original version of the instrument consists of 104 items. The respondent then expresses their attitude towards an item on a 7-point Likert scale, where 1 means that they absolutely disagree and 7 that they absolutely agree. The instrument has already undergone the process of standardization but has been adapted for the purposes of our study. An 11-item instrument was developed by Smajla for his 2014-2019 study (2019) that was reused for the 2020 study. This part of the 2020 instrument targeted the students' attitudes regarding the learning of FL 1, and there were additional three multiple-choice questions that specifically targeted the fourth graders' attitudes towards the use of ICT in FL class. Since the research was aimed at schoolchildren in the early cycle of elementary school (second grade children or mainly 7-8-year-olds), the instrument underwent a localization process, so both capital letters and simplified terminology were used.

Based on the statistical analysis of the Smajla 2020 study, the results of the confirmatory factor analysis were as follows: the 11 items that targeted students' general attitudes regarding FL 1 learning used in the Smajla 2019 questionnaire were considered for the Smajla 2020 statistical analysis, but only six items qualified, owing to the skewness and kurtosis values below $|2|$. *Table 1* shows the results of the analyses of the skewness and kurtosis coefficients.

As shown in *Table 1*, only six items in bold meet the criteria for further statistical analysis owing to their values below $|2|$. The items are as follows: My attitude towards people who speak English is good, English is interesting, I want to learn English, My attitude towards learning English is good, I am not afraid to use English outside of class, and My English class/my English teacher is good. The above points were then used in the follow-up analyses.

Table 1: Results of the skewness and kurtosis coefficients analysis for the Smajla 2020 research sample

Item	N	M	SD	SK	K
I'm learning a foreign language in order to be able to communicate with others who use this language.	406	6.34	1.23	-2.27	5.54
My attitude towards people who speak English is good.	**405**	**5.25**	**1.93**	**-0.89**	**-0.32**
English is interesting.	**406**	**5.47**	**1.76**	**-1.35**	**0.76**
I want to learn English.	**405**	**5.67**	**1.78**	**-1.36**	**0.83**
My attitude towards the learning of English is good.	**405**	**5.68**	**1.70**	**-1.29**	**0.76**
I learn a lot during English class.	406	6.17	1.40	-1.96	3.25
Learning English is a good thing.	406	6.45	1.19	-2.57	6.74
I am not afraid of using English outside class.	**405**	**5.30**	**2.04**	**-0.94**	**-0.41**
My English class/my English teacher is good.	**405**	**5.96**	**1.62**	**-1.69**	**2.02**
I am not afraid of using English during class.	406	6.14	1.56	-2.05	3.40
Learning English makes my parents happy.	406	6.67	0.92	-3.71	15.89

Legend: M – mean value; SD – standard deviation; SK – skewness coefficient; SE of SK – standard error of skewness; K – kurtosis coefficient; SE of K – standard error of skewness

As far as the research instrument that draws upon the 2019 Smajla instrument, all 11 items were processed in the confirmatory factor analysis. The reliability of the Smajla 2020 research instrument was, based on Ferligoj et al. (1995), very good, since the Cronbach alpha coefficient value was $\alpha = .82$. Based on the results of factor analysis of the 6 items, the values for skewness and kurtosis values met the required criteria, the declared total variance explained was 56, 58% for the first factor, which was a

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good result. Considering all relevant criteria, the instrument was both valid and reliable.

3.3   Research Sample

Invitations for cooperation in the study were sent via e-mail to the schools' e-mail addresses to public elementary schools in the Republic of Slovenia in January and February of 2020. The invitations consisted of a detailed description of the purpose of the study, objectives, significance of the results and procedures (delivery of the questionnaire, anonymity of the research procedures, parental consent). Seven public elementary schools chose to participate in our study producing a 406-strong sample of students in the second grade (137 or 33.7% of students), third grade (131 or 32.3% of students) and fourth grade (138 or 34% of students). Presentation of the sample is shown in *Table 2*. For this study only the fourth graders (*Table 3*) are presented in detail.

Table 2: Sample presentation based on grade

Grade	f	f (%)
2	137	33.7
3	131	32.3
4	138	34
Total	406	100

Table 3: Sample of fourth grade students according to age and gender

Fourth grade students	Age	f (%)	
	9	63.8	
	10	34.8	
	11	0.7	
	12	0.7	
Total%		100	
	Gender	f	f(%)
	M	63	45.7
	F	75	54.3
Total		138	100

Legend: M – male, F – female

As shown in *Table 2*, all three classes of elementary school students were represented relatively equally. There were slightly more students in the 4th grade, but their numbers were not excessively higher than those in the 2nd and 3rd grades. Table 63 shows sample presentation of fourth grade students age and gender wise.

As shown in *Table 3*, the majority of fourth-graders were 9-year-olds (63.8% of respondents), followed by 10-year-olds or 34.8%, while the two remaining respondents (the 11 and 12-year-old) only provided irrelevant numbers that were not included in the analyses. Gender was evenly distributed, with female students slightly outnumbering male students 75 to 63.

3.4   Data Analysis

The data were statistically analysed using descriptive statistics (frequency distributions, mean values and crosstabs). They were then processed by using SPSS IBM Statistical Package version 26. The frequency distribution of the variables and their parameters were examined, and skewness and kurtosis coefficient were determined. The research hypotheses were tested using crosstabs and nonparametric tests, such as the Chi-square test (x2).

4   Results

The results of the statistical analyses are presented in the continuation. Crosstabs were used to perform the analyses and the results are presented using descriptive statistics using frequencies and percentages. In addition to the 11-item questionnaire, the fourth graders received three questions (items 12, 13 and 14) with multiple-choice answers. The students were asked whether they used ICT in FL class, for doing their homework, for learning, and for vocabulary acquisition. Regarding item 12 (We use the following ICT support during FL lessons – multiple-choice answers are possible.), the students could choose between a) a tablet computer, b) a computer, c) a mobile phone, d) an interactive whiteboard, e) none of these, and f) unavailable. Regarding item 13 (When I write my FL homework, I use – multiple selection is possible.) and item 14 (When I study the FL or translate new words, I use – multiple selection is possible.), the students could choose between a) a tablet computer, b) a computer, c) a mobile phone, d) none of these, and e) unavailable.

RQ1: Are there statistically significant differences in the attitudes of fourth-grade elementary school students towards the use of ICT in FL 1 learning in connection with their gender?

Table 4: ICT supported FL class: Statistically significant differences in fourth-graders' attitudes towards the use of ICT in FL learning in terms of gender

ICT in FL learning	G	f	f%	f	total	x^2
Tablet	m	14	12.9	23	108	0.14
	F	9	8.3			
Desk comp.	M	20	18.5	36	108	0.22
	F	16	14.8			
Interactive board	M	36	33.3	73	108	0.55
	F	37	34.2			
Mob.	m	5	4.6	5	108	0.02
	f	0	0.0			
ICT in homework writing						
Tablet	m	6	13.3	12	45	0.59
	f	6	13.3			
Desk comp.	m	8	17.7	18	45	0.42
	f	10	22.2			
Mob.	m	9	20.0	11	45	0.01
	f	2	4.4			
ICT in vocabulary learning						
Tablet	m	5	6.2	12	80	0.45
	f	7	8.7			
Desk comp.	m	17	21.2	28	80	0.06
	f	11	13.7			
Mob.	m	18	22.5	37	80	0.51
	f	19	23.7			

Legend: G – Gender, f – frequency, f% – percentage, comp. – computer, Mob. – mobile phone, m – male, f – female, x2 – Chi-square test

Table 4 has been divided into three main sections: ICT in FL learning, ICT in homework writing and ICT in vocabulary learning. Each section is further divided into male/female frequency/percentage by response, number of participants, total number of participants and statistical significance of the Chi-square test. The statistically significant results are written in bold.

As far as the ICT in FL learning section is concerned, *Table 4* shows the following results: 108 of the 138 fourth grade students answered this question. The majority, or 73 out of 108 fourth graders, indicated that they used an interactive board in their FL class, with the answers equally distributed among male and female students. This

result was followed by 36 out of 108 respondents, who indicated that they used a desktop computer in their FL class, wherein the values showed slightly more male students compared to female students. With regard to the use of tablet computers, the results indicated that 23 out of 108 fourth graders chose this option. Only 5 out of 108 fourth grade students reported having used a mobile phone during FL class, which is based on the result of the Chi-square test, the sole statistically significant difference (p = .02) in the fourth-grade students' attitudes towards ICT-supported FL learning.

The second section of *Table 4* presents the results of ICT-based homework. 45 of the 138 fourth graders responded to this question. The majority, or 18 of the 45 fourth graders, indicated that they used a desktop computer in their FL lessons, with female students slightly outnumbering the male ones 10 to 8. Regarding the use of tablet computers, 12 of the 45 fourth graders answered this question affirmatively, with male students outnumbering female students 9 to 2. Eleven of the 45 fourth graders indicated that they used a mobile phone for homework, which makes this, based on the Chi-square test results shown in *Table 3*, the sole statistically significant difference (p = .01) in fourth graders' attitudes toward the use of ICT-supported FL learning.

The third and last section of *Table 4* presents the results of ICT-supported vocabulary learning. The results are as follows: 80 of the 138 fourth graders responded to this question, and the majority of 37 (18 males and 19 females) indicated having used a mobile phone for vocabulary learning. With regard to desktop computer usage, 28 of the 80 fourth graders indicated having used a desktop computer for vocabulary learning, with male students outnumbering the female ones 17 to 11.

As shown in *Table 4*, the use of tablet computers was the least popular, with only 12 of the 80 fourth graders stating that they used a computer for vocabulary learning, wherein female students slightly outnumbered male students 7 to 5. There are no statistically significant differences in the attitudes of fourth graders towards ICT-assisted FL vocabulary learning, although the values concerning the use of mobile phones lean towards statistical significance (p = .06).

In summary, the results presented in *Table 4* show that the fourth graders who agreed to participate in our study learned a FL in an ICT-supported learning environment. Their FL learning was supported by state-provided ICT equipment, mostly interactive boards, which are a widely used learning support tool in FL teaching in Slovenia, followed by desktop computers and tablets. It is not surprising that the students used their mobile phones for learning at home, as the use of mobile phones in official school environments is largely discouraged. Nevertheless, FL students occasionally obtained permission from their teachers to use mobile phones in class, but only for specific purposes.

A regression analysis was performed to test the research hypothesis. Linear regression was used with the ENTER method. In the regression model, the students' gender and school class were taken as independent variables, while the factor of young Slovenian FL learners' attitudes towards FL learning with the help of ICT was inserted as a dependent variable. By applying this model, 22.4% of the total variance of the model was explained. The regression model was statistically significant ($F = 10.548$, $p < .001$), as seen from *Table 6*.

As shown in *Table 5*, the students' class ($B = -.24$, sig. $< .001$) has a statistically significant influence on the factor of young Slovenian FL learners' attitudes towards the learning of an FL with the help of ICT. The results suggest that younger students (enrolled in a lower grade class) had more positive attitudes towards learning an FL with the help of ICT as compared to students who were enrolled in a higher grade. The students' gender ($B = .11$, $p = .22$) had no statistically significant influence at the 0.05 level on the factor of young Slovenian FL learners' attitudes towards the learning of an FL with the help of ICT.

Table 5: The influence of the students' gender and school class on their attitudes towards the learning of an FL with the help of information and communication technology

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.32	.18		1.72	.08
	Class	-.24	.05	-.21	-4.42	**< .001**
	Gender	.11	.09	.05	1.20	.22

a. Dependent Variable: attitudes (factor)

5   Discussion and Conclusions

This paper presents the results of research into the attitudes of fourth grade elementary school students towards the use of ICT in FL learning. Equipping state elementary schools with ICT has been one of the state educational authorities' more important projects. This was done with the effort of the whole state to create a creative and supportive learning environment and thus boost digital literacy, which is one of the key competences mentioned in both the new edition of the Učni načrt za angleščino (2016) (English as a Foreign Language Curriculum), as well as in the Učni načrt za tuji jezik v 2. in 3. razredu (2013) (Curriculum of Foreign Language Teaching and learning in 2nd and 3rd grade). Brumen et al. (2017) claim that students use technology to communicate with each other (in the FL) and with native speakers or with other students, who are beginners and still need to practice their target language skills. Internet providers, on the other hand, have been actively involved in setting up broadband internet connections throughout Slovenia, offering wireless internet options to as many citizens as possible. In this way, even some low-income families have gained access to internet services that will enable children to learn efficiently at home and from home.

As a follow-up to the study carried out by Gerlič (2005; 2006a; 2006b), which mainly involved FL teachers, our study showed that in most cases, except for the use of ICT in vocabulary learning, male students numerically outnumbered female students in ICT-supported FL learning. Based on the results, male students seemed to prefer using ICT support in their FL classes. Male students made greater use of technology wherever it was available, whether through tablet computers or mobile phones, which can be confirmed by the results in *Table 3* – the ICT section on writing homework and learning vocabulary. In that same vein, Awad (2012) indicated that boys tend to spend more time in front of the computer or mobile phone screen than girls do, nevertheless, this difference does not seem to present a significant impact on their attitudes towards the usage of ICT in the FL classroom. It can therefore be argued that gender effectively plays an important role in the formation of attitudes towards ICT-supported language learning. On the one hand, international research has shown that male students tend to be more interested in and use computers more frequently than female students. On the other hand, various studies have shown that computer use and attitudes towards computers are influenced more by educational opportunities and personality than by gender (Teo, 2006; Ates et al., 2006).

The results of this study have shown female students in the 4th grade of elementary school to be less keen on using digital technologies in the FL classroom, especially mobile phones. This result may be related to the attitudes of female students towards the use of ICT in general. However, the overall results of this study show a different picture when it comes to female students engaging in ICT-based vocabulary learning. One might add that by applying age-appropriate motivational measures, the attitudes of female students might skew more positively towards ICT usage in the FL classroom. The development of digital skills (using ICT and similar) is part of the curriculum in Slovenian elementary schools from grade 4 of elementary school onwards, but merely as an elective course. It would certainly be helpful if all fourth graders attended an ICT course; it should be promoted to a compulsory course in the first cycle (grades 1-3). If introduced to digital literacy at an early age, both male and female students would consequently adopt a more positive attitude and learn to move freely in the digital world.

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The Views and Perceived Experiences of Prospective Primary and Subject Teachers on Forced Remote Education During the Second COVID-19 Lockdown

Kosta Dolenc,[1] Mateja Ploj Virtič,[2] Andrej Šorgo[2]

[1] University of Maribor, Faculty of Education, Faculty of Natural Science and Mathematics, Maribor, Slovenia
kosta.dolenc@um.si
[2] University of Maribor, Faculty of Natural Science and Mathematics, Maribor, Slovenia
mateja.plojvirtic@um.si, andrej.sorgo@um.si

Abstract Amidst the COVID-19 pandemic, university students and teachers had to adapt to distance learning during the closures. To better understand the student experience during the second closure, a study was conducted at the University of Maribor, Slovenia. The study aimed to analyze the views and experiences of 244 prospective primary and secondary teachers from three faculties. The study found that students had a higher workload during the closure, resulting in a preference for synchronous forms of online education over asynchronous ones. Despite this, students generally had positive experiences with their teachers, except for lack of spontaneous discussions. They also missed the social interactions with their classmates, which highlights the importance of the social dimension of education. Additionally, students were expected to participate in domestic activities, which could have mixed impacts on their educational outcomes. In summary, the student experiences with online distance learning were mixed, positively impacting quality of life but not necessarily on the quality of schooling. The findings can serve as a guide for organizing study programs or courses for prospective teachers in online distance education.

1   Introduction

In 2020 and 2021, university students experienced an unprecedented situation caused by COVID-19 and the measures taken to prevent the spread of Severe Acute Respiratory Syndrome Coronavirus-2 (SARS CoV-2). While some of the interventions affected the university community in a similar way to the general population, some of the experiences were unique and mostly related to the relocation of educational and research activities to the home environment as lecture halls and laboratories were closed. According to numerous reports and references, students were one of the most affected populations, and numerous cases of difficulty were reported, including economic, social, educational, family, health and mental health problems (e.g., Bertrand et al. 2021; Marelli et al., 2021; Mudenda et al., 2020; Sahu, 2020). For epidemiological reasons, such as the accumulation of new knowledge, and treatments that needed to be balanced with various socio-economic factors, the rules for closure changed literally on a daily basis, making long-term planning very difficult, if not impossible. These daily changes and sometimes tedious measures led to uncertainty, which is known to cause stress (Greco, & Roger, 2003) and to affect not only individuals but also entire sectors (e.g., Koffman et al., 2020), therefore students were no exception (Elsharkawy & Abdelaziz, 2021).

The most serious measure in undergraduate education at the University of Maribor, Slovenia, was the shift from brick and mortar-based education to remote, mostly online forms. It should be noted that distance education is by no means something new and existed in one form or another for decades before the COVID-19 pandemic in the form of traditional communication channels, such as the mail and e-mail service (Schlosser & Anderson, 1994). Distance education proliferated with the invention of the Internet and has been enhanced over the years by the rapid development of computer power, the invention of small portable devices, and fast connections that allow the transfer of large files and visual communication. These trends transformed distance education into online distance education (Mason, 2000; Means et al., 2009) in parallel to traditional forms.

With the move to online forms with the anytime – anywhere concept as a guiding principle (Fletcher et al., 2007), signs of serious problems and shortcomings are emerging (Maguire, 2005). The major difference from traditional classroom teaching

is that the students and the professor are physically, usually geographically, separated from each other, resulting in a lack of social interaction, which can be a burden, according to Zhang et al. (2004): "E-learning requires students to be more mature and self-disciplined than traditional classroom education, which may explain the higher dropout rates in e-learning programmes compared to conventional programmes".

Prior to the epidemic, at the University of Maribor, online forms of instruction using various online learning environments were available at the discretion of the professor on a voluntary basis and in most cases were combined with traditional (live) instruction (Dolenc et al., 2022). Owing to university regulations in response to the lockdown at the state level, it was not possible to choose the extent to which teachers would include online learning environments in the classroom, as this was the only possible choice besides dropping the courses. As the change was not voluntary, which distinguishes it from previous online and distance education, the authors introduced a new term: forced online distance learning, to emphasise the difference (Ploj Virtič et al., 2021).

One difference between traditional distance education and online distance education is that the instructor and the student can interact in two ways: synchronously or asynchronously (Hrastinski, 2008; Watts, 2016). Synchronous interaction means that the student and the professor are present in the online learning environment at the same time, and asynchronous interaction means that the student decides when to learn. In this case, the teaching materials are prepared for self-study and made available to the student via any medium. It has been shown that a combination of both forms of online distance learning should be the preferred option (Nieuwoudt, 2020).

1.1   Brief Overview of the Lockdown at the University of Maribor

Several distinct periods can be delineated on a timeline of the coronavirus outbreak. The first closure lasted from March 2020 to May 2020 and can be described in terms of emergent (Bratianu & Bejinaru, 2021) and forced (Moorhouse, 2020). The closure of the university was completely unexpected, and no one was prepared for it. Although all the tools needed for online lectures, such as digital identification and

account, the learning platform, and the video conferencing system, were available from the first day of the closure, the education process was more about improvising and finding the most pragmatic and not necessarily the best solutions in the coming days or even months. As a result, a cure that saved an academic year brought several side effects (Dolenc et al., 2021; Kulikowski et al., 2021). While the parts of the learning process where teachers broadcast their lectures, usually accompanied by visual presentations, were the easiest to manage, problems arose in all activities based on practical work (Dolenc et al., 2021). The parts of the learning process, such as learning tools, instruments and materials that are not available at home, could not be done, so alternatives had to be found. In addition, all activities that involved working under the supervision of mentors in organisations, such as schools (Dolenc et al., 2022), hospitals and industry, could not be carried out because of the general measures taken at the state level. Another major problem was access to study materials, such as textbooks, which were only available in libraries, and for many students, the quality of digital technology, internet access and the quality of the place of residence (Ploj Virtič et al., 2021). The lesson learned was that teachers and students quickly mastered the technology, but technological and social interactions were tougher to crack (Kovacz, 2021), and many different views and misunderstandings emerged between students and teachers, leading to unnecessary side effects. Among the many other problems that are not directly related to studying, but indirectly affect it, are health and existential problems (Selak et al., 2021).

One of the positive side effects of the first closure was the reallocation of academic work to research and paper preparation, leading to the rapid dissemination of findings and recommendations to the teaching community (Bao, 2020; Dolenc et al., 2021; Assunção & Gago, 2020; Hodges et al., 2020; Ploj Virtič et al., 2021). By the end of 2020, review articles were already available, summarising findings and guidelines for teaching and further research (e.g., Carrillo & Flores, 2020) in the area of online education and all other aspects of education in unusual and involuntary circumstances, allowing for more focused research questions and possible guidelines for action in the next closures.

A short period followed when some of the activities, especially examinations and those requiring specialised equipment and laboratories, were conducted in person at the faculties, but some were conducted online, at the discretion of the lecturers. This period included a short time in early October 2020 when lectures took place at the faculties with some restrictions, such as the obligation to wear face masks, conduct attendance checks, and use disinfectants, as recommended by the authorities.

Due to the spread of new variants of a virus, the second closure was introduced at the end of October 2020, just three weeks after the reopening of the faculties, and lasted until March 2021. The 2021/22 school year began in face-to-face format with some restrictions, such as the wearing of masks and social distancing, as per the regulations. The second part of the closure followed essentially the same rules and restrictions that had been introduced during the first closure. According to the authors' experience and compared to the first closure, teachers were better prepared for distance education and the regulatory measures during the second wave of the pandemic. The same is true for students, although the main problems, such as those related to socio-economic and health status and pedagogy, are to be addressed as a matter of priority with the quality of learning outcomes and assessment.

1.2   Background of the Study

The current study was conducted during the second closure in the period from December 2020 to February 2021 in the best traditions of practitioner research. The study was based on findings from the first wave (Ploj Virtič et al., 2021; Dolenc et al., 2021; Dolenc et al., 2022), summarised below.

Students:

- Expressed a desire for more asynchronous learning activities than synchronous ones.
- Their satisfaction with learning activities influenced their desire for distance learning.
- There are big differences between small and large group pedagogy.

Lecturers:

- Most of the lectures were delivered synchronously, which can be understood as "talking heads" syndrome – in which the students are mostly passive.
- The reason for this pattern is undoubtedly the rapid shift to online forms, for which the lecturers were not prepared.
- Most educators understood asynchronous teaching as an additional obligation and a call for independent work alongside the traditional face-to-face pedagogical process.
- There are major differences between the pedagogical process in distance education in small and large groups.
- Many educators stepped out of their comfort zone and tried new teaching methods, but at the same time a large proportion of educators reported that they would return to the old, established way of working when the epidemic ended.

Since the intention was to explore the advantages and disadvantages of online distance learning, the authors called them the side effects of distance learning; the main ones are as follows:

- Students and lecturers report common negative and positive side effects of distance education, but there are also unique views that the groups do not share.
- The negative side effects outweigh the positive.
- Lecturers are more negative than students.
- The category of perceived ease of use of tools for online education is the most positive and the category of technology quality is the most negative.
- The positive side effects are attributed to quality of life but not to quality of schooling.
- Lecturers could choose between the environment and their way of working, while students had to adapt. To this we attribute two negative side effects expressed only by students (lack of knowledge and interest of lecturers, understanding and adaptation of lecturers' teaching).

1.3   Aim of the Study

The aim of the study was to analyse the experience of distance learning after the experience of the first wave of the epidemic. Students were partially satisfied with distance learning and mostly expressed the wish to receive more online materials for self-study instead of synchronous online lectures. The results should serve as a basis for preparing online courses that should be as effective and user-friendly as possible, both for teachers and students. As the study was exploratory, no hypotheses were made about the direction and the priority of responses estimated. However, some organisational framework was used, following Dolenc et al. (2021).

2   Methodology

An online questionnaire was sent to students and prospective teachers from three faculties with teacher education programs at the University of Maribor. The final sample consisted of 244 prospective teachers. Of the 244 participants, 168 (68.9%) were prospective primary teachers, all from one faculty, enrolled in a one-degree program, and 76 (31.1%) were prospective teachers of one and two subjects. In the sample, 215 (88.1%) of the respondents were female, 27 (11.1%) were male, and 2 (0.8) reported being other; even though theoretically interesting differences between subgroups were not sought. The participants of the study are referred to as students in the continuation.

2.1   Structure of the Questionnaire and Statistical Analyses

The focus was on four concepts attributed to someone who in their role as a teacher can influence the study process. The concepts were taken from the previous open-ended questions in the instruments of the studies by Ploj Virtič et al. (2021) and Dolenc et al. (2021). These can be understood as organisational concepts without the intention of considering them as one-dimensional instruments. They are: (i) pedagogical process, (ii) teacher, (iii) classmates, and (iv) personal factors. A total of 32 items were given a response scale of 1 (strongly disagree) – 7 (strongly agree), without indicating the meaning of the numbers between the two extremes, where the number 4 can be considered the mean of the scale.

The data were processed quantitatively using the tools of descriptive analysis. Even though some of the statements can be considered reversed because a negative response to them can be seen as a positive influence, they were not reverse coded, as summation of the collected responses was not intended. Owing to the diversity of the content of the items and the reverse response, it was not expected that the Cronbach's alphas of the organizational concepts would be high, which later proved to be true.

3   Results and Discussion

The organisational concept presented in *Table 1* is the pedagogical process.

Table 1: Pedagogical process

#	Text	A	N	F1	F2	F3	F4	F5	F6	F7	Med	M	SD
1	**The amount of independent work in distance learning is greater than in live study.**	/	244	2	8	4	12	32	47	139	**7**	**6.12**	1.33
2	The quality of lab work in distance learning is inferior to live exercises.	N	245	16	21	22	29	61	47	49	5	4.78	1.80
3	In distance learning, there is less collaboration between students than in live study.	N	245	26	16	17	36	45	53	52	5	4.73	1.93
4	The pace of distance learning lectures is faster than live lectures.	N	244	20	11	18	62	43	34	56	5	4.73	1.81
5	When studying live, I find it easier to engage in discussion on my own.	N	245	29	21	25	40	33	34	63	5	4.56	2.05
6	Distance learning enables me to be more present in pedagogical work.	P	245	35	18	21	59	32	27	53	4	4.35	2.02
7	There is less group work in distance learning than in live study.	N	245	53	29	15	44	46	33	25	4	3.82	2.03
8	It is easier for me to follow lectures when studying at a distance.	N	245	50	30	48	47	25	21	24	3	3.51	1.90
9	Owing to distance learning, study materials have improved.	N	244	50	29	41	69	30	11	14	4	3.36	1.71
10	In distance learning, I have better access to study materials.	N	245	69	36	39	45	17	18	21	3	3.17	1.93
11	**The number of lectures and lab work in distance learning is smaller than in live study.**	/	245	103	44	29	44	15	5	5	**2**	**2.42**	1.57

Note: The scale from 1 (totally disagree) – 7 (totally agree); A – Aspect; N – negative; P – positive; ranged by decreasing Mean (M)

From the frequencies of the responses in *Table 71*, it appears that the students had significantly more work during the lockdown. This finding cannot be declared positive or negative until an assessment of the knowledge, skills, and other aspects of learning outcomes has been carried out, which was not possible at the time of the study. This finding contrasts the results of the first lockdown, where students were more enthusiastic about the asynchronous forms of instruction. A new practice seems to have emerged, where lecturers informed students after each lecture what was to be learnt (by themselves) by the next session and what assignments were to be completed, both in parallel with the online lectures. This practice was uncommon before the lockdown, especially for lectures where student participation was voluntary. In some rare cases, students had no lectures at all, so they were forced to study textbooks and other study materials without additional explanations from the teacher, which regularly circulate among them as lecture notes to help them decide what may be the most important parts of an exam.

Even though these are not extreme values, based on all answers it can be summarised that most students could not gain anything positive from online distance learning. Even though online education has been promoted as a path that a modern university should take, this result should stimulate debate on what role distance education should play in a future without any restrictions.

There is only one positive exception, namely: "Distance learning enables me to be more present in pedagogical work". The answer likely follows the organisation of the work at the three faculties included in the data collection. They are all located in one building, and only a minority of students live on a campus nearby. All the others have to use public or private transport, and some of them travel long distances every day. Moreover, the students' schedule lasts from early morning until evening and is interrupted by shorter or longer breaks. For economic reasons student work is not on the list of study attendance enhancers and was almost non-existent during the lockdown.

One of the most interesting findings was that compared to the results of the first lockdown, where students demanded a more asynchronous form of study, in the second lockdown, they demanded a more synchronous form.

Table 2 shows the results of the second organisational concept: teachers as an external factor.

Table 2:. Teachers

#	Text	A	N	F1	F2	F3	F4	F5	F6	F7	Med	M	SD
1	**In distance education, there are fewer spontaneous discussions with educators.**	**N**	**245**	**10**	**6**	**16**	**32**	**41**	**48**	**92**	**6**	**5.43**	1.68
2	**I think professors and assistants get along well in online learning environments.**	**P**	**245**	**7**	**12**	**15**	**32**	**63**	**70**	**46**	**5**	**5.15**	1.52
3	Assistants understand the problems we (students) have with online learning environments.	P	244	12	14	17	47	54	57	43	5	4.89	1.65
4	I find that assistants use more innovative approaches to teaching in online learning environments than professors.	P	245	17	15	14	70	47	35	47	5	4.67	1.73
5	Professors understand the problems we (students) have with online learning environments.	P	244	16	24	26	50	44	50	34	5	4.51	1.76

Note: The scale from 1 (totally disagree) – 7 (totally agree); A – Aspect; N – negative; P – positive; ranged by decreasing Mean (M)

From the results presented in *Table 2*, it can be concluded that the students had positive experiences with teachers. However, the only negative response with the highest scores was the response to the item: "In distance education, there are fewer spontaneous discussions with educators". This finding shows that online distance learning cannot be considered equal or even superior to traditional face-to-face communication during lectures.

The students reported that the teachers were more flexible during the second lockdown, which can be considered as progress.

Table 3 shows the results of the third organisational concept: classmates, as an external factor.

The responses to all three items in *Table 3* can be seen as a negative aspect of online education, meaning that students miss interacting with their classmates. Education is not only about teaching as much content as possible in as short a time as possible, but it is also a social activity.

Table 3: Classmates

#	Text	A	N	F1	F2	F3	F4	F5	F6	F7	Med	M	SD
1	**I miss physical contact with classmates in distance education.**	**N**	**245**	10	5	14	16	24	44	132	**7.00**	**5.86**	1.66
2	I miss visual contact with classmates during videoconferencing lectures.	N	245	28	21	20	38	31	27	80	5.00	4.73	2.10
3	If I can see classmates during a video conference (they have a camera turned on), I'm more motivated.	N	245	51	37	20	66	29	25	17	4.00	3.53	1.87

Note: The scale from 1 (totally disagree) – 7 (totally agree); A – Aspect; N – negative; P – positive; ranged by decreasing Mean (M)

The organisational concept presented in *Table 4* are personal factors that influenced the experience of distance education in the second lockdown.

Table 4: Personal factors

#	Text	A	N	F1	F2	F3	F4	F5	F6	F7	Med	M	SD
1	My family supports me in distance learning.	**P**	**245**	4	5	4	23	26	52	131	7.00	**6.03**	1.38
2	When studying at a distance, I don't need to groom myself (cosmetics, clothes, hairstyle).	**P**	**245**	15	6	14	28	43	32	107	6.00	**5.46**	1.79
3	If I study from home, I am expected to participate in family chores.	N	244	28	16	14	35	39	41	71	5.00	4.84	2.03
4	When studying at a distance, I also do housework (cooking, washing, etc.) during lectures / seminars / lab work.	N	245	22	20	20	26	52	45	60	5.00	4.80	1.93
5	In distance learning, I only join the discussion, when I am personally invited by a professor / assistant.	N	245	19	21	27	27	40	54	57	5.00	4.78	1.92
6	It's easier to follow lectures if the professor has their camera turned on.	P	245	23	15	19	62	25	35	66	5.00	4.72	1.94
7	Using online learning tools gives me a high level of anonymity.	N	244	20	24	29	93	49	15	14	4.00	3.94	1.49
8	Doing family chores prevents me from studying at a distance.	P	245	53	39	23	41	41	18	30	4.00	3.62	2.02
9	When I have the camera on, I find it harder to concentrate.	N	245	51	34	52	37	17	18	36	3.00	3.54	2.03
10	Owing to distance education, the cost of study has increased.	P	244	78	28	39	40	22	12	25	3.00	3.14	2.00

Note: The scale from 1 (totally disagree) – 7 (totally agree); A – Aspect; N – negative; P – positive; ranged by decreasing Mean (M)

Due to the loss of opportunities for student work, the students were mostly dependent on family support. On the one hand, this can be seen as a positive finding, as it shows that most students have a supportive social network. On the other hand, a young adult's dependence on pocket money is far from building healthy individual independence. This finding may explain the high levels of stress and anxiety found in parallel studies (e.g., Selak et al., 2021; Dolenc et al., 2021; Šorgo et al., 2022). Because of distance learning at home, students were expected to engage in home activities, which may have a mixed impact on study outcomes.

4   Conclusion

The students and also the teachers at the university experienced an unforeseen situation and experience during the period of the first COVID-19 lockdown, known as Emergency Remote Education (Bratianu, & Bejinaru, 2021). During the transition to distance education also the period of the second lockdown known as Forced Online Distance Education (Ploj Virtič et al., 2021) was experienced. At the very beginning, a lot of questions and reports of problems with technology arose (Dolenc et al., 2021; Dolenc et al., 2022; Ploj Virtič et al., 2021).

This study confirms the views and perceived experiences of students and provides an insight into the students' perspective on distance learning. The authors have confirmed that students learned a lot from the experience of the first closure, however, they reported that the workload was much higher during the second closure. One can only assume that both students and teachers were simply trying to survive through distance education during the first lockdown, while the real work began during the second lockdown. According to the findings from the first lockdown (Dolenc et al., 2021), students in the second lockdown still experienced and advocated the positive effects on their quality of life, but not the quality of study. It seems that students relied heavily on family support and had a weak social network. On the other hand, students learning from home were expected to participate in home activities and depend on family budget support, which may have a mixed impact on study outcomes. Many results of previous studies were acknowledged and corrected, but there were old and new results that could be predicted and prevented. The inability to prevent serious side effects of these

outcomes is now evident in later studies by several authors (Gabrovec et al., 2021; Lukšič et al., 2021; Selak et al., 2021).

Recommendations

According to Šorgo et al. (2022), recommendations can be given for the following three levels:

- Students (prospective teachers): at the first level of individual students, the best solution would be to suggest that they acquire better equipment. Students being equipped with technology that enables them to master the use of educational technology is something that is non-negotiable.
- Teachers (educators): Since the individual teacher cannot directly influence what kind of technology the students have and the conditions in which they live, the teachers' actions can be as follows: they should either acknowledge and internalise the problem or adapt the content, format and expected outcomes of the courses or adapt the content, format and expected outcomes of the examinations. As a last resort, they should put pressure on those who have access to resources to equip or help each student acquire an appropriate home computer and access to the internet.
- Institutions: For an individual student, the question of who is responsible for providing equipment and fast connections is meaningless. However, any solutions must be systemic and should not rely on charities or one-off support. The most realistic solution would be to be able to rent a device (computer) equipped with licensed software so that all students could follow lectures and prepare themselves in both the off and online environments. The problem of providing fast and reliable internet connections is not an option for the educational institutions but they should put pressure on those who can solve the problem.

Limitations of the Study

The study has several limitations that should be considered to make the results more objective. The main purpose of this study was to analyse the experience of distance learning after the experience of the first wave of the pandemic, wherein students were partially satisfied with distance learning and mostly expressed a desire to receive

more online materials for self-study instead of synchronous online lectures. It is possible that an extended study with other variables could provide clearer results and stronger correlations. However, it is impossible to consider all possible factors in a single study.

The next limitation relates to the lack of responses from the invisible majority of students. The sample comprised about 10 to 15% of the total student population in all three faculties. One can only speculate that the invisible majority held the same opinions and acted in accordance with those who responded. However, within the context of the study design, it is impossible to adjust for this possible error.

The authors can only speculate about the transferability of the results to the student population, as the study was conducted with data collected only from Slovenian-speaking students at the University of Maribor in Slovenia. Students' views and perceived experiences may vary depending on the university and faculty setting, systems used, organisational support and similar factors. The study should be repeated with the inclusion of students from other countries.

The final limitation relates to the nature of the survey. Thus, the results only provide a snapshot of views and perceived experiences. Longitudinal studies would help to continue this research.

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CROSS-NATIONAL ANALYSIS OF EDUCATIONAL VIDEO CHARACTERISTICS

ALENKA LIPOVEC,[1,2] BARBARA ARCET,[1, 2] OYA GÜLER,[3] MARTIN PUTZLOCHER[4]

[1] University of Maribor, Faculty of Education, Maribor, Slovenia
alenka.lipovec@um.si, barbara.arcet1@guest.um.si
[2] University of Maribor,, Faculty of Natural Sciences and Mathematics, Maribor, Slovenia
alenka.lipovec@um.si, barbara.arcet1@guest.um.si
[3] Osmangazi District Directorate of National Education, Research and Development Department, Turkey,
oyaguler.is@gmail.com
[4] Stiftland-Gymnasium Tirschenreuth, Tirschenreuth, Germany
m.putzlocher@stiftland-gymnasium.de

Abstract The paper presents the first results of the EXPERT project, in which Slovenian e-textbooks and associated video lectures are translated into English using machine translation models. Emergency remote teaching and the characteristics of video lectures in five countries (Slovenia, Finland, Germany, Spain, and Turkey) were thoroughly analysed. The questionnaire consisted of ten broad open questions with several sub-questions. Responses were collected from ten e-learning experts, two in each country. A mixed quantitative and qualitative method was chosen to analyse the data. The various characteristics of video lectures were grouped into four pedagogical and six technical principles. The results show that the countries followed diverse paths in providing open educational resources and teacher training during COVID-19 school closures. In all countries, the video lectures' compliance with the pedagogical principles for video explanations was satisfactory, but the interactivity level should have been higher. However, recording formats and the features related to the machine translation model should be reconsidered. These issues will be addressed in the subsequent phases of the project.

1   Introduction

During the pandemic, the impact of e-learning became significant. The essential difference between distance learning, which we choose to engage in voluntarily, and emergency/crisis remote teaching, into which we are forced by a situation over which we have no control, is essential. While distance learning is carefully prepared, organised, and represents a long-term solution, emergency remote teaching takes place only in times of crisis. All content is taught online, even that which would otherwise be taught in the classroom (Hodges et al., 2020). However, not all students can participate in real-time emergency remote teaching (Lowenthal et al., 2020). Their reasons can be economical (e.g., lack of workspace or technology, especially in families with multiple siblings) or cognitive (e.g., approaches for students with special needs that parents or guardians cannot provide). The effectiveness of emergency remote teaching is still being studied. There are warnings that distance learning increases socioeconomic disparities. Viner et al. (2020) report that the impact of crisis education is particularly unfavourable for younger students and at-risk students (e.g., students with special needs, students from other linguistic and cultural backgrounds, students with low socioeconomic status).

The flipped learning approach has existed for some time but has gained new momentum with the help of technology. In flipped learning, the individual learning phase occurs before the group phase (not necessarily group work). Students first receive an educational resource (usually a video), which they watch independently, and then build higher taxonomic levels of knowledge in a collaborative activity in the physical classroom (Santos & Serpa, 2020). Several meta-analyses suggest that a well-designed inverted classroom could serve as a promising pedagogical approach. Studies report a small positive effect on STEM (Science, Technology, Engineering and Mathematics) achievements (van Alten et al., 2019; Wagner et al., 2021; Zhu, 2021). Teachers are most likely to opt for flipped learning for students between the ages of 13 and 18 (Lo & Hew, 2017). The main problems in using flipped learning are the high workload faced by teachers in creating learning materials and the reduced activity of students in learning outside the classroom (Lo & Hew, 2017). Flipped learning's overall impact on K-12 students' academic achievement is still unknown, especially in different subject areas and grades (Lo & Hew, 2017). Zhu (2021) performed a meta-analysis for the K-12 population and reported more positive correlations for STEM than other subjects. Although teaching mathematics

in flipped learning created some teaching difficulties, well-designed flipped learning offered an excellent opportunity to promote 10th to 11th-grade students' mathematical thinking and understanding (Cevikbas & Kaiser, 2020). Yang and Chen (2020) report that flipped learning is effective even in the primary teaching of pronunciation. Students can listen repeatedly to the correct pronunciation by rewinding and repeating the videos until they master it.

Teaching and learning with flipped pedagogy can also be successfully implemented entirely online (Lin et al., 2019). This variation is known as cyber flipped learning. Teachers often implemented cyber flipped learning as an emergency remote teaching method.

So far, research confirms the effectiveness of e-learning with pre-prepared videos (Lipomi, 2020). Videos can serve to (only) motivate, (only) consolidate knowledge, or to develop new concepts. The last ones are, therefore, primarily explanatory. A video explanation is defined as an educational video that follows the principles of the Socrates method. This method is traditionally one of the most widely used and is effective in various fields and within different approaches to teaching and learning, including e-learning. During the COVID-19 pandemic, pre-prepared videos were often used (Lipomi, 2020). The group part also took place in an online environment, based on the cyber flipped learning model.

The effectiveness of video lectures depends on many characteristics. Firstly, most empirical results concern video lectures at the university level. Guo et al. (2014) examined 862 lecture videos from 4 courses on edX, a massive online learning platform (MOOC). Within the scope of the review, the behaviours of 127,839 students watching course videos a total of 6.9 million times were analysed. Guo et al. (2014) found that videos shorter than 6 minutes are more interesting; videos that blend an instructor's talking head with slides are more interesting; lessons taught using informal language are more interesting; classes taught by drawing on a tablet are more interesting; it is not interesting to videotape and broadcast formal classroom environments; videos of enthusiastic and fast-talking instructors are more attractive.

Lin et al. (2019) suggest (a) inclusion of direct communication between the lecturer and the audience, (b) inclusion of the lecturer's face during the presentation, (c) minimalist style of lectures is better than "eye candy", i.e., extensive design components, transitions and other unnecessary additions, (d) suggested usage of tripods, separate voice recorders, removal of cell phones from audio equipment to avoid radio frequency interference, appropriate lighting, (e) using video editing programs, which enable adjusting the audio levels, cropping, inserting cutaways, and removing pauses in lecturer's speech. Similarly, Mayer et al. (2020) reviewed several studies and suggested that people learn better from an instructional video when:

a) the lesson contains prompts to engage in summarising or explaining the material (generative activity principle);
b) the instructor draws graphics on the board while lecturing (dynamic drawing principle);
c) the instructor shifts eye contact between the audience and the panel while lecturing (gaze guidance principle); and
d) a demonstration is filmed from a first-person perspective (perspective principle).

In the following study by Mayer (2021), the evidence-based guidelines for designing video lectures were:

- include multimedia (present words and graphics);
- coherence (avoid extraneous material in slides and script);
- signalling (highlight key material);
- avoid redundancy (do not add captions that repeat the spoken words);
- include spatial contiguity (place printed text next to corresponding part of graphic);
- temporal contiguity (present corresponding visual and verbal material at the same time);
- segmenting (break a complex slide into progressively presented pieces);
- pre-training (provide pre-training in the names and characteristics of key concepts);
- modality (present words as spoken text), personalisation (use conversational language);

- voice (use appealing human voice);
- image (do not display a static image of the instructor's face);
- embodiment (display gesturing instructor); and
- generative activity (add prompts for a generative learning activity).

The essential goal of video lectures should be *interactivity*. It is well-known that interactivity (e.g., adding interactive questions) significantly improves video explanation completion (Geri et al., 2017). It seems clear that people learn better from a video lecture when they are asked to engage in generative learning activities during learning. *Generative learning activities* are behaviours that the learner performs to improve understanding (Fiorella & Mayer, 2015). Examples include taking summary notes (i.e., learning by summarising) or writing an explanation (i.e., learning by self-explaining) or physically imitating the instructor's demonstration (i.e., learning by enacting). Prompts can enhance the educational impact of video lectures and demonstrations. These activities can be particularly effective for students with lower knowledge.

Especially for STEM subjects, it is essential that the content be "created", e.g., mathematical problems be solved gradually, experiments explained in steps, products created in phases, etc. Neither a completed solution (even with a procedure), a completed experiment, nor a finished product reinforce active learning. Therefore, recording of video lectures must be live. Hence, pre-produced drawings are inferior to *dynamically created drawings* by the instructor. In their study, Fiorella et al. (2019) reported that the dynamic drawings group significantly outperformed the static drawings group on the posttest. *Seductive details* are interesting, but irrelevant words or graphics may thus be added to a lecture. While adding exciting video clips or a talking-head window may be tempting, these features can turn into seductive details. Clark and Mayer (2011) point out that people don't necessarily learn better when an interesting, but off-topic, video is added to a multimedia lesson. Mayer et al. (2001) reported that college students who watched a multimedia lecture on how lightning storms develop performed significantly better on a transfer test if short video clips of lightning storms were not interspersed in the lecture. In a computer-based game of how plants grow, college students did not perform better on a transfer test when narrated animations included a talking-head window (Moreno et al., 2001). Adding interesting but irrelevant videos to a

multimedia lesson did not help student learning. This suggests that elements unrelated to the lesson distract students from the lesson and are unnecessary.

Filming from a third-person perspective involves placing the camera across from the instructor to demonstrate a sequence of actions (as is common in YouTube videos or films). In contrast, *first-person perspective* involves placing the camera on or above the instructor's shoulder or forehead (as in GoPro videos). People learn better from narrated videos of a manual demonstration when filmed from a first-person perspective rather than a third-person perspective. In two experiments conducted in the United States and the Netherlands, students who watched the first-person video performed significantly better in the posttests than students who watched the third-person video (Fiorella et al., 2017). The first-person perspective is a social cue that serves to involve learners more in the actions shown in the video. The first-person perspective seeks to craft a sense of self-reference, where students are more likely to feel as if their hands are building circuits, thereby creating a more robust memory for the actions in the video. This approach complements other multimedia design principles to promote productive processing, such as the personalisation principle, which includes using spoken language, and the editing principle, which includes using appropriate gestures (Mayer, 2021).

Horovitz and Mayer (2021) additionally point out the importance of the teacher's *emotional state* in video lectures for university students. They report that the instructor's emotion has similar effects for human and virtual instructors. When the onscreen instructor is visible, people learn better from a video lecture (Rosenthal & Walker, 2020). Additionally, instructors should *shift their gaze* between the audience and the board while lecturing rather than looking only at the board or only at the audience. Looking from the audience to the board is called *gaze guidance* because it suggests that the learner should look at the relevant portion of the board. In one set of studies, Fiorella et al. (2019) reported results with college students who learned about human kidneys from a video lecture with a transparent whiteboard (and had gaze guidance from the instructor). Students performed better on a transfer test than students who viewed the video lecture with a conventional whiteboard (and had no access to the instructor's eye gaze). In another set of studies, Stull et al. (2018a; 2018b) also found that students who learned about chemistry from a video lecture with a transparent whiteboard significantly outperformed students who learned from a video lecture with a conventional whiteboard on an immediate posttest, but only

at a nonsignificant level on a delayed posttest. In an eye-tracking study involving a video lecture in chemistry (Stull et al., 2018a), college students in the transparent whiteboard group tended to look more at the instructor's face and less at the material on the board than students in the conventional whiteboard group. However, the transparent group performed slightly better than the traditional group on a delayed posttest. Overall, there is some evidence that students learn better from lecture videos when gaze guidance cues are visible, yet there were no significant differences in the learning outcomes between conditions (van Wermeskerken et al., 2018).

The language of instruction plays a crucial role. Lee and Mayer (2018) asked Korean college students to view a 16-minute video on wildlife in Antarctica taken from a TV documentary with *subtitles* in English. Students performed better on a comprehension posttest if they viewed a video with printed words rather than a video with spoken words or a video with printed and spoken text rather than a video with spoken text alone. However, adding subtitles to a fast-paced 9-minute episode of a science TV show containing dialogue in English did not help non-native English speakers perform better on a subsequent comprehension test.

Standard video lecture *formats* include lecture capture, picture-in-picture, and voiceover (Chen & Wu, 2015). Lecture capture involves video recording a physical lecture. Picture-in-picture combines a full-screen presentation of the slide content with a small video recording of the instructor (e.g., talking head in a lower corner). In contrast, voiceover combines a full-screen presentation with audio narration by the instructor. Rosenthal and Walker (2020) present an additional format that combines instructor images and content, which the instructor can monitor in real-time; they named the format "live composite". The composite uses two layers: the instructor's video and the lecture slides. Live composite recording can use the green screen technique or other equipment like a glass blackboard. Rosenthal and Walker's (2020) results show that live composite lectures have a distinct advantage over other video lecture formats.

The various characteristics were summarised into ten principles. Four of the principles are somewhat more didactically oriented; probably the most important being the principle of interactivity, followed by the principle of generative activity, the principle of dynamic drawing, and the principle of seductive details. The other six principles are slightly more technical and are also related to pedagogy. They are

the principle of the perspective of the recording, the principle of the teacher's visibility, the principle of the teacher's emotional state, the principle of gaze guidance, the principle of subtitles, and the principle of the live composite of the recording.

In the field of remote teaching, there is a notable lack of high-quality, research-based learning material (e.g., Mayer, 2021). Slovenia has created advanced interactive e-textbooks and a collection of video lectures in the style of the Khan Academy (Pestano Pérez et al., 2020). Unfortunately, both are limited to the national level owing to the language barrier. The materials allow asynchronous use. Therefore, they are helpful for diverse learners, as economic and cognitive impairments can be reduced by teaching outside real-time. STEM subjects were chosen for EXPERT due to their international applicability and because the authors wanted to follow the principle of gender equality. In EXPERT, the authors set themselves the following goals: upgrade and improve learning materials, translate these materials into English, use advanced machine learning models (pivot language), include materials in the Learning management systems (LMS), and explore new models for use in classrooms in an international environment. EXPERT comprises expert organisations from five countries (Slovenia, Finland, Germany, Spain, and Turkey). About 500 primary and secondary school students will be involved in the digital pilot of open education resources (OER). The participation of about 150 teachers and researchers is expected. With developed OER and MOOC, the study will reach a much broader population. The authors are also aware of the low acceptance of this technology by teachers, so they will prepare explicit Instructional Principles for distance teaching and learning in cyber-flipped learning pedagogy and additional instructions for adapting the learning paths in the learning management systems to the needs of the students. The authors will use various project methodologies, as four intellectual outputs are technical, and four are pedagogical. The pedagogical outputs design the pedagogy for technical improvements, integrate the open educational resources into the classroom settings, and evaluate their implementation. Specific methodologies will also be used, such as qualitative and quantitative social science methodologies for pedagogical research.

Only the first results obtained in EXPERT regarding the country report will be presented in this paper.

2 Method

The authors chose mixed quantitative and qualitative methods for analysing data.

2.1 Sample

The data consist of country reports from 5 countries (Slovenia, Finland, Germany, Spain, and Turkey). The data were gathered from May 2021 to September 2021. E-learning experts in five participant countries answered the open questions. At least two experts in each country compromised on their answer. In four countries (Finland being an exception), one of the experts was an active teacher and an educational researcher.

2.2 Instrument

For the purpose of this study a questionnaire was designed, which consisted of several open questions, referred to STEM subjects. The questionnaire was answered by experts in the field of e-teaching.

1. Response to COVID-19 by country
   a. When (approximately) were schools closed in your country (in 2020 and 2021)? (Were ALL schools closed? Which schools were open? What restrictions were applied because of COVID-19?)
   b. Was a consensus reached at the national level on a curriculum (possible teaching recommendations) that is primarily implemented in emergency remote teaching (e.g., recommended objectives/content that is "easier" to implement in distance learning)?
   c. Did teaching staff get **specific** instructions (similar to https://www.distanzunterricht.bayern.de/ in Bayern, Germany) on efficient teaching approaches (e.g., flipped learning?)
   d. Are there any open educational resource (OER) websites with interactive materials for STEM (like http://iucbeniki.si/ in Slovenia)? If yes, were they formed during COVID-19 or before? Who funds them? How is quality management realised? Are there any open educational websites with video lectures for STEM

(similar to https://razlagamo.si/gradiva/ in Slovenia or https://wirlernenonline.de/ in Germany)? Who funds them?

e. How were teacher training courses on creating or using video lectures organised and realised? Was this training mandatory?

2. Video lecture characteristics
   a. Can you estimate the predominant goals of video lectures (e.g., explaining phenomena, consolidating knowledge, motivation, etc.)?
   b. Are video lectures structured in modules (e. g., several consecutive video lectures for a given content area, e.g., a linear function)? If yes, do modules include explanation video lectures and supporting video lectures (e.g., practical assignments, experimental work, motivational video lectures, consolidation video lectures – solving mathematical tasks)?
   c. Can you estimate the predominant structure of video lectures? Do they include learning objectives? Do they have a summary? Do video lectures include instructions for students to summarise content (e.g., take notes)? Do video lectures include instructions for students that help/direct them to explain the material to others?
   d. Is the instruction specific to the medium? Do video lectures follow different instructional steps compared to onsite teaching?
   e. Can you estimate the predominant characteristics of video lectures, according to the listed features:
      i. the interactivity of the video lecture,
      ii. the lesson contains elements to engage students in summarising or explaining the material,
      iii. the instructor draws graphics on the board while lecturing,
      iv. extraneous videos include many seductive details,
      v. visibility of the teacher in the video lecture,
      vi. instructor's emotional state in video lectures,
      vii. the instructor shifts eye gaze between the audience and the panel while lecturing,
      viii. a demonstration is filmed from a first-person perspective,
      ix. the predominant ways of lecture formats,
      x. Are subtitles included or not?

3 Results

The results will be shown in two subsections: the results for country background in the COVID-19 crisis and the results regarding open educational platforms and video lecture characteristics.

3.1 Results by Country

The results by country in the COVID-19 crisis are reported in *Table 1*. The results correspond to questions 1a, 1b, 1c and 1d.

Table 1: Response to COVID-19 (by country)

	School closure (months)	Emergency remote teaching curriculum	Instruction for teaching staff	Video lecture production training
Slovenia	7.5	yes	yes	no
Finland	3	yes	yes	yes
Spain	3	yes	yes	no
Germany	4.5	yes	yes	yes
Turkey	7.25	no	yes	no

There are several additional pieces of information that aid in interpreting the results. For instance, the "third wave" was based on national regulation in Germany. However, such regulations beyond states are atypical for the Federal Republic of Germany, where the states decide on health and educational issues. Similarly, Finnish teachers had various online platforms for sharing teaching guidelines. Some were public, and some were private.

In some countries (like Finland or Turkey), the private providers (aivoapina.fi and Toni Tran, for example) leaned toward the schools and their content of instruction (books, curriculum, tests) and the public ones (MOOD.fi) had exercises and exams online.

Teacher training on the creation of video lectures was exemplary in Germany. It was not mandatory but available to all teachers for free on a recurring schedule. In the state of Bavaria, there were three different organisational levels on which such courses were offered: the state level, via the central academy for teacher training and human resource management, "ALP" in Dillingen, the regional district level

(regional teacher training), and school type-specific consultants on a district level. Some private companies offered teacher training, but they were costly and often advertised non-free software, materials, or expensive tools. The free training courses provided by the state included video and audio recording, video cutting, video embedding in learning management systems, and the enrichment of videos with interactions with particular topics. The consultants on the district level offered free teacher training for schools on demand (e.g., the catalogue of teacher training for higher secondary schools in Upper Palatinate).

3.2   The Characteristics of Open Educational Platforms and Video Lectures

The results corresponding to questions 2a, 2b, 2d and 2e are reported in *Table 2*.

Table 2: Predominant OER platform characteristics

	Goals	Video lecture modules	Video lecture structure	Media specific teaching methods
Slovenia	acquisition	yes	yes	yes
Finland	acquisition	yes	no	no
Spain	acquisition	no	no	no
Germany	acquisition	yes	yes	yes
Turkey	acquisition	yes	yes	yes

In Germany, in many cases, the video lectures were embedded in learning management systems courses together with considerable additional materials. At the beginning of the module presentation, the pre-test was applied in Turkey, and the answers were recorded. After the presentation of the subject, a 5-question evaluation test was done. In Finland, self-study platforms (e.g., aivoapina.fi) had playlists for the video lectures. There were assignments (exercises) connected to the videos.

In Finland, a mathematical problem was solved multiple times during the mathematical video, so the learning objective was to master the problem. The videos didn't include summaries, or they didn't recommend taking notes. This could be due to having the option of rewatching the video.

Even though video lessons in Turkey used the same curriculum as onsite teaching, while the classes were only 40 minutes long in onsite lessons, the lessons decreased to 30 minutes in video lessons. For this reason, practice and course exams were sometimes given to the students in the form of homework. Sometimes they were sent to the student in the form of online exams. In Germany, the instructional steps – in an instructional phase of the lesson – were mostly the same compared to onsite teaching. Where there is individual video instruction, in one phase of any exercise, then the method is specific for the medium.

Table 3 provides results corresponding to question 2e.

Table 3: Predominant video lecture characteristics

		Slovenia	Finland	Spain	Germany	Turkey
Pedagogical principles	PP1 interactivity	medium	medium	medium	high	medium
	PP2 generative activity	medium	medium	medium	high	n. d.
	PP3 dynamic drawing	medium	high	medium	medium	n.d.
	PP4 no seductive details	low	medium	low	high	n.d.
Technical principles	TP1 first perspective	medium	n.d.	n.d	low	n.d
	TP2 emotional state	neutral	neutral	neutral	neutral	neutral
	TP3 teachers' visibility	medium	n.d.	n.d.	medium	n.d.
	TP4 gaze guidance	low	n.d.	n.d.	low	n.d
	TP5 subtitles	no	no	no	no	no
	TP6 format	Voice over	n.d.	Lecture capture	Voice over	n.d.

In Germany, video lectures were mainly enriched by interactions or embedded exercises with automated feedback used in remote teaching (e.g., via H5P). Teachers could share those videos via download or Moodle. In Slovenia and Spain, JSXGraph animations were used to build videos, making them more interactive. In Finland and Turkey, teachers were usually interactors, especially in recorded lecture videos, asking the present students questions.

The generative activity principle is the gold standard and is widely used in Germany. In Finland, Toni Tran used a blackboard, chalk, and sponge to draw (in his lecture videos), but numbers appeared on the screen (the drawing was not shown).

In several countries, predefined slides were often shown only for a short period of time. In some video lectures on razlagamo.si, a teacher could be seen writing and drawing on the blackboard. On the Astra.si, the teacher used a pointer to show a trace on the board where they want the students to look.

Video lectures for younger students often included an avatar (e.g., in a PowerPoint saved as a video), which can disrupt the students' attention. The Finish elementary (lower levels) mathematics (e. g., Alakoulun matematiikkaa) videos contained various objects, distracting the students.

Mathematics video lectures that show hands-on activities or solving a task on a piece of paper are often in the first perspective. Video lectures, in which the teacher is visually present (e.g., in front of a blackboard or as a "talking head") or the teacher is not visible, give the impression of a third perspective. In Germany, first perspective filming was rarely used.

Visibility is essential for all age groups. On the Slovenian website razlagamo.si, the teacher was visually present in only a small percentage of the videos. On Astra.si, the teacher was not visually present. However, visibility depends strongly on the intended use. Suppose the author in Germany aims to publish the video as an open educational resource. In that case, the instructor is not visible in the video. If the video is intended only for the students being taught by the teacher, the teacher is visible in the video.

The teachers primarily had a neutral emotional state, only exceptionally were they positive. Positive states often lead to disruptive elements. During direct instruction, the instructor should be clearly motivated. There can be role-playing elements in video lectures, where certain emotional states simulated by the instructor can be helpful. One of the preferred practices to ensure that presenting the information is more compelling is using body language. Energetic talking, using a varied tone of voice, and making gestures appropriate to the subject content are only a few examples of using body language.

On the Slovenian website razlagamo.si, there were some videos in which the teacher explained the mathematical content on the blackboard directing their gaze directly at the students and the material being written on the blackboard. In Germany, onsite lessons were rarely recorded (recording in the classroom is not allowed by law, and exceptions are rare) Thus, there was no onsite audience in video lectures for usage in schools. Some teachers recorded themselves standing in front of a blackboard while explaining – and yes, most of them respected the gaze guidance principle.

4   Discussion

The results show that responses to COVID-19 in education in participating countries were diverse and not connected to the time of closure. Germany had a relatively short time of full school closure, but they provided teachers with exact instructions for teaching. On the other hand, Turkey and Slovenia had extended closures, but instructions for teachers were not concrete, and training courses on creating video lectures were not provided by national institutions.

Open educational resource platforms' features did not differ significantly by country, with Spain being an exception.

The video lectures were still too long. Regardless of the video lecture's length, students' engagement time is at most six minutes (Guo et al., 2014). Using videos in short chunks or segments is essential for younger children who lack general knowledge and have elevated cognitive loads when processing new information (Slemmons et al., 2018). But these longer videos can often be split into shorter ones. Additionally, interactivity (e.g., H5P) significantly improves video lecture completion (Geri et al., 2017).

Pedagogical principles were followed in the video lectures. The authors believe that dedicated teachers produced video lectures in ERT. Those teachers had good PCK-pedagogical content knowledge (Ball et al., 2008) and excellent TPACK-technological pedagogical content knowledge (Mishra & Koehler, 2006). However, all experts in all countries agreed that video lectures should include more interactivity (e.g., JSX Graph features or H5P). Nevertheless, the video lectures mostly followed the generative activity principle, fostering intersubjectivity. Intersubjectivity is

described as an "unspoken reaction in the room" or "*implicit* conversation between speaker and (silent) audience" (Crook & Schofield, 2017).

In following technical principles (still connected to pedagogy) there is still a lot of room for improvement. Younger children are more prone to respond to teachers' emotional states (Sutton & Wheatley, 2003; Horovitz & Mayer, 2021). Instructors' positive emotions could be applied in all video formats. The authors also noticed that there were too many third-person scenes in video explanations for the first three grades, i.e., placing the camera across from the teacher as they perform the lecture. Videos should be prepared in a more appropriate first-person perspective format, including gaze guidance, according to Mayer et al. (2020). However, this principle could only be observed in some types of VL (e.g., voiceover does not provide perspective data). There were also too many seductive details in the video explanations for the first three grades, which could, according to Clark and Mayer (2011), harm students, as it disrupts the lesson's coherence.

Overall, there is emerging evidence that learners are sensitive to the instructor's presence in an educational video (Mayer et al., 2020; Mayer, 2021). Based on these findings, it may be helpful for video lectures that include an onscreen instructor to make sure that the instructor looks at the audience while talking and sometimes shifts their gaze to the board to signal where to look. Instructional videos where the instructor looks directly at the audience throughout a lecture may be less effective than those in which the instructor occasionally looks over at the material on the board that they are talking about.

Changing the predominant type from voiceover to live capture would be beneficial. The most used video type of video lecture was voiceover without the teacher's presence, which is the type with the lowest learning performance, according to Rosenthal and Walker (2020).

5   Conclusion

Even though COVID-19 measures were approached differently in different countries, there were no significant differences except in Germany, where nationwide teacher training courses and open educational resources of high quality were provided during school closure. The characteristics observed in video lectures

show that the video lectures were in line with video pedagogy guidelines except for the level of interactivity. Including interactive elements (e.g., using H5P) was low. The nature of open educational resources can explain that. Our data did not allow information on post inclusion in learning management systems. Technical characteristics showed a lot of room for improvement, especially in the recording format providing visibility of the teacher and language aspects that allow machine translation to remove the language barrier. Additionally, using equipment for live capture would be beneficial. Additional steps should be taken to create video lecture formats without language-specific texts, which could be done via graphical elements (e.g., arrows).

In EXPERT, several innovations will be designed, such as:

- a machine learning model to be trained to translate e-textbooks efficiently and correctly first into English (as a pivot language) and later into other partner languages;
- community-driven use and improvements of e-textbooks (similar to Wikipedia);
- the possibility of including certain topics from interactive textbooks in learning management system (LMS) and constructing personalised learning paths;
- the first taxonomy of video explanations;
- the first research-based emergency distance learning guides with video explanations; and
- Cyber-flipped LMS didactics for use in situations similar to the COVID-19 lockdown.

The taxonomy of video explanations will be designed to help teachers choose the appropriate video explanation for their students. Explicit guidance will be given on how to help better learners develop in-depth knowledge of distance learning STEM with OER. New innovative ways of individualising the work with prepared materials within the LMS will also be prepared. The results are highly transferable to other subjects in the school system (especially hierarchical subjects, such as languages) and outside the school system (e.g., the neural model of machine transcription and translation). The authors expect an impact on more profound understanding and

knowledge through STEM, the effective use of ICT in teaching by teachers, and the encouragement of decision-makers to achieve a higher level of digital literacy in all stakeholders in the school system. As STEM competences are positively related to the gross domestic product (GDP), the authors expect a potential long-term benefit in society's technological and economic development. The authors see another advantage in raising the digital competences of teachers, researchers, and students.

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Chapter 6

EDUCATION CHALLENGES IN SCIENCE TECHNOLOGY ENGINEERING AND MATHEMATICS

Supporting the Development of Technical Creativity Among Elementary Education Students During the COVID-19 Pandemic

Kosta Dolenc,[1,2] Samo Fošnarič[2]

[1] Faculty of Natural Science and Mathematics, Maribor, Slovenia
kosta.dolenc@um.si
[2] University of Maribor, Faculty of Education, Maribor, Slovenia
kosta.dolenc@um.si, samo.fosnaric@um.si

Abstract The lockdown and the following closure of the University of Maribor created unequal working conditions among both students and staff in those areas of study where much emphasis is placed on practical work. In the Didactics of Science and Technics II course, the content of the course was adapted and designed to focus on technical creativity and monthly project activities instead of prefabricated exercises and products. The exercises consisted of four monthly projects, where students produced various products and reported and presented their results at the end of each project. An evaluation questionnaire was distributed to all participants in the course. The questionnaire was completed by 57 of the total 88 students. The results of the study show that the design of the course, based on technical creativity, fully met and exceeded the expectations of the students and, most importantly, compensated for inequalities and enabled each individual to successfully fulfil the course obligations.

1   Introduction

An important fact of modern times is that the acquisition of certain competences necessary for a future teacher's work in the classroom depends on various forms of formal as well as informal learning. However, unpredictable situations can inhibit or even encourage the success of acquiring these competences. Faculties of education, as institutions for the training of new pedagogical staff, find themselves in a major gap in some situations. They are well aware of the fact that the goal of teacher education is actually to prepare students for successful performance in direct practice. However, events like the COVID-19 pandemic in 2020 can quickly change the quality of the process of future graduates acquiring the competences they need. We must not forget that the best time for future teachers, in terms of acquiring certain competences and developing favourable beliefs in various areas of their continued work, is the time of their studies (Haney et al. 1996; Hribar & Fošnarič, 2016).

In the context of shaping the character of a classroom teacher, the fact that the process of acquiring students' knowledge, skills and habits during their studies must be holistic across the entire vertical, is very important. In this regard, the mechanisms for acquiring certain specific competences, which are the subject of this study, are closely based on the generic competences, which in their essence form their foundation. For example, problem solving, logical thinking, technical creativity, motivation to work in a team, and the ability to search for, select and use relevant data and information with the help of information and communication technology (ICT). Although we know that the process of collaboration is important for the professional development of future teachers, as such a collaborative aspect affects both the development of the individual and the development of the institution as a whole (Fullan & Hargreaves, 2000), certain unexpected situations simply begin to hinder this.

Within the implementation of the pedagogical process of training future elementary school teachers at the Faculty of Education at the University of Maribor, basic technical-technological education is also an important element. In its primary context, it is closely related to the search for creative elements in students, which should be expressed in their applied dimension in direct pedagogical practice. Although creativity can usually be described as the production of useful solutions to

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problems or new and interesting ideas in various professional fields (Amabile 1996; Oldham & Cummings 1996; Zhou & George 2001; Mishra & Henriksen 2018), its promotion can be special, especially in the technical field. Therefore, at the Faculty of Education, when implementing technical and technological content in the classroom, we are constantly looking for ways to foster students' innovation and creativity. In fact, we try to follow the development of creativity in this field so that future teachers will be able to develop problem-solving skills in a new, original, diverse (divergent) way or focus on creating something new and unique, according to Pečjak (2013). We recognize that teaching takes place in a complex space where a high degree of flexibility is required to support learning practices. Therefore, technical creativity, as well as creativity in general, cannot be fostered in the educational system itself without the students, as only they bring it into practice later as teachers (Hall & Thomson, 2005).

The lockdown and closure of the Faculty of Education undoubtedly caused a major problem, especially in the practical field of implementing activities.

Thus, teachers and students had to quickly rely on their own ingenuity. This is reminiscent of the well-known "learning school" (Holly & Southworth, 1989).

This description of a "learning school" indicates that it is extremely important for the development of the future teachers that they are not left to themselves, but that they are given opportunities and incentives to participate. All of this was impaired by the COVID-19 pandemic and the closure of the university. In this case study, the authors wish to demonstrate certain elements of adaptation to the situation in the Didactics of Science and Technics 2 course from the Elementary education study program at the Faculty of Education at the UM. The adaptation and the modified implementation, including the conducted research, are based on a different approach to the acquisition of students' competences, focusing on the development of technical creativity with students' work adapting to the dynamics of project work, instead of conducting classic assembly exercises and products. In this way, an attempt is made to even out the inequalities and constraints among students resulting from the unforeseen COVID-19 pandemic. The authors are convinced that in this context they have even managed to take a step forward.

2   Insights Into the First COVID-19 Lockdown at the University of Maribor

In response to the COVID-19 outbreak most universities around the world transitioned to online environments (Usak et al., 2020). Hodges et al. (2020) referred to this transition, which began overnight and with much improvisation, as Emergency Remote Teaching (ERT). While teachers had at least some freedom to adapt their teaching to Online Distant Education (ODE), students only had the choice to follow their teachers. Therefore, the term Forced Online Distance Teaching (FODT) was introduced as a description of university teaching practices during the closure of the university, and the term Forced Online Distance Education (FODE) was introduced as a description of university education practices during the closure of the university. ERT caught teachers off guard, and they immediately responded by introducing FODT, which should be distinguished from Voluntary Online Distance Teaching (VODT) and Online Distance Teaching (ODT) (Ploj Virtič et al., 2021; Dolenc et al., 2021).

During the first COVID-19 lockdown, three comprehensive studies combining the topics of positive/negative side-effects and the students'/educators' preferences in engaging with FODE at the University of Maribor were conducted.

The first study, titled "Changes in online distance learning behaviour of university students during the coronavirus disease 2019 outbreak, and development of the model of forced distance online learning preferences" (Ploj Virtič et al., 2021), aimed to investigate the response of university students to the new situation. The research sample consisted of 750 university students from the University of Maribor, of which 448 student responses were considered complete. The highlights of the study were:

- The transition to ODE cannot be considered a transition to asynchronous learning because of the prevalence of synchronous and blended lectures. Even though ODE can be utilised anywhere and anytime, it was only used anywhere.
- The biggest jump during ERT occurred with the introduction of the MS Teams videoconferencing system, which was used the most during lockdown but had been hardly used by the students before.

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- Student satisfaction with Online Distant Learning (ODL) has a statistically significant impact on their continued preference for ODL; however, student attitudes toward online learning do not have a statistically significant impact on satisfaction with ODL.
- There are major differences between large group and small group teaching. Working with small groups of students allows for more individualized teaching and learning experiences.
- Students desired more asynchronous activities that would be more meaningful than synchronous ones.

The second study, titled "Perspectives on lessons from the COVID-19 outbreak for post-pandemic higher education: Continuance intention model of forced online distance teaching" (Dolenc et al., 2022), aimed to investigate the response of university educators to the new situation. A call for participation was sent to all potential respondents (n = 914). The research sample consisted of 290 university educators from the University of Maribor, of which 74.4% were professors and 25.5% were teaching assistants. The highlights of the study were:

- Most of the teachers used the video conferencing system to transfer their lectures into an online "talking heads" format, which is a passive format from the students' perspective. Active methods involving active student participation were less common.
- Most teachers understood asynchronous teaching as the provision of course materials and instructions to be completed outside of lecture time.
- FODT helped many teachers to "get out of their comfort zone" and try new methods and forms of ODT, but many of them will return to traditional teaching when the university reopens.

The third study, titled "The difference in views of educators and students on Forced Online Distance Education can lead to unintentional side effects" (Dolenc et al., 2021), aimed to examine the difference between educators' and students' views on FODE during the first COVID-19 lockdown. This study was part of two previous studies and focused solely on the responses to two open-ended questions. The research sample consisted of 347 university students and 210 university educators. The results of the study were as follows:

–   Students and educators shared most of the negative and positive views; however, there were unique views that were not shared between the two groups. The negative views outweighed the positive views.
–   Although the educators were able to adapt or change the teaching environment, their views were more negative than those of the students, who could only adapt to the environment chosen by their educators.
–   Even when students do not have a choice, they find positive aspects that are not based on learning experiences or technology, but on domestic comfort and prosperity.

The valuable insights and highlights from these studies were used to prepare and adjust courses during the second COVID-19 lockdown, which occurred shortly after the beginning of the new academic year.

The second COVID-19 lockdown was different from the first. It was longer and lasted the entire academic year and was also accompanied by severe restrictions. The academic year began with a hybrid teaching model with various constraints regarding the number of students in classrooms and live teaching. After only 14 days, the entire pedagogical process was transferred online, immediately following the restriction of movement between statistical regions and the restriction of free movement of people. A week later, this was followed by new restrictions on cross-border movement between municipalities and the prohibition of offering and selling goods and services to consumers, with the exception of grocery stores. Students were condemned to study in their own, generally confined space, with no ways to socialise or acquire the necessary materials and equipment for the areas of study where much emphasis is placed on practical work.

3   Case Study: The Didactics of Science and Technics II Course

The Didactics of Science and Technics II course is taught in the 4th year of the Elementary Education program. The course consists of 30 hours of lectures, 29 hours of exercises (tutorial), and 1 hour of another form of study (my.UM 2022). Students also complete 60 hours of individual work, which is part of the course. During lectures, all students are grouped, and during exercises, the students are divided into groups. Both lectures and exercises are scheduled for two hours per week.

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The main goal was to dispel the myth that exercises performed in a workshop cannot be performed remotely. This myth was built up during the first COVID-19 lockdown, where these types of exercises were generally put on hold and performed in a compressed fashion after the lockdown ended. Based on the findings from the studies (Ploj Virtič et al. 2021; Dolenc et al. 2022), the exercises were transformed into asynchronous activities, so that the students had active control over the time and place of learning/working. Information and communication technology (ICT), which according to the study (Dolenc et al. 2021) had the most negative impact on students, owing to connectivity problems and weak hardware, was primarily used to document and submit their work.

The content of the course was also adapted and designed to focus on technical creativity and monthly projects (*Figure 1*) rather than pre-packaged exercises and products, which compensated for the inequalities and limitations among students.
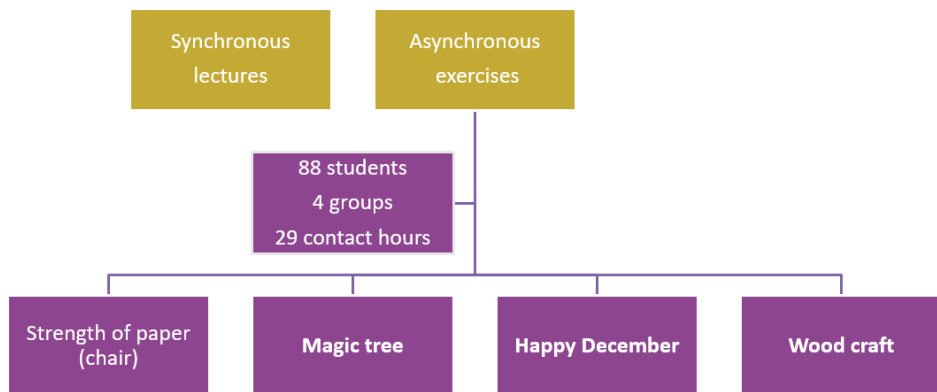
Figure 1: The organigram of the Didactics of Science and Technics II course
Source: own.

The lectures were synchronous, mainly because of student contact with the course. The asynchronous activities had monthly meetings and individual feedback through the instant response system on MS Teams. The activities consisted of four monthly projects, where the students made various products and reported and presented their findings at the end of each project. Following the course, a custom exam was given remotely, without cameras and with mandatory video conferencing presence. The students who attended the course came from all over Slovenia, from Murska Sobota

to Nova Gorica and everywhere in between. Two students even attended the course while on an Erasmus exchange in Lisbon.

3.1   Project: The Strength of Paper (Paper Chair)

The Strength of paper project was a preparatory project and lasted only 14 days. The project consisted of two assignments. First, the students had to test and evaluate the strength of multiple paper profiles (*Figure 2*).

Figure 2: Example of testing the strength of paper profile legs
Source: own.

The students constructed tables, using a hardcover book as the table surface, paper profiles as the legs, and ordinary food as the weights. They calculated the mass before the table collapsed and then compared the data for different paper profiles.

In the second exercise, the students used what they had learned about paper profiles to design and make paper chair legs that could support their own mass (*Figure 3*).

An important goal of the project was also to test and evaluate the submitted project documentation, so that the students learned how to prepare and submit clear, complete, and accurate project documentation. Therefore, each student received personalised feedback on their project documentation. The most common errors were related to reading the instructions, following the instructions, and preparing the project documentation in a way that would allow the teacher to assess and

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evaluate their work. At the end of the project, the students discussed and evaluated the most common errors and problems in a group video conference.

Figure 3: Example of constructing and testing paper chair legs
Source: own.

3.2   Project: Magic Tree

The Magic Tree project was designed in such way that the students first developed an idea and then used any material they could find. It was based on the idea that the Magic tree is a very special tree that allows one's imagination and creativity to run wild. It is a tree that can inspire, teach, tell stories, or simply spark the imagination. Because a project, based on such broad premises, could lose control and allow the imagination to run wild, the students were given the following limitations:

- The Magic tree should be a tree, at least in essence. It must have roots, a trunk, and a canopy.
- The magic tree should be free-standing and measure between 50 and 150 cm.
- The choice of material for the Magic tree is arbitrary. It may be constructed of trash (reuse), natural materials (collected on a long healthy walk), homemade materials (collected while cleaning a room), or all of the above plus something else. The choice is yours.
- The Magic tree must be meaningfully integrated into any content at the elementary level, it can be cross-curricular, it can be part of activity days,

part of a competition, a project that spans the whole school year, or any other part of the school curriculum.

The subject areas of the Magic trees designed and produced were mostly interdisciplinary, some were universal. Most of them were connected to the subject of Science and Technics (42), followed by Environmental and social studies (39), the Slovenian language (32), Art (28), Mathematics (9), Physical education (7), Social education (6), and Music (3).

The ideas for inclusion in the desired subjects were mostly unique. For example:

- Environmental and Social Studies (*Figure 4*, item 1): Family tree and naming of the family members.
- Environmental and Social Studies (*Figure 4*, item 2): Learning about the seasons and fruits that grow on trees.
- Science and Technics in fourth grade (*Figure 4*, item 3): Relating an animal's external appearance to its lifestyle and environment.
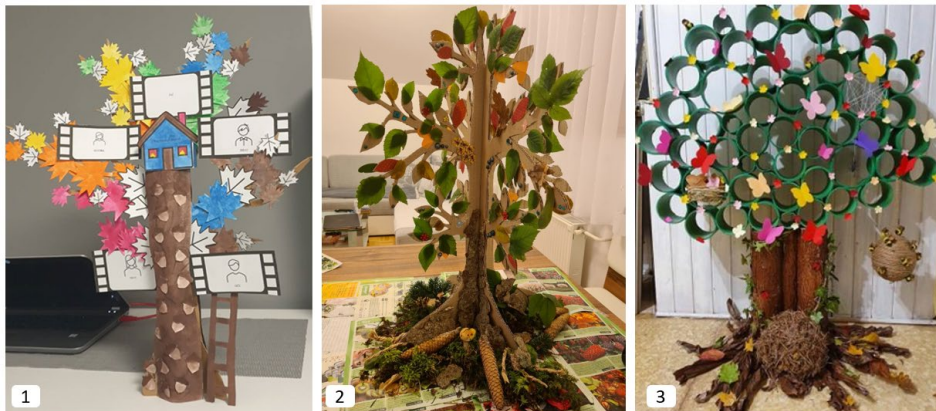
Figure 4: Examples of the students' Magic trees
Source: own.

Some innovative and unique Magic trees were designed to be interdisciplinary (*Figure 5*).

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Figure 5: Examples of interdisciplinary Magic trees
Source: own.

The most common materials used were paper (80), natural materials (53), plastic (49), waste material (46), metal (33), wood (29), and textiles (11), but most trees consisted of a variety of materials (*Figure 6*).
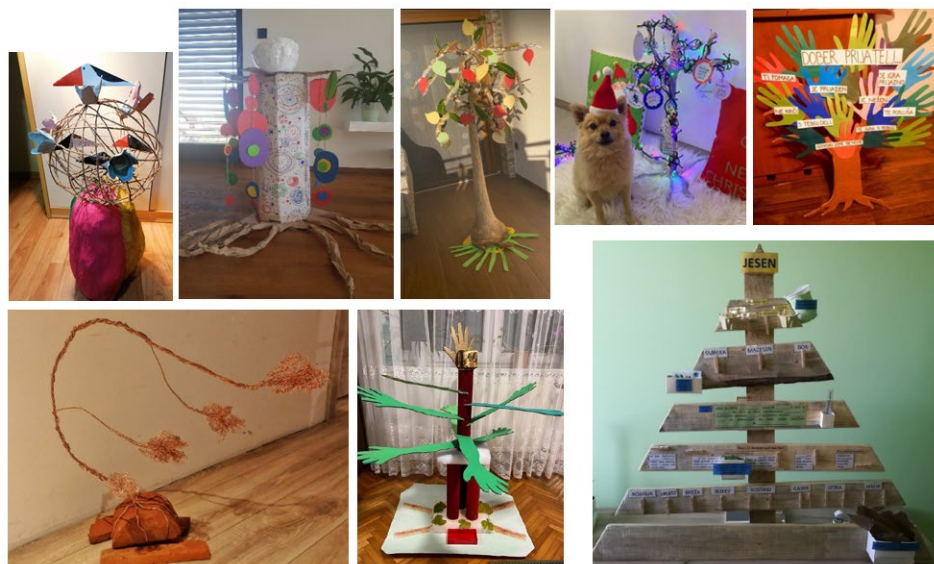
Figure 6: Examples of the materials used in the Magic trees
Source: own.

Most of the Magic trees were intended for classroom use (61), while 26 magic trees were planned for activity days and 7 for long-term project work. Of the Magic trees, 58 were designed as learning tools and 44 as student products. Some were designed as both.

3.3   Project: Happy December

December is traditionally the most festive month of the year. Products made at school and at home are usually associated with Christmas and New Year. With lockdown, movement restrictions, closures, and FODE, December was also the most difficult month in terms of student motivation and well-being. Not only did they suffer from a lack of motivation to study, but also from social deprivation. From their perspective, these were the first holidays, during which they could not celebrate with friends and extended family. The design of the project was strongly influenced by the difficulties the students experienced. Therefore, the Happy December project was planned as a team effort in families with holiday-themed products.

The students were given the following instructions:
In the Happy December project, we will remember those who mean a lot to us and ease our loneliness, as well as those who cannot be with us because of the current measures.

We will be making four products, namely:

- A greeting card (for someone we cannot visit).
- Holiday decorations (to brighten the holidays for a loved one).
- Christmas tree ornaments (to remind us that we can do anything).
- A snowman (to awaken the child in you, or to cheer up your siblings. nephews and nieces, or children from your neighbourhood).

Your job is to have fun at work, make new memories, and spend the holidays in as carefree a manner as possible. There is nothing wrong with inviting your loved ones to create with you, in fact, it is desirable to do so.

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The greeting cards were designed and made in a variety of ways (*Figure 7*). The students used various techniques and materials to create traditional greeting cards, and some students made greeting cards that were more in line with the pandemic situation.

Figure 7: Examples of the students' greeting cards
Source: own.

Most of the students designed and made indoor and outdoor Christmas decorations (*Figure 8*) related to Christmas.

Figure 8: Examples of the students' holiday decoration
Source: own.

Sewing was the preferrable option for making Christmas tree decorations. Most of the students designed and made hanging tree ornaments (*Figure 9*).

Figure 9: Examples of the students' Christmas decorations
Source: own.

The last activity allowed for some customization, mostly related to where they lived and the amount of snow available. Some students lived in areas with no snow or where there was just a dusting of snow. The materials used for the snowman were flexible (*Figure 10*). The students could use bread dough, pastry dough, modelling clay, or any other material that could be used to build a snowman.

Figure 10: Examples of the students' snowmen
Source: own.

The combination of teamwork with family members and Christmas-themed tasks was successful in motivating the students. In the project documentation, a large majority of students reported more than four products being necessary, and their creativity was at its peak.

3.4 Project: Woodcraft

The Woodcraft project was designed to require students to make a functional product out of wood. They could use any type of wood, from branches and sticks they found in the woods to semi-finished wood products, such as boards or plywood. The students also had to use at least four of the basic woodworking processes (drawing, measuring, clamping, cutting, sawing, drilling, sanding, joining – gluing, nailing, screwing, doweling – or surface protection) in making the product. They were advised that the complexity and function of the product would play an important role in evaluation.

The majority of the products were various types of chairs and footrests (*Figure 11*).

Figure 11: Examples of the students' chairs and footrests
Source: own.

Some products were designed to be used as functional objects in the students' living area (*Figure 12*).
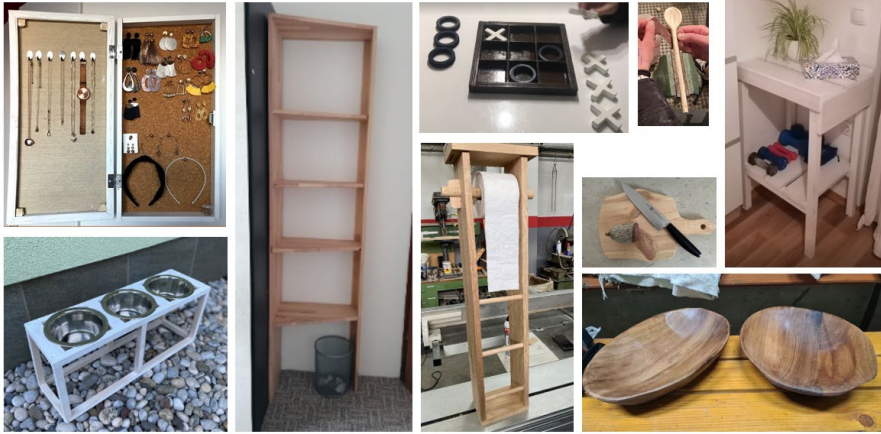
Figure 12: Examples of functional objects in the students' living areas.
Source: own.

Some of the products were also made out of a combination of materials, with wood as the main material (*Figure 13*).
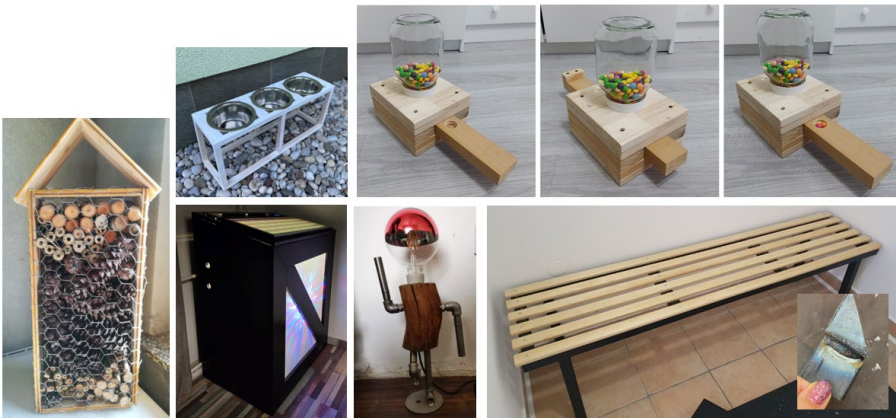
Figure 13: Examples of the students' products made of a combination of materials
Source: own.

The activity allowed the help of a family member who usually acted as an observer. Most often, the students described the role of the observer as an "instructor" who explained the use of machines and tools and oversaw their safety during the manufacturing process.

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3.5 Evaluation of the Course

The students were asked to fill out an evaluation questionnaire after completing all of the course activities. Answering the evaluation questionnaire was voluntary.

Owing to the lockdown caused by COVID-19, an open-source web survey application 1Ka (University of Ljubljana, 2021) was chosen for data collection. The call for participation in the survey in the form of an evaluation questionnaire was sent to the course's MS Teams group. A reminder was sent one week after the initial call. After two weeks, data collection was completed. The survey was anonymous, and the responses were taken as consent. An opt-out option was recognized in that no fields were marked as mandatory, and no participant was subject to abuse or could take advantage of the response.

The sample consisted of 56 out of a total of 88 students, who had completed the course and were willing to participate in the survey.

The evaluation questionnaire consisted of five different parts, however for this case study, only the first two parts are relevant, wherein the authors asked for:

- The students' views on the course (7-point scale ranging from "Completely disagree" (1) to "Completely agree" (7));
- An evaluation of the course (10-point scale ranging from 1 for negative to 10 for positive); and
- An evaluation of the course (open-ended comments).

Data collected with the online system were stored in a spreadsheet file. Descriptive statistics were calculated using the IBM SPSS statistical program. Means and Standard Deviations (SD) were calculated based on frequency of responses and are shown in the tables below. The validity of the scales was ensured by using scales that had already been tested in previous studies.

3.5.1 Students' Views on the Course

The students' views regarding the usefulness of the subject of technics and product manufacturing in the educational process are presented in *Table 1*.

Table 1: The usefulness of the field of technics and the usefulness of product manufacturing

Statement	N	Mean	SD
Before taking the course, I had a good opinion of the usefulness of the field of technics in the educational process.	57	6.0	1.03
Before attending the course, I had a good opinion of the usefulness of making products in the educational process.	57	6.0	0.96
The contents of the exercises have positively changed my opinion about the usefulness of the field of technics in the educational process.	57	5.8	1.66
The contents of the exercises have positively changed my opinion about the usefulness of making products in the educational process.	56	6.0	1.66

The results show that the content of the exercises positively altered the students' already high opinion of the usefulness of the field of technics and the usefulness of making products in the educational process.

The students' opinions regarding content of the exercises and their implementation are presented in *Table 2*.

Table 2: Content of the exercises and their implementation

Statement	N	Mean	SD
I liked the way the exercises were conducted.	57	6.2	1.08
I think the manner in which the exercises were conducted was most suitable in the given situation.	57	6.8	0.45
I expected to gain more skills and knowledge during the exercises.	57	3.2	1.74
I think that I was able to express my creativity and originality in the exercises.	57	6.6	0.92

The results show that the students thought that the exercises were most suitable and suited them in the given situation. They thought that they were able to express their creativity and originality. However, some of them had expected to acquire more skills and knowledge during the process.

The students' opinions on the products and the product making process are shown in *Table 3*.

Table 3: Products and product making process

Statement	N	Mean	SD
I drew sketches of my ideas before I started making the products.	57	4.5	1.89
My idea for the design changed when I started collecting the materials for my product.	57	4.5	1.67
The products would be better if I had access to all the materials to make them.	57	5.2	2.02
The products would be better if I had access to tools and a workshop.	57	4.7	2.21
The products would be better if I had made them at the university.	57	3.8	1.73

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The results show that most students sketched their ideas before making their products, but they changed the design when they started collecting materials for a product. They believe that the products would have been better had they had access to all the materials to make them. They also believe that the products would have been better had they had access to tools and a workshop, however, the majority of them believed that the products would not have been better if they had made them at the university.

In the second part, the students were asked to rate ten areas within the Didactics of Science and Technics 2 course using a 10-point system.

Table 4: Evaluation of the Didactics of science and technics 2 course

Areas	N	Mean	SD
Implementation of the lecture	56	9.2	1.57
Implementation of the exercises	57	9.8	0.58
Responsiveness during the lectures	56	9.3	1.42
Responsiveness during the exercises	56	9.8	0.59
Appropriateness of the products	56	9.6	0.8
Amount of work in the lectures	56	8.3	2.41
Amount of work in the exercises	56	8.9	1.58
Implementation of the Didactics of NIT 2 course as a whole	56	9.7	0.94
Implementation of the course in total	57	8.8	1.63
Exam difficulty	57	7.3	1.91

The results show that the students gave top marks to both the lectures and exercises and to the course as a whole. The same pattern is seen in the responsiveness during the lectures and the exercises, and the appropriateness of the products made in the exercises. The amount of work, exam implementation and exam difficulty were rated as appropriate and with high marks.

The authors received 36 open-ended comments from students. Analysis of the comments shows that the students had an overall positive experience with the course. All comments were positive, and the students' comments confirmed that the design and delivery of the course based on asynchronous activities fully met and exceeded their expectations.

"With the exercises, I liked that we had an activity that included several exercises together and we could decide for ourselves when we wanted to make the product. We were not forced to make a product in a certain week if we happened to have a lot of other commitments that week."

The students' comments also confirmed that delivering the course based on asynchronous activities and adapting the content to focus on technical creativity compensated for inequalities and enabled each individual to successfully complete the coursework.

"I enjoyed the exercises. I already mastered my technical skills and use or work with different tools, so it did not cause me any major problems. However, it is true that I live in an apartment building, and I do not have all the tools or materials at home, so I had to make my own products at my grandparents' or my boyfriend's house, because luckily they had all the materials and tools I needed."

The course was successfully completed by all participants, including those who were abroad on an Erasmus exchange, which further strengthens the claim.

4   Conclusion

The realization of the program for acquiring teaching qualifications at elementary school level was undoubtedly put to the test during the pandemic period at the Faculty of Education at the University of Maribor. All of us involved in this process found ourselves in the unenviable position of putting our ingenuity and perseverance to the test. In the process, the authors also learned a great deal. They found that a specific project modification of an approach that emphasises a higher level of technical creativity can exceed student expectations and, most importantly, equalise inequities and allow everyone to successfully complete all coursework. In the context of what the authors have been doing, they have learned that it is possible to accomplish anything with a carefully planned work strategy. The strategy should not be based on "reproductive activities" or "dictation work", which has little to do with creative technical activity, but on problem-solving strategies that develop divergent thinking. At the same time, the product does not become an end in itself, but a means for the development of the students' comprehensive creative abilities.

In "Teaching in the Society of knowledge", Hargreaves (2003) points out the great demands and expectations of society on all those who will be or are already professionally involved in teaching. So, we find ourselves in a whole bundle of conflicting interests and demands. We expect ourselves to encourage and enable students to acquire quality knowledge so that later on they will be able to promote creativity through their work and contribute to the progress of society. At the same

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time, owing to increasing economic pressures and dwindling resources, we were expected to perform all these tasks as efficiently and with as few resources as possible during the pandemic. Well, we may actually have done it.

Finally, the analysis of the survey results, the complexity of the students' products, and the students' feedback from monthly meetings has shown that students spend significantly more time on technical activities in the home environment than is required by the current curriculum. The most common feedback during the monthly meetings was that the students transferred these activities to their free time. The reasons for this varied, but they all had a common theme: To get away from excessive computer work and to spend time with family members who were allowed to and even wanted to participate in the activities.

All these experiences remind us of how much we underestimated the creativity of students and their willingness to create, design, and produce during "normal" classes. The authors are convinced that in the future, the experience gained can be combined with project or problem-based learning (PBL) and regular exercises in a workshop at the university. PBL is often used as an educational strategy across a broad variety of disciplines and is referred to as a total approach to education (Wells et al., 2009). The PBL process should involve a systematic approach to resolving problems or meeting challenges that are encountered in real-life situations (Levine, 2001). A student's independence, self-direction, and autonomy are considered the hallmarks of PBL (Rideout et al., 2002). PBL is a beneficial learning style, as students acquire problem-solving abilities to deal with a variety of unique life situations (Norman, 2008). In the case study presented, the students were confronted with real-life situations in which they had to solve several problems related to the creation of a product (accessibility of materials, tools, machines, and work environment) in conjunction with the integration of the manufactured product into activities in the school environment. Although they had structured instructions and tasks, they were not guided, but were independent and autonomous because of the nature of the asynchronous activities.

Finally, the authors can say that they have learned and achieved the following:

- Exercises performed in a workshop in ODE are possible with a carefully planned approach or strategy.

- – Project learning within the content framework of the subject area can also be problem-based learning on 'steroids', where students know how to look for and solve real-life problems.
- – More time was spent solving problems on their own initiative than the contact hours in the curriculum. However, none of this placed any obvious additional burden on them, as they enriched their experience of the pandemic in their home environment through the creative cycles of their own work, and even derived a great deal of pleasure from it.

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Analysis of Pictorial Material in Textbooks for Environmental Studies and Social Studies

Polona Jančič Hegediš, Vanesa Kidrič,
Barbara Lazički, Vlasta Hus
University of Maribor, Faculty of Education, Maribor, Slovenia
polona.jancic1@um.si, v.kidric@gmail.com, lazickibarbara@gmail.com,
vlasta.hus@um.si

Abstract A textbook is a learning tool designed for students throughout the learning process. Pictorial material can significantly affect the quality of a textbook and is of great importance in textbooks. The purpose of the study was to examine the quality of pictorial material in textbooks for the subject of environmental studies in the first three grades of primary school and social studies in the fourth and fifth grades of primary school. The pictorial material in the textbooks was analysed according to the set criteria. It was established that the ratio between text and pictorial material in the textbooks was not appropriate in all publishers. The quality of the pictorial material also varied depending on the grade. In all analysed textbooks, photographs presented the largest part of the pictorial material. The pictorial material contributed the most to improving the understanding of the content in the textbooks for the third grade.

1   Introduction

Blažič et al. (2003) cite the demonstration method as one of the basic teaching methods. Demonstration methods include graphic displays, i.e., the use of images, sketches, diagrams, photographs, maps and other tools, visual stimuli, which predominate in the educational process, and auditory stimuli, which are particularly important when displaying the images found in textbooks. "Visual representation is very widespread, and relies on a theoretically broader complex, on visualization, that is on pictorial (graphic) demonstration" (Blažič et al. 2003, p. 53). The pictorial material in textbooks falls under the category of static demonstration, wherein objects and phenomena are not dynamic and do not have the properties of motion. In static observation, the object stands still, and students are given as much time as necessary for observation (ibid.). Images and photographs in textbooks influence the learning process. Students often see pictorial material even before reading the text (Kasmaienezhadfard et al., 2015). Since pictorial material affects the quality of textbooks, an analysis of pictorial material in textbooks was performed in 2020 for environmental science in the first three grades of primary school and for social science in the fourth and fifth grades of primary school. The results are presented according to individual criteria and the publisher.

1.1   Textbooks in Class

Textbooks still play an extremely important role in schools (Ivanuš Grmek et al., 2021a; 2021b). In Slovenia, a textbook is defined in Article 2 of the Rules on the Approval of Textbooks (2015) as the basic teaching material for achieving educational goals and standards of knowledge defined in the curriculum or knowledge catalogue. It supports teaching and learning with a didactic and methodical organization of contents and adapted art and graphic equipment. The content and structure of the textbook enable participants to learn independently, and they enable the acquisition of different levels and types of knowledge. A textbook is linked to a school subject or module and a certain level of education. A textbook is also read as a collection of texts selected in accordance with the objectives of the curriculum. It can be printed or electronic, or both (Rules on the Approval of Textbooks, Art. 2). The textbook acts as a content provider and facilitator that includes several ideas, information, and activities essential to achieve

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the expected results (Khutorskoi, 2006). A textbook is not meant for teachers – it is meant for students.

In this role, a textbook is intended for learning or providing students learning activities (Štefanc, 2005). Several textbooks are available for each individual subject, so the teacher must choose the one that is most suitable for them and the characteristics of their students (Mithans & Ivanuš Grmek, 2020). Ivanuš Grmek (2003) defines a textbook as a special learning book in which science becomes accessible to all students who use the textbook. Marentič Požarnik (2019) finds that a textbook can only be used successfully if it is adapted to students and vice versa, because only in this way do students learn to use effective learning strategies. Writers of textbooks must pay attention to the developmental stage or the level of understanding of the students for whom the textbook is intended. Using a textbook is an economical way of preparing learning materials for students (Lukianenko, 2007). Therefore, most teachers consider textbooks to be the most important resource in the classroom. In addition, textbooks affect what and how students learn and what and how teachers teach (Mahmood, 2011). Textbooks can help students perceive their experiences. If they contain relevant questions and assignments, they can motivate students to think (Iqbal, 2009; Mahmood, 2011; Saeed, 2009). Textbooks are designed according to certain standards. It is necessary to consider the standards for the content organization of the text, page design, printing of pictorial material, font, readability of the content, etc. (Swanepoel, 2010).

In Slovenia, textbooks approved by the responsible scientific council may be used. In accordance with Art. 3 of the Rules on the Approval of Textbooks, it approves textbooks that:

- are in line with the goals of the education system in the Republic of Slovenia;
- are in accordance with the valid curricula or knowledge catalogues, according to the goals, standards of knowledge and contents;
- are in line with modern professional knowledge of the experts in the field,
- are methodologically and didactically appropriate;
- contribute to reducing the weight of school bags;
- are appropriate for the developmental stage and age of the participants; and

– are linguistically correct and appropriate, technically appropriate, and aesthetically and visually appropriately designed.

For textbooks used in the first educational period, developmental and psychological adequacy assessment is also obligatory (Rules on the Approval of Textbooks, Art. 3).

1.2   Pictorial Material in Textbooks

A textbook is a secondary source that cannot replace objective reality but can present it in several ways (original text, sketches, diagrams, etc.), and it must present it carefully and as clearly and unambiguously as possible (Poljak, 1983). The visual design and arrangement of textbooks can give importance and emphasis to some elements in the textbook. Students first visualize and understand the words between the illustrations in their textbooks (Hibbing & Rankin-Erickson, 2003). Peeck (1993) emphasizes the importance of pictorial material in textbooks, which can motivate students to study the attached text and encourage them to process the textual data included in the illustrations in greater detail. Pictorial material can explain and clarify content that is not easy to understand, or it can help create verbal and non-verbal codes, thus increasing the potential for the content of the pictorial material. Many authors agree that including pictorial material in learning material is important for improving the process of learning (Agrawal et al., 2011). Pictorial material can significantly affect the quality of a textbook. Illustrations and words together are an important factor in encouraging children and students.

Nevertheless, students must be motivated to learn. Motivation is considered the basis of creative success, so in the classroom, external motivation usually comes from teachers and learning materials. Accordingly, it is recommended that in the textbook making process, the designer and illustrators pay attention to the effect of images on student motivation (Kasmaienezhadfard et al., 2015). Authors must be very careful when choosing illustrations or pictorial material, as illustrations have a great cognitive and educational effect. If the author chooses an inappropriate illustration, it can act as an inhibitor (Justin et al., 2003). It is important to determine which pictures and photographs students are in constant contact with when learning about the environment and whether children learn from good and quality pictorial material (Lukša et al., 2014).

2   Methodology

The purpose of the study was to determine the quality of pictorial material found in textbooks for the subject of environmental science and the subject of social science.

Descriptive – non-experimental methods of pedagogical research were used. Textbooks from the four largest publishers in Slovenia were selected for the research sample.

The research sample included the following textbook publishers:

-   Mladinska knjiga (Hergan et al. (2014), Hergan (2015), Kozel et al. (2016), Raztresen et al. (2016)).
-   DZS (Skribe Dimec et al. (2012), Skribe Dimec et al. (2013), Umek et al. (2014), Komac & Zorn (2015), Zorn & Komac (2016)).
-   Rokus Klett (Šefer & Kumše (2015), Grošelj & Ribič (2016), Grošelj & Ribič (2018), Verdev & Žlender (2018), Verdev & Razpotnik (2019)).
-   Modrijan (Krnel et al. (2013), Umek & Janša Zorn (2014), Krnel et al. (2015), Antić et al. (2016), Umek & Janša Zorn (2016), Krnel et al. (2017)).

The publishing houses were labelled with the letters A, B, C and D. The pictorial material was analysed with the help of pre-prepared instruments. The instruments consisted of the criteria used to analyse the pictorial material in the textbooks. The data obtained from the analysis of the pictorial material were presented by indicating the absolute (f) and percentage frequencies (f%).

2.1   Criteria for the Analysis of Pictorial Material in Textbooks

For the analysis of pictorial material, criteria were first prepared, the composition of which was based on scientific statements by various authors. The following ten criteria for determining the quality of pictorial material in the textbooks were formulated:

1.   The ratio between text and pictorial material in the textbook.

2. The representation of pictures, photographs, sketches, graphs, tables and schemes in the textbook (how much of which type of pictorial material is in the textbook and which type of pictorial material is most or least represented).

3. Pictorial material's contribution to the improvement of the understanding of textbook content (how much the pictorial material leads/does not lead to the improvement of the understanding of the content or how much the pictorial material is/is not related to the topic).

4. The up-to-datedness of the pictorial material in the textbook (do outdated objects still appear in the textbook?).

5. Authenticity of the pictorial material in the textbook (does pictorial material that does not show an authentic (real) situation appear in the textbook?).

6. Additions to the pictorial material (is all pictorial material accompanied by a description or comment?).

7. Appropriate size of pictorial material in the textbook (does the pictorial material show appropriate ratios between animals, objects and people?).

8. Unnecessary details in the pictorial material in the textbook (do many displayed objects appear in the pictorial material and are there added objects outside the context of the text?).

9. Supporting verbal information with pictorial material (does the pictorial material support verbal information written next to, below, or in front of the pictorial material?).

10. The emergence of a gender stereotype in the pictorial material in the textbook (does the textbook contain pictorial material in which a gender stereotype can be confirmed and pictorial material in which a gender stereotype can be refuted?).

All pictorial material in the analysed textbooks was evaluated according to the stated criteria. The results were compared based on the grade and the publisher.

3 Results

The results by individual criteria are presented in the following section.

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3.1 Ratio Between Text and Pictorial Material in Textbooks

The combination of illustrations and words is an important factor in encouraging children and students. In literature, the material is most effective if it is properly presented. In textbooks, the appropriate ratio between the pictorial material and the text is chosen according to the students' level of development.

In environmental science, textbooks for the first and second grades by all four publishers were found to have the same ratio between pictorial material and text; namely, pictorial material represented 70% and text 30%. For the third grade, publishers A, B and D had the same ratio between pictorial material (60%) and text (40%). Only publisher C differed and had 50% pictorial material and 50% text.

For social science, the textbooks for the fourth and fifth grades had quite different ratios between pictorial material and text. For the fourth grade, the textbook from publisher A had 30% pictorial material and 70% text, and from publisher B it had as much as 60% pictorial material and 40% text. In contrast, the textbooks from C and D had the same ratio between text and pictorial material. For the fifth grade, the textbook from publisher A had 70% pictorial material and 30% text, and while the share of pictorial material (50%) and text (50%) from publisher B were the same, the textbook from publisher C had 40% pictorial material and 60% text, and the textbook from publisher D had the least pictorial material, namely 30%, and as much as 70% text.

3.2 Representation of Pictures, Photographs, Sketches, Graphs, Tables and Diagrams in the Textbook

The study examined the representation of various pictorial materials in textbooks.

For the subject of environmental science, photographs had the highest representation (65.5% of all pictorial material), followed by pictures (30% of all pictorial material), and schemes (1.8% of all pictorial material), sketches (1.4% of all pictorial material), tables (1.0% of all pictorial material) were much less represented, while the least represented were graphs (0.2% of all pictorial material).

Table 1: Numbers (f) and structural percentages (f%) of types of pictorial material for social and environmental science

Types of pictorial material	Environmental science		Social science	
	f	f%	f	f%
Pictures	121	30.0	341	20.2
Photographs	265	65.6	1.119	66.2
Sketches	56	1.4	16	0.9
Graphs	9	0.2	1	0.1
Tables	41	1.0	8	0.5
Diagrams	71	1.8	206	12.2

Source: Own

For the subject of social science, photographs also had the highest representation (66.2% of all pictorial material), followed by pictures (20.3% of all pictorial material), schemes (12.2% of all pictorial material), sketches (0.9% of all pictorial material), tables (0.5% of all pictorial material), while graphs (0.1% of all pictorial material) were also the least represented.

3.3   Pictorial Material's Contribution to the Improvement of the Understanding of Textbook Content

Pictures allow students to use their imagination to identify events in a book, which encourages students to come up with ideas based on their imagination and creativity. Diamond (2008) believes that pictures in textbooks are important, as their use causes students to learn better and with greater ease. Children often associate pictures with their life experiences, thus finding the meaning of the picture.

The results show that pictorial material contributed the most improvement in the understanding of textbook content in the third grade (100%), a little less in textbooks for the first grade (99.6%), and the least in textbooks for the second grade (99.4%).

Publisher A stood out because all pictorial material (100%) was related to the presented topic, publishers B and C were equal (99.8%), and the smallest connection between pictorial material with the presented topic was found in publisher D (99.3%).

The social science textbooks were almost entirely (99.9%) related to the topic for the fourth grade and slightly less (99.7%) for the fifth grade.

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3.4 Up-to-Datedness of the Pictorial Material in the Textbook

Jurman (1999) says that a textbook is intended for mass use, so it must be designed according to certain principles. The language in the textbook must be appropriate to the developmental stage of the students who will use it; the difficulty must be adapted to the average student at a certain stage of development. The personal component is also important, as it creates an attitude towards the book among students. There are various types of content in textbooks that need to be up-to-date. It is important to choose content that will be the same for at least five years, as textbooks are approved for five years (Turk Škraba, 2006).

The study utilised only pictorial material the up-to-datedness of which could be clearly understood. Any topic related to the past was omitted in the analysis. The results show that, concerning the pictorial material, the textbooks for the third grade (30.0%) contained the least obsolete items. The textbooks for the second grade (36.4%) contained a few more, and the textbooks for the first grade (42.2%) contained the most. The textbooks from publisher A contained the most up-to-date pictorial material (78.6%), followed by publishers D (69.6%), C (54.8%) and B (54.3%). There was more obsolete pictorial material (20.0%) in textbooks for the fifth grade than in the fourth grade (15.7%). The publishers A and D had fully updated pictorial material in their textbooks (100%), B had a little less (90.0%), and the publisher C had significantly less (44.4%).

3.5 Authenticity of the Pictorial Material in the Textbook

The visual design and arrangement of textbooks can give importance and emphasis to some elements in the textbook. Students first visualize and understand the words between the illustrations in their textbooks (Hibbing & Rankin-Erickson, 2003). Authors must be very careful when choosing illustrations or pictorial material, since illustrations have a great cognitive and educational effect (Justin et al., 2003). Students at the primary level in particular internalize pictorial text, so it must be authentic, which means that it depicts the true reality of the children's world. For the subject of environmental science, most pictorial material depicted authentic situations (98.1%). However, there were also cases where the pictorial material did not represent an authentic situation (1.9%). Also, for the subject of social science,

there were some examples of pictorial material that does not represent an authentic situation (1.2%).

3.6   Additions to the Pictorial Material

In addition to subjective influences, the objective conditions or methodological determinants of the textbook are important in the design of the textbook. Jurman (1999) defines them as follows:

- Substantive
- Design
- Cognitive
- Technical

In the technical determinants of textbook design, the general form of letters and illustrations must be adapted to the developmental stage of students, readability must be maximal, illustrations must be correctly arranged in the text, and the textbook format for lower grade students must be A4 (ibid.). In the study, the additions to the pictorial material were delineated as either description or commentary.

Pictorial material had adequate additions in textbooks for the second grade (98.2%), slightly less in textbooks for the third grade (96.9%), and least in textbooks for the first grade (96.1%). The textbooks from publisher C had the most proper additions to the pictorial material (98.6%), followed by publishers D (96.8%), A (96.6%) and B (96.6%).

In textbooks for social science, pictorial material had adequate additions more often in the fifth grade (99.0%) than in the fourth grade (96.3%). Publisher C stood out, as all pictorial material (100%) had adequate additions, followed by D (98.7%), A (97.7%) and B (94.7%) with the smallest share.

3.7   Appropriate Size of the Pictorial Material in the Textbook

The study also observed the appropriate size of the pictorial material, as well as the size ratios between animals, objects and people.

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The results show that the size of the pictorial material in the textbooks was most often appropriate in the first grade (99.7%), followed by the third grade (99.3%), and it was least appropriate in the second grade (99.0%). In terms of the appropriate size of the pictorial material in the different publishers, publisher C stood out the most (99.5%), followed by A (99.1%), D (99.4%) and B (98.9%). The pictorial material was more often adequately sized in textbooks for the fifth grade (98.8%) and less often in textbooks for the fourth grade (97.4%). Among the publishers, all pictorial materials were adequately sized in the textbooks by publisher C (100%), followed by A (99.1%), D (98.7%) and B (94.7%).

3.8 Unnecessary Details in the Pictorial Material in the Textbook

In learning literature, the materials are most effective if they are properly presented. Therefore, in textbooks, only a small number of pictures is selected that best helps to understand the text in different parts of the same chapter.

In the textbooks for environmental science, most of the pictorial material was without unnecessary details (99.7%), but some examples contained unnecessary details (0.3%).

In the textbooks for social science, all examples contained necessary details (100%).

3.9 Supporting Verbal Information with Pictorial Material

The language used in the textbook should be close to the student. It must be interesting to encourage the student to participate. Language includes not only text but also pictorial material. In the first three years of primary school, pictorial material already carries independent messages and can completely replace the text. Art and graphic equipment are also important for the effectiveness of the textbook. Therefore, the role and position of pictorial material, font, font size, textbook format, text structuring, titles and subtitles, and transparency of information are important (Blažič et al., 2003).

The study also focused on whether the pictorial material was related to the discussed topic. There were some cases in the textbooks for environmental science where the pictorial material did not support the verbal information (0.2%). In the case of the

textbooks for social science, all pictorial material was supported by verbal information (100%).

3.10   The Emergence of Gender Stereotypes in the Pictorial Material in the Textbook

Visual images are often treated as ornaments in textbooks, although they are much more than that. Younger students learn from illustrations that help them shape their views of society. Books and textbooks are examples for students, based on which they can form certain stereotypes as soon as at the age of five. Children's books are an important source of gender stereotypes. Gender stereotypes were present in the pictorial material in the textbooks for environmental and social science.

The highest number of gender stereotypes in the pictorial material, where it could be understood, was present in the textbooks for the third grade (88.1%), slightly less in the second grade (77.6%) and the least in the first grade (65.6%). The least gender stereotypes were present in the pictorial material from publisher A (58.1%). In contrast, the percentages were higher in B (83.3%), D (85.0%) and C (85.4%).

The results showed that more gender stereotypes were present in the pictorial material in textbooks for the fifth grade (92.9%) than in textbooks for the fourth grade (80.0%). They were least present in publisher A (80.0%) and most in publisher C (91.7%).

4   Conclusion

It can be concluded that the choice of pictorial material in textbooks for environmental and social science is still given too little attention. Although the authors of the textbooks follow certain criteria when choosing pictorial material, the authors of this study believe they should follow the criteria presented in this paper.

The study found that there was a much higher proportion of pictorial material in lower grades than text. In contrast, it was the other way around in most textbooks for the fourth and fifth grades. The reason for that could be that the students in the lower grades are just learning to read, and the content is easier to remember with the help of pictorial material. The division of the ratio between pictorial material and

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text was appropriate in most textbooks. However, there were also a few cases where, in our opinion, it would have been better for the ratio to be more appropriate to the developmental stage of the students.

Umek's and Cimeša's (2008) study showed that there was the most illustrative text in fourth grade textbooks for social science, while explanatory text was in second place. The same could be seen in publisher B in the current study, while publisher A had more text. Lukša et al. (2014) state that concepts in environmental science must be presented in textbooks in the form with which children have the most contact because this way children learn about nature and everything around them. Without authentic images or pictorial material, the student will not recognize certain concepts in everyday life. Therefore, it is important that the textbook contains as many instances of pictorial material as possible that give meaning to the real situation of the children's world. Photographs and pictures were the most represented in the textbooks. Here, the authors must point out that pictures were most represented in lower grades and photographs in higher grades.

Pictorial material can motivate students to study the attached text and encourage them to process the textual data included in the pictorial material in more detail. Pictorial material can also explain content that is not easy to understand (Peeck, 1993). The authors' criterion for supporting verbal information with pictorial material is also derived from this. In the study, some pictorial material that did not support the verbal information was also found in the textbooks. Such pictorial material confuses the student even more and distracts from the content.

A criterion that was determined, among other things for the analysis of pictorial material, was appropriate additions to the pictorial material, as Blažič et. al. (2003) emphasize that the role and position of pictorial material and titles and subtitles are important. Most of the pictorial material in the textbooks in this study was organised according to the authors' advice.

Poljak (1983) states that it is very important for students at the primary level to present facts and abstractions artistically. Reality should be presented as realistically, obviously, and unambiguously as possible, and the facts as close to the students as possible. Thus, it is important for the pictorial material in the textbook to be authentic and to show real situations in the children's world. The analysis of the

pictorial material showed that there are also cases in the textbooks where the pictorial material presents inauthentic situations that distance students from reality.

There were various topics in the textbooks that needed to be up to date. It is important to choose content that will be the same for at least five years, as textbooks are approved for five years (Turk Škraba, 2006). The same can be related to pictorial material, which must show current things and situations. The study showed that there were examples of pictorial material with obsolete objects, especially in the textbooks for environmental science – less so in the textbooks for social science.

The study also focused on the phenomenon of gender stereotypes in pictorial material. Gender stereotypes were still present in the pictorial material in the textbooks for environmental and social science. The analysis of three textbooks (*Playway to English 1*, *Magic Adventure 2*, *Cookie and Friends*) also showed that the textbooks contained a lot of gender stereotypes and that they would need some corrections, depending on the children's cognitive development and their visual perception and depending on the age of the children for whom the textbooks were intended. Men are more often represented in textbooks than women. Moreover, in all textbooks, men are presented as more active, and women are presented on the side in a silent social role (Sovič & Hus, 2014). In the pictorial material used in the current study, females were also often depicted as housewives.

It would have made sense to include all textbooks for the primary level in the sample and thus obtain more detailed data, which would certainly have provided a better picture of the situation in this area.
Finally, in the future it would make sense for textbooks to:

− contain a ratio between the pictorial material and the text appropriate for the level of development of the students;
− contain different types of pictorial material;
− contain pictorial material that would be fully related to the presented topic;
− present current objects and situations authentically; and
− contain properly equipped pictorial material.

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Real situations must be presented in the pictorial material, without unnecessary details and with an appropriate ratio between the size of the objects in the pictorial material.

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Identifying Scientific and Non-Scientific Claims in the Natural Sciences

Nika Golob,[1] Polona Avguštin[2]

[1] University of Maribor, Faculty of Education, Maribor, Slovenia
nika.golob@um.si
[2] University of Maribor, Faculty of Natural Sciences and Mathematics, Maribor, Slovenia
polona.avgustin5@gmail.com

Abstract The purpose of the research was to establish whether elementary school students differentiate between scientific and non-scientific claims and whether the use of scientific criteria is effective. The study was carried out on 31 eighth and ninth graders from one primary school in Slovenia. Each student had to take a test consisting of ten claims that they had to classify as scientific or non-scientific at their own judgement. The test was followed by a discussion in which six scientific criteria were defined that the students had to use to classify ten other claims as scientific or non-scientific. The results show that there are no statistically significant differences in test performance between eighth and ninth graders and between tests. After a discussion with students, they were found to have many misconceptions. These were successfully overcome by having students express their own opinions and ideas to better understand science and develop the critical thinking needed in adult society.

1   Introduction

Every day we are exposed to a plethora of information. Some of it is scientifically proven, some not. But how do we distinguish the scientific from the non-scientific? What criteria define science? Shermer (2002) defines science as a set of methods for describing and interpreting observable or completed phenomena, past or present, designed to build tested knowledge open for refusal or confirmation. Scientific myths are common, as we are exposed to scientific issues on a daily basis, and people are curious, we want to know how things work. Some answers can be found very quickly, others with more difficulty, as they are more demanding due to the complexity of a phenomenon and the existence of different aspects or views of this phenomenon (Daempfle, 2013).

2   What Is Science?

When we think of the word science, we probably think of a thick book, a laboratory, a scientist in a white coat and gadgets, like a microscope. This, of course, cannot explain what science is, as it is a broad term that includes the following aspects (Baran et al., 2013; Berkeley University of California, 2013):

- Science is knowledge and a process. It is a process of discovery that allows us to link facts into a comprehensive understanding of the natural world.
- Science is exciting. It is discovering how things worked in the past, how they work today and how they will work in the future.
- Science is useful, as it can be used to discover new technologies, treat diseases, etc.
- Science is in progress, as our knowledge is constantly evolving and expanding. This leads to new questions.
- Science is a global human endeavour, as people all over the world participate in the process of science.

It is useful to know what scientific procedure is, as this helps to identify misleading and untrue claims or statements. This is how we learn to properly analyse and correctly assess many of the questions that arise daily. But before analysing, it is necessary to know how science works. Baran et al. (2013) stress that science is a process based on asking questions. When questions are asked, we look for evidence-

based answers, but because not everyone agrees, a debate begins. That is the basic scientific process: ask questions, give answers, debate, review, and ask more questions. So how does science work? Not as it does in most elementary and secondary schools, where students follow certain instructions to perform laboratory exercises. Almost everyone knows what the results of the experiment will be, and what chemicals and utensils will be used. After the experiment, they have to write a report and explain the results of the experiment, which they usually find in a book or in the teacher's explanation during the chemistry class. Thus, in the school process, we usually get the correct result and the evaluation itself is very simple (Baran et al., 2013). Science, however, is not as simple since it is necessary to independently find a correct answer that is not known in advance.

2.1   Scientific Procedure

The scientific process can be divided into several steps, which usually follow one another consecutively. These are (Baran et al., 2013):

- research and discovery;
- information gathering;
- stating hypothesis;
- testing of hypothesis;
- conclusion; and
- analysis within the scientific community.

The first step in science is usually asking questions, observing and initial experimentation. In addition to observing, data collection and experimentation are important, not in order to achieve the final result, but to make it easier to choose between various interpretations and hypotheses to continue the research (Baran et al., 2013).

A hypothesis is a tested statement that is always either adopted or rejected at the end of the study. It must express something unambiguous with a clear approach to testing (Lack & Rousseau, 2016). Opinions and assumptions based on supernatural and mystical explanations that cannot be tested do not fall within the scope of science (Baran et al., 2013; Afonso & Gilbert, 2010). Scientists conduct experiments

to test hypotheses. These experiments must be well planned, otherwise the data used may be worthless.

In most experiments, a control group is required. Random errors can be reduced by repeated measurements (Baran et al., 2013). A conclusion or interpretation of the results of the experiment follows. After testing, the hypothesis is confirmed or rejected. If the hypothesis is rejected, it does not mean that the study is finished. Scientists can set new hypotheses, repeat an experiment, or continue to research and seek new evidence that could confirm their hypothesis. Cooperation with other scientists is essential to ensure the best possible interpretation of the functioning of the world and natural phenomena (Berkeley University of California, 2013).

2.2.   Scientific Criteria

This paper focuses on six important criteria that determine science and can help students distinguish between scientific and non-scientific claims. They are the following, as summarised from the article "Is it science?" (University Corporation for Atmospheric Research, 2015):

- Scientific is *natural,* subject to *continuous observation and testing.*
- Scientific truth is *temporary,* subject to new discoveries.
- Scientific findings are *uncertain.*
- Scientific findings should be *shared with society.*

Scientific explanations are based on natural laws. Articles published by scientists must be tested and peer-reviewed by the scientific community. Scientists can explore on the basis of their beliefs, but the results may not be adopted in scientific articles. The subject of research can be a car, a battery, mental health, or the weather. In any case, science is usually limited to natural explanations, as these can be scientifically confirmed (Viney, 2007).

Observation of the phenomenon/event must be a planned and targeted activity. It is observed through the senses (hearing, vision, type, smell, taste). Students come to know the concept of a variable through observation, if observing a changing feature. Measuring and observation aids, such as a microscope, a magnifier, a telescope, etc., may be helpful in observing (Ambrožič et al., 2010).

The research must not be influenced by personal beliefs or financial reasons. We must be prepared to accept and correct the errors (Lack & Rousseau, 2016). Rauch (2013) writes: "At the bottom of this kind of scepticism is a simple proposition: we must all take seriously the idea that any and all of us might, at any time, be wrong. Taking seriously the idea that we might be wrong is not exactly a dogma. It is, rather, an intellectual style, an attitude or ethic" (p. 58).

Scientific explanations should be open to new research and evidence (Viney, 2007). Over time, we can find new evidence that changes our understanding. If scientific discoveries are tested several times over time, then that knowledge becomes a theory (Berkeley University of California, 2013).

Science is also uncertain, as we are never 100% certain. Being 99% certain means there is still a 1% chance of being wrong. The weather is an excellent example, as predictions are usually reliable, but with a 90% chance of rain there is still a 10% chance that it will not rain (University Corporation for Atmospheric Research, 2015).

Table 1: Criteria for identification of scientific and non-scientific claims

CRITERIA	APPLIED IN THE SCOPE OF SCIENCE
Natural	Science is limited to studying natural phenomena or mechanisms in the environment we live in.
Testing	Natural phenomena must be tested. Tests (experiments) in science must be predictable and repeatable.
Observation	The phenomenon or event must be detected by human senses or by various devices, such as a microscope or a thermometer.
Temporary	Scientific explanations and findings of phenomena are temporary, as new evidence can be found that changes the understanding.
Uncertain	Science is uncertain, as there is no scientific phenomenon that we are 100% certain of.
Society	Science depends on society. It requires cooperation with other scientists, providing findings in scientific journals, articles, etc.

Source: Adapted from (University Corporation for Atmospheric Research, 2015).

Society plays a major role in science. Sometimes it is good to include other scientists in studies, as they can help us see things from a different angle (Adams, 2013; Lack & Rousseau, 2016). The reasons for publication in established scientific journals is that the community also benefits from it, science can progress faster and more effectively, and new dogmas are subject to scientific review (Lack & Rousseau, 2016).

For the purpose of the study described in the following sections, the criteria summarised in *Table 1* has been adapted on the basis of the literature used. These criteria present a tool for identifying scientific or non-scientific claims for elementary school students.

3   Findings on Learners' Conceptions of the Nature of Science

Daempfle (2013), a university biology professor in Great Britain, believes that we are exposed to scientific questions on a daily basis in almost all areas (e.g., history, science, philosophy). In various countries and among all communities, there are widespread beliefs that are not scientific and are often referred to as pseudoscience. Mugaloglu (2014) emphasises that the intrusion of pseudoscience into science education is a problem in science education today. Scientific myths, which are the result of misconceptions and beliefs, are occurring more and more in our society. There are several reasons why people do not show great interest in science. These are, according to Daempfle (2013): a) the media highlight the greater value of sport and leisure, b) progress in technology is more oriented towards fun than towards teaching, c) the value of hard work has decreased dramatically over the last century, d) poor critical thinking and literacy and e) the mode of teaching at school does not attract students.

Below the authors present some of the research conducted so far in the field of understanding science and non-science, with the aim of better highlighting the studied topic. Different beliefs are somehow an appropriate context for learning the nature of science. Non-scientific explanations appeal to students' interests and are socially and personally relevant to the everyday lives of individuals (Afonso & Gilbert, 2010). Based on a small sample of students Thompson and Logue (2006) state that the older the students, the more difficult it is for them to accept that their perceptions are wrong, while younger students have a more open desire to learn and obtain new information. Younger students also have more or less appropriate and correct perceptions. However, a number of cases were observed, where students were confused by sub-questions. Ten-year-olds feared failure since it was very difficult to get an answer from them. Older students, however, often thought about the question longer before giving their answer. The authors also observed that the responses of the youngest students were based on observation, while the oldest elementary school students, besides observed information, considered their existing knowledge. The researchers also wondered how students accept the fact that their

perceptions are wrong. They found that, especially the oldest students, find it very difficult to accept being wrong. Even when their beliefs were rejected by an experiment, they did not give in, suggesting rooted beliefs that are very difficult to change (Thompson & Logue, 2006).

Afonso and Gilbert (2010) examined the beliefs and explanations of university science students and non-science students for "water dowsing", a pseudoscientific method for finding groundwater. Their results show that many students believed in the effectiveness of water dowsing and gave pseudoscientific explanations for it. Moreover, the students were not aware of the demarcation criteria between science and pseudoscience (Afonso & Gilbert, 2010).

In an extensive study on a larger sample (247) of American students, Abraham at al. (1992) found that 28% of all responses indicated poor understanding of chemical phenomena. The authors of the study believe that the vast majority of chemistry teachers rely on the text written in the textbooks and use the interpretation of natural sciences with laboratory work too little (Abraham at al., 1992). The inadequate understanding of students' conceptions of the particulate nature of matter is supported by a literature review by Karataş et al. (2013), in which many research findings suggest that students' conceptions of the particulate nature of matter range from belief in a continuous form of matter to sophisticated ionic and molecular representations. Although students' conceptions often became more sophisticated with age, many student responses still contained inappropriate macroscopic conceptions (Karataş et al., 2013).

According to Akgün (2009), future teachers have difficulty in defining terms, such as dissolving and diffusion, and believe that they derive from misconceptions by their previous teachers. The author therefore suggests that teacher incomprehension should first be eliminated, otherwise misunderstanding spreads further to younger generations (Akgün, 2009). A study by Arias and Davis (2017) examined the learning trajectories of four pre-service teachers of science teaching practice in supporting students in making evidence-based claims during a two-year practice-based teacher education program. One teacher supported elementary students in analysing data in an inconsistent manner, while another teacher developed sophisticated support. The results of this study suggest that elements of the program, such as coherence, facilitate learning. All this has implications for teacher educators (Arias & Davis,

2017); therefore, we could also expect positive effects on students' knowledge and beliefs.

A positive change in better understanding among younger students was observed by Novak and Treagust (2022) as they examined how students develop an integrated understanding of scientific ideas and how they apply their understanding to new situations. When students explore a phenomenon, they need to gather evidence and use scientific ideas and arguments to understand and make sense of the phenomenon. In their study, the authors examined the gradual development of 7th grade students' scientific ideas over four iterations of a scientific explanation of a freshwater system. The authors show that knowing how to use scientific ideas to explain phenomena must be learned, as well as developing an integrated understanding of scientific ideas. The students participated in an open-ended, long-term project-based learning unit in which they created an explanation over time. Novak and Treagust (2022) emphasise that students need opportunities to make claims based on existing evidence and to use scientific ideas to justify why the evidence supports the claim. They also need support not only to understand that they need to incorporate scientific ideas, but also how to incorporate those ideas. It is not enough for students to learn about scientific ideas. Students need to use ideas to understand phenomena, to develop an integrated understanding of scientific ideas, to know how to use those ideas, and to apply that understanding in new situations. Through various iterations of explanation during qualitative research, the students were able to engage in richer discussions using appropriate scientific ideas. The students were also able to better use new knowledge in new situations (Novak & Treagust, 2022).

The difficulties with the nature of science were also observed by Cobern et al. (2022) on a sample of 500 prospective elementary and middle school teachers. They found that during their studies most students considered noncontroversial science to be correct and that almost all acknowledged the provisional nature of science, regardless of what they thought about controversial issues. In his qualitative survey study, Karaman (2022) examined the views of practicing elementary school, physics, and science teachers (750 participating teachers), regarding the distinction between science and pseudoscience in the specific context of astronomy and astrology. The teachers used six different dimensions to distinguish science from pseudoscience: universality, source, verification, methodology, aims, and progressiveness. Many of the teachers' conceptions of science did not necessarily match contemporary

representations of the nature of science in the science classroom. The results of this study suggest that teachers should be given opportunities to refine their conceptions of the nature of science in professional development programs (Karaman, 2022). It is advisable for science educators to focus more on the relationship between data and evidence in the classroom that leads to the permanence of scientific knowledge (Cobern at al., 2022). Ferguson (2022) argues that "society can both trust in scientific evidence and question scientific bias in the same space, holding these two seemingly opposite positions in productive tension" and concludes that we should teach students to do the same when using critical realism in science.

Because of these results, systematic and sustained efforts have been made to teach the nature of science. Implicit and explicit teaching approaches have been developed in numerous research studies, as cited in Afonso and Gilbert (2010). In the implicit teaching approach, the effective understanding of the nature of science is the result of guided, hands-on, inquiry-oriented activities. In the explicit teaching approach, the various dimensions of the nature of science are clearly addressed and reinforced through reflective, hands-on experiences with their application. Thus, Afonso and Gilbert (2010) conclude that the implicit approach has had limited success, while the explicit approach appears to be more successful. Lederman at al. (2002) point out that the current state of this line of research calls for a focus on individual classroom interventions aimed at improving learners' beliefs about the nature of science rather than mass assessments aimed at describing or evaluating students' beliefs. Thus, the authors of this paper took the explicit approach in their action research case study with eighth and ninth graders.

The authors believe that understanding science is crucial in contemporary society, therefore they wanted to determine whether it was possible – using scientific criteria (*Table 1*) – to better distinguish scientific claims from non-scientific ones, thus eliminating many of the misconceptions encountered by students on a daily basis. In his book, Deampfle (2013) cites some common scientific and non-scientific claims. Some of these were used in this study.

4   Research

Before beginning the study, the following research questions were posed:

    a.   Do students distinguish between scientific and non-scientific claims?

b. Do the students' final grades in chemistry affect their ability to distinguish between scientific and non-scientific claims?

c. Is the use of scientific criteria effective in separating scientific and non-scientific claims?

d. Are there any differences between students in the eighth and ninth grade in understanding science and non-science?

4.1   Sample

The study involved 17 eighth-grade students and 14 ninth-grade students from an elementary school in Slovenia, so the results cannot be generalised to the entire population.

4.2   Research Methods

For the purpose of the study, the authors first reviewed the literature relating to scientific and non-scientific claims and based on that prepared two worksheets: one with ten claims, and one with ten different claims and descriptions of criteria defining science. The claims with the arguments are presented in *Table 2* and *Table 3*. The test and implementation of the planned lesson in chemistry class in the eighth and ninth grade of elementary school allowed the use and interpretation of the prepared criteria on science in the evaluation of the claims made. By analysing the results of the completed written worksheets, the authors obtained data that was processed at the level of descriptive statistics using the Excel software tool. The statistical analysis was carried out using SPSS software. For the difference between the two tests (before and after explanation and introduction of criteria) and sections (eighth and ninth grade), a non-parametric statistical χ^2-test of the hypothesis of the same probability was carried out at the level of inferential statistics.

In determining the difficulty index, the authors considered that in dichotomous scoring knowledge tests, the difficulty index is defined as the proportion of students who answer the item correctly. A high difficulty index means that a low level of measurement is required for a positive response (Sočan, 2004, p. 13).

Table 2: The scientific claims used in testing

1.1. Steam condenses in contact with a cold surface. (Criteria: Natural, Testing, Society, Observation)

Condensation is a state when water vapour transforms into a liquid. It can be formed in two ways (Rutledge et al., 2011):

1. The air cools under the dew point. The dew point is the temperature at which condensation occurs. When the warm air comes into contact with the cold surface, it reaches the dew point, and the water vapour condenses.

2. Air becomes saturated with water vapour. Water vapour molecules are far from each other. If the air is saturated with water vapour, these molecules are closer, and when they reach the saturation point, the water vapour condenses.

1.7. Water is at its highest density at 4°C. (Criteria: Natural, Testing, Society, Observation)

Water as a substance has typical properties that are a result of strong bonds between molecules of water, called hydrogen bonds. The result is the high boiling point of water and high specific heat. An unusual characteristic of water is the lower density of ice (solid phase) than water (liquid phase), as the maximum density is at 4°C (Drofenik, 2013).

1.8. Metal is a better heat conductor than wood. (Criteria: Natural, Testing, Society, Observation)

Thermal conductivity is a property of a substance that can be explained by the particles it consists of. Atoms in metals are arranged in crystal structures. As a result, the fluctuation is easier or faster to pass through the substance. Free electrons in metals also contribute to conductivity (Krnel, 2011). They transfer energy from one part to the other even faster with their movement in metal. Metals are therefore good conductors. Insulators such as wood have a very disorderly structure. The basic particles in the wood are large molecules of glucose, which require a lot of energy to fluctuate, so the heat transfers slower than in metals (Krnel, 2011). Many insulators contain air in the intermediate space, which is a bad conductor. Metal is therefore a better heat conductor than wood (Krnel, 2011).

2.1. The Sun heats the Earth's surface unevenly, as this depends on the angle at which the Sun's rays fall. (Criteria: Natural, Testing, Society, Observation)

The amount of heat absorbed depends on the radiation angle of sunlight. The surface is most heated if the sunlight falls perpendicularly, as most of the energy is transmitted to the smallest surface. Surfaces at various inclinations can receive significantly different amounts of radiation and these differences are the main cause of the large differences in vegetation, soil, snow cover, etc. in an environment with a varied relief (Rakovec & Vrhovec, 2000).

1.5. If food is stored in the refrigerator instead of at room temperature, it will deteriorate at a slower rate. (Criteria: Natural, Testing, Society, Observation)

Food goes bad because of the microorganisms present, such as bacteria, yeast or mould. Cold temperatures in the refrigerator do not destroy, but only slow down the growth and reproduction of microorganisms, as these require water, nutrients and a suitable temperature for their growth and reproduction. If the ambient temperature is 4°C or lower, it becomes unfavourable for the growth of microorganisms. They will, of course, continue to grow and reproduce, but slower than at room temperature (Fraser, 2012).

2.5. Green plants cannot survive in eternal darkness. (Criteria: Natural, Testing, Society, Observation)

The main task of green leaves is photosynthesis, during which the leaves can produce up to 200 billion tons of sugars per year, requiring sunlight collected with chlorophyll in chloroplasts (Dermastia, 2007). Besides sunlight, green leaves also need water and carbon dioxide. With the process of photosynthesis, the plant produces sugars. Besides the sugars, it also needs mineral substances for normal growth that are extracted from the soil (Godec et al., 2015).

1.3. Friday's forecast expects showers with an average temperature of 20°C. (Criteria: Observation, Uncertain)

Meteorology is an atmospheric science focused on weather processes and weather forecasting. The variables of the Earth's atmosphere change over time. Events in the atmosphere are very non-linear

and change rapidly. The weather forecast is therefore most reliable 10 to 14 days in advance. Later on, the reliability decreases. (UCAR, Center for Science Education, 2019).

2.2. It was once thought that the number of human chromosomes in the body cells of a healthy person is 48; today, owing to advances in technology, we know there are 46. (Criteria: Observation, Temporary)

The first genetic analysis was conducted in the field of cytogenetics, where 48 human chromosomes were enumerated in the body cell. Later, in 1956, Tjio and Levan (1956) found in their study titled "The chromosome number of man" that there were in fact 46.

2.7. Some plants are carnivorous. (Criteria: Natural, Society, Observation)

Editors of Encyclopaedia Britannica state that some plants are truly carnivorous and almost all of them grow on swamp ground, where the soil is poor with minerals. This is why they are adapted to attract, capture, execute, digest and absorb important animal (especially invertebrates) substances that are not derived from the soil (Encyclopaedia Britannica, 2021).

Note: Claims for the first test had number 1 as a leading number and those for the second test had 2 as a leading number. For each claim, the authors used the criteria defined in Table 1.

Table 3: The non-scientific claims used in testing

2.9. You have to wait at least an hour after having a meal before going swimming. (Criteria: Testing, Society, Observation)

Many people believe that swimming right after having a meal can cause muscle spasms, but there is no evidence to confirm that. This myth is associated with the digestive system as the parasympathetic nervous system, which is a set of nerve fibres that send a signal for blood and energy to come from other parts of the body towards the digestion system. This does not mean, however, that the muscles will not get enough oxygen and nutrients to function normally when swimming (Daempfle, 2013).

2.10. Storing hot food in a refrigerator destroys food. (Criteria: Observation)

Leftovers of hot food are recommended to be stored in a refrigerator to slow down the growth and reproduction of microorganisms. During the process of cooling the food at room temperature, we increase the possibility of growth and reproduction of microorganisms, which can consequently be harmful to our health. The only negative side to storing hot food in a refrigerator is that the refrigerator will use more energy to cool the food to the desired temperature in the refrigerator (Daempfle, 2013).

1.2. My birthday is at the beginning of February so I'm an Aquarius. That means I am loyal and sociable. (Criteria: Natural, Testing, Society, Observation, Uncertain)

Prothero (2013) states in their study that a large number of surveys showed that 20–30% of Americans, Canadians and Britons believe in astrology, but a large percentage of people do not even know the difference between astronomy and astrology. As long as there are at least a few people who believe this, horoscopes will still appear in magazines, and the people who write them will earn well. The bad thing is that people waste time and money, making decisions based on horoscopes (Prothero, 2013). In the absence of any reliable research on astrology, the claim is not scientific.

1.4. I'll be rich when I grow up. (Criteria: Natural, Testing, Society, Observation, Uncertain)

Believing in something without any doubt is not scientific (Jaffe, 2010). If what you believe is not reproducible (tested), then it does not belong in the field of science (Nilsson, 2014).

1.6. Most people believe that dogs do not sweat because they breathe heavily through their mouths when hot and cool down only this way. (Criteria: Natural, Testing, Society, Observation)

Dogs lose most of their heat by breathing through their mouth. The water evaporates from the tongue through the open mouth, resulting in loss of heat. Besides heavy breathing, blood vessels are wider in the heat, causing greater heat loss, especially on the head and ears where the skin is very thin. Dogs still have sweat glands, which are most densely arranged in the area of the paws (Daempfle, 2013).

2.6. Animals are nicer than humans. (Criteria: Observation, Testing)

Daempfle (2013) summarises scientific resources by stating that animals are supposed to help each other and cooperate only because of common genes. What about pet friendliness towards a human? Is this really just kindness, or is it because a person offers them a home and food? Daempfle (2013) states in the book that the objective of the animal is survival. By providing food and living space for animals, we enable them to survive. But in the wild, related rather than unrelated organisms are supposed to help each other (Dawkins, 1976, as cited in Daempfle, 2013).

2.3. Life began 3.5 billion years ago, and nothing will change that. (Criteria: Testing, Society, Observation, Uncertain, Temporary)

According to data gathered so far, life began approximately 3.5 billion years ago (Kambič et al., 2000). This claim is very similar to the eighth claim in the sub-chapter on scientific claims. The difference is that in this claim, we claim that science is not progressing and does not change over time.

2.4. Walking under a ladder brings misfortune. (Criteria: Testing)

Superstition is a belief in something that is not entirely understandable in either its causes or consequences (Martin, 2004). This is a matter of the individual influenced by several factors. Science cannot claim something about a thing if we cannot prove it experimentally (Lack & Rousseau, 2016).

2.8. I've heard it's always sunny in Southern California. (Criteria: Natural, Testing, Society, Observation)

If many people believe in something, that does not mean it is true. Scientific facts mostly have very little to do with the logic or common sense of a crowd of people (Jaffe, 2010). Data (Repe & Brus, 2010) shows the annual rainfall in California, which means that the claim is not scientific, as it is not always sunny in California.

1.9. Coconut oil is better for your health than olive oil. (Criteria: Testing, Society, Observation)

Coconut oil does not contain representative essential nutrients, e.g., protein, carbohydrates, fibre, omega 3 fats or key vitamins and minerals (USDA, 2014; Jakše & Jakše, 2018), giving credible science little chance to prove popular and often unfounded health benefits in a well-designed study (Jakše and Jakše, 2018).

1.10. A black cat crossing your path means bad luck. (Criteria: Testing)

This claim is very similar to the 2.4. argument that has already been explained.

Note: Claims for the first test had number 1 as a leading number and those for the second test had 2 as a leading number. For each claim, the authors used criteria defined in Table 1.

5 Results with Discussion

The results of the case study and the analysis of the data processed by discussion are presented below.

Firstly, the authors wanted to establish whether there was a statistically significant difference between the eighth- and ninth-graders in the performance of responding to the claims raised. The results are given in *Table 4*.

Table 4 shows that students in the ninth grade (80.4%) were somewhat more successful than eighth-grade students (76.2%) in completing the test, which can be explained by longer education in the field of natural sciences.

Table 4: The number (f) and structural percentage of correct and incorrect answers given by the eighth- and ninth-grade students in the first and second tests together

			Answers on Test 1 and Test 2		Total
			Correct	Incorrect	
Grade	**Eighth grade**	Number	259	81	340
		Structural percentage (%)	76.2	23.8	100
	Ninth grade	Number	225	55	280
		Structural percentage (%)	80.4	19.6	100
Total		Number	484	136	620
		Structural percentage (%)	78.1	21.9	100

In the continuation the effectiveness of the criteria set for the classification of claims were examined. The results were therefore compared before the introduction of the aid criteria and results using the criteria for the classification of claims (see *Table 5*).

Table 5: The number (f) and structural percentages of correct and incorrect answers given by the students according to the claims of the first and second test

			Student answers		
			Correct	Incorrect	**Total**
Test	Test 1	Number	246	64	310
		Structural percentages (%)	79.4	20.6	100
	Test 2	Number	238	72	310
		Structural percentages (%)	76.8	23.2	100
Total		Number	484	136	620
		Structural percentages (%)	78.1	21.9	100

Table 5 shows that the students were somewhat more successful in completing the first worksheet (79.4%) than the second (76.8%). The results were surprising, since the authors had expected a significant difference or better results on the second worksheet compared to the first one. After the first worksheet the authors held a discussion on scientific and non-scientific claims, where they explained the individual criteria using the statements of the first worksheet. The teacher's intervention focused on argumentation, similar to what was explained in *Table 2* and *Table 3*, using the criteria from *Table 1*. The second worksheet included different statements than in the first worksheet, as the authors wanted to verify the effectiveness of the criteria given in the new cases. Consequently, it is possible that the claims in the second worksheet were more complex for students even though they understood the criteria.

By analysing the results of individual students, the authors realized that 61% of the participants correctly identified at least three quarters of the claims on both tests combined. A comparison between the first and second tests shows that the proportion of those who correctly identified at least three quarters of the claims decreased, as this proportion was 71% for the first test and only 58% for the second test.

For this reason, the authors decided to further check the difficulty index of individual claims. Most of the claims were found appropriate, given that the difficulty indexes were in the 20–80% range (Čagran & Bratina, 2018). Six statements in both worksheets were easier for students, with a difficulty index of more than 80%.

The claims to which all students answered correctly are as follows: *I'll be rich when I grow up; The Sun heats the Earth's surface unevenly, as this depends on the angle at which the Sun's rays are glancing* and *Green plants cannot survive in eternal darkness.* The last two statements refer to the objective set out in the curriculum. In the science and technique class in fifth grade, the students must learn: "that the floor warms up the most when the Sun's rays are at the right angle" (Curriculum. Elementary school program. Science and technology, 2011). They teach the children about photosynthesis in the fifth and sixth grades, where the students have to: "realise that light energy during photosynthesis is converted into energy bound in organic matter (sugar); plants use organic matter as a source of energy and as a raw material for building their own body (e.g., cellulose, starch)" (Curriculum. Elementary school program. Natural science, 2011). According to the results, the students understood why these claims belong to science, as they thought that they had already learned about this in science class.

In addition to the above, there is another claim that most of the students answered correctly. It reads: *If the food is stored in the refrigerator instead of at room temperature, it will deteriorate at a slower rate.* There is no goal in the science or chemistry curriculum that can be linked to this claim, but it is true that understanding the proper storage of food and the functioning of microorganisms is an important topic in home economics class. As many as 26 students (83.9%) from the eighth and ninth grades answered correctly. When asked why they thought the claim was scientific, there was no answer. Only a few sub-questions about microorganisms and their operation at various temperatures led them to a reasoned correct conclusion. A similar picture

was observed in a claim on the second worksheet: *Storing hot food in a refrigerator destroys food.* As many as 21 students replied incorrectly; the remaining 10 that answered correctly were not able to explain why the claim was not scientific.

The interviews with students led to the finding that they were very quick to become convinced and believe their teacher too blindly or want to satisfy the teacher and the teacher's expectations. This was also found by Thompson and Logue (2006) in their study, which highlighted the difference between students of different ages. In their explanation, the teacher must use correct professional terms and demonstrate understanding as they transfer the knowledge to students and, consequently, to coming generations (Akgün, 2009).

To perform a χ^2-test, the students' grades in chemistry class were pooled: 2 (sufficient), 3 (good), 4 (very good), and 5 (excellent) and compared them with each other. The authors wanted to determine whether the final grade in chemistry class affected their effectiveness in separation between scientific and non-scientific claims. The results are presented in *Table 6*.

Table 6: The number (f) and structural percentages of the students' correct and incorrect answers to the claims of the first and second test, according to the final grade in chemistry class and the outcome of the χ^2-test

			Student answers on Test 1 and Test 2		Total
			Correct	Incorrect	
Grade	Excellent (5) and very good (4)	Number	337	83	420
		Structural percentages (%)	80.2	19.8	100
	Good (3) and sufficient (2)	Number	148	52	200
		Structural percentages (%)	74	26	100

$\chi^2 = 3,09$ P = 0,079

The result of the χ^2-test ($\chi^2 = 3,09$; P = .079) shows that the sample was dependent in terms of correct responses according to the final grade in chemistry class, as the error was less than 10%. *Table 6* shows that the students with grades 4 and 5 (80.2%) were slightly more successful than students with grades 2 and 3 (74%). Since the sample was small, the results cannot be generalised to the hypothetical population. Furthermore, some claims related to knowledge of physics and natural sciences and grades in these classes should also be included.

6   Conclusion

From a didactic point of view, knowledge is defined as a system – a logical overview of objective reality, which an individual acquires and permanently retains in their consciousness (Peklaj et al., 2009). Natural science knowledge includes understanding basic facts, concepts, and theories (Štraus et al., 2016). In doing so, students acquire competences that define how well they:

– "Identify natural-scientific questions,
– Scientifically interpret the phenomena and
– Use data from natural sciences and verified facts" (Repež et al., 2006).

Since this is very important in a student's education process, the study sought to examine how students distinguish between scientific and non-scientific claims and whether the use of criteria published by the University Corporation for Atmospheric Research (2015) is effective in understanding science.

The results of the study showed that the use of criteria was not effective, which was surprising, since the criteria were expected to bring science and its understanding closer to students in an easier, simpler way. However, this is clearly not as easy as it seems at first glance. Each student comes from a slightly different environment. The findings of TIMSS 2011 (Kozina et al., 2012), for example, were that students who had a computer, their own desk, and more books at home, achieved better results in science. Better results were also achieved in students whose parents had a higher level of education. The students thus came to school with prior knowledge, which only needed to be upgraded through education (Thompson & Logue, 2006). The problem is that various deficient and incorrect concepts they acquire in early childhood are retained during education. With the acquisition of new knowledge, the old does not automatically overlap with the new, which leads to misconceptions that are very difficult to change or correct (Peklaj et al., 2009). The authors believe that this is also the reason why the given criteria were not as effective as expected. The longer a misconception remains unchanged, the more it takes to root out and the harder it is to change. The question, however, is whether it is in the power of the teacher to eliminate it. The authors believe that the role of the teacher is invaluable in this as well, but one school hour of a planned learning process is certainly not enough for such complex goals. The teacher must first identify the student's

misconceptions, only then can they build on eliminating them (Gooding & Metz, 2011).

As Novak and Treagust (2022) describe (mentioned in the 5th chapter of this article), students need many opportunities to make claims based on existing evidence, as well as discussion to use scientific ideas to justify why the evidence supports the claim. They also need support on how to incorporate those scientific ideas into practice. There may also be some difficulty if previous school teachers' ideas surrounding science and their misunderstanding transfer over to the younger generations (Akgün, 2009; Arias & Davis, 2017; Cobern at al., 2022). Connections between a student's misunderstanding of the nature of science and their teacher's understanding were not explored in this study.

In our teaching practice, we need a framework that allows students to develop their understanding over time, as pointed out also by Novak and Treagust (2022). As with any new endeavour, students need multiple experiences – not just one attempt – that allow them to develop an understanding of the practices and relationships among different scientific ideas.

The authors believe that the claims and criteria used in this study are an excellent start to the process of recognising science, as they identified many student misconceptions and explanations during the study, especially in discussions about justifying students' decisions about why, in their view, a claim was or was not scientific.

Based on the results, the authors cannot claim that with these criteria students will fully understand and distinguish between scientific and non-scientific, as there are several factors in the background that influence this. However, it can be said that the results of this study are important, that addressing the topic is necessary, and that this study represents an example of the beginning of confrontation between students and teachers in this field. We are also a step closer to better understanding the nature of science and raising science literacy among Slovenian students in the long run.

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Chapter 7
EDUCATION CHALLENGES IN ARTS

ARTS AND CULTURAL EDUCATION IN KINDERGARTENS AND ELEMENTARY SCHOOLS IN SLOVENIA

OLGA DENAC,[1] BARBARA SICHERL KAFOL,[2] JERNEJA ŽNIDARŠIČ[1]

[1] University of Maribor, Faculty of Education, Maribor, Slovenia
olga.denac@um.si, jerneja.znidarsic@um.si
[2] University of Ljubljana, Faculty of Education, Ljubljana, Slovenia
barbara.sicherl@pef.uni-lj.si

Abstract The The study, involving Slovenian preschool teachers in kindergartens and teachers in elementary schools, focused on the assessment of preschool and elementary school teachers on the importance of different values for the life of an individual and society, and the teachers' opinions on the inclusion of arts and cultural fields and objectives in the educational process. The results show that both preschool and elementary school teachers do not contribute significant meaning to spiritual, cultural and aesthetic values. Preschool teachers believe that when planning the inclusion of arts and cultural fields, performing arts, cultural heritage and musical arts should be given more attention, and the teachers in elementary school believe the focus should be on performing arts, cultural heritage, musical arts, and creating a reading culture. Although preschool and elementary teachers estimate that they often realise the majority of arts and cultural education's objectives, the results show that they put less focus on the objectives, which impacts the shaping of a relationship towards our own and foreign national cultural heritage.

1 Introduction

Culture and art are essential components of modern education. Art holds great educational value since it arose from the historical development of aesthetic thought and pedagogical conceptions. Plato believed that art is an irreplaceable and integral component of the free man's education, Schiller pondered on the nature of beautiful and educational functions in art, Herbart believed that art impacts the inner harmony of the personality (Jerman, 1983), and Read (1945) notes that the basic flaw of all educational systems and their methods lies in their excessive focus on rationalism. Even today, education is facing a crisis of colossal dimensions. The paradigms of scientific thought and modern techniques control the lives of individuals and society. Kroflič (2007) notes that the "value of art in the spirit of the postmodern epistemology and value orientation should increase since it portrays a tool for the ability of emphatic identification of various value perspectives and facing existential questions" (Kroflič, 2007, p. 14).

The key competences for lifelong learning (Council recommendation on key competences for lifelong learning, 2018) are defined as a combination of "knowledge, skills and relationships" (ibid, p. 7) and include: literacy, multilingualism, math, science and engineering, digital competence, personal, social and learning competences, civic competence, entrepreneurship, and cultural awareness and expression. The instrument for developing the competence of cultural awareness and expression is arts and cultural education, which is becoming a central theme in education and culture in the 21st century (Požar Matijašič et. al., 2008). Many international documents, including Gifts of the Muse (2004), Bamford (2006), UNESCO: Seoul Agenda, Goals for the Development of Arts Education (2010), Art for Art's Sake (2013), Arts Education Partnership (2004), Road Map for Arts Education (2006), Work Plan for Culture (2015-18, 2019-22), and in Slovenia – the National guidelines for arts and cultural education (2009), and the National programs for culture (2008-201; 2014-17; 2018-2025), demonstrate the important role of arts and culture education for lifelong learning and integrated personality development. To highlight some of the key recommendations from the presented documents: arts education should be mandatory on all educational levels, the learning process should be made more exciting by meeting artists and visiting cultural institutions, and initial and continuing professional education and training should be guaranteed for everyone included in the educational process.

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2   Arts and Cultural Values

Musek (2014) discusses two main pillars that are the bases of future society's stable operation: the first pillar is values and related ethical standards, the second pillar is knowledge, principally quality and premium knowledge. He believes that harmonising behaviour with values and ethical standards bears a great significance in solving the most pressing issues of the individual, society, and humanity, since it leads to a reduction of all most vital negative phenomena.

To achieve a stable society in the future, we must respect, upgrade and change the culture, if necessary. This is largely achieved through values. Musek (2008) wonders whether the man of the modern world is not aware of the value of arts and cultural values, the lack of which, along with any other material and technical progress, promises only spiritual decay, counteracting all progress in other fields. He believes we can only avoid this danger with suitable arts and cultural education. The greater the role of humanist and cultural values in society, the firmer the structure of modern human identity and perspective in the future. In Slovenia, we have a traditional appreciation of culture and art, however, we are not fully aware of their importance in the existence of a democratic society, which should be based on mankind's civilizational achievements, which we should preserve and nurture (Musek & Musek Lešnik, 2003).

How do young people accept and process the content and goods of the established culture, conveyed by various institutions of the adult world? One can state, as does Ule (2008), that "the young people perceive and spiritually integrate the components of the established culture only to the extent that is in accordance with their own youth culture, otherwise the 'cultural education' passes their radar, presenting even a source of irony and sometimes of their own cultural innovation" (Ule, 2008, p. 96). Efficient integration of values into upbringing, education, personal and character development alone has a long-term impact on the rise of harmony between values and behaviour and on the decrease of negative societal phenomena.

3   Arts and Cultural Education in Research

Despite the relatively small amount of empirical research in the field of art, the number of theoretical analyses and discussions on the meaning and role of the arts and cultural education is rising. Many good practice examples, involving arts and cultural education, can be found, especially in early teaching, where the programs often emphasise the aesthetic component and the integration of the cognitive and emotional area of the child's personality (Welch, 2006; Schirrmacher, 2002). Reggio Emilia schools (Cadwell, 2003), the program of early teaching, such as the Montessori method, devote particular attention to art and creative expression. For example, Fantuzzo (2007) introduced such a project, where literature, mathematics and social and emotional development were based on art. It was formed in cooperation with preschool and elementary school teachers and placed in a learning and social environment. By using experimental, quantitative, and qualitative methodology, the study explained the success of the research approach and cooperation with the wider environment (Fantuzzo & Gadsden, 2007). Other studies (Drovenik Adamec et al., 2020; Kovačič & Matejek, 2020) also set the framework for examining the development of musical talent at the elementary level of music education and at later educational levels. Other examples (Bresler, 2003; 2006; Burton et al., 1999) also show that the integration of art in general education programs has positive effects on students' academic learning and general attitudes. In this context, the authors (Jeler et al., 2021) emphasize the students' increased motivation for learning, a rise in innovation and creativity, and the development of new learning strategies. Specified studies, along with many examples of good practice, substantiate the need for a more adequate placement of arts and cultural education in educational programs.

4   The Objectives of Arts and Cultural Education in the Planned and Implemented Curriculum

Taggart, Whitby and Sharp (2004) found that most European countries have formed goals in their art curriculum. A comparative study, prepared by the Eurydice Network (2009), also provides a review of the planning and implementation of arts and cultural education in the curricula of 30 European countries. Art is positioned in two ways within the curriculum: as an integrated whole of different art subjects (art) or as a string of individual art subjects (fine art class, music class, dance class,

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acting, etc.). Therefore, some countries have objectives and accomplishments set on a general level and some on a more specific level. The most represented general objectives of arts and cultural education, which may be found in the majority of European curricula, are as follows: realising the basic human right to education and cooperation in the cultural field, developing critical evaluation or aesthetic assessment, understanding cultural diversity and the meaning of cultural heritage, developing the ability of personal expression, and developing creativity. Along with these learning objectives, stated within the framework of arts and cultural education, the general learning objectives in curricula should also be mentioned. These may be connected to art and culture, such as encouraging cross-curricular connections between art and other subjects.

Increasingly, government institutions and various documents offer mainly theoretical ideas on the meaning and role of arts and cultural education in education, which are followed by curriculum planners but not actual didactic teaching approaches for arts and cultural education. The question is: to what extent do preschool teachers and teachers (classroom teachers, subject teachers of artistic classes, subject teachers of other classes, such as history, mathematics, etc.) have the ability to implement the arts and cultural education's objectives into the planned and implemented curriculum?

Teachers teaching artistic subjects have a key role in developing the students' creative ability. In a study on the impact of culture on creativity (KEA European Affairs, 2009), the training of preschool and elementary school teachers was emphasised as one of the main areas in need of improvement in order to establish a creative learning environment in kindergartens and schools. The students participating in the study also believed that universities in Slovenia, where future preschool and elementary school teachers are educated, offered good professional and general knowledge. However, there was not enough emphasis on the development of creative abilities and the meaning of social and emotional competence for future preschool and elementary school teachers (Denac et al., 2013).

Many authors discuss the issue of ensuring quality classes in the field of arts and cultural education (Burak, 2019; Kim, 2017; Šinkovec, 2017; Musek, 2014: Bamford, 2006; Holden & Button, 2006; Sharp & Le Métais, 2000; Taggart et al., 2004). This

issue is also verified by the findings of an international comparative study (Ijdens et al., 2018), which studied the quality of realising arts education in practice. Based on a representative sample of approximately 1600 experts from 78 countries the results showed the complex conditions and characteristics of arts education in different countries and highlighted the predominately insufficient qualification of teachers for teaching artistic subjects, especially in elementary schools. There are gaps in the implementation of arts in the learning process, namely between the "insight, opinions and ambitions of the arts education teacher on one hand and the politics and public in their country on the other" (Ijdens, Bolden & Wagner, 2018, p. 170). Even though education policy recognizes several educational, cultural, and social benefits of arts education, we find that education in and through arts still lacks quality implementation into curricula.

Therefore, preschool and elementary school teachers planning and implementing the educational process in the field of art should have sufficient pedagogical and didactic knowledge and skills to teach arts and cultural education, well-developed skills for creating and implementing artwork, capabilities for analysis, interpretation and valuation of artwork, well-developed personality potential and social and economic competences, which are demonstrated in the responsibility towards the aesthetic development of children, a positive attitude towards culture, art and expressing joy, and interest in a certain type of art. In the past, insufficient attention was paid to studies monitoring the quality of arts teaching. Since the quality of the planning and implementation of the educational process in artistic fields predominately depends on preschool and elementary teachers, the authors conducted empirical research, which offered them an opportunity to highlight arts and cultural education in the Slovenian education area.

5 Methodology

5.1 Objectives of the Empirical Study

The study includes:

- an assessment of the importance of different values for the life of an individual and for society;

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- preschool and elementary school teachers' opinions on the inclusion of arts and cultural fields in the educational process;
- teachers' opinions on the attention the students give arts and cultural fields in elementary school and in their free time; and
- preschool and elementary school teachers' opinions on the realization of objectives of arts and cultural education in the educational process.

5.2 Research Sample

The sample consists of 475 preschool teachers who worked and performed tasks in the first (38%) and second (62%) age groups of children and 510 elementary school teachers who taught at the grade level (48%) and subject level (52%). The sample included preschool and elementary school teachers from different Slovenian regions (Podravska, Pomurska, Koroška, Gorenjska, Osrednjeslovenska, Notranjsko-kraška and Obalno-kraška).

5.3 Data Collection Method

The electronic survey was conducted with an online questionnaire. The authors sent a request to the principals of 70 randomly selected kindergartens and 70 elementary schools, asking them to provide us with the e-mail addresses of their employed preschool and elementary school teachers. The questionnaires were then sent to 600 preschool teachers, of whom 475 completed the questionnaire, and 789 elementary teachers, of whom 510 completed the questionnaire.

5.4 Measuring Instruments

The questionnaire for preschool and elementary school teachers comprised closed-type questions (dichotomous questions, questions with verbal and scaled answers) and was created in accordance with the following measurement characteristics:

- Validity was based on a rational assessment of the test questionnaire by experts for content- and format-related properties (art advisors from the National Education Institute) and its pre-test use.

- Reliability was ensured with detailed instructions, single-meaning, specific questions, and a comparison of the answers to questions with similar content.
- Objectivity in the data collection stage was based on the use of electronic questionnaire surveying, and in the validation phase it was based on the recognition of the answers with no subjective interventions.

The questionnaire for preschool teachers differed from the questionnaire for elementary school teachers in the names or listing the subject areas defined in the Curriculum for Kindergartens as areas of activity, and in a set of questions about the attention that students pay to the areas of cultural and artistic education in elementary school, which were not included in the questionnaire for preschool teachers.

The questions were formulated in several rounded sections, namely:
- value categories (Musek, 2000) assessed by preschool and elementary school teachers (grades ranging from 1 to 12), according to their importance for the life of the individual and for society;
- preschool and elementary school teachers' opinions on the inclusion of areas and goals within arts and cultural education in the educational process; and
- preschool and elementary school teachers' opinions regarding the attention that students give to arts and cultural fields in school and in their free time.

For the purpose of this paper only some survey questions results will be presented.

5.5   Data Processing Operation

The data was processed at a descriptive level. The authors used frequency distributions (f, f%), assessment average ($\bar{x}$), and range average ($\bar{R}$).

6   Results and Interpretation

How do preschool and elementary school teachers assess the importance of values for the life of an individual and for society?

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Table 1: Value categories arranged by average assessment (x̄) of importance

Values preschool teachers	$\overline{x}$	Values elementary teachers	$\overline{x}$
Family (love for partner, for children)	10.84	Family (love for partner, for children)	10.31
Health (health, healthy diet, physical culture)	9.86	Social (selflessness, friendship, solidarity)	10.04
Social (selflessness, friendship, solidarity)	9.81	Health (health, healthy diet, physical culture)	9.81
Traditional (kindness, diligence, responsibility)	9.71	Traditional (kindness, diligence, responsibility)	9.40
Status (power, reputation, celebrity, money, long life)	8.57	Security (security, rest)	8.49
Sensual (joy and fun, comfort, physical pleasure)	8.45	Cognitive (knowledge, progress, truth, science)	8.03
Security (security, rest)	8.20	Spiritual and cultural (spiritual growth, wisdom, cultural life)	7.88
Cognitive (knowledge, progress, truth, science)	8.14	Sensual (joy and fun, comfort, physical pleasure)	7.47
Aesthetic (beauty, harmony, art, music)	7.77	Aesthetic (beauty, harmony, art, music)	7.09
Spiritual and cultural (spiritual growth, wisdom, cultural life)	7.76	Patriotic (patriotism, national pride)	5.69
Patriotic (patriotism, national pride)	5.90	Religious (faith, love, hope)	5.51
Religious (faith, love, hope)	5.78	Status (power, reputation, celebrity, money, long life)	5.14

Value categories, shown in *Table 1*, are based on Musek (2000). The results show that the preschool and elementary school teachers assigned the greatest significance to family values, followed by health, social and traditional values. In the middle of the scale, the preschool teachers place status values, followed by sensual, security and cognitive values, whereas the primary school teachers list security values, followed by cognitive, spiritual and cultural values, and aesthetic values. At the bottom of the value scale, the preschool teachers listed aesthetic, spiritual and cultural, patriotic, and religious values, whereas the primary school teachers listed aesthetic, patriotic, religious, and status values, which both preschool and elementary school teachers assigned the smallest significance. Looking at the assessment of the importance of spiritual, cultural and aesthetic values, one may determine that preschool teachers do not assign great significance to these values. Musek and Musek Lešnik (2003) also found that art and culture were listed in the last quarter of the value scale in the Slovenian population. In his research on the presence of values in educational plans, Šinkovec (2017) found that respect, knowledge, and responsibility

(moral) were the most frequently selected values in Slovenian elementary school educational plans, followed by status, patriotic (potency) and sensual (hedonistic) values. Cognitive, aesthetic, and cultural (fulfilment) values are selected the least. Furlan (2002), however, believes that we cannot talk about a uniform Slovenian cultural space in terms of values and that there are differences in interpreting the values of the youth, which are the result of the interaction of different factors, such as social, cultural and geographic environment, the economic situation of areas, etc.

Are the preschool and elementary school teachers themselves active in the field of arts and cultural education?

Table 2: The number (f) and structural percentages (f%) of opinions of preschool and elementary school teachers on the activities outside of work

	Preschool teachers		Elementary teachers	
Answer	f	f%	f	f%
Yes	214	45.1	289	56.7
No	261	54.9	221	43.3
Total	475	100.0	510	100.0

The results show that there was a greater number of elementary school teachers that were active in the fields of art and culture outside of work compared to preschool teachers (see *Table 2*). According to their own descriptions, both sets of teachers engaged in singing, dancing, creating art, theatre or playing an instrument outside of work.

By being active in the fields of art and culture outside of work, the preschool and elementary school teachers affirmed the conformity of their conduct with their values. By example, they promoted interest in such activities in the wider environment, as well as with children or students. Engaging in extracurricular activities in the artistic field contributes to the teachers' professional competence and their sensitivity to ensure the appropriate place and role of artistic subjects in a planned and implemented curriculum.

What is the opinion of preschool and elementary school teachers on the inclusion of the arts and cultural fields in the educational process?

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Table 3: The number (f) and structural percentages (f%) of preschool and elementary school teachers' opinions on the arts and cultural fields, which should receive more attention

Fields	Preschool teachers				Fields	Elementary teachers			
	Yes		No			Yes		No	
	f	f%	f	f%		f	f%	f	f%
Performing arts	405	85.3	70	14.7	**Reading culture**	419	82.2	91	17.8
Cultural heritage	301	63.4	174	36.6	**Performing arts**	365	71.6	145	28.4
Musical arts	288	60.6	187	39.4	**Cultural heritage**	344	67.5	166	32.5
Fine arts	232	48.8	243	51.2	**Musical arts**	302	59.2	208	40.8
Reading culture	231	48.6	244	51.4	**Fine arts**	233	45.7	277	54.3
Intermedia art	99	20.8	376	79.2	**Film and audio-visual culture**	121	23.7	389	76.3
Film and audio-visual culture	66	13.9	409	86.1	**Intermedia art**	96	18.8	414	81.2

The majority of preschool teachers believed that kindergartens should give more attention to performing arts, cultural heritage and musical arts, whereas other fields, such as fine arts, reading culture, intermedia art, and film and audio-visual culture did not need more attention.

The majority of elementary school teachers believed that more attention should be given to reading culture, performing arts, cultural heritage and musical arts.

At a declarative level, the elementary school teachers were aware of the importance of reading culture, however, there remains an existing issue of their qualification for quality work with students. The professional knowledge and beliefs of elementary school teachers regarding reading culture also have a significant influence on the manner and quality of their work.

There are also some issues in the field of performing arts, since such content, despite being included in the preschool curricula and the curricula for Slovenian language, often remains neglected.

One can also be critical of the opinions of preschool and elementary teachers regarding cultural heritage, expressed in the study, since the kindergarten and Slovenian elementary school curricula analysis shows that its contents and objectives are adequately represented in the statutory (such as in environmental studies, social studies, Slovenian language, history) as well as in the elective curricula and extracurricular activities.

Musical art in kindergarten and school has various possibilities of operation, such as musical and cultural events, extracurricular activities, and clubs. A crucial factor in the quality realization of musical education in kindergarten and school is a competent preschool or elementary teacher, who knows the discipline, is reflective, and responds efficiently (also) to the extracurricular musical environment by establishing cooperation with cultural institutions and artists.

Compared to reading culture, performing arts, cultural heritage and musical arts, which according to teachers require a higher share among the artistic fields, the fields of film, audio-visual and intermedia art were not assigned significant meaning. Despite students being highly interested in film, extracurricular activities relating to film are rarely implemented in schools.

What is the opinion of elementary school teachers regarding the attention that students give to arts and cultural fields in the elementary school and in their free time?

Table 4: Arts and cultural fields arranged by average range ($\bar{R}$) of students' attention to arts and cultural fields in elementary school

Fields	$\bar{R}$
Intermedia culture	4.75
Musical arts	4.45
Film and audio-visual culture	3.86
Fine arts	3.82
Reading culture	3.81
Performing arts	3.72
Cultural heritage	3.47

According to the elementary school teachers, the students in school gave the most attention to intermedia culture and musical arts. This was followed by film and audio-visual culture, fine arts, and reading culture. According to the teachers, performing arts and cultural heritage received the least attention from the students.

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The level of attention students have for individual artistic fields in school depends on many factors: the planned and implemented curriculum, the syllabus or the type of elective subjects offered by individual schools, the launched projects, extracurricular activities and, of course, the teacher.

Table 5: The number (f) and structural percentages (f%) of opinions of elementary school teachers on the attention the students give to arts and cultural fields and popular culture activities in their free time

Field and activity	Yes		No	
	f	f%	f	f%
Popular and band music	247	80.1	68	19.9
Intermedia culture	207	60.5	135	39.5
Film and audio-visual culture	204	59.6	138	40.4
Musical arts	92	26.9	250	73.1
Trivial literature	71	20.8	271	79.2
Reading culture	34	9.9	308	90.1
Performing arts	32	9.4	310	90.6
Fine arts	16	4.7	326	95.3
Cultural heritage	3	0.9	339	99.1

The majority of teachers believed that students gave the most attention to popular and band music in their free time. This was followed by the attention given to intermedia culture, film and audio-visual culture, trivial literature, reading culture, performing arts, and fine arts. The teachers believed that students did not give attention to cultural heritage in their free time.

Today the youth, even more than the previous generation, follow the trend currently set by the media and entertainment industry. Therefore, during the general education process, students should form a critical relationship towards popular culture.

What are the opinions of preschool and elementary school teachers on the realization of arts and cultural education's objectives in the educational process?

Table 6: The number (n) and structural percentages (f%) of preschool and elementary teachers on the frequency of realization of arts and cultural education's objectives in their work with children or students

Objectives		Preschool teachers f f%		Elementary teachers f f%	
Developing imagination	Frequently	374	78.7	395	77.5
	Rarely	101	21.3	115	22.5
	Never	0	0	0	0
Shaping arts and cultural values	Frequently	345	72.6	252	49.4
	Rarely	130	27.4	258	50.6
	Never	0	0	0	0
Raising awareness in caring for the natural and cultural environment	Frequently	401	84.4	380	74.5
	Rarely	74	15.6	130	25.5
	Never	0	0	0	0
Developing aesthetic sensitivity	Frequently	353	74.3	396	77.6
	Rarely	122	25.7	114	22.4
	Never	0	0	0	0
Integrating the emotional, intellectual, physical, and creative capabilities of children and students	Frequently	398	83.8	389	76.3
	Rarely	70	14.7	121	23.7
	Never	7	1.5	0	0
Developing individual creative potential	Frequently	366	77.1	377	73.9
	Rarely	104	21.9	121	23.7
	Never	5	1.0	12	2.4
Developing free and critical thought	Frequently	332	69.9	468	91.8
	Rarely	143	30.1	41	8.0
	Never	0	0	1	0.2
Developing emotional intelligence	Frequently	360	75.8	366	71.8
	Rarely	115	24.2	144	28.2
	Never	0	0	0	0
Learning about their own culture	Frequently	230	48.4	242	47.5
	Rarely	243	51.2	257	50.4
	Never	2	0.4	11	2.1
Expressing their own culture	Frequently	110	23.2	203	39.8
	Rarely	355	74.7	222	43.5
	Never	10	2.1	85	16.7
Promoting tolerance towards different cultures	Frequently	154	32.4	240	47.1
	Rarely	311	65.5	259	50.8
	Never	10	2.1	11	2.1
Learning about other cultures	Frequently	173	36.4	187	36.7
	Rarely	281	59.2	301	59.0
	Never	21	4.4	22	4.3

The *Table 6* shows that most preschool and elementary school teachers believed they could frequently realise the following objectives in art and cultural education in their work: raising awareness in caring for the natural and cultural environment (84,4%), integrating the emotional, intellectual, physical and creative capabilities of children

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(83.8%), developing creativity (78.7%), developing individual creative potential (77.1%), developing emotional intelligence (75.8%), developing aesthetic sensitivity (74.3%), developing arts and cultural values (72,6%), and developing free and critical thought (69.9%). The following objectives were rarely planned by more than half of preschool teachers: expressing their own culture (74.7%), promoting tolerance towards different cultures (65.5%), learning about other cultures (59.2%), and learning about their own culture (51.2%). However, it is worth mentioning that there were quite a few preschool teachers who never pursued these objectives: learning about other cultures (4.4%), expressing their own culture (2.1%), and promoting tolerance towards different cultures (2.1%).

The majority of teachers, however, frequently planned the following objectives: developing free and critical thought (91.8%), developing aesthetic sensitivity (77.6%), developing imagination (77.5%), integrating the emotional, intellectual, physical and creative capabilities of students (76.3%), raising awareness in caring for the natural and cultural environment (74.5%), developing individual creative potential (73.9%), and developing emotional intelligence (71.8%). More than half of the teachers only rarely pursued these objectives: learning about other cultures (59.0%), promoting tolerance towards different cultures (50.8%), shaping arts and cultural values (50.6%), and learning about their own culture (50.4%). Some teachers never pursued the following objectives: expressing their own culture (16.7%), learning about other cultures (4.3%), learning about their own culture (2.1%), and promoting tolerance towards different cultures (2.1%).

The results show that preschool and elementary school teachers frequently realise arts and cultural education objectives in the learning process. However, they are less successful in realising the objectives that impact the shaping of a relationship towards our own and others' cultural heritage. Culture and culturality as a value domain mean respect, conscious preservation, and development of acquired heritage. They involve respect for cultural, spiritual, material, artistic, and scientific achievements. That is why the systematic pursuit of the objectives of cultural education must start in preschool. How will the preschool and elementary school teachers who neglect the objectives of developing cultural identity respond to the needs of modern society with its ever-growing cultural diversity? The school environment must be open to different cultures and develop understanding and tolerance for other and different cultures through a multicultural and intercultural

approach. Only in a tolerant and diverse cultural environment will young people be able to develop their own national identity and acknowledge to others what they also expect for themselves.

In which areas of the kindergarten curriculum can preschool teachers pursue the objectives of arts and cultural education?

Table 7: The number (f) and structural percentages (f%) of preschool teachers' opinions on the possibilities of realising the objectives of arts and cultural education in different areas of activity

Areas of activity	Yes		No	
	f	f%	f	f%
Language	466	98.1	9	1.9
Art – Fine arts activities	456	96.0	19	4.0
Art – Music activities	452	95.2	23	4.8
Art – Dance activities	448	94.3	27	5.7
Art – Drama activities	445	93.7	30	6.3
Art – AV-media activities	411	86.5	64	13.5
Society	388	81.7	87	18.3
Movement	142	29.9	333	70.1
Nature	163	34.3	312	65.7
Mathematics	174	36.6	301	63.4

The majority of preschool teachers believed that they can pursue the objectives of arts and cultural education in the following fields of curriculum activity: language, art (fine arts, music and dance activities, drama and AV-media activities) and society. With movement, nature and mathematics, the majority of preschool teachers believed that the objectives of arts and cultural education could not be pursued.

In which subjects in the elementary school curriculum can teachers pursue the objective of arts and cultural education?

The majority of teachers believed they can pursue the objectives of arts and cultural education in the following subjects in the elementary school curriculum: music, art, Slovenian language, history, social studies, civic and ethics education, foreign languages, environmental studies, geography, home economics. In subjects, such as sports, engineering and technology, natural studies, biology, mathematics, chemistry, and physics, the majority of teachers believed they cannot pursue the objectives of arts and cultural education.

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Table 8: The number (f) and structural percentages (f%) of teachers' opinions on the possibilities of realising the objectives of arts and cultural education in different subjects

Subjects	Yes		No	
	f	f%	f	f%
Musical arts	502	98.4	8	1.6
Fine arts	498	97.6	12	2.4
Slovenian language	488	95.7	22	4.3
History	433	84.9	77	15.1
Society	418	82.0	92	18.0
Civic culture and ethics	411	80.6	99	19.4
Foreign languages	401	78.6	109	21.4
Environmental studies	388	76.1	122	23.9
Geography	367	72.0	143	28.0
Home economics	257	50.4	253	49.6
Sports	222	43.5	288	56.5
Engineering and technology	146	28.6	364	71.4
Natural and technical studies	133	26.1	377	73.9
Natural studies	109	21.4	401	78.6
Biology	55	10.8	455	89.2
Mathematics	48	9.4	462	90.6
Chemistry	21	4.1	489	95.9
Physics	16	3.1	494	96.9

For the realization of the objectives of arts and cultural education both preschool and elementary school teachers especially highlighted the fields of art, social studies and language. If we understand the integration of art as "connections between two or more of the traditional disciplines or subjects" (Russel & Zembylas, 2007, p. 289) and as "a conceptual term to refer to activities that strive to infuse the arts across school disciplines" (ibid.), then we may assume the realization of objectives of arts, such as the realization of critical thought, developing imagination, caring for the natural and cultural environment, developing individual creative potential etc. in different (also non-artistic) subject areas. Respecting beauty, respecting education and other achievements of the human civilization may be included in nearly any field of activity and in every school subject. In this regard, it is important to understand integration not only through the transfer of objectives and contents of learning, but also as the "cultivation of habits of mind" (Bresler, 2006). Such an approach naturally demands especially suitable professional qualification from teachers, because "teachers feel uncomfortable when asked to teach in an integrated manner, unless they have had opportunities to develop deeper knowledge in the subjects they are trying to integrate" (Russel & Zembylas, 2007, p. 296).

7   Conclusion

Finally, let us highlight once more the basic empirical knowledge on the arts and cultural status of preschool and elementary teachers, their assessment of the inclusion of arts and cultural fields into the planned and implemented curriculum, and their realization of objectives of arts and cultural education in the educational process:

- The preschool and elementary school teachers did not assign significant meaning to spiritual and cultural (spiritual growth, wisdom, cultural life) and aesthetic values (beauty, harmony, art), even though half of the teachers are engaged in the arts and cultural education activities outside of work.
- The preschool teachers assessed that more attention should be given to performing arts, cultural heritage and musical arts in kindergarten, whereas the primary school teachers believed more attention should be given to reading culture, performing arts, cultural heritage and musical arts.
- According to the teachers, students in school gave the most attention to intermedia culture and musical arts, followed by film and audio-visual culture, fine arts, and reading culture. Performing arts and cultural heritage received the least attention from students. In their free time, the students paid most attention to popular and band music, intermedia culture, film and audio-visual culture. Most teachers believed that their students did not give attention to musical arts, reading culture, performing arts, fine arts or cultural heritage in their free time.
- Both the preschool and elementary school teachers believed they frequently realised the majority of arts and cultural education's objectives in their work, and gave less attention to the objectives, such as learning and expressing their own culture and cultures of other nations, and promotion of tolerance towards different cultures.
- The arts and cultural education's objectives may be pursued in artistic and social science fields, and to a lesser extent in sports, mathematics and natural sciences.

Spiritual, cultural and aesthetic values are insufficiently included in the whole social system in the Slovenian space. Both preschool and elementary school teachers do also not assign significant meaning to these values. Therefore, more effort should be made in the short and long-term strategies of functional education, which will form a basis for these values to hold a more important position in society.

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The objectives and content of different arts and cultural fields should be equally included in the planned and implemented curriculum, especially those underrepresented in the curriculum. Thus, we could increase interest in cultural heritage, performing arts, musical arts, and form a relationship with artistic content in children and students.

The field of intermedia culture is most attractive to students. Society directs the attention of all artistic practices using information technology, the internet, cybernetics, virtual reality and multimedia. The teachers also believe that students give the most attention to popular and band music. Why? Because postmodern culture promotes the mass culture of consumer society, where trivial culture plays a great role.

The results remind us that Slovenian preschool and elementary school teachers give too little attention to understanding cultural diversity and the meaning of cultural heritage when planning and implementing the learning process. Since preschool and elementary school teachers do not include the aforementioned objectives in the educational process, children also do not get the opportunity to develop a relationship with their own and other cultures. Even though preschool and elementary school teachers believe they can pursue the objectives of arts and cultural education in most fields, they do highlight movement, natural science and mathematics as the fields, where such objectives are impossible to follow. Primary school teachers also have the same belief. The question also arises of how the artistic subjects, as individual or in connection with other subject areas, can be used to pursue the objectives of arts and cultural education. The essence of modern arts and cultural education is its interdisciplinarity – it should be integrated into different fields of activity and learning subjects. The integration of art into the education system demands the systematic analysis of cross-curricular integration on the level of objectives and content (Kalin & Kind, 2006; Larson & Walker, 2006; Sicherl Kafol, 2007). To be successful in practice, not only in theory, in shaping specific didactic approaches to implementing arts and cultural education's objectives and contents into other subject areas plenty of work will still have to be done.

The research on cultural education in Slovenia (Arts and cultural education and the non-governmental sector in culture, 2017) emphasises that kindergartens and schools often only passively receive cultural content, that there is a unilateral

relationship between educational and cultural institutions, which is not based on partnership, and that more attention should be given to quality cooperation among institutions and the further education of educational cultural staff, because the results show that the integration of cultural content in kindergartens and schools depends on the initiative and resourcefulness of preschool and elementary school teachers. Both preschool and elementary school teachers are aware that they should take more action to raise the quality of arts and cultural education in kindergartens and schools. It is necessary for art to achieve an equal and independent status in education compared to other subject areas. Those who strive for this perspective see arts education as a way to encourage children, students and youths to become co-creators of the educational process and not merely remain passive recipients of knowledge passed on by others.

In Slovenia, many educational and cultural institutions pursue the strategy of more efficient art and cultural education through various programs and projects. It is worth noting the operation of the Jože Trontelj Institute for Ethics and Values, which, since 2012, has actively contributed to the culture of knowledge, values and ethics from preschool to university in the field of education. The objective of this operation is to offer preschool and elementary school teachers, and also parents, support for existing efforts to strengthen their educational role in imparting universal values to children and youth (Working material for the culture module, 2014). In this context, the Developing communication competences through cultural-art education (SKUM) (2017-2022) project should also be emphasized, which is co-financed by the Ministry of Education, Science and Sport of the Republic of Slovenian and the European Social Fund, which supported the concept of education with art from 2018 to 2022. In cooperation with educational and cultural institutions and artists (the letter of cooperation was signed by more than 100 artists, self-employed professionals in culture, and cultural institutions), efforts are being directed to the development of unique creative approaches to realising the objectives of curricula and to open the way to authentic artistic experience to all participants. The central objective is to raise the communicative competence of children and youth. Therefore, didactic approaches and new forms of integrating educational work with artistic activities within various artistic fields are updated and developed. It is also worth noting the successful national inter-ministerial project, titled Cultural Bazaar (2021), which offered good practice examples and contributed to an innovative learning environment and the comprehensive development of

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children and youth through cooperation and the integration of different fields and quality arts and cultural education in formal and informal education.

All listed quality cultural programs in education and educational programs in culture contribute to the implementation of objectives and content of arts and cultural education in the educational system. In the future, we should ensure that all stakeholders involved in the planning, implementation and valuation of the learning process recognize arts and cultural education as one of the key values of our society.

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THE ATTITUDE OF ART TEACHERS TOWARDS CONTEMPORARY FINE ARTS

KATJA KOZJEK VARL,[1] SINIŠA OPIĆ,[2] JERNEJA HERZOG[1]
[1] University of Maribor, Faculty of Education, Maribor, Slovenia
katja.kozjek-varl@um.si, jerneja.herzog@um.si
[2] University of Zagreb, Faculty of Teacher Education, Zagreb, Croatia
sinisa.opic@ufzg.hr

Abstract Students learn about the world in which they live through the subject of contemporary fine arts. They can form a range of views on the highlighted themes and develop their own critical thought by appropriately interpreting contemporary artwork. Because contemporary art is multifaceted, it also offers opportunities for encouraging artistic and creative work in the classroom. The role of the art teacher is crucial in this respect, because with the right approach, contemporary art can be successfully implemented in the curriculum. Such an approach, however, requires a committed and creative teacher who pursues continuous professional development. This paper deals with the attitude of art teachers towards contemporary art practices and how they follow contemporary art practices. This was done by looking for differences according to the respondents' age and work experience. The study was conducted on a non-randomized sample of primary school art teachers (n = 84) from all over Slovenia. The age and work experience of the teachers interviewed in the study did not emerge as an important factor in shaping their attitudes towards contemporary fine arts. In any case, the study reveals new issues related to the promotion of positive attitudes towards contemporary fine arts among art teachers.

1   Introduction

Fine arts in general help us learn about life and give us opportunities to reflect on it. At the same time, the subject of contemporary fine arts, i.e., art that is happening now, as Kemperl (2013) says, distinctly thematises current social and political issues in everyday life. Through contemporary fine arts, we can learn about the world in which we live, explore our cultural environment, learn about and seek new possibilities of expression, and express our own views and beliefs (Kemperl, 2013; Herzog et al., 2017; Kozjek Varl & Duh, 2017). Today, art, through the content it addresses, is more integrated into our lives than ever before (Gompertz, 2019). Moreover, the sites for its presentation are often public. Artists seek their audience in city squares or shopping malls and address not only the professional public but also random passers-by with their conceptual content. People who encounter contemporary fine art accidentally or for the first time and are unfamiliar with such concepts, often have a negative or even dismissive attitude towards it (Bračun Sova, 2013). Contemporary art seems alien and difficult to understand (Venaläinen, 2012). The same can be said for young people. Students are insufficiently familiar with contemporary fine arts (Kozjek Varl & Herzog, 2018), as they hear little or nothing about the topic in primary school (Cakiroglu & Ince, 2015; Kozjek Varl & Duh, 2017; 2020). It is therefore important to bring young people closer to contemporary fine arts and teach them to understand the subject from an early age.

To develop a positive attitude towards contemporary fine arts and acquire lifelong competences (Bela knjiga o vzgoji in izobraževanju v Republiki Sloveniji, 2011), it is essential to include topics concerning contemporary fine arts in art class (Cole, 1996; Venaläinen, 2012). The importance of contemporary art practices and the need to connect the content of the classroom with current developments in the fine arts (Cole, 1996) are already highlighted in the postmodern curriculum through several concepts and ideas (Efland, 1992; Hardy, 2006). The school education system can interweave content from different subject areas with the content of contemporary fine arts through the standard curriculum, but this mostly depends on the autonomy of the teacher. Research shows (Herzog & Duh, 2013; Ching, 2015) that teachers seldom or never integrate contemporary art practices into their art lessons because of uncertainty or lack of knowledge (Vahter, 2016).

The curriculum for art education (Učni načrt, 2011) still emphasises traditional ways of artistic expression among its operational objectives and content, which means knowledge and practical work based on formal art language (Zupančič, 2006). However, one can already recognize the value of contemporary fine arts in the introductory note of the curriculum (Učni načrt, 2011, p. 4): "The fundamental task of art education is the development of the student's artistic ability (competence), which is based on an understanding of the visual (natural, personal, social and cultural) space and is expressed in the active transformation of this space into an artistic space." This shows the importance of contemporary fine arts, whose themes deal with everyday life and current space. Therefore, when preparing students for artistic and creative work, it is necessary to acquaint them with the artists that are creating today. The foundation of contemporary artwork is its conceptual/content-based design, which encourages students to relate it to their own experience (Duh & Kozjek Varl, 2017; Kozjek Varl & Herzog, 2018), to think, and to formulate their own ideas. However, since contemporary fine arts are multifaceted, they offer not only richness of content, but also many opportunities to stimulate artistic and creative work and to discover new ways of artistic and creative expression (Duh, 2004; Herzog, 2017; Vann, 2017). Since we aim to pursue the goals of the UN[1], this should not be neglected when learning about contemporary artistic practices. Students can communicate their ideas verbally or through their own artistic expression (Kozjek Varl & Duh, 2020), where an interactive approach (Tomljenović, 2015) is indispensable.

To successfully integrate the above, Zupančič (2006) proposes a method with an artistic and pedagogical concept, the essence of which is "to integrate artistic work with the interests of the students" (p. 29). This means that we bring students closer to topics that are close to them (Vrlič, 2002), as young people might otherwise find contemporary art irrelevant. If students do not see connections between the work of contemporary artists and the things that interest them (Cole, 1996; Zupančič, 2006), they will not relate to the work (Kozjek Varl & Duh, 2020). The right choice of artwork, however, might generate more student interest. As a result, the students could be more intrinsically motivated to create art on their own (Kozjek Varl & Duh, 2020), although they may be additionally limited in terms of tapping into their creative potential (Zupančič, 2006), since they rarely or never encounter new,

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[1] UN = Učni načrt/The Curriculum of Art Education

contemporary modes of artistic expression when a different artistic expression emerges (Kozjek Varl & Herzog, 2018). For these reasons, it is important for the teacher to have a good knowledge of contemporary artwork and varied approaches (Ching, 2017), which means regularly monitoring developments in contemporary art practices. If the teacher is aware of the diversity and multifaceted nature of contemporary art, they will be able to select appropriate works of art and integrate them into the teaching process accordingly.

However, as Zupančič (2006) states, when selecting works of art, it is necessary to consider (at least) certain criteria: a) the importance of the artist and their work, b) the typicality of the artist and their work, c) the illustrative nature of the work, d) the contextual appropriateness of the work, and e) the practical-performance appropriateness of the work.

With the appropriate interpretation of selected contemporary artwork, students can therefore form varied views on the highlighted themes and develop their own critical thought, while at the same time creating art. This can be influenced by appropriate approaches and suitably designed art assignments. The role of the art teacher is crucial in this regard (Ching, 2017), since with the right approach, contemporary fine arts can be successfully implemented in the curriculum. Part of the appropriate approach that helps to create a positive attitude towards contemporary fine arts is the transferral of activities from the teacher to the student (Tomljenović, 2015). This interaction is based on conversation (Vahter, 2016) or equivalent dialogue (Vrlič, 2002), with the teacher guiding the student's thought process and research. This approach requires an engaged and creative teacher who keeps abreast of current developments and engages in regular professional development in their professional field.

Previous research (Zupančič, 2006; Vahter, 2016; Kozjek Varl & Duh, 2017; 2020; Vann, 2017; Zupančič & Velikonja 2017) has shown a positive impact in terms of students' attitudes towards contemporary fine arts and the content itself, but in Slovenia, we face a lack of integration of contemporary fine arts in the classroom (Herzog & Duh, 2013). Since an engaged teacher can be successful in implementing contemporary art practices in art lessons and can thus stimulate interest in contemporary fine arts among students, the authors were interested in the attitudes of art teachers towards contemporary art practices. They sought to explore whether

and in what ways art teachers follow contemporary art practices, looking for differences in terms of the teachers' age and work experience. By analysing the responses of art teachers in Slovenian primary schools, the authors obtained information on their opinion, beliefs, knowledge, and competences in terms of their awareness of contemporary art practices and perceived attitudes towards the topics covered. The obtained data can be used for the design of professional training in the integration of contemporary art practices and further research in this field.

In the following, the authors present the results of the questionnaire survey, which provide insight into the current state of art teachers' attitudes towards contemporary art practices.

2   Methodology

The study is based on a descriptive and causal-non-experimental method of empirical pedagogical research. The respondents' answers were analysed at the descriptive level and with the help of inferential statistics. The differences between groups were determined using non-parametric tests. The responses to open-ended questions were analysed using a range of categories.

2.1   The Purpose and Objectives of the Study

The purpose of the study is to examine the attitudes of primary school art teachers towards contemporary art practices and to establish whether they follow current developments in this field. Another purpose of the study is to raise awareness on the importance and pedagogical value of contemporary art practices for their inclusion in the primary school curriculum in the subject of art.

2.2   Research Hypotheses

The study was based on the following general research hypothesis:

> H_{SP1}: *We anticipate that most teachers will show a positive attitude towards contemporary fine arts.*

In terms of identifying differences in both the age of the respondents and their work experience, the following specific research hypotheses were used:

Based on age:

> H_{S1}: *Teachers are equally committed to following contemporary fine arts regardless of age.*
> H_{S2}: *There will be differences in the way teachers follow contemporary fine arts; we predict that younger teachers will be more likely to use literature, articles and current periodicals.*

Based on work experience:

> H_{DI1}: *We anticipate that more experienced teachers will show a greater engagement with contemporary fine arts.*
> H_{DI2}: *Teachers follow contemporary fine arts in similar ways regardless of work experience.*

2.3   Research Methods and Data Processing

2.3.1   Instruments

The data were collected using an online survey questionnaire for teachers of art in primary schools in Slovenia. The survey was conducted via the 1KA online environment, individually, voluntarily, and anonymously. The questionnaire was conducted between June 30, 2020 and July 30, 2020. The results are presented in tabular form; frequency distributions (f, f%), non-parametric test (χ^2-test) and the Kruskal-Wallis test were used to test for differences according to age and years of experience.

2.3.2   Research Sample

The study was conducted on a non-random sample of teachers from across Slovenia. The questionnaire was completed by 122 teachers, and only fully completed answers were included in the analysis (n = 84). *Table 1* presents the frequency distribution of the research sample in terms of gender, age, and work experience.

Table 1: Number (f) and structural percentages (f%) of teachers surveyed in terms of gender, age, and work experience

Gender		f	f%
Men		14	16.7
Women		70	83.3
	Total	**84**	**100.0**
Age		**f**	**f%**
Up to 30 years		0	0
Between 31 and 40		18	21.4
Between 41 and 50		27	32.1
51 and over		39	46.4
	Total	**84**	**100.0**
Work experience		**f**	**f%**
1 – 5 years		10	11.9
6 – 10 years		7	8.3
11 – 15 years		11	13.1
16 – 20 years		8	9.5
21 – 30 years		19	22.6
30 years and over		29	34.5
	Total	**84**	**100.0**

Table 1 shows that the majority of the participating art teachers were female (83.3%), while only 16.7% were male. When analysing age, the authors found that no participating teacher was under 30 years of age, and that almost half the teachers were 51 or older (46.4%). At the same time, the distribution of teachers in terms of work experience was fairly even. Most teachers had been teaching for 30 years or more (34.5%), followed by teachers who had been teaching between 21 and 30 years (22.6%), followed by teachers who had been teaching between 11 and 15 years (13.1%), then those that had been teaching between 1 and 5 years (11.9%), 9.5% of teachers had been teaching between 16 and 20 years, and 8.3% of teachers between 6 and 10 years.

Apart from gender, which was not statistically treated in the survey, the survey sample can be said to be evenly distributed, balanced in both other variables (age and work experience). Given the problem of the employability of art teachers in the Slovenian education system, the authors were interested in the variables of age and work experience separately, since a teacher's higher age does not mean more work experience.

3 Results and Discussion

The results will be presented in three parts. In the first part, the authors will present the results related to the attitude towards contemporary fine arts from the point of view of the respondents' age, and in the second part, from the point of view of the respondents' work experience. In the third part, the authors will present an analysis of the open-ended questions, which were not statistically compared in terms of differences, but analysed by means of a ranked series of categories.

The term "attitude towards contemporary fine arts" includes questions which, in addition to the respondents' attitudes towards contemporary fine arts, also cover the ways in which they follow what is happening in the field of contemporary art practices and their assessment of, or attitude towards, contemporary art practices. The authors estimate that the age and work experience of the respondents could be an important factor in forming a position on or an assessment of the respondents' attitudes towards contemporary fine arts.

3.1 Analysis of Results in Terms of the Respondents' Age

The authors began by asking the respondents whether they followed contemporary fine arts. The results are presented in *Table 2*, in terms of frequency, rank and differences between the age groups of the respondents.

Table 2: Results of the Kruskal-Wallis test (K-W test) for differences in teachers' responses on following contemporary fine arts

	Age	n	$\overline{R}$	K-W test	
				χ^2	P
Do you follow contemporary fine arts?	Up to 30 years	0	0		
	Between 31 and 40	17	43.88		
	Between 41 and 50	25	41.74	2.620	.270
	51 and over	36	35.88		
	Total	78			

Only fully completed responses were included in the statistical processing

The age of the respondents did not emerge as a key factor in following contemporary fine arts. However, there are slightly more positive answers to this question in the group of teachers aged 31-40 compared to the oldest group (51+). Based on the given answers one may estimate that interest in contemporary art is evenly

distributed across the age groups. These results confirm hypothesis H_{S1}: *Teachers are equally engaged in following contemporary fine arts regardless of age.*

The authors were also interested in the ways in which interest in contemporary fine arts is reflected. They offered the respondents answers such as: going to exhibitions, following the media, reading literature and periodicals. The results are presented in *Table 3*.

Table 3: Results of the Kruskal-Wallis test (K-W test) for differences in responses on indicating the methods of following contemporary fine arts

		Age	n	$\overline{R}$	K-W test	
					χ^2	P
How do you follow contemporary fine art?	**By visiting exhibitions**	Up to 30 years	0	0		
		Between 31 and 40	9	26.17		
		Between 41 and 50	15	29.00	1.919	.383
		51 and over	27	24.28		
		Total	51			
	By following it in the media	Up to 30 years	0	0		
		Between 31 and 40	9	26.17		
		Between 41 and 50	15	27.30	0.374	.830
		51 and over	27	25.22		
		Total	51			
	By reading literature, articles, current periodicals, etc.	Up to 30 years	0	0		
		Between 31 and 40	9	32.56		
		Between 41 and 50	15	28.20	4.506	.105
		51 and over	27	22.59		
		Total	51			

Only fully completed responses were included in the statistical processing

The answers regarding the method of following contemporary fine arts show minor differences between groups that are not statistically significant. Teachers between the ages of 41 and 50 attended the most exhibitions. The same group of teachers most often followed contemporary fine arts through the media, while teachers aged between 31 and 40 most often followed contemporary fine arts by reading literature, articles, and current periodicals. The biggest difference appeared between the groups 31-40 ($\overline{R}$ = 32.56) and 51+ ($\overline{R}$ = 22.59), namely in following contemporary art by reading literature, articles, and current periodicals. Otherwise, the answers were fairly evenly distributed across all age groups. With the obtained data we must refute research hypothesis H_{S2}: *There will be differences in teachers' way of following contemporary fine arts, as we predict that younger teachers are more likely to use literature, articles and current periodicals.*

Contemporary fine arts are not limited to the local environment but are much more intensively and widely present in the international space, where the conditions for manifesting contemporary art practices are also quite different than in the local environment. Therefore, the authors were interested in whether the respondents had also attended international exhibitions. The results are presented in *Table 4*.

Table 4: Results of the Kruskal-Wallis test (K-W test) for differences between teachers' answers on attendance to international exhibitions of contemporary fine arts

	Age	n	$\overline{R}$	K-W test	
				χ^2	P
Do you attend any international exhibitions of contemporary fine arts?	Up to 30 years	0	0		
	Between 31 and 40	17	42.38		
	Between 41 and 50	24	39.88	3.977	.137
	51 and over	32	31.98		
	Total	73			

Only fully completed responses were included in the statistical processing

For the question *Do you attend any international exhibitions of contemporary fine arts?* the authors also observed no statistically significant differences, although the frequency of responses shows the greatest differences between the youngest participants (between 31 and 40; $\overline{R}$ = 42.38) and the oldest group (51 and over; $\overline{R}$ = 31.98). It can be concluded that younger teachers attended international contemporary art exhibitions slightly more often. This result was also expected, as it is somewhat in line with the assessment that younger respondents might be more skilled at organizing such trips.

3.2 Analysis of Results in Terms of Work Experience

Results related to the comparison of the respondents' work experience can undoubtedly have an impact on how an individual will recognize the pedagogical value of a particular subject and, in the interests of professional development, participate in events and follow up on related content. For this reason, the authors were interested in the following of contemporary fine arts from the perspective of work experience. The results are presented in *Table 5*.

Table 5: Results of the Kruskal-Wallis test for differences in teachers' responses on following contemporary fine arts

	Work experience	n	$\bar{R}$	K-W test	
				χ^2	P
	1-5 years	10	48.80		
	6-10 years	7	36.86		
	11-15 years	10	37.40		
Do you follow contemporary fine arts?	16-20 years	8	41.94	3.658	.600
	21-30 years	17	40.21		
	30 years and over	26	36.23		
	Total	78			

*Only fully completed responses were included in the statistical processing

In terms of work experience the authors found no statistically significant differences when analysing the following of contemporary fine arts. However, they noticed that there were slightly more positive answers to this question in the group of teachers with 1 to 5 years of experience. They were followed by teachers with 16-20 years of experience, and then by those with 21-30 years of experience. Among the other three groups the distribution is even. The authors estimate that the interest in contemporary art is fairly evenly distributed according to the respondents' work experience. The results reject research hypothesis H$_{DI1}$: *We predict that teachers with more years of experience will be more engaged in contemporary fine art.*

The following section consists of the results related to the method of following contemporary fine arts in terms of the respondents' work experience and the differences between the groups. The results are presented in *Table 6.*

No statistically significant differences can be detected in terms of the way in which contemporary fine arts are followed and possible differences between the length of work experience. Teachers with 16-20 and 6-10 years of experience attended exhibitions more often, while teachers with the least amount of experience (1-5 years) were least likely to do so. The group of teachers with 16-20 years of experience was also the most likely to follow contemporary fine arts through the media. In *Table 6* we can see that teachers with longer experience (16-20 years, 21-30 years, 30+) on average followed contemporary fine arts less frequently by reading literature, articles, and current periodicals. The variations are small, so one can say that the answers are evenly distributed across all groups. The results are also in line with those related to the age of the respondents and are somewhat expected. These results confirm the

research hypothesis H_{DI2}: *Teachers follow contemporary fine arts in similar ways regardless of their work experience.*

Table 6: Results of the Kruskal-Wallis test for differences in responses on indicating the methods of following contemporary fine arts

How do you follow contemporary fine art?		Work experience	n	$\overline{R}$	K-W test	
					χ^2	P
	By visiting exhibitions	1-5 years	4	20.50	7.569	.182
		6-10 years	5	30.70		
		11-15 years	7	27.79		
		16-20 years	5	30.70		
		21-30 years	11	29.77		
		30 years and over	19	21.84		
	By following it in the media	1-5 years	4	26.88	2.213	.819
		6-10 years	5	25.60		
		11-15 years	7	27.79		
		16-20 years	5	30.70		
		21-30 years	11	22.82		
		30 years and over	19	25.87		
	By reading literature, articles, current periodicals, etc.	1-5 years	4	25.75	5.897	.316
		6-10 years	5	33.10		
		11-15 years	7	34.50		
		16-20 years	5	23.30		
		21-30 years	11	23.55		
		30 years and over	19	23.18		

*Only fully completed answers were included in the statistical processing; n = 51

The analysis of the data related to attending foreign international exhibitions of contemporary fine arts is presented in *Table 7*.

Again, no statistically significant differences were detected. However, the greatest difference can be seen between the groups with the most work experience (30 years and older; $\overline{R} = 30.54$) compared to the group with 16-20 years of experience ($\overline{R} = 45.14$). On this basis, it can be concluded that teachers with the most experience, in this case we assume that they are also among the oldest, do not visit international contemporary exhibitions as often as the other teachers. These results are consistent with the results of the data analysis in terms of the age of the respondents.

Table 7: Results of the Kruskal-Wallis test (K-W test) for differences between answers on attending international contemporary fine arts exhibitions

	Work experience	n	$\bar{R}$	K-W test	
				χ^2	P
Do you attend any international exhibitions of contemporary fine arts?	1-5 years	9	43.67		
	6-10 years	7	36.36		
	11-15 years	10	35.05		
	16-20 years	7	45.14	5.437	.365
	21-30 years	17	40.26		
	30 years and over	23	30.54		
	Total	73			

*Only fully completed responses were included in the statistical processing

3.2 Results of Open-Ended Questions

Through the open-ended questions, where the respondents wrote down their thoughts, the authors gained a broader perspective on the research issue, which allowed them to analyse the data more objectively and draw conclusions.

They were thus interested in which international exhibitions or events the respondents had visited. The obtained data are presented in *Table 8*.

Table 8: Numbers (f) and structural percentages (f %) of responses on the visited exhibitions

Venice Biennale		International Graphic Biennale		Vienna		Museum of Contemporary Art Zagreb		Other		Total	
f	f %	f	f %	f	f %	f	f %	f	f %	f	f %
18	48.6	4	10.8	3	7.1	2	5.4	10	27.0	37	100.0

*Only fully completed responses were included in the statistical processing

Table 8 shows the frequency distribution of responses by the surveyed teachers. Not all teachers gave an answer, but the most frequently visited event was the Venice Biennale of contemporary fine arts (48.64%), which is the closest of contemporary fine arts event of its kind for Slovenian teachers. The Venice Biennale was followed by the International Graphic Biennale in Ljubljana (10.8%), and then the cities of Vienna and Zagreb. A few teachers mentioned several exhibition venues that they visited occasionally: the Maribor Art Gallery, the Museum of Modern Art Ljubljana, the National Gallery of Slovenia, the Museum of Architecture and Design Ljubljana, etc. However, also two other important exhibitions in the European context were mentioned in the answers: the Documenta in Kassel, a contemporary art exhibit that

takes place every 5 years, and the sculpture exhibition in Münster, which is held every 10 years (both in Germany). Since the monitoring of contemporary art practices is indispensable for quality teaching, especially in updating approaches to art and creative work, one would have expected a higher proportion of responses from the teachers surveyed at this point. One might also have expected more frequent mention of galleries in Slovenia, which also host international contemporary exhibitions annually.

The frequency of the respondents' viewing of international art exhibitions are presented in *Table 9*.

Table 9: Frequency of visiting international art exhibitions

Rank	Categories	f
1	Every two years	11
2	At least once a year	8
3	Once a year	3

The frequency of the answers given in *Table 9* can be compared to the answers given in *Table 8*. Given that the most frequent choice was the Venice Biennale of contemporary art, the frequency of the answer that the surveyed teachers visit international contemporary exhibitions every two years (Rank 1) is also appropriate. It is also encouraging that the teachers go to contemporary fine arts exhibitions at least once a year (Rank 2), which indicates that teachers are very active in attending contemporary fine arts exhibitions.

The authors were also interested in the respondents' attitudes towards contemporary fine arts. The obtained results are given in *Table 10*.

Table 10: Respondents' attitude towards contemporary fine arts

Rank	Categories	f
1	Positive	51
2	Negative	6
3	Undecided/ No attitude	6

Most of the respondents expressed positive attitudes towards contemporary fine arts, with positive attitudes also meaning acceptance of content with a negative message. Then, in order of frequency of responses, the following categories were

equally represented: negative and undecided or unformed attitudes. In addition to the ranked categories, the authors would like to highlight a few more statements that indicated a positive attitude towards contemporary fine arts, at the same time encompassing the fundamental goals of contemporary fine arts, and above all describing the purpose of including contemporary fine arts in the primary school curriculum:

> *"It is important for the development of society, education, awareness and the search for the essence of life."*
> *"It requires the viewer to make a critical assessment of quality, message, and address."*
> *"I consider contemporary art a necessary part of society; it is the face of a nation. I don't always understand it, but I have a respectful attitude towards it."*
> *"I have a positive attitude towards art. But I always keep in mind that one does not have to agree with all the ideas or concepts presented."*
> *"It always opens new perspectives on and horizons of how an artist can express himself even with non-classical approaches."*
> *"I am attracted to contemporary art because of its confessional, interpretive and multifaceted nature."*
> *"I am very interested in it for its new reflections and messages, technical approaches, in search of inspiration for my own creative work and approaches in the teaching process."*
> *"I am interested, I don't always understand it, but I am aware that if I don't understand something at first sight, I don't have the right to judge whether it is good or not (but I can have a personal opinion or like it)."*

In contrast, some teachers who had a negative attitude towards contemporary fine arts described their position vividly:

> *"I find contemporary art intrusive, shouting, no quality is recognized. It forces you to think too much. It doesn't allow the simple satisfaction of just looking at it."*
> *"There is a lot of rubbish that is not art at all. In a few years' time, some of the 'art' will be forgotten."*

Teachers who had not developed an attitude towards contemporary fine arts were modest in their statements – in their recording of attitudes:

> *"I don't have a particular attitude, because professionally I am not convinced by it."*

"I'm not too interested in it; I don't see anything new, of quality."

The authors were delighted by the statements from teachers who expressed positive attitudes towards contemporary fine arts. They also agree with the teachers who described their negative attitudes, but we cannot overlook the fact that it is the teacher who receives the impulses and selects them according to their appropriateness in accordance with the pedagogical process. In conclusion, teachers who have a completely negative attitude or have not formed an opinion about contemporary fine arts lack insight into contemporary fine arts practice; thus, little experience, or possibly a negative experience has developed into a general, negative belief. In this respect, these exists a similarity with students who, because of their lack of knowledge, are unable to form an attitude towards contemporary fine arts. Nevertheless, the results confirm the research hypothesis H_{SP1}: *We anticipate that most teachers will show a positive attitude towards contemporary fine arts.*

The authors were also interested in what attracted or repelled respondents the most about contemporary fine arts exhibitions. The categories of answers are presented in *Table 11*.

Table 11: Ranking of attraction toward contemporary fine arts exhibitions

Rank	Categories	f
1	Positive message	42
2	Negative message	15
3	Neutrality	15

Respondents most often pointed out the positive message that appealed to them in contemporary fine arts, followed by two categories that are equally represented in terms of frequency: negative messages and neutrality. The authors categorised the open-ended questions into positive or negative messages and neutral responses. To give a better picture, the following are some of the characteristics/features that attracted the teachers surveyed to contemporary art:

"New ideas, especially the author's vision of the world; creativity, aesthetics, ingenuity; interesting conceptual ideas; unusualness; diversity of views on art; finding new opportunities for expression; provocativeness; a different view on the same topic; new approaches and media in artistic expression; articulating ideas and attitudes towards modern life, problems and challenges; a critical portrayal of our society; experimenting with

techniques; meaningful audacity; work with space and body; the context of the origin of the work."

and those that repelled them:

"V*ulgarity; half-finished work; absurdity and excessive brutality; bizarreness; art pour art nonsense; painful and suffering presentations – performances; when the works are an end in themselves; when there is no discernible message; superficiality; videos, especially if they are long, very strange, obscure; senseless boldness; repetition of what has been seen before and emptiness of the mind (without an idea);*"

Here are some more interesting opinions and statements from the respondents:

"*It depends on the work that appeals to me.*"
"*I find the work short-lived. In the variety of different works, what is good gets lost.*"
"*Sometimes the realisation is hidden behind the concept; I think both are very important.*"
"*Sometimes the artwork draws you in; sometimes it has the opposite effect on you with its expressiveness and you don't know what it is that attracts you. Honesty ...*"
"*I am attracted or not attracted by the sense of humour and the concept, the idea. After some deliberation, I decide whether I agree with the idea (I like it) or not.*"
"*Sometimes I don't understand what the artist is trying to say. But that doesn't mean it doesn't attract me.*"
"*Contemporary art is a mirror of today's society, of any social phenomenon and of any layer, so it can repel, shock, shout at and influence the individual and their reactions.*"
"*I am attracted by the strangeness, the materials, the humour, the spatial layout. Too much philosophizing, which I may not understand, does not attract me. But it doesn't sit well with me as a visual art thing at all.*"

In view of the above, it can be concluded that the teachers' opinions and writings encourage evidence that teachers who have formed positive attitudes towards contemporary art also accept those artworks that have negative messages. This shows that they accept contemporary fine arts and give it the opportunity to speak to them and to establish a more objective attitude towards it. The characteristics highlighted as not attractive to the respondents are themes/issues about which the teacher needs to think carefully before presenting them in the classroom. Based on the respondents' statements, the authors conclude that the teacher's critical attitude

towards certain topics is crucial in deciding which topics to present to students. Critical and open-minded art educators are an indispensable factor in contemporary art education practice.

4   Conclusion

The questionnaire for teachers was used to obtain information about the teachers' personal interest in following contemporary art practice, the ways in which they follow it, and their attitudes towards and opinions about contemporary fine arts. The first part of the survey was dedicated to personal interest, ways of following and attendance at international exhibitions of contemporary fine arts in terms of identifying differences between the age group and work experience of the respondents. In the analysis of the open-ended answers, the authors were interested in a deeper perspective, i.e., the respondents' opinion on the topic. The findings regarding the teachers' engagement with contemporary fine arts show that teachers were equally engaged in following contemporary fine arts, regardless of age. Perhaps slightly greater interest was shown by the younger group (31-40 years). A similar finding is observed for the groups of teachers according to their work experience. The analysis shows a proportional distribution of responses, which means that there are no differences between the groups of teachers on this variable either and that interest in contemporary art is fairly evenly distributed according to the work experience of the respondents. At the same time, one may again observe that slightly more interest was expressed in the group of teachers with the least work experience (1-5 years).

In terms of the way they follow contemporary fine arts, the teachers' answers do not differ either by age or by work experience. The teachers followed developments in contemporary fine arts by visiting exhibitions, through the media, and by reading literature, articles and current periodicals, with younger teachers being slightly more likely to use the latter method. At the same time, this group of teachers was slightly more likely to attend international contemporary exhibitions. It can be concluded that younger teachers, who consequently have less experience, are slightly more attracted to contemporary fine arts than the other groups.

The authors found that most teachers showed positive attitudes towards contemporary fine arts, which they justified with statements describing their attitudes. Interesting conceptual ideas, a critical portrayal of society, accepting a different view on a certain topic, and finding new approaches and media in artistic expression are the goals pursued in art lessons when incorporating contemporary fine arts. This does not mean that teachers have a positive attitude towards all examples of contemporary art practices. Teachers are bothered by absurdity, excessive brutality, unrecognisable messages, superficiality, vagueness, etc. The results of the survey show that the teachers were open to the variety of expressive and contextual possibilities offered by contemporary fine arts, making their own judgements about what appealed to them and what did not, which work spoke to them and which didn't. Teachers' openness is important for the ability to exercise judgement in the selection of artwork and to guide the appropriate design of the art assignment in art lessons.

Even though most teachers showed a positive attitude towards contemporary fine arts, a small percentage of teachers did not like it, had a negative attitude, or had no attitude at all towards contemporary fine arts. Their opinion was that contemporary art was intrusive, loud, and did not give pleasure at the mere sight of it. An art teacher should be receptive to a variety of artistic practices and not generalize based on a possibly bad experience. They should also recognize the qualitative communicative and formal value of a work of art, discover interesting content, look for possibilities for didactic transfer, think about ways of implementing contemporary art in the art classroom, and establish an objective attitude towards the work of art.

It can be therefore concluded that most of the teachers surveyed, while having a positive attitude towards contemporary fine arts, had a good appreciation of the positive value of contemporary fine arts and recognized the pedagogical and didactic value in the artwork, which is the basis for its implementation in the artistic and pedagogical process. However, this is not a matter of personal interest but of pedagogical competences that art teachers must have.

The study has raised new questions, which relate mainly to a more detailed analysis of the situation of art teachers in terms of integrating contemporary art practices into the pedagogical process, more specifically in what ways and how often (if at all) they do so. The study also raised questions on a detailed analysis of the presence of

interdisciplinary integration in contemporary fine arts. In any case, the present results point us in positive directions in promoting the integration of contemporary art practices into the primary school curriculum. There should be no obstacles for art teachers, as the results show since contemporary fine arts are well accepted by teachers in terms of following and positive attitudes towards the content covered.

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Inclusion of Artwork in Various Subject Areas

Janja Batič,[1] Petra Lebar Kac[2]

[1] University of Maribor, Faculty of Education, Maribor, Slovenia
janja.batic@um.si
[2] Osnovna šola Janka Padežnika, Maribor, Slovenia
petra.lebar-kac@guest.arnes.si

Abstract This paper discusses a case study on exploring how works of art could be included in the teaching of various subject areas. The study included a sample of one class of fifth graders and their teacher. One week of lessons was organised in such a way that students discussed works of art before beginning a new unit in various subject areas. A questionnaire was used to obtain data from the students. Data were also obtained through participatory observation. The obtained data show that the implementation of lessons with the inclusion of works of art was very well received by the students, and the conversation about the works of art motivated the students with respect to further activities. At the same time, within a very short period, the students became familiar with many different works of art outside of art class.

1   Introduction

The importance of fine art in education transcends the boundaries of the art class (Robinson & Aronica

Viewing artwork can trigger various responses in the viewer. Artwork has the potential to awaken strong emotions, both negative and positive. "Visual images are unique" and can, as Leavy said (2020, p. 236), "evoke particular kinds of emotional and visceral responses from people; they are typically filed in the subconscious without the same conscious interpretative process people engage in when confronted with a written text." How an individual responds to a work of art to a large extent depends on previous experience and knowledge. Children are introduced to art in preschool without even realising it. The first contact with fine art is most often connected to reading picture books and viewing illustrations. Sipe (2001) sees this kind of experience as an opportunity for children to become familiar with art or even art movements, styles, artists, etc. Viewing illustrations, moreover, represents the child's first artistic experience. Later, students experience fine art or photographs in art classes, especially in classes where fine art is taught by a specialised art educator. When viewing, discussing and exploring artwork, students learn about the basics of art theory, artistic motifs and techniques. In doing so, they gain an aesthetic experience that is, as Dewey (2005) said, "a manifestation, a record and celebration of the life of a civilization, a means of promoting its development, and it is also the ultimate judgement upon the quality of a civilization" (p. 339). However, it should be noted that viewing art in photographs is mostly an alternative experience (Savedoff, 1993) that does not allow the student to experience the original work in an authentic environment and with all the senses. Even in the case of a video, viewing a video is a different experience when students view the video in a classroom or in an exhibition space.

, 2015). Marshall and Donahue (2014, p. 3–4) noted that "from a systems perspective, academic disciplines are components of a system of inquiry and knowledge in which all parts contribute to the workings and purpose of the system. Art, as a component of the system and as a mode of investigation and interpretation, can support the system and knit it closer together by promoting systemic, integrated learning." The integration of fine arts with other subject areas requires various learning strategies. Marshall (2010) outlined fives strategies based on contemporary artistic practices. Three of the five are suitable for all student age groups (*Table 1*).

Table 1: Creative strategies and learning

Strategy	Learn through	Learn about
Depiction	Observing/interpreting	Learning through image-making
Projection	Imagining/envisioning	The power of fiction & imagination
Mimicry	Copying/performing	Various methods of inquiry

Source: Marshall, J., & Donahue, D. M. (2014). *Art-centered learning across the curriculum. Integrating contemporary art in the secondary school classroom.* New York: Teachers College Press.

Examples of depiction include drawing a plant in biology or an illustration of a myth or a legend. Projection refers to exploring what might happen to, for example, the depiction of a historical person if they lived in the present, or to anticipating what the technology in the future might solve environmental problems. Mimicry is a form of play-acting, where a student imitates, for example, the work of a botanist by exploring and collecting plants, and then makes drawings or sculptures (Marshall, 2010).

This means of integrating fine art with other subject areas enables students to acquire knowledge about these subject areas, while learning about artistic approaches and ways of working. Marshall (2010, p. 19) demonstrated that the various approaches to teaching fine art are not mutually exclusive but are compatible, saying that "these strategies testify that learning through the arts is compatible with learning in the arts."

1.1 Artwork

Works of art are a whole of form, theme, and context (Sandell, 2006). Form refers to the material and design of the work (materials and artistic technique, design methods, artistic elements, and composition), while theme refers to the concept (motif, what is depicted, what the idea of the work is) and context (when and where the work was created, who created it, for whom it was intended, why it was created, and appreciated) (Sandell, 2006). In fine art classes, research on form is usually at the forefront in order to learn about artistic theoretical concepts. The problem with this way of using art is that students do not experience the works of art as a whole. Such conversation deprives students of important insights and new experiences. A typical example of such partial knowledge of artwork is the observation of Picasso's artwork from the blue period in the fifth grade, when students learn about cool colours and consolidate their knowledge of brightness. The artwork is presented to

students with the aim of acquiring artistic theorical concepts, leaving out motif, i.e., what is depicted, what is the idea of the work, why the artist has portrayed a particular motif, etc. Students observe the brightness of the picture, looking for the darkest and brightest shades of blue, while being deprived of thinking about why the artist used only blue, how the selected motifs of that period are consistent with the choice of blue, and the idea behind it. Their creative response is channelled into painting a particular subject using only cool colours of varying brightness. The performance criteria are based on the number of shades used, the students' technical performance, and the layout of the composition. In doing so, the idea of the selected artwork, which refers to the confrontation with the sadness and suffering that marked Picasso's blue period, is completely neglected. The creative response of students can arise not only from the form of the artwork but also from knowledge of the subject and context.

A conversation about artwork, which acknowledges equally their form, theme, and context (Sandell, 2012, Hubard, 2010), can motivate students with respect to various activities, not just artistic expression. Therefore, works of art are ideal for cross-curricular integration. An example of cross-curricular integration is a project for primary schools called "Take One Picture", run by the National Gallery in London. In this project, researchers explored a simple idea: they chose one painting as the starting point for teaching and learning various content from the curriculum (Hosack Janes, 2014). The results of the project showed that fine art is an important stimulus for learning and teaching different subject areas because: (1) learning becomes personalised, and students get the opportunity to express their thoughts, ideas and guide their learning, (2) students use their own experiences, so learning is more thoughtful and leads to better learning through the development of transferable key skills, and (3) it improves school cooperation and school participation with the wider community and also nurtures the interests of teachers and students (Hosack Janes, 2014).

2   Method

2.1   Research Problem and Research Questions

Works of art have great potential for cross-curricular integration in primary school, as they relate to very different areas of human activity. Artwork has the power to attract our attention, affect our senses and evoke strong emotions. However,

students rarely encounter artwork during their elementary education. Most often, art is addressed in art classes taught by an art educator. The case study was used to provide answers to the following questions:

1.   What experience do students have with fine art?
2.   Is it possible to integrate works of art into all the subject areas?
3.   What are the students' views on fine art after the case study?

2.2   Sample and Participants

A convenience sample was used, since the survey was conducted among fifth graders in a primary school with which the authors frequently collaborate on prospective teacher training. The survey included all fifth graders (n = 22), but not all of them were present during all units owing to occasional legitimate absences. The class counted 12 boys and 10 girls.

The survey included a generalist teacher with 13 years of experience and a faculty researcher with 18 years of experience.

2.3   Instruments

The case study was conducted between 22 February 2021 and 26 February 2021 (*Table 2*).

The data obtained from the survey questionnaire were analysed using descriptive statistics. Questionnaire 1 was used to check the students' attitudes towards fine art and what their experiences of it are. Questionnaire 6 checked the students' attitudes towards fine art after the case study was carried out. Both questionnaires included a combination of open and closed questions.

Questionnaires 2, 3, 4 and 5, looked at what students remembered most from everything they did during the day, whether the students remembered which works of art they viewed, which work of art they found most interesting, and which of the works presented they would like to see live.

Table 2: Case study schedule

Date	Activity	Monitoring
22/2/2021	Student opinions on fine art and artwork.	Questionnaire 1
	Motivating students with artwork in the following subjects: Social studies, Slovene language.	Questionnaire 2
23/2/2021	Motivating students with artwork in the following subjects: Slovene language, Sports, Mathematics, and home-class period.	Questionnaire 3
24/2/2021	Motivating students with artwork in the following subjects: Slovene language and Natural sciences and engineering.	Questionnaire 4
25/2/2021	Motivating students with artwork in the following subjects: Slovene language, Mathematics and Home economics.	Questionnaire 5
26/2/2021	Motivating students with artwork in the following subjects: Sports and Music.	Questionnaire 6

3 Results

3.1 Students' Attitudes Towards Fine Art and Their Experience Before the Case Study

The first questionnaire obtained data on students' experiences of fine art before conducting the case study. Nineteen students responded to the questionnaire.

Table 3 shows that the students had a positive attitude towards fine art. Most of the students liked to look at artwork and did not agree that art is boring. However, they believed that artwork was more interesting to adults than children. More than a third of the students thought they know of many works of art; however, a very large proportion of the students did not go to exhibitions with their parents. More than a third of the students only discussed artwork with a teacher.

Table 3: Students' answers (Questionnaire 1)

	True		Neither true nor false		False		Total	
	f	f%	f	f%	f	f%	f	f%
I like to look at works of art because they are interesting.	13	68.4	5	26.3	1	5.3	19	100
I find art boring.	1	5.2	4	21.1	14	73.7	19	100
Works of art are more interesting to adults than children.	8	42.1	7	36.8	4	21.1	19	100
I know of many works of art (paintings, statues, graphics by famous artists).	7	36.8	11	57.9	1	5.3	19	100
My parents and I usually visit art exhibitions together.	4	21.1	5	26.3	10	52.6	19	100
I've never been to an art exhibition with my parents.	3	15.8	10	52.6	6	31.6	19	100
I only talk about artwork at school with a teacher.	7	36.8	2	10.6	10	52.6	19	100

The students were asked which work of art they had last seen, what the piece was like, and what they remembered about it. The students' responses were very modest, only a few remembered the artwork they had seen and described it, and only two of them remembered the artist's name.

3.2 Motivating Students with Artwork in Social Studies and Slovene Language Class

On the first day of the case study, the students had the following scheduled classes: social studies, Slovene language, English or German language, and fine art (painting of a fantasy landscape with warm and cool colours). Works of art were integrated into the social studies and Slovene language classes.

The students discussed karst phenomena in social studies. The aim was to be able to list and describe surface karst phenomena, which also include karst valleys.

The students were introduced to the spirit of the landscape or genius loci in art as their introductory motivation. They viewed the *Drava Landscape* (1937) painting France Mihelič and the *Karst Village* (1955) graphic by Lojze Spacal. The students were not told the title of either work; only the fields of art were mentioned. The students' attention was first focused on the motif and finding similarities and differences between the two works of art. This was followed by conversation about colours. The students saw that the first painting was dominated by green, grey, and brown, while in the second piece, the colours were more varied and striking. The students were then told the names of the artists and the titles of the pieces. Over the course of the discussion, the students found out that both artists had been working on the same motif (landscape). The biggest difference they saw was in the use of colours. They realised that every landscape has its own mood. Artists who depict a landscape try to convey the spirit of a particular place. What followed was a conversation about why each landscape had a different mood, a different colour.

During the Slovene language class, the students discussed and analysed a poem by Srečko Kosovel titled "Poem from the Karst". The goal was to perceive and experience the sound of poems, perceive rhymes, and create imaginative sensual visions of the Karst landscape about which the poet wrote.

For introductory motivation, they looked at photographs of two works of art. The first piece was a painting by Ivana Kobilca called *Summer* (1889–1890). The second piece was a painting by Ivan Grohar called *Štemar's Garden* (1907). The students compared the pieces and looked for similarities and differences in the motive and method of depiction. Ivana Kobilca realistically depicted the time of year, children having fun, and greenery in the garden. She painted her younger sister Fani and her children. Ivan Grohar, on the other hand, portrayed a feeling and an impression. What followed was a discussion about whether the impression of an experience could be shown in words.

At the end of the class, the students answered Questionnaire 2. Twenty students responded to the questionnaire. In response to the first question "What do you remember most from today?", the students replied that they remembered the paintings and fine art the most. Some wrote that they remembered the social studies class the most.

To the question "Do you remember which works of art we saw?", as a rule, the students did not respond with the titles of the pieces but with descriptions or words left in their memory. Most of the time, they mentioned the pieces that had been seen in connection with the analysis of the poem. They highlighted the work of Ivana Kobilca, entitled *Summer* ("lady and three children", "family") and on several occasions, the work of Ivan Grohar, called *Štemar's Garden* ("Garden", "Yes, we looked at a picture of a garden with tables. It was empty because there was a storm coming on").

The next question was "Which work of art did you find most interesting? Why?" Once again, the students described the piece by Ivan Grohar, *Štemar's Garden* and the piece by Ivana Kobilca, *Summer*. The students' reasons for choosing the first painting were different (colours, trees), and in the second one, the students were drawn to the details and realistic representation of the figures.

The last question was "If you could see the original work of art, which piece would you choose and why?" Most students wrote down which work they would choose and explained their choice; most of them said that they would like to see the piece by Ivana Kobilca, *Summer* ("I would choose *Summer* because I am interested in the details that I could not see so well.", "*Summer* because it is incredibly well painted.").

3.3 Motivating Students with Artwork in the Subjects of Slovene Language, Sports, Mathematics, and in Home-Class Period

On the second day of the case study, the students were motivated by fine art in all subjects: Slovene language, sports, mathematics, and home-class period. In Slovene class, the aim was for the students to consolidate nouns and adjectives on the basis of a text about the *Portrait of Sister Fani* painting. In the introduction, the students were shown a picture of Ivana Kobilca's *Summer*, which they had observed the previous day, and they focused their attention on the persons depicted. They were then shown another piece, *Portrait of Sister Fani* (1889), in which Kobilca portrayed her sister. The following discussion referred to the motif of a full body portrait. The text in hand, entitled "Sister Fani", was taken from the informative part of the text of Andrej Rozman Roza's poetry collection *Poems from the gallery* (2018).

In sports class, the students were shown two works of art: Ivan Vavpotič's *Boy with a Hoop (Borut Žerjav)* (1922) and Ivana Kobilca's *Boy in Navy Dress* (1891–1892). The discussion focused on the similarities and differences in the depiction of the motif (the first boy is standing, the second is sitting; the first one has something in his hands, the second does not; where they are located, etc.). This was followed by a conversation about colours (in which painting dark colours were dominant, in which painting bright colours were dominant) and mood (which image would be associated with melancholy and anxiety, and which one with joy, exuberance for life and playfulness). The group looked for possible reasons why the first boy depicted (painted in the outdoors, in vibrant and bright colours) looked happier than the second (depicted in dark colours, sitting on a chair indoors with a sad expression on his face). The group focused the conversation on how they could become more like the first (more cheerful) boy.

During mathematics class, the students learned about exponentiation. The goal in learning about exponentiation is for the learner to understand that the product of the same numbers can be written in the form of an exponent. For introductory motivation, three works of art were shown to the students: *The Young Rabbit* (1502) by Albrecht Dürer, drawings of sheep from a sketchbook by artist Henry Moore (1972), and a large painting of cats by painter Karel Kahler, *My Wife's Lovers* (1893). The students compared the pieces to each other and found that all artists portrayed animals in such way that the animal's hair (texture) is shown. The pieces differ in their artistic techniques, format size, and number of animals depicted. The students' attention was then focused on 42 cats, portrayed by Karel Kahler at the request of the cats' owner. The latter is believed to have had as many as 350 cats on her property. The students were asked how the owner could have obtained so many cats. The authors set up a problem situation on the basis of which they presented the students with a calculation of exponents.

In the home-class period the discussion was centred on values. The students were shown paintings by: Franjo Golob, *Vineyard Worker's Family* (1939/40); Janez Vidic, *Self-Portrait with Family* (1959); Petra Varl, *Portrait of the Rijavec Family* (2000); Jožef Tominc, *The Family of Dr Frušić* (before 1835), and Matija Jama, *Rozi Bleiweis with Her Children* (1901). The conversation about the works of art was focused on similarities and differences (number of people depicted, the size of the paintings, the way in which people are depicted, colour, composition, facial expressions, gestures, relationships between the depicted). The students found that artists depicted the

same motif (family) in different ways. The authors directed the conversation to find the reasons why this motif was so common in art and what family usually meant to people. Then the conversation was focused on exploring other values.

At the end of the class, the students answered Questionnaire 3. Fourteen students responded to the questionnaire. To the first question "What do you remember most from today?", the students mainly mentioned math class (cats and exponents) and the conversation about families.

When asked "Do you remember which works of art we saw?" the students most often mentioned the pieces by Ivan Vavpotič, *Boy with a Hoop (Borut Žerjav)* and Ivana Kobilca, *Boy in Navy Dress.* "Families" appeared in the responses several times, with students not naming any work of art specifically. When asked "Which work of art did you find most interesting? Why?", the students again described the motifs but only a few students also explained their choice ("42 cats. I like it because I love animals.", "Cats, because there really were a lot of them.", "A little boy with an exercise ring because I love sports and because it is happening on a beautiful sunny day.", "The boy who was pale. Because he's weird."). When asked "If you could see the original work of art, which one would you choose and why?", the students described different works of art, but most of them did not explain their choice.

3.4 Motivating Students with Artwork in the Subjects of Slovene Language and Natural Sciences and Engineering

On the third day of the case study, the students had Slovene class, sports, mathematics, and natural sciences and engineering on their timetable. Artwork was included in the subjects of Slovene language, and natural sciences and engineering. In the Slovene language class, the students consolidated knowledge about how to describe a building. As introductory motivation, the students learned about Hutter's colony (a conversation about living conditions today and in the past, about the textile factory in Maribor and its founder, Josip Hutter, and the two-family houses built for the workers on his initiative). The students were then shown a photograph of Maribor by photographer Matjaž Wenzel. The selected photograph was part of the HK photography project (2008) and shows Hutter's colony today. The students then wrote a description of the building.

The objectives of the natural sciences and engineering class were to learn about water circulation and changes in the aggregate state of water. The students were first shown photographs of Brazilian artist Néle Azevedo's work. Students were shown photographs of her installations, in which she places small human figures in open public spaces ("Minimum Monument"). When viewing photos of the installation, the students recognised that the figures were made of ice. The artist places hundreds or thousands of ice figures in a public space, which then melt quickly. The discussion was focused on what materials statues in a public space are usually made of, why they are usually made of bronze or stone, and why the artist had used ice instead of materials that are much more long-lasting. Together with the students, the authors of this paper looked for possible reasons (alerting people to climate change, melting glaciers, etc.)

At the end of the class, the students answered Questionnaire 4. Eighteen students responded to the questionnaire. When asked "What do you remember most from today?", most students replied that they remembered the installations by the Brazilian artist most; slightly fewer students gave the sport and the twin house as answers. When asked "Do you remember which works of art we saw?", "Which work of art did you find most interesting? Why?" and "If you could see an original work of art, which one would you choose and why?", most of the students pointed out the ice statue installation. In large part, they also explained their choice ("Ice people because there really were a lot of them.", "Water, because I didn't know you could make something out of water.", "Because she used ice and because you can see through the statues.").

3.5   Motivating Students with Artwork in the Subjects of Slovene Language, Mathematics, and Home Economics

On the fourth day of the case study, the students had Slovene class, social studies, mathematics, and home economics on their timetable. The works of art were included in the subjects of Slovene language, mathematics, and home economics.

The objective of the Slovene class was to do a text analysis of an excerpt from Fran Levstik's *Martin Krpan*. First, the students were presented with two illustrations of Martin Krpan lifting a horse and moving it to the side of the road. The first illustrator is Hinko Smrekar (1917), and the second is Tone Kralj (1954). Both illustrations

depict the identical event. While observing the illustrations, the students looked for similarities (surroundings, horse lifting) and differences (art technique, composition).

In mathematics class, the students were engaged in computational operations. The objective of the lesson was to write down mathematical calculations using various calculation operations.

The students were shown two non-figurative works of art, one by Thea van Doesburg, *Composition VII* (*The Three Graces*) (1917) and Kasimir Malevich's supermatist painting, *Aeroplane Flying* (1915). The students looked for similarities and differences. In particular, the students focused on the composition and colours (chromatic, achromatic). The students were then challenged to calculate how many primary colours were in the two paintings combined. The students wrote different mathematical calculations with the same result.

In the home economics class, the students learned about advertising messages. The objective was for the students to learn about the components of advertising, how messages are designed and their purpose.

The students were shown Vincent van Gogh's *Self-Portrait* (1889) and Piet Mondrian's *Composition II with Red, Blue, and Yellow* (1930). The group discussed both pieces (motif, portrait, abstract painting) and the authors told them that both works of art were considered to be very famous. Vincent van Gogh was not recognised as an artist while he was still alive, but today he is considered to be one of the most recognisable artists of all time. Piet Mondrian created many similar compositions. Designer Yves Saint Laurent combined Mondrian's distinctive compositions with high fashion and designed a clothing collection (the students were shown a photo of a dress). Afterwards, the students were shown two more images – two advertisements that companies use to advertise their activities. The first advertisement combined text and image. The text said, "fine art stays fine when we ship it," and the image showed a composition of coloured shapes that looked as though someone had demolished one of Mondrian's compositions. It was a delivery ad. The second image was a French optics advertisement. Mirrors were placed in front of a reproduction of Van Gogh's self-portrait. Around the mirror, the self-portrait was painted in Van Gogh's distinctive style with short brush strokes and curved lines so that the surface appeared to be swirling, varied and restless. In the mirror, however, the image appeared sharp and clear. The following discussion was

about how designers take advantage of the fame of certain works of art to advertise various activities.

At the end of the class, the students answered Questionnaire 5. Eighteen students responded to the questionnaire.

When asked "What do you remember most from today?", the students replied that they remembered mathematics and home economics the most. When asked "Do you remember which works of art we saw?", the students described different works. Van Gogh and the advertisement – referring to van Gogh's self-portrait and abstract art – appeared among the answers (the students did not name any individual piece). When asked "Which work of art did you find most interesting? Why?", most students mentioned Van Gogh's self-portrait. Some also explained their choice ("because it is very original", "because it is a portrait", "because it is realistic"). Some students chose abstract works, however in most cases they did not explain their choice. In answering the last question, "If you could see an original work of art, which work of art would you choose and why?", in a similar proportion, the students indicated Van Gogh's self-portrait and abstract paintings.

3.6   Motivating Students with Artwork in the Subjects of Sports and Music

On the last day of the case study, the students had mathematics, natural sciences and engineering, sports, and music on their timetable. Art was incorporated into the introductory motivation in sports and music.

In sport, the students were engaged in upper-body strengthening exercises and throwing the ball to the finish line. The students were shown photographs of two works of art: Myron's *Discobolus* (a 2nd century Roman marble copy) and Duane Hanson's *Supermarket Lady* (1969). They were shown several photographs of the pieces that had been taken from different angles. In finding similarities and differences, the discussion pertained to depicting a human figure and what message the students could read from the pictures (disc thrower, sports, healthy spirit in a healthy body versus shopping, accumulation of goods, unhealthy lifestyle).

In music, the students learned about folk songs. The students observed artwork by Ivana Kobilca, *Women Ironing* (1891) and by Jurij Šubic, *Grandmother Sewing* (1882). The students looked at both pieces and described them (what the people were doing,

how they were painted, what colours prevailed). They were then told both titles and had the lesser-known terms explained to them. The students learned that the people in the paintings are depicted engaging in everyday tasks and that this motif is called a genre. At work, however, workers in the past usually helped the time pass by singing folk songs. Following this, the students learned about a new folk song, which described work at a mill.

At the end of the course, the students answered Questionnaire 6, which related not to the last day of the study but to the entire experience with fine art that the students had had during the course of the case study. Nineteen students responded to the questionnaire. The teachers presented the students with the questionnaire and told them that the questions related to all the artworks they had seen so far.

The students expressed a positive view regarding the integration of fine art into the classroom (*Table 4*). Most students were surprised by how many different school subjects could be linked to fine art. The authors conclude, therefore, that before the performance of the case study, the students primarily connected works of art with the subject of fine art. Most of the students were attracted to the artwork presented, and some of them would also have liked to see it in person. A small proportion of students would have been happy to present some of the artwork they saw to friends or relatives.

The students were also asked to answer three open-ended questions. First, the authors wanted to know of all the works presented which one they would have liked to see in its original version. The students mostly described the pieces without mentioning the authors or titles, but the descriptions showed which piece or group of paintings they preferred. They pointed out the different works of art they had seen in class, and most of their answers related to Myron's *Discobolus* (a Roman marble copy from the 2nd century) and to Néle Azevedo's installation, *Minimum Monument*.

With the next question, the authors wanted to find out what students remembered most from that week. The students recorded multiple responses or activities, and some responses could be assigned to several subject areas at once. Most students mentioned fine art in their answers, and sport also appeared a few times.

Table 4: The students' answers on Questionnaire 6

	Yes, very much.		Yes, I'm pretty sure.		I don't know.		No.		Not at all.		Total	
	f	f%	f	f%	f	f%	f	f%	f	f%	f	f%
Do you find art interesting?	10	52.6	5	26.3	2	10.5	1	5.3	1	5.3	19	100
Did you enjoy learning about art at the beginning of the lessons?	7	36.8	8	42.1	4	21.1	0	0	0	0	19	100
Were you surprised by how many different subjects we linked to art?	11	57.9	5	26.3	0	0	1	5.3	2	10.5	19	100
Would you like to see any of the artwork we saw this week in their original versions?	12	63.2	2	10.5	2	10.5	2	10.5	1	5.3	19	100
Would you like to present any of the artwork you saw this week to friends who have never seen these pieces?	3	15.8	7	36.8	5	26.3	3	15.8	1	5.3	19	100
Would you like to present any of the artwork you saw this week to your parents or other relatives?	4	21.1	5	26.3	7	36.8	3	15.8	0	0	19	100

During the case study, the students also learned about artists from various historical periods while studying the works of art. With the last question, the authors wanted to know whether they had ever met an artist in person, would they like to meet one in person, and what they would ask an artist. Most students had never met an artist in person and would have liked to. The typical questions they would ask artists related to what type of art the artist prefers, how many pieces they have already created, how difficult it is to make a statue, where they get their ideas for their work, etc.

4   Survey Findings

The objectives of the case study concerned students' attitudes towards fine art and the possibilities of integrating artwork in various subject areas. The authors selected the subject areas taught by the fifth-grade teacher. This means that artwork was not included in the German or English lessons taught by other teachers at the school. The findings of this case study showed that the students had a mostly positive attitude towards fine art before conducting the study. At the same time, they thought that fine art was more interesting to adults. They had trouble recalling works of art they had already learned about.

The planning of lessons was carried out collaboratively between the two authors of the paper, who sought opportunities to integrate artwork into the objectives and content of individual subject areas. In the search for appropriate pieces, it was necessary to consider the objectives of the fifth-grade art class. The conversations about the works of art were planned and realised in such a way that the students reinforced the artistic elements in the curriculum (motifs, techniques, colours, colour relationships, composition) during discussions. For the most part, the lessons were designed in such a way that the pieces served as an introductory motivator for the specific content of the selected subject area. The students responded positively to the work presented and were enthusiastic, which was also reflected in the questionnaires they answered after each day of instruction. Few students did not answer any of the questions asked. It was particularly interesting that the students made it very clear, which pieces impressed them the most and that their responses were very diverse.

At the end of the case study, the students were surprised that they were able to link fine art to all their school subjects. At the level of the student-artwork relationship, a positive attitude towards artwork was perceived. Most students liked that art had been included at the beginning of lessons. The art was interesting to most students, and they would have liked to see the original pieces. However, for a large proportion of students in this class, fine art was not something that could be a topic of conversation outside the classroom. When asked "Would you like to present any of the artwork you saw this week to friends who have never seen these pieces?" almost half of the students replied that they would not like to. When asked "Would you like to present any of the artwork you saw this week to your parents or other relatives?" more than half of the students replied "I don't know" or that they would not like to. The answers are meaningful because, in a way, they indicate the general state of fine art in the learning process and in society.

5   Conclusion

Art can be meaningfully integrated into the teaching of various subject areas through thoughtful planning. Motivating students with artwork creates a space for non-burdensome conversation about varied topics and enables teachers and students to explore the content of the curriculum through fine art. The works of art that were included in the case study encouraged students to discuss form (colour, colour relations, composition, artistic technique), themes (motives, idea of work) and context (why the work was created, circumstances). This is not to say that the students were learning about individual pieces in depth, but rather that the conversation highlighted an aspect that was directly related to the content (including objectives) of each of the lessons. When talking about works of art, the students consolidated the concepts from the field of fine arts in an unobtrusive and spontaneous way. The biggest problem with motivating students with artwork, which was detected by the authors of the study, is adjusting the time to talk about art. The students wanted to discuss the pieces for a longer time than had been allotted because they were drawn to them, and they wanted to share their experiences and observations with the teacher.

The original research plan was adapted to distance work. While exploring the possibility of integrating artwork into various subject areas, the authors wanted to encourage students to participate more actively in distance lessons through art. However, the remote work was cancelled just before the execution, so a live case

study was conducted. The survey was conducted in the first week of the return to live classes. The authors believe that the integration of art helped to achieve a more relaxed transition from distance work to the school environment. At the same time, due to the risk of a retransition to remote work (e.g., if the whole class should be quarantined), the case study was carried out within a very short period of time. Under normal circumstances, the same amount of artwork would be included in the classroom over a longer period of time.

Despite the limitations and nature of the study, which does not allow for generalisation, the authors believe that the case study has shed light on the possibilities of integrating fine art into various subject areas.

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LET THE MUSIC SPEAK IN JOYFUL MUSIC LESSONS

KONSTANCA ZALAR
University of Ljubljana, Faculty of Education, Ljubljana, Slovenia
konstanca.zalar@pef.uni-lj.si

Abstract Many elementary school teachers enjoy the state of students' immersion in musical activities. However, researchers claim that a state of complete student engagement is difficult to achieve owing to their lack of experience in playing and creating with musical parameters. The aim of the illustrative case study was to explore future teachers' awareness of music making. The aim was to find out how they included it in their preparations, how they described it in self-reflections, and how they evaluated it in peer descriptions. The analysis of the data revealed that future teachers planned the implementation of musical content carefully but were less aware of the factors that contribute to the achievement of group flow. The future teachers emphasised a lack of non-verbal communication skills in musical language, and a well-conducted lesson, where everyone was equally involved in achieving a common goal. Additionally, the teacher could perceive students' ideas, and the group could be focused – all of which are elements of group flow. The study enables the planning of teacher education in a way to provide children with quality acquisition of musical experiences.

1   Introduction

A joyful music lesson – utopia or reality? Does the answer lie hidden in the intangible creative moments of communication between students, teacher and music? In search of an explanation, one should acknowledge that creative activities are considered a central component of goal attainment in music education. Many teachers strive to enable their students to become good music (re)creators within their capabilities. Yet this area seems to be the least visible in practice, despite the fact that the Slovenian Curriculum for primary school (2011) includes objectives, such as:

Exploring timbres and using them to express acoustic ideas, creative movement demonstrating sound-related experiences and musical ideas, exploring the sounds of musical instruments and describing the differences, imitating things, animals, languages and events in the local and wider environment as well in nature, reproducing songs, lyrics and instrumental accompaniments, creating one's own accompaniments and sound images, creatively expressing musical and non-musical experiences and images in fine arts, non-verbal communication and movement, listening to music and expressing experiences and perceptions of musical elements with movement, dance, visual arts or verbally, etc. (p. 7).

All the starting points of the Slovenian Curriculum for primary school are underpinned by a process-oriented approach to music teaching. This approach follows the recognition that the learning process also determines the development of future teachers itself, which thus becomes a goal with intrinsic value and goes beyond predetermined goals (Sicherl Kafol & Zalar, 2011). The realization of a music lesson can thus lead to unexpected situations, the effects of which are as important to the learning process as the planned objectives. These situations are an expression of the relationships between all those involved in the learning process and show a specific group dynamic. It is here that teachers realize that students must have a "strong musical self-concept" if they are to attain and develop intrinsic motivation and sustained engagement in musical activities (Lamont, 2011, p. 377). But what about teachers' musical self-concept, and especially that of future teachers? Moore (2012) recognizes that previous formal or informal musical training and associated musical background can strongly influence people's learning (and teaching) experiences and that socio-cultural background can limit or enhance sensitivity to the teaching process. With this awareness and recognition of their own limitations, teachers find it easier to overcome them and treat students in the

classroom not only as a "class" but also as a group that includes students and themselves. They seek to exceed the "healthy music-making team" (ibid, p. 65) and to achieve as often as possible "a high level of intrinsic motivation." (ibid).

Outside the school environment, the above-mentioned intrinsic motivation, along with personal satisfaction and psychological well-being, represents "flow experience" (Csikszentmihalyi, 1975; 1990), which is "considered to be some of most enjoyable, rewarding, and engaging experience of all and typically involves automatic and effortless action coupled with intense focus." (ibid, p. 23). When multiple people are simultaneously involved in a "flow experience", they are either connected in a "team" where members hold each other accountable, or in a "group" that does not explicitly require this. As co-workers, team members are entirely dependent on each other's contributions – common purpose is a central aspect of defining a team, whereas a group may consist of largely independent actors working in parallel (Katzenbach & Smith, 1992).

From what has been said, it is clear that depending on the process-oriented specifics of teaching, class communities of students and teachers can be classified as "groups". Sawyer (2003) asserts that group flow is not just a collection of individual flows, but a collective phenomenon. Its pre-existing structures are elements related to a ritualized performance as a whole, outlining the performance known to all group members or the predefined roles for each group member. Group flow is assumed to involve parallel actions between group members, which means that group members must simultaneously focus on each other's activities and respond to them with their senses – hearing each other, seeing each other, etc. – in order to keep the interactive synchronicity flowing.

To achieve the peak experience in a group, Sawyer (2007; 2015) introduces the following ten conditions: the group goal, close listening, complete concentration, being in control, blending egos, equal participation, familiarity, communication, moving it forward, and the potential for failure. To learn how to prepare future teachers for teaching with an awareness of the presence of "group flow" we must situate the occurrence of these conditions in the classroom community of students and teachers.

2   Research

2.1   Aims of the Study

The aim of the study was to gain a deeper understanding of the elements of "group flow" that can/should occur during the first experience of teaching music. To this end, the study was conducted at the Faculty of Education, where the authors observed how future elementary school teachers plan and deliver music lessons and how aware they are of the conditions for "group flow" in the classroom.

2.2   Research Questions

Based on the goal of the study, each of the posed questions related to four levels of research: the participants' first-person experience of the first music teaching process (L1), the participants' peer evaluation of the teaching process (L2), the detailed lesson preparation (L3), and the final level, which offered future teachers' views on the implementation of "group flow" elements in the classroom (L4).

The research questions were as follows:

1. How do future teachers experience their involvement in the classroom community in their first music lessons? (RQ 1 – L1)
2. Are there any elements that point to the importance of "group flow" among the elements that future teachers consider important for the successful implementation of the learning process in a music lesson? (RQ 2 – L1, L2)
3. In preparing for music lessons, do future teachers (consciously) plan for those elements of "group flow" that later in the analysis become the key factors of a successfully delivered lesson? (RQ 3 – L3, L4)

2.3   Method

Given that the research topic was studied from a broader perspective, two analyses were conducted: a phenomenological case study (Kordeš et al., 2015) to answer the first research question (RQ 1 – L1) and an illustrative case study (Hayes et al., 2015; Jackson, 1991) that led us to a better understanding of the first research question and provided answers to the second and third research questions (RQ 2 – L1, L2 and RQ 3 – L3, L4). This scientific methodology made it possible to address the

target audience (future teachers) and bridge the gap between theory and practice by finding a common language to discuss the topic.

Thus, the authors focused on the holistic interpretation of possible elements of "group flow" among the elements of music teaching that students find important for a successful music learning process and went into detail about how/if they plan these elements in advance.

2.4 Participants and Data Gathering

Because the aim was to gain the deepest possible insight into the topic, the authors included future teachers from three consecutive years of study, all of whom were teaching music for the first time and all of whom had also observed at least five performances by their classmates. All 241 participants were aged between 22 and 23, were in their final year of undergraduate studies, and will work as first to fifth grade teachers in elementary schools after obtaining their master's degrees.

The participants were divided into three groups according to their respective years of study, with 80 students in the first group, 82 in the second and 79 in the third.

Table 1: The structure of the participating future teachers

	Students (n)
1st group	80
2nd group	82
3rd group	79
Together	241

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After each student made their own lesson preparation, each of them carried out a 45-minute music lesson with 1st to 5th grade children and participated in a group discussion that followed, therein the students analysed the respective lesson along with those of at least five other classmates. Within one week after the respective lessons, each student also produced a written self-reflection of their own lesson and wrote evaluations of five other selected lessons, given by their classmates, according to a specific protocol that included an evaluation of professional and didactic implementation, as well as open-ended questions about their general impression of the performance.

This procedure provided the opportunity to include multiple sources of information in the study. During data collection, the authors first reviewed all self-reflections (241) but selected only those that contained descriptions of successful implementations in the classroom for analysis. As it turned out, only 68 students (28.21%) were completely satisfied with the way they conducted the lessons.

For each of these self-reflections, the authors searched for and analysed the respective peer reviews, of which, given the observation system used, there were five times as many (340), but only 200 of them contained data relevant to the current field of study. All detailed lesson preparations were also included in the data (68). Finally, 31 teacher's notes were analysed. These were made for selected lessons and were highlighted during the group discussion with students after the lessons.

Table 2: Data collected for the study

	Written self-reflection on music teaching (n)	Relevant written self-reflection included in the study (SRP) (n) (f %)		Relevant peer evaluation of music lessons (PEP) (n)	Detailed music lesson preparation for relevant lesson (LPP) (n)	Teacher's notes for relevant music lessons (TP) (n)
1st group	80	19	23.75 %	65	19	10
2nd group	82	23	28.75 %	60	23	9
3rd group	79	26	32.91 %	75	26	12
together	241	68	28.21 %	200	68	31

Legend: SRP – Self-Reflection Protocol, PEP – Peer Evaluation Protocol, LPP – Lesson Preparation Protocol, TP – Teacher's Protocol.

Based on these sources, four protocols that contain data for each level of research were created:

– "Self-Reflection Protocol" ("SRP", encryption units in the protocol are marked as SRP-I/1, SRP-II/5, SRP-III/69, etc.) contained data for the first level (phenomenological) of research from the relevant written self-reflections.
– "Peer Evaluation Protocol" ("PEP", encryption units in the protocol are marked as PEP-I/1, PEP-II/5, etc.) covered data derived from peer evaluation notes on the second level of research.
– "Lesson Preparation Protocol" ("LPP", encryption units in the protocol are marked as LPP-I/4, LPP-II/5, etc.) contained data for the third level of

research obtained from the review of lesson preparations, drawn up in advance.

– "Teacher's Protocol" ("TP", encryption units in the protocol are marked as TP-I/1, TP-II/5, etc.) covered data on the final, fourth level of research obtained from the teachers' notes and provided an additional view of the research area, ensuring the necessary validity of the study.

2.5 Definition of Categories

The data collected in all four protocols were analysed using a qualitative method of scientific research. The authors followed the steps of phenomenological research (Kordeš et al., 2015) and illustrative case study process (Gerring, 2017; Hayes et al., 2015), formed coding units (Yin, 2009), and used open and axial coding to determine the categories, whose paradigmatic model was related to the area under study. 21 categories were formed, of which ten were linked to professional and didactic implementation in lessons and eleven related to the representation of "group flow" between the teacher and children from 1st to 5th grade (six to eleven years old) during music lessons. In a further process of analysis, the authors combined four of the originally defined categories into one (*The use of the voice, Attitude towards silence, Perception of individual sounds and group sounds, Perception of the singing contents and instrumental music contents*), since their data overlapped to such an extent that separation into more specific areas was no longer possible. Some category titles also contained codes relating to a specific theme, as well as their antipodes – all with the intention of providing insight into the problem from as many perspectives as possible.

2.5.1 Phenomenological Case Study

In the phenomenological case study, material related to the first level (L1) of the entire study were analysed, answering the research question regarding the experience of their involvement during their first music lesson.

The "Individual Flow" vs. "Group Flow" Relationship. In the "*individual flow" vs. "group flow*" category, data were included showing how the individual future teacher's flow merged with the "group flow" experience in the classroom community. The author also included data showing the reverse path from experiencing "group flow" back to the future teacher.

Thus, the self-reflection protocol yielded records that suggest that the energy expended to overcome initial nervousness and uncomfortable feelings is positively valued and critical to the successful delivery of music lessons. More than effort, future teachers described induction efforts as a process that is inevitable and at the same time quickly overcome: *"… then I forgot it was a performance"* (SRP-I / 6), *"I never thought I would enjoy teaching music as much as I did during the performance"* (SRP-III / 50), *"I think we found a common language and we felt each other"* (SRP-III / 52). Data from the "Teacher's Protocol" (TP) also confirm the above findings: *"She performed the introductory motivational activities remarkably well" (TP-II/17)* and provide insight into the students' feedback about the future teacher experience: *"I had a very positive experience of the lesson. I think the students also played a big role in the overall experience"* (SRP-I / 17)*, "I felt very good and accepted by the students. The students are very nice and like to help"* (SRP-III / 50).

A particular sense of time flying by is evident in the following statements: *"I do not even know when or how the hour passed"* (SRP-II / 37), *"… all of a sudden we were at the last activity, it was great"* (SRP-III / 42). On the other hand, some future teachers reported difficulty during the lesson and a lack of shared experiences: *"I lack energy and dynamism in performing"* (SRP-I / 9) and *"I do not see any problems in the (un)success of individual activities, but rather in the feeling and frustration"* (SRP-I / 14).

In teaching, the data show the special "status" of the teacher; on the one hand, they are involved in the class community and the "group flow" experience, on the other hand they (at the same time) secretly control the course of the lesson: *"It is very good that she changed the game depending on the situation – this means for me that the teacher can try to play with the students, but on the other hand he always acts as a supervisor as well"* (SRP-I / 14).

How deficiencies in certain areas of expertise can be compensated by a carefully devised and consolidated teaching strategy is shown in the following notes*: "Intonation is not reliable. But she masters the piano playing perfectly and helps herself by constantly observing the students in spite of her playing. She has beautiful facial expressions"* (TP - II / 24) and *"I realized that a teacher can attract students even if she does not have an ear for singing"* (SRP-II / 24).

Emotional Commitment. The *Emotional Commitment* category explains how strongly future teachers experience their first lesson in music teaching: *"I experienced the music lesson as a kind of whirlwind of emotions"* (SRP-III / 58).

All participants reported feeling some tension at the beginning of the lesson, calling it *'fear'* SRP-III / 41, 48, 52, 51), *'trembling'* (SRP-I / 3. 6. 15, II / 25.32, III / 68), *'stress'* (SRP-I / 2, 7, 8, 9, II / 21,26, 37, III / 44, 55, 62, 67), and successfully overcoming the initial discomfort: *"I made a conscious decision that this would not throw me off track and started the lesson"* (SRP-I / 9), *"I overcame that initial fear and exceeded my expectations"* (SRP-I / 12). Often external factors were responsible for the uneasy initial feeling, over which future teachers had no control: *"Due to the absence of the teacher, I did not have the agreed musical instruments and other necessities ready"* (SRP-III / 59). However, through a reflective process of introspection, the future teachers achieved a certain degree of self-confidence and experienced this as a personal transformation. Descriptions of the final parts of the lessons are therefore as positive as possible and contain words, such as *fun, enjoyment, relaxation, pleasant atmosphere, positive experience, victory, etc.* (SRP-I / 3, 5, 6, 7, 8, 13, 15, 16, 17, II / 22, 23, 24, 27, 31, 33, 39, 40, III / 45, 46, 48, 60, 61). The author can confirm that the experience of teaching music changes after succeeding in (co-)experiencing the musical language with students: *"At the end of the lesson I was overwhelmed with feelings of satisfaction, happiness, personal victory"* (SRP-II / 38). The best way to describe this process of transition is to say: *"If I could sum up the experience of this lesson in one word, I would call it a storm, precisely because the atmosphere was tense at the beginning, but at the end the feeling was very pleasant, like when the sun shines after a storm"* (SRP-I / 17).

Teaching Music as an Artistic Experience. In the material in the "*Teaching music as an artistic experience"* category, it is stated that future teachers (also) led the lessons as a time of special artistic experiences through which they wanted to encourage students' active participation by stimulating curiosity and finding different ways of solving musical tasks: *"... achieving, through all the activities carried out, a single goal, namely, the artistic experience of teaching music lessons"* (SRP-I/4). They were aware that they influenced students through personal involvement: *"I think it is important that we as teachers provide a lively, joyful interpretation and attitude towards music, because then students will participate in music lessons more gladly"* (SRP-II/64), *"The way it (music) is presented by the teacher is the way it is accepted by the students"* (SRP-II/44).

They also knew how to incorporate the aesthetic dimension of music teaching into their deep experience: *"I found music lessons relaxed, calm and creative at the same time, because not only the students learned a lot, but I also left the classroom with a new positive experience"* (SRP-II/31), *"I got to know myself much better"* (SRP-I/12).

Desire to Teach Music vs. Fear of Making Mistakes. The records gathered in the "*Desire to Teach Music Arts vs. Fear of Making Mistakes*" category report on the participants' great desire to teach music, but at the same time a fear of doing so. The following quotes confirm this statement: *"I am surprised and proud to have completed a performance that to me was one of the most challenging school performances this year"* (SRP-III / 41), *"One of my most valuable personal learnings from this lesson was the awareness that I can prepare a quality lesson and that I can do more than I had previously imagined"* (SRP-III/54). Once again, working together and experiencing "group flow" proved helpful in overcoming embarrassment before teaching. Thus, the influence between the future teacher and the students was two-way: *"I am glad I had the opportunity to work with a class like this ... it inspired me and gave me the confidence to teach music that I lacked before this experience"* (SRP-I / 10). Despite being aware that dialogue is an important part of communication, many students reported on the importance of performing with self-confidence (SRP-I / 1, 2, 3, 6, 14, 17, II / 34, III / 53, 59) and how being well prepared for lessons contributes to it: *"Music lessons are not so demanding if you just start properly and prepare well and go into the lessons positively and with good energy"* (SRP-I / 14), *"Now I understand how important preparation is"* (SRP-II / 24) and *"Because I was aware of this, I prepared carefully for the lessons and practised a lot at home and prepared well. At the performance I noticed that it paid off because after a few minutes the insecurity was completely gone"* (SRP-III / 47).

A confident performance is strongly emphasized again in connection with flexible adaptation to the learning process. The insights regarding practical implementation are expressed in the following statements: "*..., so I adapted the lesson slightly"* (SRP-I / 10), *"So I realized that I needed to be prepared for unpredictable situations in the further course of the lesson and at the same time trust in my abilities and the activities I prepared"* (SRP-I / 18, SRP-II / 31). However, the occasional humorous situation occurs on the part of the observer when they realize that potential mistakes do not affect the experience of "group flow" or that the participants do not even notice them: "*She made a mistake several times, they played on nuts and not on hazelnuts"* (PEP - II / 101) and "*The students became so absorbed in musical communication and followed so well that speech errors were not noticed at all"* (TP - II / 101).

2.5.2   Illustrative Case Study

The illustrative case study, as the second part of the study, analysed the material obtained for the second (L2), third (L3) and fourth (L4) research levels, confirming and at the same time extending the insight into the explored themes of the phenomenological study at the first (L1) research level. Four categories were identified in the material.

Music as a Game. In the "*Music as a Game"* category, data were collected from 136 (of 200) relevant peer evaluations of music lessons that emerged as key indicators of the realization of group flow conditions. These included descriptions of moments in the lessons for which it was clear from the materials that all participants were engaged in common music making with clearly expressed expectations on the one hand, and a sense of confidence that enabled students to feel comfortable and creative on the other. There was some initial effort involved, but once the collaboration had begun, it provided valuable feedback and began to be intrinsically rewarding. The data relate solely to the introductory motivational activities: *"Nice, calm, relaxing introductory motivational activity"* (PEP -III / 172), *"Creative and interesting start to the lesson"* (PEP -III / 187), *"I am surprised how wonderfully the improvisation worked in the introductory motivation"* (PEP -III / 198), and to the final activities: *"Great end to the lesson – the musical game was a success"* (PEP -I / 3). In the materials, play is never described as a central activity of the lesson.

Perception of the Class Community as a "Group". The records that report a high level of student engagement in music language and a high level of interest in their actions by the cooperating teacher are all grouped under the category of "*Perception of the Class Community as a 'Group.'"* It highlights the consistent attitude of the future teacher whose posture, facial expressions, and other forms of non-verbal behaviour confirm their empathy for the functioning of the class as a whole: "*He is also kind and has a happy expression on his face, he is obviously enjoying himself"* (PEP-II/70 and 92 other similar reports). In the analysis, the author found that mentions of kindness, warmth, and a reassuring demeanour were always associated with the experienced interpretation of music contents. Therefore, one can conclude that professionalism is a prerequisite for creating conditions for the development of group flow: *"... Music house, everybody was at home there. Literally (physically) and figuratively"* (PEP -I / 37).

The Influence of Additional (Non-) Formal Education. This category contains a selection of the most important descriptions from the materials, showing how much knowledge from other artistic fields students brought to the music class was welcome and how much it helped them fit into the group flow. The ability to play an instrument, even modestly, was also desirable. Reports, such as *"My hands were shaking, but I was just kind of along for the ride"* (SRP-III/59) and *"She was visibly nervous, but she played so heartily"* (SRP-III/59) and *"the kids applauded"* (PEP-III/189), show how students spontaneously valued a genuine personal relationship more than a technically flawless musical performance. In the peer evaluation material, the author also found praise for the piano, guitar, and accordion playing. As regards to other artistic areas, acting stood out: *"Super facial expressions and singing in the roles of the mayor and the sparrows"* (PEP-I/4), *"Excellent dramatization" (ibid.) "Innovative delivery of a lesson with good pantomime"* (PEP-III/150).

Musical Parameters. The "*Musical Parameters*" category includes all reports related to the use of voice in music lessons, attitudes towards silence, perception of individual/group sounds, and perception of the vocal/instrumental music contents. The material is extensive but overlaps to such an extent that it is not possible to separate it into more specific areas. For example, the note *"she used calmness of the voice as a conscious choice"* (PEP -III / 189) was given a double meaning. On the one hand, this statement characterized the future teacher's self-presentation, influenced by the students' intense experiential listening to instrumental content, which she did not want to interrupt with speech, and at the same time it praised her extraordinary attention to sonority: *"In this way, she leaves the 'speech' to the music and grabs the students' attention in a great way. At the same time, she guides them and leaves them free"* (TP -III/58).

The codes included in the category also indicate the real benefit of an appropriate attitude towards silence. One future teacher allowed her students a lot of freedom to develop and coordinate their own musical ideas: *"... with the movement of her hands and without words, she took the student's sound idea and passed it on to the other student in the same way. The latter carried out the melody without error. I was very surprised; I had never seen or heard such a performance before"* (PEP -II/133). With the absence of speech (and its possible substitution with, for example, movement or facial expression), silence enabled students to learn through active participation. They responded emotionally: *"The students looked at her with their eyes wide open and no one moved"* (PEP -II / 139), but they also successfully acquired new knowledge: *"The students wanted to repeat over and over, I heard them singing a new song during the break."* (ibid.). Teaching with little language

and with more non-verbal stimuli is even described as 'risky' in the material: *"The kids kept playing ... And without instructions – risky, but great!"* (PEP -I / 144).

3   Discussion

Finally, the paradigmatic model of the relationships between categories in the selective coding of the collected material was identified. The authors established the connections between the main findings and the concept of "group flow" – the process led to the formulation of the final discussion in a form of grounded theory, which offered answers to all research questions.

In making music together with students, future teachers experience a change in their personal view of the teacher-student connection during their first music lesson.

All participating future teachers followed the Slovenian Curriculum for primary school and planned lessons using a process-oriented approach with all its recommendations. Self-reflection on their performance showed that not only the students, but also the teachers themselves made progress in this way. An important insight into this progress is the understanding of "group flow". Drawing on the psychology of music, it argues that collaborative group work is a powerful social activity (Hargreaves & North, 1997; MacDonald et al., 2006; Miell & MacDonald, 2000) with a particular state of mind, and as such represents the highest level of psychological and physical ability for participants (Sawyer, 2015). Shared activities – especially in the creative field of music – become pleasurable, although, as Csikszentmihaly (1975) says, they initially require a great deal of effort – a complete *"whirlwind of emotions"* (SRP-III/58). Once this is successfully overcome, it usually begins to be intrinsically rewarding (ibid.): "*I have come to know myself much better*" (SRP-I/12). This task requires great concentration and few cues come to mind during the (teaching) process (Csikszentmihaly, 1990). It is only through the analysis of the teaching method that the conditions for achieving progress are expressed; this is mainly reflected in the awareness that it is worth expending a large amount of energy just to make future teachers feel it (Sawyer, 2015). Thus, when they focus their attention to music making in interaction with students, rather than worrying about their "status" as a teacher, they achieve a paradoxical result – they no longer feel like a separate individual as a teacher, but they become stronger and more confident as a member of a group.

In addition, the study confirmed that the perception of time during teaching also overlapped with the conditions for the realisation of "group flow". Nakamura and Csikszentmihaly (2009) state that after experiencing "group flow", we do not know where the time has gone, *"I do not even know when or how the lesson has passed"* (SRP-II / 37). In this sentence, the word *"when"* confirms that "time seems to stand still" (Nakamura & Csikszentmihaly, 2002, p. 95), but even more significant is the word *"how"*. Indeed, one would expect the teacher to be in control of what is happening in the lesson, but here it seems as if the lesson progresses on its own. The teacher is completely immersed in group music making. Forgetting their position as teacher, they experience being part of a group. Sawyer (2007) explains that this phenomenon (through aesthetic experience) expands the boundaries of the experience of one's being and opens up the possibility of seeing oneself from other perspectives. In an educational context, aesthetic experience is completely direct (and synonymous with creation), and its interpretation allows this intense inner experience to be expressed to others (Kroflič, 2007). According to the data analysis, the confidence needed to express oneself in the context of the classroom stems from the personal transformation of the future teachers' world, which enables them to "act properly – musically, socially, communally – with constant concern for the protection and promotion of human creativity" (Elliott & Silverman, 2014, p. 44).

Well-prepared and thought-out music lessons combined with impeccable professionalism in the classroom community allow for the achievement of several elements of "group flow".

A significant finding within this study is also the fact that the more precisely the lessons are planned, the more they can prove to be *"child-friendly"* (PEP-I/17), *"calm"* (PEP-II/102, *"successful, collaborative"* (PEP-II/141), *"full of musical improvisation"* (PEP-III/180). Future teachers plan certain conditions for "group flow" in advance without being aware of it – especially when it comes to the "external task environment" (Nakamura & Csikszentmihaly, 2009). This includes "challenges matched to skill level, clear proximal goal(s), and clear, immediate feedback" (van den Hout et al., 2018, p. 392). In addition to the above, "group flow" can also indicate situations that future teachers do not plan for but simply happen because of their full personal engagement. They create an environment for students where there is "no fear of failure, full focus, and intrinsic motivation" (ibid.). Future teachers sense they can handle situations because they feel confident to respond to any kind of event, and their thoughts, energies, and attentions are focused on the

task at hand. Possible distractions are eliminated from awareness – the teacher can achieve this with much practice (Lutz et al., 2008). It shows that the exercise in eliminating external influences begins immediately upon first entering the class: *"I did not have all the musical instruments agreed upon ..."* (SRP-III / 59) and *"I made a conscious decision that this would not make me panic ..."* (SRP-I / 12).

Based on the progression of lessons characterized by the behaviours described above, and in accordance with the theories of achieving a "flow" state (Csikszentmihaly, 1975, 1990; Nakamura & Csikszentmihaly, 2002, 2009; van den Hout et al., 2018), one can claim that "group flow" in music lessons in the school environment occurs in shorter periods of time, during which participants enter, leave, or stay for more or less time. During this time, they lose "reflexive self-consciousness" (van den Hout et al., 2018, p. 393) – their concern for themselves temporarily disappears, and they experience a "distorted experience of the passage of time" (ibid.).

In most lessons, the future teachers and students included in the study began to make music together at the beginning of or during the last few activities. During these moments, the manner of communication between them played a great role, as the children believed the non-verbal messages and perceived them as more authentic (Noller, 1984). *"The students looked at her with their eyes wide open ..."* (PEP-II / 139) refers to the events in which the future teacher used a calm voice and expressive body language and communication skills she acquired outside of her studies by participating in children's theatre. Park (2013) describes these two qualities as essential for contact with (especially younger) children. Appelman (2000) further confirms the importance of coherence between expressions and dyadic interactions, as speech intonation, rate of speech, and all related non-verbal elements that promote synchronization and comprehension of others' feelings. Facial expressions, vocalizations, postures, instrumental behaviours of individuals in a group, all positive and negative emotions can be transferred from one person to another and are "contagious" (Hatfield et al., 1993, p. 96; Culbertson et al., 2015; Hart & Di Blasi, 2015).

The analysis has explained several interactive communication processes in which it was possible to observe how the mood of the future teacher affected many factors of teaching and, of course, vice versa: *"... (the class) inspired me and gave me the confidence to teach music that I lacked before this experience"* (SRP-I/10). In this way, "emotional

internal infections" (Bakker, 2004, p. 28) begin to work, determining the quality of teaching and indirectly affecting student and teacher satisfaction.

It is believed that children at the beginning of primary school have great interest in music activities carried out as symbolic play, which is characterized by the representation of others from the real or imaginary world (Marentič Požarnik, 2018). The vast majority of data in the study confirms this. And if the definition of communication (Communication, 2021) is: "a process in which information, ideas, thoughts, feelings, etc. are exchanged between individuals through a shared system of symbols, sounds, signs, or behaviors," then they merge the teacher's lesson preparations with concrete plans of making music together with the children and their mutual emotional influence into a concrete entity (Bakker, 2004), leading to a creative process of knowledge formation.

In preparing for music lessons, students rarely plan consciously for the elements of group flow, even though they identify them in lesson analyses as being crucial for the successful integration of all participants in collaborative music making.

In the study, preparation for music lessons did not fare well on the prerequisites for "group flow". The results indicate that there are no mentions of its deliberate planning except for a few passing remarks, such as "*I pay attention to non-verbal communication"* (LPP-II/39 and two others). Unlike goals, methods, and activities that future teachers plan and can consciously pursue in the course of teaching, the conditions for achieving "group flow" or participating in "group flow" are something that they only become aware of after a thorough analysis, specifically when they are able to give a "proper name" to descriptions, such as "…*it was great"* (SRP-II/29) and place their feelings outside the frame of stress of giving their first music lesson. The success of teaching in terms of collaborative musical creation and performance often comes as a complete surprise. Complete concentration – "*... then I forgot it was a performance..."* (SRP-I/6) – means bringing order to the state of mind by incorporating future teachers' and students' actions into the group's "flow experience" (Sawyer, 2006, 2007). It is understandable that we often cannot achieve this state of mind in the school setting because we are limited by time and space. Moreover, the investment of mental energy requires full concentration, not to mention the skills without which it is impossible to think of achieving "group flow".

During the study, it was found that during the lessons, moments of "group flow" emerged when the basic conditions for this were met and complemented by feelings of healthy competition among the children. In all cases, the latter proved to be a means of perfecting the abilities of the children who experienced it as fun. Armstrong (2008) refers to these learning situations as goal-oriented activities that are sequential and constrained by rules, while at the same time containing a tremendous amount of cooperation and attention among all participants. In this study, the author was more interested in when/if a leap into "group flow" occurred under the above-mentioned circumstances. It was found that "group flow" occurred more frequently in younger children, when the shared music making moved from the concrete to pure music. The result is surprising, because in some respects it goes beyond the phase of concrete operations, which these children, according to Piaget and Inhelder (2018), are still in as regards their cognitive development. One can assume that it is an (unconscious) acceptance – to the point of "emotional contagion" (Bakker, 2004) – of the teacher's manner of teaching, their speech, professional skills (in notion of singing, interpretation, musical language, etc.), frame of mind, attitude towards the students, and mood. Of greater importance than children's musical products is the fact that the children involved in the "group flow" approach "pure music", the expression of which, as Stravinsky (1947, p. 47) argues, has never been its inherent quality. Its purpose is to express the expression of feelings that live far from reality in (vocal) visions of individuals (ibid); with good guidance, a group of children easily "moves" into this world of sounds and returns from there to the school environment.

According to the findings, lesson preparation for music lessons fails to consider that participants in highly interdependent groups report more enjoyment of flow than individuals (Walker, 2010, p. 4). Although "group flow seems to come naturally" (Sawyer, 2006, p. 158) when working with children, we need to be aware and consider that the social context of "group flow" may be a qualitatively different phenomenon than individual flow – and therefore we need the best possible music lesson preparation.

4   Conclusion

The detailed analysis of the plans for the first music lessons and the detailed description of the future teachers' experiences during their implementation gives us an excellent holistic insight into the interpersonal relationships formed between the

participants through musical language and by making music together. It is important to note that "group flow" as the culmination of participation in a shared musical activity occurs completely unplanned and yet it can be facilitated or enhanced by increasing a group's musical competences, improving interaction and social relationships. Future teachers, who are open to a variety of experiences, eager to continue learning, and have a strong commitment to others, including young children, demonstrate that optimal experiences in "group flow" do not come from inactive, relaxing times – even though their lessons seem to be "*quiet, nice, friendly*" (PEP-II / 37, 39). The data also point to the personality traits of good teachers, which should begin with acceptance of oneself – the teacher should be who they are. In (non-verbal) communication, they should not show any discrepancy between experience and expression, they should trust students unconditionally, they should create an atmosphere of safety and empathic acceptance – or, as the one of the future teacher writes: "*I realized that it is always worth trying something new in life*" (SRP-II / 35).

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Music Lessons in Distance Learning and a Presentation of Musical Objectives in the Affective, Psychomotor and Cognitive Domains

Bojan Kovačič,[1] Mateja Kolmanič,[2] Alja Lapuh[1]

University of Maribor, Faculty of Education, Maribor, Slovenia
bojan.kovacic@um.si, alja.lapuh@um.si
[2] Primary School Križevci pri Ljutomeru, Križevci pri Ljutomeru, Slovenia
mateja.kolmanic@gmail.com

Abstract The aim of the study was to determine the distribution of planned music objectives in the affective, psychomotor and cognitive domain in the associated taxonomic categories in the internship of student teachers (full-time students of primary education in the academic year 2019/20). The research sample included 84 third-year undergraduate students who conducted distance music lessons in pairs (n = 42) via video explanation, and 55 first-year Master of Elementary Education students who independently taught distance music lessons (n = 55) at the elementary level during a condensed two-week internship under the supervision of a general education teacher. This study utilised a descriptive method of empirical pedagogical research. Data were obtained by analysing 97 lesson plans. Using a t-test, some statistically significant differences between the two groups of student teachers were found. The conditions that were found and the differences can be attributed to several factors, such as the difference in the amount of acquired musical-professional and didactic competences between the two groups of students, the particularities of distance learning, and the fact that the 3rd year students had their practicum under the guidance of professional didacticians and the master's students under the guidance of mentors at the elementary school.

1   Introduction

The processes and effects of music teaching and learning are complex and, through the interaction of musical activities, enable balanced learning development in the affective, psychomotor, and cognitive domains. Therefore, when planning and implementing music lessons, it is important to consider the integrated, process-developmental and learning-objectives aspect (Sicherl Kafol, 2015).

When we talk about classic teaching, we are aware that teaching is a complex whole – a complex concept (Ivanuš Grmek & Javornik Krečič, 2011). A lesson is the deliberate and planned acquisition of new knowledge and, at the same time, a means of achieving educational goals. It has a basic structure consisting of five components. These are objectives, content, didactic environment, time, and resources (Kramar, 2009). Important aspects of teaching also concern the role of the teacher in the classroom, forms of learning, working methods, strategies (Ivanuš Grmek & Javornik Krečič, 2011), the learning environment (Strmčnik, 2001), the active participation of students in the classroom (Kramar, 2009), which increases motivation to learn (Kastelic et al., 2021), didactic games (Rugelj, 2014; Kopačin, 2020), individualization and differentiation (Strmčnik, 1993; Galeša, 1995; Kramar, 2009; Drobnič, 2014), cross-curricular integration (Sicherl Kafol, 2008), etc. The situation with COVID-19 radically changed our lives overnight. Accordingly, we were also forced to adapt the way of teaching, as classic classroom teaching was temporarily impossible. It took much innovation and creativity to keep the gaps between classic face-to-face and distance teaching as small as possible.

2   Distance Education

Distance education and classic education differ considerably. The differences are evident everywhere, both in pedagogical-didactic and organizational areas. An adequately-supported learning environment and a suitably qualified teacher are priorities in every school during distance education. If the conditions are met, the implementation of distance education can be of very high quality (Kustec et al., 2020). In distance education, the teacher is no more a monopolist of knowledge, but primarily an advisor and moderator of the process. They are physically separated from the student, and the relationship between them is significantly different. In e-learning, the active acquisition of knowledge and learning is crucial (Bregar, 2002).

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Distance education cannot completely replace traditional classroom instruction. However, when various unforeseen situations occur, such as the COVID-19 pandemic, it is a good option for classes to take place at all. However, it is extremely important that we give students clear instructions, provide a reasonable amount of work, and give them ongoing feedback during distance learning. It is also important to provide motivation, which can quickly wane. In terms of didactics, distance learning is not so didactically diverse. The explanation method is often used in combination with presentations and conversations (Kustec et al., 2020).

E-learning involves learning not only from the established sources of knowledge typical of traditional classroom instruction (e.g., textbooks and other study materials), but also learning by using other resources available online (Bregar, 2002). Simply transferring the work to an online environment is not enough in this case; teachers must almost completely adapt the way they work, communicate with students, their content and methods, etc. When conducting distance education, it is also important to choose the right medium. Teachers most often opt for e-mail, online classrooms, and video conferencing through a variety of web platforms (Krecenbaher Mernik, 2020).

Bowman (2014) states that traditional instruction is often referred to as the standard of quality, but at this point he emphasizes the assumption that there are both weaknesses and strengths in distance and traditional instruction. He also believes that interaction between students is very important because it bridges the gaps in the physical separation of peers.

3   Advantages and Disadvantages of Distance Education

E-learning provides faster and cheaper training to a larger number of people, is flexible in time and place, and offers faster access to knowledge; these are the main advantages. E-learning also accelerates globalization by enabling education beyond the borders of one's home country. In Slovenia, we have relatively well-developed infrastructure and expertise for e-learning to thrive, both on a level similar to the developed European countries (Bregar, 2002). Distance education allows for low implementation costs, high-quality instruction, and increases the flexibility and efficiency of implementation. Other benefits that distance education can offer students include increased access to educational opportunities, the ability to choose

the learning method, administrative efficiency, improvement of students' skills, etc. (Grahame Moore & Diekl, 2019, as cited in Krecenbaher Mernik, 2020).

A major shortcoming of distance education is the lack of interpersonal interaction between students and from teacher to student. There is less social support for the student, and there is also a lack of contextual interactions between the student and the content itself (Kung-Ming & Khoon-Seng, 2009, as cited in Krecebaher Mernik, 2020). Another shortcoming is low motivation in distance education, which can also be triggered by assessment criteria that are too high and learning content that is too demanding. Namely, students work more independently in distance education, the teacher's explanations are largely reduced, and contact with the teacher is also reduced (Kastelic et al., 2021). The study conducted by Rupnik Vec et al. (2020) confirmed that distance education is more demanding for students than traditional face-to-face education, but it was still evaluated as interesting and creative. They emphasised the lack of social contact with peers as well as with teachers, as students missed the teacher's explanations.

In planning distance education, the teacher faces major challenges that also have to do with individualization and differentiation (Mosbruker, 2007), especially when it comes to dynamically adapting content and methods to the pace and nature of an individual's ability to learn (El Falaki et al., 2010).

The online environment offers and opens new avenues, so rather than trying to replicate a traditional learning environment in distance education, it is necessary to try to make the learning experience as easy as possible and reduce the challenges (Thomson, 2010). We need to use web and computer tools and applications for distance education. Fortunately, current information and communication technology has made tremendous progress and is highly developed, so we know of many value-added tools and online platforms that can be used to advance distance education: the Retrotool online tool, Mentimeter, Kahoot, Google Drive, Liveworksheets, E-asistent, Lo.Polis, Moodle, ZOOM, Microsoft Teams, etc.

4 Asynchronous and Synchronous Distance Learning

Asynchronous instruction is distinctly different from synchronous instruction. Synchronous instruction occurs live for students and instructors simultaneously (Kustec et al., 2020). Synchronous and asynchronous interaction in the online environment is clear, but much less is known about the pedagogical consequences of using these two methods in the same environment (Oztok et al., 2013).

Synchronous communication is the real-time communication between teachers and students in the form of text chat (Johnson, 2006). In synchronous learning, students receive immediate feedback, and the student and teacher collaborate and act spontaneously. Thus, synchronous learning is more similar to traditional classroom learning because it takes place in real time (Kung-Ming & Khoon-Seng, 2009, as cited in Krecenbaher Mernik, 2020). In synchronous learning, teachers most often use videoconferencing because it allows frontal instruction (Krecenbaher Mernik, 2020).

On the other hand, asynchronous teaching embraces the basic principles of constructivist education, including student and teacher participation and active learning. In asynchronous learning, students can come to the fore to a greater extent and thus take a more central role in learning. Asynchronous distance learning also brings many other benefits, such as time for responsiveness, adaptability, situational learning, etc. (Oztok et al., 2013). If teachers are to successfully navigate an asynchronous teaching environment, they must first examine their views on the philosophy of teaching and adjust them slightly or abandon some views if necessary. Asynchronous teaching requires different approaches and ways of working, of which teachers themselves must be aware. The asynchronous mode has emerged as the predominant form of computer-mediated educational communication. Asynchronous learning environments can promote meaningful learning if there is an appropriate cognitive, social, and pedagogical presence (Oztok et al., 2013). The possibilities are many but are limited by the energy and creativity of those who design the lessons (Johnson & Aragon, 2003).

5   Distance Learning and Music Education

The music teacher must create a learning environment that regulates important pedagogical and technical areas which primarily support quality music instruction, whether it is classic or distance learning. As far as learning and teaching music through distance education is concerned, it does not go far back in time. Distance learning is especially challenging for music teachers because they lack or do not have experience in this field. It is also a challenge for the students who must also adjust to a completely new approach to their continuing education (Ruippo, 2003).

Recently, we have seen a significant upsurge of information and communication technology in music. Music has become accessible to everyone in this and other forms (Breznik, 2016). However, as far as music education is concerned, it is still a challenge. The results of a survey conducted by Bohak Adam and Metljak (2021) show that the digital literacy of music education teachers has improved significantly during the pandemic. Teachers have acquired a new set of skills in this area, as their ICT-related competences in practice have greatly improved since the beginning of the pandemic and are much better than before. Indeed, the teacher has a key role in the integration of ICT into music teaching, so he or she must have a certain level of competence in digital literacy, which is also confirmed by the students in the study conducted by Rotar Pance and Bohak Adam (2019). If teachers are knowledgeable about digital literacy and follow innovations in information and communication technology, they will find it easier to do their work, achieve learning objectives more effectively, and improve motivation, both in traditional and distance education. However, student-centred listening, performing, and creating activities should still be at the forefront of music teaching, and the use of ICT should not be the predominant activity but only serve as a support for teaching (Bohak Adam & Metljak, 2021).

In any case, there are also some interactive limitations to distance learning in music education. All this leads to the need for the teacher to change their mindset and teaching methods. It is important for the teacher to combine different styles in the distance teaching of music and not use just one teaching method (Ruippo, 2003).

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Maki (2001) engaged in a study on music teaching in remote places. As part of the study, they sought to create a learning environment as similar as possible to that found in traditional classrooms, while developing learning methods that would increase educational equality. The results of the study showed that it was much more difficult to learn singing and playing instruments remotely than music history and general theory. Also, there was a time lag that represented a burning problem when singing and/or playing at the same time. Another problem that arose when teaching music at a distance was the problem of proximity. The teacher and the student were physically separated, so the teacher could not help the student in the way they could if they were together. When playing an instrument, for example, the teacher cannot help the student with hands and finger positioning. However, they can still zoom in and out of the camera remotely via video conferencing and model the positions of their hands, which still gives the teacher a good overview and control (Maki, 2001).

Riley's (2009) study confirmed earlier findings that the most frequent technological obstacles in videoconferencing are sound, image, and time delay problems (Maki, 2001; Wulf & Schinzel, 1998; Gouzouasis, 1994, as cited in Riley, 2009). It has also been confirmed that it is not possible to implement such a range of material at a distance as would be possible in traditional teaching in the same amount of time. Videoconferencing is therefore a great way to teach when students and teachers are in distant locations, which can be particularly beneficial in the area of cultural interaction (Riley, 2009).

Videos can be an effective choice when teaching music at a distance. During the epidemic, in March 2020, the Razlagamo.si educational portal was launched, and it was specially designed for distance learning and peer support. The materials and video explanations are intended for asynchronous teaching. The portal covers more than a hundred primary and secondary school subjects, and it also includes music school subjects. The videos follow certain guidelines (Pesek et al., 2020). The subject of music arts is relatively well covered from the 1st to the 5th grade of elementary school, and the website includes over a hundred video explanations that allow the student to pause the recording, play it several times, and follow the explanation according to their abilities.

Research has shown that pre-recorded videos have many advantages. They allow flexibility of time and location, reduce educational costs, promote independent learning, provide unlimited access to learning materials, create a collaborative learning environment that connects students with peers and physically separated professionals, they are also better for updating and retaining knowledge, and the activities are student-centred (Baloian et al., 2000; Piccoli et al., 2001). Videos are embedded in cognitive theory and help to extend the learning context through information technology and real-life situations. Indeed, pre-recorded videos can make the learning context a more practical and realistic learning experience (Kumar, 2010). Lee (2001, as cited in Chen, 2012) points out the problem of videos, stating that they can lead to superficial learning and limit the sustainability of learning outcomes. Lee also believes that the learning materials in videos are not well organized. As we know, the learning activities in a traditional classroom basically follow textbooks or the chapters within. Thus, students may quickly fall into a passive state, wherein they do not enjoy learning; they may even fail to understand what is presented and are later unable to apply it. The mere inclusion of recordings may not be enough to enhance learning (Zhang et al., 2006). In recording video explanations, the prevailing method is explanatory, also called the Socratic method, which is one of the most commonly used methods in general and in various fields (Overholser, 2018; Pesek et al., 2020).

6   Musical Objectives

The structural elements of instruction include the student and the teacher, as well as the content, the objectives, and the didactic resources. Learning objectives are an integral part of general learning planning, and at the same time, they are the most important regulator of teaching in general. Learning objectives in Slovenian education are classified according to Bloom's taxonomy, which includes cognitive, emotional-motivational or affective, and skill or motor objectives. Within the set of cognitive objectives, there are six taxonomic levels, which are as follows: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. Each of the taxonomic levels is an extension of the previous one, as thinking processes are classified into a hierarchy (Ivanuš Grmek & Javornik Krečič, 2011). Bloom was an advocate of the fact that when teaching and later testing knowledge, we need to keep in mind that learning itself is a process and that we need to develop higher order thinking processes in students. According to his taxonomy, this means that we

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develop children's cognitive abilities during teaching to the point where they are capable of synthesis and evaluation. However, since these two taxonomic levels mostly involve only thinking processes, it is mainly the cognitive component that is activated here (Kennedy, 2007/2015).

Musical objectives tell us what changes and progress students will make through the process of music education. In musical objectives, we focus on the processes of performing, listening, and creating, as well as the accomplishments students acquire during the educational process of music education. Learning objectives in the area of affectivity are planned according to the level of internalization. Thus, we focus on emotions, attitudes, and values from lower to higher taxonomic categories. The achievement of objectives in the affective domain is also directly related to objectives in the psychomotor domain. The psychomotor domain is very important from the point of view of music learning. Indeed, without active music making, students cannot develop their own musical experiences and performances. The elementary way in which a child responds to sound is through motor response, and psychomotor objectives are present in most musical activities. The third area of objectives is cognitive, which is the foundation of musical thinking. This area involves the development of musical thinking, memorization, renewal, comprehension, and the ability to use sound ideas in completely new situations. These new situations may involve the production and evaluation of sounds. The relationship between each of the areas of learning objectives in music didactics is reciprocal. Indeed, musical thinking is formed through affective and psychomotor experiences, so we can also say that the relationships among the domains are reciprocal (Sicherl Kafol, 2015).

In order for the planning and subsequent implementation of the learning process in music art to be of truly high quality, it is important to plan learning objectives and musical activities in a systematic and balanced way. Oblak (1995, as cited in Sicherl Kafol, 2015) explains the importance of not neglecting any musical activities, as this can lead to gaps that are difficult or impossible to remedy.

Through musical objectives, we express, at various levels of concreteness, the objectives of music teaching and learning in the areas of musical performance, listening, and creating. Musical objectives state how students will change or progress in their learning under the influence of music instruction. We use musical objectives

to refer to learning in the areas of performance, creation, and listening, as well as learning outcomes that are reflected in the acquisition of musical language. At the highest level of concreteness, musical objectives are defined as operational objectives that express the purposes of music teaching and learning in a given unit of study in terms of musical development in the affective, psychomotor, and cognitive domains (Sicherl Kafol, 2015).

In the affective domain, musical objectives are planned according to the degree of internalization of interests, attitudes, values, and emotions (Krathwohl, 1964, as cited in Sicherl Kafol, 2015). The qualitative range of musical objectives extends from lower taxonomic categories, with passive response to sound information still present to taxonomic categories with active response and an organized value system. Krathwohl's (1964, as cited in Sicherl Kafol, 2015) taxonomic categories of the affective domain are: Receiving, Responding, Valuing, Organization, Characterization.

Psychomotor objectives are present in most musical activities and enable the development of musical skills, abilities, and musical language. We use them as a method of learning (movement indications of pitches, durations, strengths, and other musical elements) and as learning outcomes (movement expression with music in the form of dance, dance games, movement creation, etc.) (Sicherl Kafol, 2015).

According to Kibler et al. (1970, as cited in Sicherl Kafol, 2015), the classification of learning objectives for the psychomotor domain is defined according to the degree of skill growth from gross, larger movements to finer movements and from nonverbal to verbal forms of communication, and it includes the following categories: Gross Body Movements (with subcategories "upper limb movements", "lower limb movements", "simultaneous movements of several body parts"), Finely Coordinated (with subcategories "hand and finger movements", "eye and hand coordination", "ear and hand coordination", "hand, foot and eye coordination", "combination of coordinated movements"), Non-Verbal (with subcategories "facial expressions", "hand movements", "whole body movements"), Speech Behaviours (with subcategories "voice formation", "word formation", "speech formation of longer texts", "coordination of words and gestures").

Following cognitive taxonomy (Bloom, 1956, Anderson et al., 2001, as cited in Sicherl Kafol, 2015), we trace the development of musical thinking from basic understanding at the level of sound recognition, memory, and recall, to higher levels with the ability to use sound performance in new situations, which includes sound production and evaluation. The taxonomic categories of the cognitive domain (Bloom, 1956, Anderson et al., 2001, as cited in Sicherl Kafol, 2015) are: Knowledge (with subcategories "knowledge of individuality", "knowledge of how to deal with individual facts and data", "generalized knowledge"), Understandings (with subcategories "translation", "explanation or interpretation", "prediction or extrapolation"), Use, Analysis (with subcategories "analysis of elements", "analysis of relations", "analysis of structure and organizational principles"), Synthesis (with subcategories "creation of an original message", "elaboration of a plan or a working proposal", "creation of a system of abstract relations"), Evaluation (with subcategories "evaluation based on internal criteria", "evaluation based on external criteria").

6   Methodology

6.1   Goals of the Study

The aim of the study was to determine the distribution of musical objectives planning in the affective, psychomotor, and cognitive domains during the internship of the students of elementary education in the 2019/20 academic year.

6.2   Research Questions

RQ1: What is the average number of learning objectives in lesson plans intended for distance education in music?

RQ2: What is the number of planned learning objectives in the cognitive, affective, and psychomotor domains in lesson plans for distance education in music?

RQ3: What are the differences in the numerical representation of the planned objectives in the cognitive, affective, and psychomotor domains in the lesson plans for distance education in music, depending on the year/level of study?

6.3   Sample

The research sample included 84 third-year undergraduate elementary education students who conducted distance music lessons via video explanation in pairs (n = 42) and 55 first-year elementary education master's students who conducted music lessons independently (n = 55) in elementary schools under the supervision of a general education (elementary education) teacher during a condensed two-week internship. Data were obtained from the analysis of lesson plans, 97 in total. Of these, 43 or 44.3% referred to learning a song and 54 or 55.7% of the analysed lesson plans referred to other content (listening to music, creativity, movement and dance, etc.). The structure of the sample of lesson plans by grade level, for which the lesson was intended, is as follows: 23.7% first grade, 26.8% second grade, 25.8% third grade, 19.6% fourth grade, and 4.1% fifth grade.

6.4   Measurement Instruments

In analysing the lesson plans, a checklist that first included information on the year of study/level of study, the method of instruction (distance learning, video, asynchronous; distance learning, synchronous), the content of the lesson (learning a new song; other), and the grade level (first, second, third, fourth, fifth) was used. This was followed by information on the total number of planned objectives and the number of planned objectives in the cognitive, affective and psychomotor domains.

6.5   Statistical Methods

In the study a descriptive method of empirical pedagogical research was used. In data processing, frequency distributions of variables (f, f%) and some descriptive statistics (mean, median, mode, standard deviation, minimum, maximum, sum) were used. A t-test was used to compare the means.

7   Results and Discussion

The learning objectives in the lesson plans for elementary school students intended for distance learning were analysed and in continuation the results will be presented.

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Table 1: Descriptive statistics for the whole set of planned objectives

N	Mean	Median	Mode	Std. Deviation	Minimum	Maximum	Sum
97	6.56	7	7	2.31	1	12	636

636 written learning objectives in 97 lesson plans were analysed, where the overall average was 6.56 learning objectives per lesson plan. The most frequent value (Mo) was 7. The maximum number of learning objectives in a lesson plan was 12 (*Table 1*).

A similar study was conducted at the Faculty of Education at the University of Ljubljana and included a sample of students and working elementary teachers who designed a total of 186 lesson plans and 2124 planned objectives. The students and teachers planned an average of 11.48 objectives in each lesson plan. It should be noted that the lesson plans were intended for traditional live face-to-face instruction in schools.

It is evident that there are significantly fewer objectives in the lesson plans for distance education. These results are not surprising and are consistent with previous findings (Maki, 2001; Pesek et al., 2020; Riley, 2009), as distance learning can rarely be as rich and varied in the number of activities compared to traditional classroom learning. It is possible that the teachers planned a smaller number of objectives because of the resources and tools available to them, in part to avoid overwhelming students in their home learning.

It should be noted that owing to the complex content dimension, the objectives were often assigned to taxonomic categories of different learning domains (affective, cognitive, psychomotor), as mentioned by Sicherl Kafol (2015). The descriptive statistics are based on the analysis of 79 lesson plans. Indeed, in 18 lesson plans, written under the guidance of teacher-mentors, there was no subdivision of objectives into domains, which is very significant. One can conclude that students in pedagogical practise/internship under the auspices of teacher-mentors in primary schools neglect the knowledge of parcelling objectives or that mentors do not require this from students because they do not do it themselves. Perhaps the reason lies in the varying methods of planning objectives in the various didactics courses in Elementary Education studies. When students begin the practicum under the

guidance of a teacher-mentor, they may feel too overwhelmed to utilise so many different types of objectives planning, so they use only one type for all subjects.

Table 2: Descriptive statistics of the numerical representation of the planned objectives in the cognitive, affective, and psychomotor domains

Learning domain	N		Mean	Median	Mode	Std. Deviation	Min	Max	Sum
	Valid	Missing							
Cognitive	79	18	3.13	3	3	1.29	0	6	247
Affective	79	18	1.97	2	2	0.70	0	4	156
Psychomotor	79	18	2.00	2	2	1.06	0	6	158

An analysis revealed that students planned the most objectives in the cognitive domain of development (3.13 per lesson plan), followed by the psychomotor domain (2.00 per lesson plan), and the fewest in the affective domain (1.97 per lesson plan) (*Table 2*). Given the circumstances of the COVID-19 pandemic, it is understandable and consistent with the study done by Pesek et al. (2020) that most of the objectives were planned in the cognitive domain, as these are easier to plan and implement in distance learning.

Sicherl Kafol (2015) came to a different conclusion, namely higher mean scores in all the areas studied, and this suggests significant differences in the design of music objectives for live music lessons in school and distance learning. For example, an analysis of the objectives revealed that teachers planned the most objectives in the psychomotor development domain (4.75 per lesson plan), then in the cognitive domain (3.92 per lesson plan), and the fewest in the affective domain (2.81 per lesson plan). The author concludes that this is a positive shift towards active approaches to music teaching and that, at the same time, teachers are not sufficiently aware of the importance of emotional and social factors in learning. However, Sicherl Kafol (2015) attributes the greater presence of objectives in the cognitive domain to the fact that objectives in the cognitive domain are easier to plan and operationalise using Bloom's Taxonomy, as well as easier to observe and verify.

As shown in *Table 3*, the mean number of planned objectives by domain is higher for 3rd year (1st level) students with compared to 1st year (2nd level) students in all learning domains. Using the value of the t-coefficient and the statistical significance level (Sig.), one can conclude that the number of planned objectives differed statistically significantly in the cognitive domain; it differed between elementary

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education students in their 3rd year (1st level) and 1st year (2nd level), in favour of younger 3rd year elementary education students (*Table 4*). The difference between the means of the two groups was 0.85. In the psychomotor domain, the difference was on the verge (.05) of statistical significance and was again in favour of the 3rd year elementary education students. The difference between the means was 0.46. In the affective domain, there were no statistically significant differences between the two groups.

Table 3: Group statistics – comparison of the representation of the planned objectives by domains according to the year of study

Learning domain	Year/level of study	N	Mean	Std. Deviation
Cognitive	3rd year/1st level	42	3.52	1.06
	1st year/2nd level	37	2.68	1.40
Affective	3rd year/1st level	42	2.07	0.78
	1st year/2nd level	37	1.86	0.59
Psychomotor	3rd year/1st level	42	2.21	0.87
	1st year/2nd level	37	1.76	1.21

Table 4: Independent Samples Test – comparison of the presentation of the planned objectives by domains according to the year of study

Learning domain	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	MD*	SED**	Lower	Upper
Cognitive	3.090	0.083	3.057	77	.003	.848	.277	0.296	1.401
			3.006	66..933	.004	.848	.282	0.285	1.411
Affective	0.942	0.335	1.320	77	.191	.207	.157	-0.105	0.518
			1.343	75.243	.183	.207	.154	-0.010	0.513
Psychomotor	2.139	0.148	1.944	77	.056	.457	.235	-0.011	0.926
			1.905	64.495	.061	.457	.240	-0.022	0.937

* Mean Difference
** Std. Error Difference

In conclusion, the 3rd year elementary education students who undertook more detailed planning of learning objectives, when planning distance music lessons in the context of their didactics class at the university, more frequently considered the principles of balanced learning development in the cognitive, affective, and psychomotor domains. Their planning was more in-depth and detailed.

8   Conclusion

With this study, the authors implicitly wanted to draw attention to certain gaps in the distance teaching of music art, which are evident in the planning of distance teaching. Indeed, for the quality of planning and then the implementation of the learning process in music lessons, it is important to plan the learning objectives and the musical activities systematically and in a balanced way. The situation that was revealed, namely the relatively few objectives set according to the domains (and thus to the taxonomic categories), and certain differences between samples of elementary education students can be attributed to the following: the differing extent of acquired musical-professional and didactic competences between the two groups of students, as well as the fact that the 3rd year students (1st level) completed an internship under the guidance of subject didacticians at the university and, the master's students (2nd level) under the guidance of mentors at the school; the complexity of the processes and effects of music teaching (Sicherl Kafol, 2015); differences between classic teaching (Ivanuš Grmek & Javornik Krečič, 2011; Kramar, 2009) and distance learning (Kustec et al., 2020; Kastelic et al., 2021; Bowman, 2014) or e-learning (Bregar, 2001); motivation to learn (Kastelic et al., 2021); suitability of the chosen medium in distance learning (Krecenbaher Mernik, 2020); the expected lack of human interaction among students, and between teachers and students (Kung-Ming & Khoon-Seng, 2009, in Krecenbaher Mernik, 2020); the complexity of distance education compared to traditional face-to-face education (Rupnik Vec et al., 2020); limitations in dynamically adapting content and methods to an individual's learning pace and methods (El Falaki, Khalidi Idrissi & Bennani, 2010); specifics of asynchronous and synchronous teaching (Oztok et al., 2013; Kung-Ming & Khoon-Seng, 2009, in Krecebaher Mernik, 2020); adopting a new approach as a challenge for students in education (Ruippo, 2003); improving the digital literacy of music teachers (Bohak Adam & Metljak, 2021) and students; time delay in learning singing and instruments; the difficulty of helping e.g., with the position of hands and fingers (Maki, 2001); technological barriers, problems with sound, image, and time delay (Maki, 2001; Wulf & Schinzel, 1998, Gouzouasis, 1994, in Riley, 2009); and planned and targeted work at the university with the aim of publishing video explanations on the portal Razlagamo.si (Pesek et al., 2020). The problem also manifests itself in the balanced planning of music lessons, in the lower taxonomy levels, in the training of elementary education students for teaching and conducting music lessons at a distance, and in the limits and peculiarities of this type of teaching, to all of which

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further research should be devoted to gain a better insight into all this. In conclusion, the presentation of learning objectives in lesson plans for distance learning is more modest than the presentation of objectives in lesson plans for traditional live teaching in schools in all three music education objective domains studied (cognitive, affective and psychomotor).

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Comparison of Education Documents in the National and School Curriculums with a Focus on Music Education in Primary School

Jarmila Jurášová Šteigerová

Comenius University in Bratislava, Faculty of Education, Slovakia
steigerova1@uniba.sk

Abstract This article presents the results and interpretations of a study that aimed to compare the National curriculum for music education with the school educational programs and map the modification of the National music education curriculum and its implementation in school educational programs. Ten school educational programs were subjected to a qualitative content analysis and a mutual comparison. The most important finding was that the Thematic Educational Plans continue to be part of the curriculum even though their implementation is optional. The musical competences listed in the National curriculum are followed and developed by the schools through a wide range of musical activities. Varying criteria were used in the evaluation of students based on the school curriculum but all of them comply with the competences required by the National curriculum for music education. Despite a certain freedom in curriculum development, insufficient competence to modify educational standards can be observed among teachers.

1   Introduction

Education in Slovakia, as in other European countries, has been subject to a number of changes and attempts at school reform. The school reform (2008), the legislation of which was defined by the Zákon č. 245/2008 Z. z. zákon č. 245/2008 Z. z. o výchove a vzdelávaní (školský zákon) a o zmene a doplnení niektorých zákonov, brought a two-tier model of curriculum development. The requirements of the state curriculum in the form of a basic pedagogical document, called the state educational program, representing the first tier of the two-tier model of education, became binding for the school curriculum. Within the boundaries of the state curriculum, schools are required to incorporate the mandatory content of education and training aimed at the required competences into their programs. The state educational program comprises educational standards, i.e., requirements aimed at the education output and formulated as competences. These are knowledge, competences, skills, values, and attitudes in the context of the defined content of education. Using the two-tier model of the curriculum, schools further solidify, complete, and specify their own vision, focus and goals in their programs based on the pre-determined state educational standards as well as the content of education and training.

In this article, the focus is on monitoring the implementation of the state curriculum's requirements in school educational programs with a focus on the subject of music education.

2   Music Education in the First Level of Primary School

The target area of the study was the school subject of music education, which is part of the Arts and Culture educational field. Primary education for students covers seven educational areas. These comprise content for education beyond particular subjects and include some issues from those subjects. They provide continuity and coherence to the education content, in which students acquire knowledge, skills and key competences.

According to the State Educational program, the education area of Arts and Culture "creates a space for understanding the importance of culture and art in the life of man and society" (State Pedagogical Institute, hereinafter referred to as ŠPÚ, 2015, p. 9).

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Music education in Slovakia is a compulsory subject that is carried out once a week from the first to the eighth grade of primary school. As part of the school educational program, primary schools can use the available (optional) lessons, defined in the framework curriculum of the state curriculum, according to their own preferences, e.g., to increase the weekly lesson allowance for compulsory subjects. This is one of the ways in which schools can create enough time to strengthen the educational standard of music education.

Music education incorporates many natural abilities, such as playfulness, spontaneity, curiosity, and attention, with which children enter primary schools. The goal of music education at the primary level is to continuously develop students' innate and natural abilities and skills. Based on the activity character, the aim of music education through musical activities is to develop students' basic musical competences, to foster a positive relationship with music art and music, and to develop their cultivated expression in speech, voice and movement in connection with music. The objective is to educate an active, receptive performer to and listener of music, and to develop the emotional world and musical taste of students (ŠPÚ, 2015). Music education is based on the student's activity and independence, whereby the teacher in the role of facilitator, together with the students creates, becomes familiar with, and experiences music through musical activities, thus creating the individual character of this activity.

The activity-related nature of music education needs to be understood in terms of education in music and education through music (Sedlák, 1985), with regard to the requirements of modern innovative pedagogy. On the topic of progressiveness and innovation, Petlák (2020, p. 15) points to the selection of goals in education, the formulation of educational goals, teaching of and learning by students, multimedia aids and techniques, the development of activating methods, techniques, the use of teaching strategies, and the search for methods and forms of pedagogical work.

2.1 Educational Standards in Music Education – Primary Education

The educational standards of the state curriculum define a set of requirements for a student, wherein their successful mastery allows the student to advance to the next grade of the given level of education. According to the state educational program "the requirements are formulated as competencies, which include knowledge,

competences, skills, attitudes and values in the context of defined content of education" (ŠPÚ, 2015, p. 14). Educational standards determine the minimum performance requirements, setting out the norm for students and the prescribed content.

The performance standard of music education includes 6 basic areas of student competency development in the field of music: vocal, instrumental, active listening to music, musical-motor, musical-dramatic, and musical-visual. They represent the student's required performance in individual areas, expressed in the form of active verbs for achieving goals.

Boroš (2020, p. 83) states that music education can be defined by three elements: content, goal, and method. The content of music education anchored in the content standard consists of facts, concepts, processes, and metacognitive knowledge, as further specified by Fridman (2020, p. 49–50). The primary goal of music education is to acquire the given learning content, as well as the development of musical skills, which are the starting point and means for the development of a student's key competences. The secondary goal is to deepen key competences via the art of music (art, aesthetics, creativity), which leads to comprehensive development of the student's personality.

In connection to educational practice, the state educational program defines the following musical activities: vocal activities, instrumental activities, perceptual activities, musical-motor activities, musical-dramatic activities, and musical-visual activities. For students, musical activities are a means of getting to know and mastering the art of music, as well as of developing musical competences. At the same time, these activities are independent musical activities (performance and interpretation of music), methodological starting points (they are the medium of another teaching method, or they can have the function of a teaching aid), and methods (musical activities used to achieve an educational goal) (Boroš, 2018, p. 89). According to the educational standard, students at the end of the 4th grade should have the following musical abilities:

- **Vocal**: use the voice consciously to achieve a specific musical goal (rhythm, melody, dynamics, expression, mood); naturally apply the correct vocalising, sing purely and rhythmically correctly; know the specifics of the folk music

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culture of their own region; sing a simple two-voice harmony (maintaining their own melodic line); intonate melodic models according to the notation; use the voice in improvisation and elementary composition.

–   **Instrumental:** play elementary musical instruments; play on the body; play on objects; create elementary musical instruments; play rhythmic models; play simple melodic-rhythmic formations according to notation; create an instrumental accompaniment; improvise with an instrument; react to the teacher's gestures while playing musical instruments; adequately change tempo, dynamics; conduct.

–   **Active music listening:** actively listen to songs and musical compositions, as well as their own musical expression; express feelings from listening to music verbally, through movement, and by other artistic means; identify the functions of music and its social significance; identify, characterise and use the correct terminology to name musical-expressive media; identify the cast of interpreted musical composition; identify musical forms and genres; recognise form-building elements; listen with concentration; decipher and express in own words atmosphere, emotions, associations, ideas; or create a specific program.

–   **Musical-motor skills:** express feelings from the heard music through movement and other artistic means; adequately respond to rhythm, metre, and tempo; adequately express musical-expressive means through movement; realise dance elements and movement in simple choreographies; distinguish contrasting parts of musical forms through movement; distinguish form-building elements through movement; realise cultivated, aesthetic movement.

–   **Musical-dramatic skills:** independently express the plot, mood, and characteristics of the characters in the story; create a musical-dramatic whole by using rhythmic and melodic instruments or other sources of sound; perform musical activities according to free and standardised graphic expression of musical storylines.

–   **Musical-visual skills:** visually display sound perceptions; create (write), read, and perform (through voice or playing an instrument) notation (ŠPÚ, 2015).

2.1.1   Cross-Cutting Themes

In primary education, cross-cutting themes are a mandatory part of education. They have no precise time allowance, but they are integrated and overlap with individual subjects according to their content. Schools can implement cross-cutting themes by creating a separate subject within the available lessons or by integrating it into individual subjects in the form of projects, courses, or seminars. The method and form of cross-cutting themes falls within the competence of each school.

The state educational program for primary education defines topics with a cross-cutting character, such as: Personality and social development, Education in the field of marriage and parenthood, Environmental education, Media education, Multicultural education, Regional education and folk culture, Traffic education – road safety education, Protection of life and health. In their content, the cross-cutting themes complement and complete the education of students, as well as enable the creation of links between educational areas of the primary curriculum. The cross-cutting approach encourages the acquisition of new knowledge and the development of students' key competences.

2.2   Assessment in the Subject of Music Education

The assessment of music education in primary school is constantly confronted with the issue of the diversity of students' musical abilities, the temporal scope of teaching music education, subjectivism, and other variables that influence the assessment process. Many teachers place emphasis on giving marks in educational subjects, which fortifies their standing as educational subjects among other compulsory subjects in the state educational program.

Nevertheless, assessing students in the form of marks (grades) has its pitfalls, including insufficient respect for the characteristic features of the student, which makes it a constant subject of criticism in the field of education. Hanna (2007) points out that music education stands outside standardised testing, which causes "dishonour as being objectively measurable" (In: Fridman, 2020, p. 20). The above fact may result in its position in the education system that is associated with a time allowance, the nature and quality of teaching (Fridman, 2020).

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Assessment of a primary school student is defined in Section 55 of Act no. 245/2008 Coll. According to this Act, the student's assessment is carried out according to the level of achieved results obtained through verbal assessment, giving a mark, or a combination of marks and verbal assessment (In: Metodický pokyn č. 22/2011 na hodnotenie žiakov základnej školy).

3 Research Problem and Research Goals

The focus in this paper is music education in the first level of primary school at the state and school educational programs. The subject of the study was the issue of transformation of the content of music education from the state educational program into the school educational program. The performance of the requirements of the state educational program with the subsequent transformation of the curriculum reflected in school educational programs was examined at individual selected primary schools in Slovakia.

Following the research problem, the following **research goals** were defined**:**

1. Create an overview of the basic areas of the content of music education in the state educational program for the first level of primary school. The study focused on the identification of the requirements declared in the state educational program.
2. Analyse the content of school educational programs with a focus on music education.
3. Compare school educational programs in terms of implementing the requirements from the state educational program into the school educational program.

These research goals were met with the aid of the following sub-objectives:

1. Research what student competences receive attention within the school educational program and compare them to the required competences under the state educational program.
2. Research whether the school educational program states that the school implements music education through activities other than lessons in music education.

3. Research whether the school educational program also states the assessment method for students in music education.

Research Questions

Following the research objective and its sub-objectives, the following research questions were set:

1. *Which student competences within the development of music receive attention in school educational programs?*
2. *Do school educational programs state music activities that are also implemented outside the compulsory subject of music education?*
3. *What method of student assessment is stated in school educational programs for the subject of music education at the first level of primary school?*

3.1   Design and Method

The study utilised the method of content analysis on the data found in educational documents at the state and school level. School educational programs were analysed through content analysis carried out in a qualitative way. Sentences and paragraphs were proceeded through coding with the goal to find the main idea. Using the open coding method, the data from the textual documents was broken down into separate parts. In order to identify the category, the most significant recurring data were identified as key dimensions of the key concepts in each category. The research material was gradually segmented and assigned to the created categories, which were further expanded and specified (as a result of the identification of new categories).

A qualitative analysis of the data was conducted by allowing key categories and concepts emerge from the data within the textual material.

The categories were then used to search for the answers to the research questions and to answer the main objective of the study.

Table 1: Categories and concepts in the curricular documents

Interpretation categories	Concepts
Students' competences	Students' ability to express themselves musically, ability to express themselves independently in all components of music education
Interest activity	Students' specific focus on the development of their potential
Student assessment	Feedback on the mastering of set goals

With the help of grounded theory, using the "constant comparative method of analysis," as coined by Strauss and Corbinová (1999, p. 43), the school documents were compared with each other, as well as with the state educational program.

The constant comparative method, representing, according to Strauss (1987), one of the fundamental methodological pillars of grounded theory, was used in the comparison and in search of similarities and differences in the empirical data in individual school documents (Švaříček & Šeďová, p. 223).

In the framework of the analysis, the focus was on the school educational program as a whole (school characteristics, goals and mission in education, strategies, inclusion of cross-cutting themes), but specific attention was paid to areas such as: musical competences, student interest in activities, and assessment.

3.2   Research Set

The research set comprised curricular documents at the state level in the form of the State Educational program and documents at the school level, consisting of the school educational programs for ten selected primary schools in the Bratislava Region.

Owing to the principles of qualitative methodology in selecting the research file, a deliberate selection was made. The criteria for the selection of participants were applied according to a research sample by Strauss and Corbinová (1999). The composition of this research sample had a non-stochastic, more precisely intentional selection, because the schools were systematically selected according to certain criteria in order to feel sure that other new relevant categories of significance would no longer appear.

The criteria were as follows: Slovak language of instruction, school location (representation at the level of the capital city, regional city, and at the level of a municipality with full grade and non-full grade organisation of teaching in classes), and representation of music education at school (music education is/is not in the forefront of interest). The analysis was performed with a selected set of texts, which stood for a representative sample from the basic set, as the documents were very extensive.

The first basic research set was a curricular document at the state level, the state educational program. The representative set consisted of the State Educational program for Primary Education – 1st Level of Primary Schools and its components: the framework curriculum and educational standards of music education for the 4th grade.

The second basic research set included curricular documents at the school level and state educational programs. The representative set consisted of the school educational program for primary school – primary education and its components: Curriculum and Teaching Curriculum of the subject music education for the 4th grade. At the state level, the State Educational program, which came into effect September 1st, 2015, was examined. It is a supreme applicable curricular document and forms the foundations for developing school educational programs. It is issued and published by the Ministry of Education, Science, Research & Sport of the Slovak Republic.

The school educational program as a basic school document is the school's statement about its idea of the quality of education. It is developed by pedagogical staff at the school and, following its discussion within the pedagogical board and the school board, and the written consent of the school founder, the educational program is issued by the principal and must be published in a public place.

According to Gavora (2015), these curricular documents are complete materials that were created beyond the researcher's reach. The latter takes them over and analyses them.

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These documents are a textual means of communication, and Krippendorff (2004) emphasises that "these means of communications were neither developed nor work in a vacuum, but in a specific context. The context is important because it adds additional meaning to the content that is being communicated. Sometimes, without knowing the context, it is even not possible to understand this means of communication" (Gavora, 2015, p. 351).

4   Research Findings

In the analysis of the documents in the state educational program, the following items were observed: the definition of the area of Arts and Culture, key competences, cross-cutting themes, and the educational standards of music education.

In school educational programs, the focus was on monitoring the implementation of the requirements of the state educational program into school educational programs with a focus on the development of musical literacy.

School educational programs in primary schools worked from the foundation of the state educational program. The teaching curriculum for music education in school educational programs are educational standards, and schools state this fact using the following formula in their school educational programs: "the teaching curriculum of music education is identical to the educational standard of the state educational programme."

Educational standards did not specify a specific way of fulfilling and implementing standards as well as methods for achieving the required musical competences. The form of educational standards determined in this way, even though providing an opportunity for individual schools to freely implement the requirements of the state educational program, nevertheless require a competent teacher in the field of music education, who should use appropriate methods, determine and flexibly adjust the content of education with appropriate methodological materials, taking into account regional specifics, as well as students' preferences, while respecting requirements of the state educational program.

Some music teaching curriculums were developed within the limits of the state educational program dating back to 2009. The teaching curriculum detailed the objectives of music education in the cognitive, affective, and psychomotor areas. They recommended organisational forms, methods of music education, music materials, as well as the graded assessment of the subject of music education. The content of music education was determined by two thematic areas with a defined time allowance:

1. Folk song in the life of man and society (approx. 18 lessons); and
2. Mission of music in our lives (approx. 12 lessons) (ŠPÚ, 2009).

Based on the data analysis, using identified categories, a repertoire of possible information from individual schools was obtained from the research material. In the process of data analysis, the following research questions were posed:

1. *Which of the students' competences within the development of music receive attention in school educational programs?*

Based on the analysis of the state educational program, key competences are respected in school educational programs.

Musical competences are developed within school educational programs, especially in the field of key competences, such as the ability to perceive and understand culture and express oneself through cultural tools. This area of competences is only marginally mentioned by schools in the framework of the teaching strategy; they are achieved by supporting activities and out-of-school activities. Nothing is stated about the methods and forms of teaching.

School educational programs implement the development of musical literacy by integrating the content of cross-cutting themes into music education classes. Nonetheless, the inclusion of cross-cutting themes in music education happens without further specification. The method and implementation are only indicated as an abbreviation of the cross-cutting theme in the teaching curriculum.

The effectiveness of the cross-cutting theme of Regional Education and Folk Culture was strengthened in some school programs through informal experience activities carried out in the form of competitions in the field of art and viewing theatre performances.

Another topic of interest was social and personal development aimed at developing students' personal and social competences through extracurricular activities in some school educational programs.

One of the analysed school curriculums included lessons used for the subject of music education. The increased number of music education lessons was not aimed at expanding the content of the subject music education, rather it created space for the development of musical competences outside lessons, in the choir and band. The choir or band are unique in that they develop individual and social competences, lead to cooperation, and create a space for presentation.

2. *Do school educational programs include music activities that are also implemented outside the compulsory subject of music education?*

Despite the fact that the allocated time for music education is one lesson per week, school educational programs within non-formal education significantly support students' interests in further development and contribute to the consolidation of students' musical competences through interest groups. Schools cooperate with multiple entities and, owing to their spatial equipment, provide premises for art schools and hobby groups focused on musical activities.

Therefore, these schools offer targeted support for students' activities of interest. Schools provide premises for the realisation of activities, offering a choice of a number of hobby group activities and various courses outside of class.

As part of the development of students' competences in the context of musical literacy, school educational programs provide students with opportunities to represent the school at cultural events and to participate in the creation of school cultural events outside class.

3.   *What method of student assessment is prescribed in school educational programs for the subject of music education at the first level of primary school?*

The system of student assessment, mentioned in school educational programs, is based on the Methodical Guidelines for Student Evaluation, issued by the Ministry of Education, Science, Research and Sport of the Slovak Republic.

It outlines the principles of assessment, obtaining background data for assessment, and the procedure of assessment. In the case of verbal assessment, it lists the criteria for the student's required competences.
School educational programs recommend that the subject of music education be assessed according to the agreement of pedagogical staff on the school's pedagogical board. School educational programs include different criteria for assessing students in music education at different schools. They recommend assessing the subject with a written grade, a verbal grade, as well as a combination of both. Research findings suggest that schools do not specify criteria for a grade.

Some school programs recommend the use of different types and forms of assessment, especially self-assessment.

5   Discussion and Conclusion

The paper deals with curricular issues in the context of music education at the first level of primary school. The aim was to get a holistic understanding of the characteristics, circumstances and conditions affecting the process of transformation of the state curriculum into the school educational programs at selected primary schools. The main findings and conclusion of the analysis of school documents were interpreted with regard to the fact that these documents contain information indicated in the schools' own educational programs. The selection of schools included in the analysis was not random, at the same time their number was too small to draw any generally valid conclusions from the results of the analysis.

Most schools did not have their school educational programs published on their websites. Some school documents were made available to the author for inspection in full at the school directorate, where they had the opportunity to create photo documentation of the documents. The principals of other primary schools were

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contacted by telephone, and they willingly sent in their teaching curriculum for the subject of music education by email. These were not always part of their school educational program. The teaching curriculum of music education formed a separate document. To maintain the anonymity of the schools, their exact names were not given in the study. The schools were denominated by their initials.

The main limit of the study came from the nature of qualitative research, wherein the results may not be generalised to a broader research population (Hendl, 2016). The aim of the study was not to present generally valid theses, but to point out the space in which students' musical competences develop.

The focus was on the implementation of the music curriculum from the state educational program in school educational programs at selected primary schools in Slovakia. The subject matter of the study were the state educational program and school educational programs for primary education. The topic of interest was the subject of music education. Through open coding, the school educational programs were examined, coded, categorised, conceptualised and compared.

By analysing the text of the documents, the author identified the specifics, as well as the uniqueness of the educational programs at individual schools, which integrated and transformed the content of components from the music curriculum in their programs. The author sought answers to the research questions and pointed out the coincidences and differences in the basic components of the lesson contents in the subject of music education in school educational programs with the requirements of the state educational program. The school educational programs considered the basic framework of students' musical competences contained in the state curriculum. The state educational program formulated musical activities in a general and concise framework. The student acquires musical competences, such as: singing, playing, listening, expressing music through movement, verbally or by other means.

The development of musical competences is driven not only by the overall educational content of music education, but also by schools creating a stimulating environment through the implementation of various activities carried out during and outside classes with the aim of developing students' musical literacy. It was gratifying to find that schools worked with entities that contribute to the development of musical competences and offer a choice of hobby group activities and courses

focused on musical activities outside class. In terms of students' assessment, it can be concluded that teachers preferred verbal assessment.

Based on the research findings, the author recommends that the objectives of music education be broken down in the teaching curriculum, as was done in the past, so that it is clear which competences are developed in students, according to the taxonomy of objectives in various areas of developing the student's personality with a focus on music education. The choice of topic was related to the effort to highlight the area of music education in schools. The benefit of comparing individual school educational programs can be seen in the knowledge of how individual schools are able to transform the music curriculum in their school educational programs. In this study, it was necessary to point out the implementation and creation of the conditions and space for the targeted development of musical abilities in primary school students. It is important to further integrate music education to a level of equal standing with other compulsory subjects and seek a receptive home for the subject of music education.

The creation of school educational programs has always been a topical issue for every teacher. It is an expression of their pedagogical autonomy and the responsibility of the whole school for the methods and results of education. For this reason, it is important that all school teachers responsible for the implementation of individual parts of the program participate in the development of school educational programs.

As part of the triangulation, the qualitative findings were created using content analysis, and in the next stage of research, the author plans to apply the method of semi-structured interviews and in-depth observation in order to increase its validity.

In this sense, a comprehensive understanding of the transformation of the state curriculum, with a focus on the subject of music education would be interesting. In further research, it is important to map whether the curricular transformation formalised in school educational programs in the form of goals and content also takes place under school conditions, as well as what the attitudes are of music teachers in primary schools towards the processes of transformation of the state curriculum into school curricula.

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Chapter 8

**EDUCATION CHALLENGES
IN HUMANITIES**

LITERARY WORKS INCLUDING CHILDREN WITH SPECIAL NEEDS

NIKA VIZJAK PUŠKAR,[1, 2] DRAGICA HARAMIJA[2, 3]

[1] Centre for Hearing and Speech Maribor, Maribor, Slovenia
nika.vizjak-puskar@csgm.si
[2] University of Maribor, Faculty of Education, Maribor, Slovenia
nika.vizjak-puskar@csgm.si, dragica.haramija@um.si
[3] University of Maribor, Faculty of Arts, Maribor, Slovenia
haramija@um.si

Abstract Owing to their inclusion in the education system, teachers often encounter students with special needs during their work. When working with these students, the teacher's level of empathy is extremely important, however it is difficult to achieve if they are not familiar with how these students think and feel. One way of becoming acquainted with individuals with special needs is by becoming familiar with their thinking patterns, especially their emotional responses. The paper presents literary sources related to the topic, wherein the sources are evaluated, and the selected works are analysed. Besides the method of analysis (protagonists, supporting characters, literary space, literary time, subject, theme, motifs, narrator, structure, and plot), the descriptive method for presenting theoretical starting points and the method of synthesis in the conclusion are also used.

1   Introduction

This paper presents a few selected works of realistic young adult fiction. These cover the themes of various special needs in their literary characters. Adolescents as literary characters with special needs or literary characters close to them that act as narrators piques the interest of readers partly in the 2nd and particularly in the 3rd educational period of primary school (hereinafter referred to as: EP), and those in their early years of secondary education, which are the general focus groups of young adult literature. The selection of texts considers the quality of the texts at the cognitive, ethical and aesthetic level (Kos, 2001, p. 35), and at the same time draws attention to the emotional states and reactions of literary characters with special needs in various situations. The authors deliberately avoided texts belonging to children's literature, where the main literary characters are animals that represent one of the groups of special needs, e.g., Svetlana Makarovič's *A Special Kind of Squirrel* (1994) that is very optimistically oriented, as Čopko compensates for his motor disability by acquiring new knowledge; the cognitive deficit of Pooh Bear in A. A. Milne's collection of short stories of the same name (*Winnie the Pooh*, 1926), where he is affectionately described in several places as the "dumb old bear"; the visual impairment in Peter Svetina's *Little Walrus' New Glasses* (2003); or stuttering in the picture book by Mateja Gačnik and Lidija Križnar, *About Beaky that Overcame Fear and Saved His Friends* (2014), and the stuttering of the rooster Kokojevič in the fantasy story *Hanny Rattie* (2010) by Suzana Tratnik.

Texts that can help in the understanding of a certain special need can be useful for two groups of readers: teachers (and future teachers) and young readers. By raising awareness and consequently understanding the special needs of students with special needs or their classmates, the class community or the school, i.e., students and teachers, can develop sensitivity and empathy. In fact, through high-quality literary texts, containing literary characters with various disabilities, teachers and young readers can familiarise themselves with various emotional states. The theory and practice of inclusive pedagogy is based on the teacher's willingness to learn about the individual's needs and their positive attitude towards the student with special needs (Opara, 2003; Kovač, Ščuka in Čagran, 2017). Therefore, the teacher's attitude towards students with special needs and towards inclusion itself are important, and the teacher should be able to identify individuals with special needs in development and learning, and to master various approaches, methods, techniques, and strategies for working with children with special needs (Opara, 2012). However, a survey of

Slovenian primary school headmasters (96 headmasters and headmistresses took part) conducted by Kovač, Ščuka and Čagran (2017), showed that they believed that they lacked knowledge on special needs, however they supported pedagogical workers in their work. "Among the conditions related to those working with students with special needs, headmasters rate the highest the work of a mobile pedagogue at school, and the lowest the appropriate qualification of teachers that work with students with special needs." (Kovač et al., 2017, p. 27).

Many authors find that literary texts are a good way of becoming acquainted with special needs in school. In her study, Adomat (2014) looked at how children build positive understandings of disability from children's literature, but also how societal attitudes, beliefs, and stereotypes might play into their interpretations of the literature. Through guided reading and discussions about what they read, both teachers and students gained insights that are key to accepting people with special needs and living side by side with them; they developed empathy for diversity and changed their view of their classmates or students. At the same time, students with special needs also identified with the literary characters and thus developed a more positive self-image. "This study shows that classrooms could be democratic places where children explore, through children's literature and the guidance of their teachers, real questions of disability" (Adomat, 2014). It is therefore important that in literary works special needs are presented realistically, in accordance with the actual functioning of persons with a particular disorder, and not based on stereotypes (Miller, 2012). Children (as well as adults) often have misconceptions (stereotypical) about people with special needs, and it is this kind of literature that can influence the formation of proper conceptions, better understanding, tolerance and empathy through thoughtfully and realistically presented literary characters and their way of thinking (Ostrosky et al. 2015). "Teachers who are preparing for inclusive classrooms could use children's literature to help themselves and their students in developing empathy, acceptance, and understanding for individual differences. This is a way to share examples of how we all may or may not relate to individual differences. This can be especially true for understanding how disabilities impact the lives of individuals and their families and friends" (Kurtts & Gavigan, 2008, p. 23).

To identify the special needs in this paper, the *Criteria for defining the type and level of deficiencies, impairments or disorders of children with special needs* handbook (ed. Vovk-Ornik, 2015) was used, which lists nine special needs groups: mental disability, blindness

and low vision, deafness and hearing impairment, speech and language disorders (hereinafter referred to as: SLD), motor disability, long-term illness, children with deficits in individual areas of learning, emotional and behavioural disorders, and autism.

2   Method

The paper defines types of disorders in different groups of children with special needs. In addition, it defines literary works wherein the general theme is a special need. Based on argumentation for each special need, literary texts with a literary character with special needs were sought and compared the description of the special need with the description in the literary work. In searching through the Cobiss library system using the keywords "special needs" and "youth literature", the authors obtained 514 results. Firstly, non-Slovene texts were excluded, then those unsuitable for 7th- to 9th- graders and finally texts without human characters. The remaining 37 literary texts were analysed in terms of the ethical, aesthetic and cognitive aspect of literary phenomenology. The texts with the highest quality are presented in the paper. Special attention was paid to the thematology, wherein the chosen high-quality texts include all nine special needs as established in education law (*Criteria for defining the type and level of deficiencies, impairments or disorders of children with special needs,* 2015).

After having selected quality texts that include the desired theme, the following methods were used to present the special need through the literary text:

- an analytical method for analysing individual literary works;
- a comparative method for comparing the characterisation of literary characters and their emotional states and behaviours with a description of the special need; and
- a comparative method for comparing literary characters with different special needs.

The basic premise was that through reading the young adult literary works, adults and children can recognise a special need, understand it better, and thus develop sensitivity for people with special needs.

In the study, two research questions were posed:

– Which special needs are described in quality young adult texts?
– How are the literary characters with special needs characterised?

The selection of texts is limited to those literary works whose main characters are children and adolescents, and the works belonging to young adult literature in terms of motif and theme (3rd educational period of primary school).

3 Results

Literary Works on Children or Adolescents with Special Needs

3.1 Mental Disability (Marinč et al., 2015, p. 6): "is a neurologically conditioned developmental disorder that occurs before the age of eighteen and is manifested in significantly lower intellectual abilities and significant deviations in adaptive skills." A first-person narrator is characteristic of literary works about children with intellectual disabilities, and this is usually a family member or someone to whom the mentally disabled person is attached. The following are two quality examples: *My Nina* (2004) by Janja Vidmar and the novel *Whale on the Beach* (2015) by Vinko Möderndorfer. The first-person narrators are Nina's younger brother and Igor's older sister.

My Nina is a story of a girl with Down syndrome who is called a *downsy* owing to her illness (the nickname is always used affectionately). Tim, her younger brother, admires his sister, plays with her, loves her immensely, but when one day he finds out that he is developing faster than her and that he already understands many things that Nina never will, he also becomes protective towards her. Tim, who finds living with someone with Down syndrome normal, and who can see no problem with it, begins (when he has to write an essay about his family) to learn from other people's perspectives the derogatory attitude of others towards everything that is different, including people with disabilities. At first, he does not understand it, and then it starts to anger him. He fights for his sister and tries to accommodate her needs. His biggest expression of his love towards Nina is when they go to the train station because Nina loves trains. In her narrative, Janja Vidmar creates a mirror that reflects the impatience of modern society towards people with disabilities who do not exhibit enough speed, capability, greed, rudeness, beauty, or insidiousness.

Whale on the Beach is a novel that describes the life of a family with a child with Down syndrome. At the forefront is the hardship of the first-person narrator Nika, who is ashamed of her brother Igor and seemingly denies his existence. She never mentions him to her classmates, and she skilfully eludes situations that could uncover her secret. At school, Nika is very popular and successful, and at times even too mature for her age. She takes part in many activities and is above average in all of them, which, in a way, is just an escape from her domestic reality. When her secret is revealed, she begins to get to know her brother's positive qualities. She ultimately accepts him and grows to love him, which has a positive effect on the entire family. Igor is also enthusiastically received by her classmates, and only then does Nika start to feel truly accepted and welcomed. Her previous above-average performance was only a sign of her distress and her perception that because of her parents she has to be "smart enough for two".

3.2 Blindness and Low Vision are defined by one's remaining vision, namely "the limit between them is set at 95% loss of visual acuity or a narrowed visible field around the fixation point to less than 10 degrees, regardless of visual acuity" (Zveza društev slepih in slabovidnih Slovenije, n. d.).

Most literary works for children and young adults on the topic of blindness and low vision in Slovenia were published by Aksinja Kermauner. They include *Darkness is not Black Coat* (2001), and *Berenice's Hair* (2006) and its sequel *Orion's Sword* (2008). In these realistic novels, the main literary character is the student Anina, who faces problems in a new environment (e.g., a new school, a new room layout, a new route home) because of albinism, since she experiences problems caused by vision impairment. Through conversations with her dead grandmother, Anina reveals her bitter realisations (Kermauner 2006, p. 118): "Granny, am I so different if I have a different colour of complexion and hair? And if my sight is poor? What does it even mean to be different? To stand out from the average?" In several places in both novels, through Anina's narrative, the author unobtrusively discusses blindness, to which the characters with fully functional senses fail to respond in a satisfactory manner. Throughout Anina's story, her feelings are depicted using colours, as Anina uses a colour scale to portray moods and actions, pitch and melody of the voice, and thus uses it to interpret her or the other person's speaking position. Anina says (Kermauner, 2008, p. 70): "Thank goodness those with good sight are completely blind to such obvious colours of voice, such as the colour of my lies. Only orange, a shiny orange!"/… /The voices can also be: unpleasant, tensely orange; lies turn

from orange to a blindingly red; they can be gently purple; solid, bright red, guiding; interesting, slightly dimmed like the yellowish light of a candle; friendly and content as forget-me-nots with a hint of white; the voice can be full of crimson-red pride; a mixture of crystal blue excitement and astonishment; it can be greyish-black with furious red streaks. Occasionally, the author also compares voices to material reality: spiky icicles, cooled to absolute zero, filling someone's voice; a voice can also be painfully sharp.

3.3 Deafness and Hearing are defined by the extent of one's remaining hearing. "According to the World Health Organization (WHO) classification, deafness is one of the most severe disabilities. A deaf person is defined by hearing loss at frequencies of 500, 1000 and 2000Hz on average at the level of 91dB or more. Due to hearing impairment, people who are deaf and hard of hearing have great difficulties in communicating and integrating into the environment in which they live, study, create, work or spend their free time, which can result in various forms of social exclusion" (Zveza društev gluhih in naglušnih Slovenije, n. d.). Large individual differences can exist between deaf persons. Their functioning is influenced by several factors: type and degree of hearing loss, time of onset, appropriate and early treatment or rehabilitation, and cognitive, personality and other characteristics (Battelino et al., 2015, p. 11).

Some of the issues faced by deaf adolescents are presented by Aksinja Kermauner in her stories depicting the deaf main character David in *David: Mission Possible* (2019) and *David: Mission Beethoven* (2020). They are short stories about a deaf boy, David, that include elements of fantasy and they are also accompanied with a translation into Slovenian Sign Language (SZJ). Below the illustrations of the gestures, a literal translation of the gesture is noted, which follows the characteristics of the Slovenian Sign Language (without declinations, etc.). In this way, readers with no hearing impairment can become acquainted with the first language of the deaf. Each page is also equipped with a QR code, with which one can view the open text of that page with a video application. Such types of texts are a very good method of familiarising the general public with the peculiarities of Slovenian Sign Language, which is the first language of the deaf.

David is a well-adjusted deaf teenager, a child of hearing parents. He communicates in Slovenian Sign Language and partially by lip reading. He finds it difficult when he has to communicate in a hearing social environment that is unaware of his

impairment and is not familiar with Slovenian Sign Language. In the first story, *David*: *Mission Possible*, reality is intertwined with motifs of science fiction. Throughout the story of meeting Zmeljan (a creature from the parallel planet of Zmelj), who communicates in sign language alone, the reader faces the distress experienced by the deaf, as only a handful of people understand them. The creature comes to warn Earthlings of imminent danger. With the help of David and his understanding parents, who know sign language, the Earth avoids destruction. The second book, *David*: *Mission Beethoven*, is set in 2020, which was marked by a pandemic, while also being dedicated to the composer Ludwig van Beethoven. David, like all schoolchildren, finds himself facing the challenge of distance learning, which does not pose any major problems for him, as he is very computer-savvy. A bigger problem for him are masks that make it impossible for him to read lips. To his great delight, he has a computer game about Beethoven that they have to play as an assignment in art class. He gets to know the deaf composer and his music through visualization and vibration. In this way, he is introduced into the world of music, which until then had been inaccessible to him.

3.4 Speech and Language Disorders (hereinafter referred to as: SLD) affect "the ability to acquire, understand, express and/or make meaningful use of speech, language and communication. Deviations in these areas have a significant impact on the child's daily communication and learning" (Skamlič et al., 2015, p. 15).

According to incidence, experts distinguish between mild, moderate, severe and very severe SLD. These disorders often occur in conjunction with other disorders, e.g., with intellectual disabilities. The speech of a child with severe SLD in connection with a mental development disorder is well illustrated through the character of Nika's brother Igor in Vinko Möderndorfer's *Whale on the Beach* (2015). Igor speaks in incomplete sentences, he repeats words, and the sounds he makes are described as "a speaking with a burr that is supposed to mimic words" (Möderndorfer, 2015, p. 69). In the same novel, there is also a character named Barbka, who could be recognised as a girl with selective mutism, as she never speaks. She communicates with her classmates and teachers via text messages. Although selective mutism is not directly related to SLD, it is difficult to categorise because of its many different causes, therefore the authors chose to include it here.

The suffering of a child who is ostracised by her peers because of a speech disorder (stuttering) is presented in Beta Akerman's Isabella: *The Story of the Princess Who*

Stuttered (2010). For her birthday, Isabella wished everyone stuttered, so that they could see the challenges she has to deal with in her situation. Her wish was granted, and at the end of the festivities, she wrote down rules for everyone to follow: "if you hear someone stuttering, do not make fun of them because they will be sad. Instead listen to them, do not drive them away just because they stutter, do not interrupt them, do not try to guess the words they are trying to say because you do not know what they want to say, if you scold them to stop stuttering, it will not get any better, they will still stutter. It is a game for everyone, therefore everyone can join in" (Akerman, 2010, p. 13).

3.5. Motor Disability is defined as (Logar et al., 2015, p. 19): "Children with motor disability or children with reduced mobility have congenital or acquired defects of the locomotor system, central or peripheral nervous system. As a result, they have difficulty engaging and taking part in activities. According to their mobility impairment, we distinguish between children with mild, moderate, severe and very severe motor disability."

This disability is the main theme in Janja Vidmar's novel ***Shooters*** (2009). It is a distinctly two-part novel, consisting of the inner life of the main literary character, seventeen-year-old Torki, and his real life. The inner life is actually Torkar's hallucination, a parallel world that he creates in complete isolation, wherein he can do anything. The real-life events are set in the Soča training centre and later at his home, and only there does a retrospective story about the teenager's car accident that resulted in his disability begin to reveal itself. Torki needs to re-establish his own value system, experience his surroundings, accept himself as a paraplegic, and find the meaning of existence. The book is written using slang, and its title is the nickname used for boys in wheelchairs who play basketball. Vulgarity is associated with Torki's sexual fantasies that are his escape, and in some parts, it is also expressed in his dislike for the outside world or his withdrawal from everyone and everything. The end of the novel shows at least a little optimism, although Torki's life is very limited due to his disability.

In the novel by David Hill, ***See Ya, Simon***, Simon is wheelchair-bound because of muscular dystrophy, while the emotional and social relationships between peers, parents and teachers intertwine around him. Despite knowing his life is going to end soon, Simon is a confident and witty teenager who radiates optimism and joy, although he often experiences a crushing feeling in his chest because he is aware of

the finality of his life: he will never go on a real date and kiss a girl, he will never go to prom, etc. The first-person narrator is Simon's best friend Nathan, and Simon's world, marked by illness and death, is depicted through his eyes. Nathan finishes the novel on an optimistic note: "My life goes on without Simon, but with all sorts of memories of him. He was bad tempered and funny. He was fierce-tongued and brave. He was my friend. I'm proud I knew him, and I'll never forget him. See ya, Simon!" (Hill, 1994, p. 153)

3.6 Long-Term Disease is the main theme of the novels *Wonder* (2014[1]) by J. R. Palacio, *See Ya, Simon* (1st edition 1992[2]) by David Hill (described in the Motor disability section), and *The Fault in Our Stars* (2012) by John Green. According to the *Criteria for defining the type and level of deficiencies, impairments or disorders in children with special needs*, the group of children with long-term diseases includes those "whose disease does not resolve in at least three months. A long-term disease may be in remission for a certain period of time, but it can flare up again (until the child's condition worsens again)" (Zavrl et al., 2015, p. 21).

In his novel **_The Fault in Our Stars_**, John Green brings up the topic of long-term disease, as Hazel and Gus are teenagers with cancer. Their world is limited to hospitals; therefore, they wish to bring at least a little normality into their relationship. They experience it on their trip to Amsterdam, where they are only two teenagers in love. Although it constantly seems that Gus is cured and Hazel is permanently on her deathbed, it is Gus who dies in the end. The novel depicts many reflections on passing and death; each of the young people who meet has an (incurable) disease. At the beginning of the novel, Hazel mentions that whenever she reads anything about cancer, the side effects always include depression (Green, 2012, p. 3): "But, in fact, depression is not a side effect of cancer. Depression is a side effect of dying. (Cancer is also a side effect of dying. Almost everything is, really.)" The subtle reflections on the disease sometimes include hints of irony, e.g., the cancer only wishes to survive, or shock when e.g., Hazel begins to count the days after Gus' death (the eleventh day after A. W., Gus's full name is Augustus Waters), or when she talks to him in her mind and utters that she loves him using the present tense.

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[1] Translated in Slovene in 2017.
[2] Translated in Slovene in 2003.

Wonder is a novel about social and family relations that encourages empathy, or, as principal Tushman says in his end-of-the-year speech, the effort to be a bit nicer than is necessary (Haramija, 2020). The main character is ten-year-old August Pullman. Everyone calls him Auggie. He is a very intelligent boy who loves natural sciences and space, and he is a big fan of George Lucas' *Star Wars*. This iconic series of films is referred to throughout the novel, establishing an intermedial relation between the novel and the films (especially with the fifth part of the series, *The Empire Strikes Back*). At the beginning of the novel, he explains his appearance as: "I won't describe what I look like. Whatever you're thinking, it's probably worse" (Palacio 2014, p. 3). In *Wonder*, Auggie's teacher Mr. Browne presents a monthly precept, the first (in September) is the thought by Wayne W. Dyer about the choice between "right" and "kind". August Pullman is presented at a crucial time in his life, when he first enters regular schooling, which isn't easy. Despite being a very gifted child, he (mostly) isn't well-accepted among his peers because of his appearance. On the contrary, most of his schoolmates participate in a game called *the plague*. The meanest of all his schoolmates is Julian, though he loses all his friends by the end of the narrative (and transfers to another school). The bullying is mostly verbal (Julian's comments on August's looks, nasty messages that he writes to August and Jack), but it also includes rejection and ignoring (the boys' war). Twice, physical violence erupts: when Jack hits Julian for calling August a freak, and at nature camp, when the older boys attack August and Jack but are stopped by August's schoolmates. This last fight is the key event after which August is accepted as an equal: "When I went back to school the next day, the first thing I noticed was that there was a big shift in the way things were. A monumental shift. A seizmic shift. Maybe even a cosmic shift" (Palacio, 2014, p. 282). This refers to the acceptance of August into the school environment.

3.7 Emotional and Behavioural Disorders are defined according to the *Criteria for defining the type and level of deficiencies, impairments or disorders of children with special needs* (2015) as a spectrum of disorders that typically occur together with other disorders. These types of disorders are perfectly described in the literary work *Angie* (2007) by Janja Vidmar. It is a socio-psychological novel about a teenager with special needs who suffers from obsessive-compulsive disorder, agoraphobia, panic attacks and speech disorders; the author notes that: "No one understands that patients who suffer from mental illness are not integrated into the matrix scheme." (Vidmar, 2007, p. 182). Angie is always betrayed by her brilliant mind, when the patterns of life are not repetitive, known, or common, and this occurs quite often: "Then she went to

the kitchen full of determination. But at the doorstep, she ran out of steps. This keeps happening to her. She puts double the energy into everything she does to get at least as much shit done as others can do in their sleep." The author depicts the moods and inner conflicts the main character faces with conscious shifts in language from literary Slovenian to the use of vulgar terms. In fact, only a fraction of the events is focused on the external visual aspect of Angie's life, which is shown as an internal landscape, while all the fears and hardships arise from the disease.

3.8 Autism "is a developmental disorder with the largest deficit in the fields of social communication and interaction and with a pronounced stereotypical nature/inflexibility in the fields of activities and interests" (Zveza za avtizem Slovenije, n. d.). The way a person with autism functions is very clearly depicted in the novel by Mark Haddon, *The Curious Incident of the Dog in the Night-Time (*2004[3]), and the novel by Siobhan Dowd, *The London Eye Mystery* (2016). Both novels are first-person narratives about boys with Asperger's syndrome. This is a form of autism in which a person functions relatively well in terms of language and cognitive skills. The common characteristics of the main characters can be observed in both novels. Both are enthusiastic about scientific theories, space, and mathematics. They both have a distinct sense for details, they always speak the truth because for both the concept of lying is foreign. In **The Curious Incident of the Dog in the Night-Time***,* the first-person narrator, fifteen-year-old Cristopher, writes the following (Haddon, 2004, p. 25): "This is another reason why I don't like proper novels, because they are lies about things which didn't happen and they make me feel shaky and scared. And this is why everything I have written here is true." The novel is conceived as a book written by the character himself. He uses it to meticulously record all the events following him seeing a murdered dog in the neighbour's garden. While searching for the dog's murderer, he uncovers many family secrets, while accurately describing his own experiences and functioning in various situations that he also illustrates with drawings and charts depicting his mental functions. Throughout the unfolding of the events, the family dynamics are revealed, which result from Christopher's disorder and lead to his parents' divorce.

The London Eye Mystery centres around the first-person narrator Ted, a twelve-year-old boy with autism. It is a suspenseful detective story about the disappearance of Ted's cousin Salim, and the story has a happy ending due to the boy's unusual

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[3] Translated in Slovene in 2006.

abilities. The first-person narrative very clearly mimics the streams of thought of a child with highly functional autism. It is a form of autistic disorder where the individual's intellectual abilities are above average, while his social functioning is impaired or limited. When external events are described, the author uses short and very concise sentences. The descriptions are accurate and contain great attention to detail, which such children notice but which usually elude the typical observer. The entire story is built on Ted's "unusual" abilities. The emotional states or hardships experienced by Ted are also very well portrayed. In such situations, the narrative is entangled in a mesh of feelings and thoughts that directly follow each other. The events take place in the centre of modern-day London, where Ted lives with his parents and sister Kat. Ted's Aunt Gloria and her son Salim from Manchester visit Ted's family in London. For Ted, any change in routine is stressful. He is aware of his peculiar character features, and he is familiar with the syndrome he suffers from and knows how to partially correct his behaviour using the thought processes he has learned. Any such correction of behaviour requires considerable mental effort from him, therefore in certain situations he loses his composure; for example, when he realised that he was lost, his hand waved uncontrollably, but he did not even try to steady it (Dowd, 2016, p. 56).

4   Discussion

Themes relating to literary characters with special needs touch upon individual issues that are also social problems or even taboos. At the principal level, the society at large acts inclusively towards deficiencies, impairment or disorders of persons (children) with special needs; but on an individual level, while social exclusion is by no means acceptable, it is more comfortable for all to keep it hidden.

In novels belonging to young adult literature, all the listed deficiencies, impairments, and disorders (*Table 1*) appear as a topic, apart from deficits in individual areas of learning. This group includes children "with a more severe form of specific learning difficulties, who due to known or unknown disorders or differences in the functioning of the central nervous system and despite average or above average intellectual abilities exhibit pronounced issues with reading, writing, spelling and/or arithmetic" (Magajna et al., 2015, p. 23). In the analysis of literary works, it has been shown that such disorders in literary characters are related to other deficiencies, but in young adult literature, they are not discussed as a standalone disorder. There is a decline in learning success caused by a deteriorating family situation or social

relations, addiction, unrequited love or illness. The side literary characters have proven to be mostly tolerant to impairments or special needs, but almost all the novels feature characters that act impatiently and exclude the child with disabilities, as well as characters who possess a lot of empathy and tolerance.

Table 1: The deficiencies, impairments, or disorders of children with special needs in selected literary works

The deficiencies, impairments, or disorders of children with special needs	Selected literary works with themes related to the deficiencies, impairments, or disorders of children with special needs	Positive responses of the environment	Pronounced negative responses of the environment
Mental disabilities	Möderndorfer, *Whale on the Beach*	Nika's classmates.	First Nika, who later changes her attitude towards her brother.
	Vidmar, *My Nina*	Nina's brother Tim.	Some participants in games in the Primary School with an adapted school curriculum.
Blindness and low vision	Kermauner, *Berenice's Hair* and *Orion's Sword*	Family, Nik (who is a negative character at first).	Some of Anina's classmates.
Deafness and hearing impairment	Kermauner, *David: Mission Possible* and *David: Mission Beethoven*	Parents, teachers, and classmates act in an inclusive manner.	The guard and director of the museum, as representatives of the uneducated hearing public, who respond improperly to David's deafness.
Speech and language disorders (SLD)	Möderndorfer, *Whale on the Beach*	Everybody tries to understand Igor.	There are no negative SLD-associated characters.
	Akerman, *Isabella: The Story of the Princess Who Stuttered*	Isabella's parents and eventually peers.	Isabella's peers.
Motor disability	Vidmar, *Shooters*	Torki's loved ones try to help him, but he does not respond.	The main character of Torki completely isolates himself.
	Hill, *See Ya, Simon*	Students; in fact, all supporting characters, because they are aware of Simon's mortality.	There are no distinctly negative characters.

The deficiencies, impairments, or disorders of children with special needs	Selected literary works with themes related to the deficiencies, impairments, or disorders of children with special needs	Positive responses of the environment	Pronounced negative responses of the environment
Long-term illness	Green, *The Fault in Our Stars*	Support group, relatives, the best friend.	Author Peter van Houten.
	Palacio, *Wonder*	Headmaster, teachers, some classmates since the beginning of the school year.	At the beginning, most of the classmates, ultimately only Julian.
Emotional and behavioural disorders	Vidmar, *Angie*	The outside world is described from the perspective of her inner world, presenting the subjective opinion of the titular character.	Angie has the most trouble living with herself; she blames the father who left the family.
Autism	Dowd, *The London Eye Mystery*	Parents and Professor Shepherd, about whom Ted says that beside his parents is his only friend.	In the beginning, Kat acts dismissively, but in the end, she and her brother grow closer. At the beginning, Aunt Gloria feels uneasiness.
	Haddon, *The Curious Incident of the Dog in the Night-Time*	It is difficult for his parents, but they try to be supportive. Therapists, teachers, and many strangers offer their help to Cristopher.	The officer that touches Cristopher and takes him to the police station.

Source: own

Literary characters with special needs are separated from the average by external (direct) or internal (indirect) characterisation:

– In terms of external characterisation, literary characters in the works in question separate themselves by appearance or by visible medical aids. In terms of appearance of the literary character, Down syndrome in people with mental development deficiencies, weight loss and other physical signs of long-term illness in adolescents, and mutated genes that cause facial deformity are all visually apparent. Another variant of external

characterisation refers to the use of medical devices, e.g., a mobility-impaired person in a wheelchair, a cochlear implant in persons with a hearing impairment, or an orientation white stick in the blind and partially sighted. Some special needs have no pronounced external signs.

– According to the internal characterisation, persons with special needs are presented through descriptions of actions and reactions, or through their thinking, expressed in (internal) monologues or dialogues, including their manner of speaking.

The reader's attention should also be focused on language use, especially in the naming of literary characters with deficiencies, impairments or disorders. The language code used for a certain literary character – also true in characterising people in real life – can indeed easily drop to the level of offensive and exclusive discourse.

By understanding the special need that a reader (teacher, student) can gain by reading quality (young adult) novels featuring characters with special needs, the social inclusion of children could improve and their future would be *brighter,* or as Janja Vidmar wrote in *Angie* (2007, pp. 70, 71): "*Angie was sitting in the twilight of her soul. /…/ Thomas Edison was afraid of the dark, therefore he invented the light bulb. But what should she do? Invent the future?*"

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Teachers' Attitudes Towards Teaching Methods and the Realized Outcomes of Mother Tongue Teaching During Lockdown

Irena Krumes, Luka Pongračić, Ana Maria Marinac

University of Slavonski Brod, Department of Social Sciences and Humanities, Slavonski Brod, Croatia

ikrumes@gmail.com, lukapongracic2@gmail.com, marinac.anamaria98@gmail.com

Abstract The past pandemic provoked completely new educational approaches and forced all teachers in the Republic of Croatia to embark on a completely new way of teaching and evaluating students. This paper will highlight the specifics of Croatian language teaching during distance learning in the spring of 2020; from 16 March 2020 until the end of the school year. A questionnaire on distance learning of the Croatian language was conducted (n = 170). A qualitative analysis of the responses and a descriptive analysis of attitudes were performed, and a one-way analysis of ANOVA variance was used for correlations. The ways in which teachers conducted teaching and the methods used to evaluate the achievement of educational outcomes are presented. Furthermore, the teachers expressed their views on whether the students completed learning tasks independently and whether they had contact and good communication with the students and parents. The position on the realization of educational outcomes during online teaching was compared with the similar position during direct teaching in school. The results showed that the teachers were less satisfied with the results achieved during emergency remote teaching, and they were dissatisfied with the level of cooperation with parents and the students' level of independence.

1   Introduction

The coronavirus pandemic has caused changes in all areas of human activity, even the educational process. Thanks to the fast reaction of educators and the conscientious behaviour of students, a complete interruption of the educational process was avoided. In the search for new solutions, and with the hope that the new situation would pass as soon as possible, many changes have taken place. The complete closure in early 2020 forced almost all teachers and professors to adapt extremely quickly, for the most part, to untested tools, methods, and strategies in emergency remote teaching. It should be emphasized that this was not the typical distance learning that had previously been conducted in certain areas of education. Given that the entire education system was unprepared, and that many teachers had not mastered the methods and techniques of this way of teaching, this time was very challenging. Teachers had to teach at a distance and educate themselves on a number of tools. This was reflected in the subject of Croatian language at all levels of education from primary to secondary school, as well as in all types of schools in the Republic of Croatia. The teaching of all subjects was conducted in Croatian, since it is the mother tongue of most students, and the content of Croatian language teaching in schools is aligned with the level of education with the obligation to meet certain educational outcomes. Given that the nature of the Croatian language as a subject is very complex, and that this subject is very demanding and layered in relation to the outcomes associated with different educational levels, the time of complete closure or isolation affected communication in knowledge transfer, in achieving basic outcomes, in monitoring and in evaluating students. Communication is the most important human activity, and the challenge of gaining students' initial literacy or encouraging basic communication skills at the beginning of formal education were the most difficult to achieve through distance learning, especially through this form of emergency distance learning. Croatian language teachers had to overcome numerous obstacles in teaching. Much qualitative research was conducted in order to contribute to the educational science of distance learning. Various data on teaching at that time are presented, which can be a solid foundation for improving future teaching. Among other things, the attitudes of Croatian language teachers towards the achievement of educational goals were examined. Achieving teaching goals is the task of every teacher. Furthermore, data on job satisfaction at that time for mother tongue teachers were collected and presented. The method of evaluation in the Republic of Croatia, similar to that in other

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countries, had to adapt to the situation, and evaluation was entrusted to teachers. That is why it is important to analyse how teachers evaluated students.

2 The Time of the Pandemic and Teaching the Croatian Language

The coronavirus pandemic initiated a number of changes in the educational process, requiring teachers to respond quickly and apply completely new methodological concepts. Teachers around the world have faced challenges that have made their mark on the history of education. Contact teaching has been replaced by teaching supported by information and communication technology, so the digital competences of teachers and professors have come to the fore for the organization and implementation of this type of teaching. Digital literacy, as one of the core competences, has been at the centre of interest for many years. Digital literacy has become necessary not only for the modern teacher, but for modern man in general. Numerous authors have conducted studies on the digital literacy of teachers. A study conducted by Ružić Baf, Radetić-Paić and Zarevski (2012) showed that the students of teacher training colleges believed that future teachers did not need education in the field of informatics, which at that time was not considered to be the foundation of modern and quality teaching. However, today many teachers are aware that they need additional education to use information and communication technologies, given that during the pandemic, digital competences were the basis for the implementation of the teaching process. Teachers point out that many of them were left to fend for themselves during online classes. On the other hand, in order for teaching supported by information technology to really achieve its purpose, the students also need to be digitally literate. Lovrić and Bjeliš (2021) conducted a survey among 101 high school students in which they explored students' coping abilities in the digital environment and their satisfaction with distance learning. The study showed that most students do very well with the necessary technology (57.40%), but that some students do not cope at all (4%). The study also showed that most students have the necessary IT equipment (54.5%), but that there are students who do not (4%). According to previous research on the quality of teaching during the pandemic, it can be concluded that at that time the educational process was burdened with a number of difficulties. Lovrić and Bjeliš (2021) point out that students believe that teachers do not afford enough time for teaching homework (56.4%), or for sufficiently explaining new teaching content (44.6%). Only 5.9% of students agreed that they would adopt the new teaching content well during distance

learning. Ćurković, Krašić and Katavić (2020) conducted research during the coronavirus pandemic in Croatia and examined the attitudes of teachers and parents towards various aspects of distance learning. The results of the study showed that parents and teachers have different perceptions of work, effort, stress and tension – teachers show a higher level of anxiety than parents and students. However, parents and students pointed out that during distance learning they felt an increased level of stress and anxiety, compared to the time of contact teaching. Parents believe that teachers sent a much larger number of assignments to students during distance learning, while teachers felt that their students did the same amount of work as before distance learning. Also, the parents pointed out that the tasks that the students received from the teachers were quite vague. The parents emphasized good communication between students and teachers, and they were more satisfied with the final grades than the teachers were.

3   Distance Learning

The coronavirus pandemic almost managed to bring the whole world to a standstill for a while, and the challenges it has posed to humanity have also been reflected in the field of education. Experts in this field have realized that dropping out of education is not the solution. Therefore, teachers and professors at all levels of education were forced to find new methods and strategies for teaching their students. Čubrić (2021) calls education during the pandemic an e-education system and points out a number of new concepts that emerged during that time: e-education, e-learning, distance teaching, distance learning, online teaching, online education, etc. Information and communication technologies are used in different ways in the teaching process – with regard to the manner and intensity of use, we can distinguish between teaching in the classroom, accompanied by information and communication technologies; hybrid or mixed teaching, which includes a combination of classic teaching and e-learning, and online teaching, i.e.., teaching that is fully organized at a distance and is based on digital technologies (Divjak & Begičević, 2010, according to Mikša, 2011). Thus, terms that are frequently used in the same context do often not have exactly the same meaning. According to the e-Learning Strategies (Strategije e-učenja, 2007, p. 5) at the University of Zagreb, e-learning is: "The process of education (learning and teaching process) with the use of information and communication technology, which contributes to improving the quality of this process and the quality of education outcomes." E-education is any

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form of teaching process in which technology is used. Distance learning implies the acquisition of knowledge and skills with the help of the materials and instructions delivered and with the help of technologies (Šain, 2017). In this paper, it is called "emergency remote teaching" because of the influence of pandemic circumstances in which teachers applied distance learning in a sudden and unplanned way, using untested methods, strategies and teaching materials, in particular the method of evaluation.

Upon analysing the educational system throughout history, one can conclude that distance education is nothing new or unknown. The roots of this kind of teaching can be found in the advent of correspondence schools. In the last century, they were based on materials and books sent by mail, and today modern technologies are used to exchange materials and to take exams. With the advent of the Internet, distance education is gaining new dimensions and, in this context, is considered a new educational phenomenon (Pokorni, 2009; Ćukušić & Jadrić 2012; Clark & Mayer, 2016). Education in which the teacher and student are physically distant, and this is part of the definition of distance learning today, was first recorded in 1904 at today's Aberystwyth University (Kalamković, Halaši & Kalamković, 2013). In the search for the definition and outcome of distance learning, Čubrić (2021) points out the advantages and disadvantages of distance teaching. Some advantages mentioned by the author are the flexibility of work in the teachers' own rhythm and time, less travel, the development of personal responsibility for learning, the development of information processing skills, lectures can be recorded and watched again, and all students can participate, thus reducing absenteeism. Čubrić finds shortcomings in the fact that live contact cannot be replaced by anything else, in poor technical equipment, technical difficulties, poor motivation, the reduction of the educational role of teachers while teaching in the classroom, technology costs, the difficulty of committing time to each student, the constant need for additional training, and the initial years of school education, when the implementation of distance learning is almost impossible. Other authors also note the advantages and disadvantages of distance learning, emphasizing as the greatest advantages the possibility of continuous learning and professional development, further learning according to the students' own capabilities, cheaper education, but they also point out the disadvantages found in the mandatory use of appropriate technology, which is sometimes very demanding but also expensive. The scholars notice a lack of motivation in students because of the lack of face-to-face interaction, as well as

unclear evaluation criteria. Ultimately, they point out that e-learning cannot replace the traditional school environment (Shipside, 2002; Janeska & Taleska, 2011; Kalamaković, Halaši & Kalamaković, 2013; Lovrić & Bjeliš, 2021). Bastl (2021) discusses the benefits of distance learning during the pandemic that have made it easier for teachers to work, some of which are flexibility and self-organization of work time, saving money and time instead of traveling to work, additional and easily accessible education, etc. However, the author concludes that these advantages were not realized in concrete work and points out that teachers' working hours often stretched throughout the day, they often depended on students and their parents, and many teachers did not have the necessary equipment for distance learning in real time or the necessary space for their work to be unhindered by external factors, etc. This resulted in problems with reconciling work and private life; the teachers felt pressure, stress, etc.

4   The Complexity of Croatian Language Teaching

In almost all countries, the teaching of each national language is allotted the largest number of teaching hours. The Croatian language as a subject is very complex and rich in diverse curricula containing the basic tasks needed to follow all subjects. The Croatian language, as a school subject, could previously be viewed in light of several program-methodological components, namely initial reading and writing, literature, the Croatian language, linguistic expression, and media culture (Mendeš, 2009). The basic area as of today in the first two grades of primary school is initial reading and writing because it is the basis for mastering the content of the Croatian language, as well as all other subjects. Bežen (2002) points out that through initial reading and writing, the foundations are built for the acquisition of knowledge, abilities, and the skills necessary for functional and creative engagement with language and literature in later life, and for the development of expressive-communicative, literary and media literacy. Since the Croatian Language Curriculum is the basic document that regulates modern Croatian language teaching, a short analysis of the document will be presented in order to identify the purpose and expected educational outcomes that will be achieved after the completion of Croatian language teaching in a particular class. According to the curriculum, the Croatian language is divided into three interrelated areas: Croatian language and communication, literature and creativity, and culture and media. Outcomes are achieved in accordance with these

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areas; thus, the goal of the Croatian language and communication domain is to master the possibilities in all language activities and to acquire communicative language competence. The field of literature and creativity is based on literature, i.e., understanding literature as art, where students develop personal, national, cultural, social and aesthetic value, and critical thinking. The field of culture and media teaches students about various social, cultural and intercultural contexts. All areas are upgraded during primary and secondary education, which means that they complement and expand the student's knowledge in accordance with their age and abilities, but also in accordance with their previously acquired knowledge (Curriculum, 2019). Teachers also achieved the prescribed educational outcomes during emergency remote teaching, and in the end, they had the task of achieving the goal for the Croatian language subject in each class. Whether this new form of teaching has opened new job opportunities for teachers or not, whether it has affected the achievement of outcomes and the purpose of learning and teaching, and whether grades are realistic indicators of student knowledge are questions that the educational system will deal with for some time. Krumes et al. (2021) conducted a study on the ways of teaching Croatian language in relation to the teaching areas of literature, language, media culture, and initial reading and writing. Most of the respondents pointed out that they conducted classes using the appropriate tools and programs, creating virtual classrooms. Of the digital classrooms, Yammer, MS Teams, and Google Classroom were used the most, and Loomen, Merlin, and Google sites were used slightly less. Zoom, Google meet and Viber platforms were used to process teaching content via video calls. However, some teachers replaced real-time video calling with teaching programs and tools and sent them to students in the form of prepared written teaching materials. In distance learning the teachers used the following digital tools the most: PowerPoint, Word, Wizzer, Wordwall, Kahoot, Canva, Genially, Testmoz, Edmodo, Webex and others. In this paper, the form of distance learning that had to be utilized because of the pandemic is called emergency remote teaching to indicate the period in which teachers could not realize all learning outcomes, and they were not prepared, so teaching took place on many different platforms and in many different ways.

Regarding the achieved learning outcomes, the teachers of the first and second grade of primary school consider that the least achieved outcomes were in the field of initial reading and writing, and most teachers think that the least achieved outcomes are in the field of language – spelling and grammar. Furthermore, teachers believe

that students mostly fulfil their tasks independently, and in a somewhat smaller form with the help of their parents. Regarding the organization of Croatian language teaching, primary school teachers pointed out that during emergency remote teaching they often taught reading and literature, and much less language and media culture. Teachers of the first and second grade of primary school devoted most of their time to the teaching of initial reading and writing, which was challenging owing to the age and inexperience of the students because of their independent work from home.

5   Evaluation of Learning Outcomes

To find out teachers' opinions on the achieved learning outcomes after emergency remote teaching, one must look at student evaluations. The evaluation carried out by the teachers showed how successfully the students achieved their learning outcomes. Evaluation during emergency remote teaching was an additional challenge for teachers. Evaluation in the teaching process is regulated by a curricular approach, where it refers not only to summative evaluation, but to evaluation from three points of view: evaluation for learning, evaluation as learning, and evaluation of what has been learned. Marin (2019) points out that the emphasis is on formative evaluation, which implies systematic monitoring of student progress. Marin (2019) conducted a study the results of which showed the great potential of the Loomen platform for evaluation, according to all three mentioned approaches. However, the author points out that the approach of "valuing what has been learned" depends on the teaching content, educational outcomes and individual subjects. However, the platform offers some solutions for evaluating what has been learned – a simple direct assessment, an assessment form, and a rubrics for monitoring grades. The approaches "evaluation for learning" and "evaluation as learning" can be implemented because the platform enables the monitoring of a large number of activities for each student. When evaluating students, it is easier for the teacher if they implement the following fundamental questions stated by Mrkonjić & Vlahović (2008): who and what is evaluated, what is the starting point and content of evaluation, who is the bearer of evaluation, and what is the goal of evaluation?

The Ministry of Science and Education is announcing guidelines for evaluating the process and achievement of educational outcomes in primary and secondary education (2019), according to which emphasis is placed on the learning process,

achieving progress, improving learning and cooperation, strengthening the responsibility of all participants in the educational process, and ensuring equal opportunities for all students. Numerical assessment is determined as the ultimate goal of evaluation, but evaluation in itself has a far deeper meaning in the process of upbringing and education in the development of student competences. In addition, the purpose of the evaluation is to inform parents and students about the extent to which educational outcomes have been adopted and what needs to be worked on further. Precisely for these reasons, regardless of whether the teaching process takes place in person or at a distance, evaluation needs to be carried out systematically and thus guide students and develop skills of self-assessment, assessment, monitoring and management of the learning process. A prominent challenge for teachers was to assess whether students perform their tasks independently, and thus whether the evaluation is objective and whether the concluded grades accurately exhibit the students' level of knowledge. During distance learning, many teachers concluded that students did not work independently, and one way to avoid this lies in cooperation between teachers and parents, or schools and parents. The task of teachers is, among other things, to convey to parents the meaning of fulfilling school assignments, homework, and other school obligations, in order for parents to realize that participating in the teaching process in the wrong way can harm their children, and thus disrupt the basic tasks of school – objective assessment, and the acquisition of skills and abilities.

6   Methodology

6.1   Research Goal and Research Questions

The study is focused on teachers' opinions and attitudes, as well as the self-evaluation of teachers during emergency remote teaching and the specific circumstances in which the teacher found themself. Torn between the learning outcomes to be met and the specific circumstances of distance learning, the Croatian language teacher had to sacrifice some of the learning outcomes that they had to omit. Given the circumstances, the authors believe that the teacher therefore had to change their way of teaching. The negative circumstances also affected the quality of assessment, wherein it was no longer clear who the teacher was assessing: the student or the parent who had to help the student with distance learning. However, learning would not have been possible if teachers in the lower grades of primary

school had not had to cooperate with the parents, on whom they had to rely completely. The authors therefore believe that all these circumstances greatly influenced the attitudes and dissatisfaction of teachers at varying levels of education. The goal of this study was to examine the opinions and attitudes of teachers who organized emergency remote teaching and learning of the mother tongue in primary and secondary schools. The study raises several fundamental research issues: to establish the teachers' assessment of their students' independence when working at home; to examine the teachers' the opinions on the quality of cooperation with parents during distance learning; to assess the level of goal achievement and the outcomes of mother tongue teaching during distance learning; and the self-assessment of attitudes surrounding satisfaction with the quality of one's own teaching of the mother tongue at a distance.

6.2   Respondents

A total of 170 teachers participated in this study; of which 54 were primary school teachers, 69 were Croatian language teachers in primary schools, and 47 were Croatian language teachers in secondary schools.

6.3   Instrument

For the purpose of this study, an online questionnaire for teachers of the Croatian language was constructed. The questionnaire was uploaded onto Google Drive and filled in remotely. The respondents answered the questions by self-assessing their attitudes on a Likert scale from 1 to 5, where 1 represents the lowest rank.

6.4   Conducting Research and Data Processing

The questionnaire was available in early 2021. It was posted online, and its implementation was anonymous and transversal. The data were processed in the SPSS Statistics v21 statistical data processing program for Windows. The results included all participants who completed the questionnaire.

7 Results and Discussion

7.1 Student Independence

The teachers' attitudes surrounding their students' independence during their work at home showed the following results: mean = 2.75; M = 3.00; SD = 0.9; skew. = 0.2; min = 1.00; max = 5.00 (*Figure 1*). These results show the very low level of positive attitudes and the high heterogeneity of the group in the assessments. The teachers estimated that the students were rarely independent in their work and that their parents helped them more than they should. There is also a fairly large dispersion of results, which indicates very different assessments of independence depending on the level of education, i.e., the students' age and the class they attend.
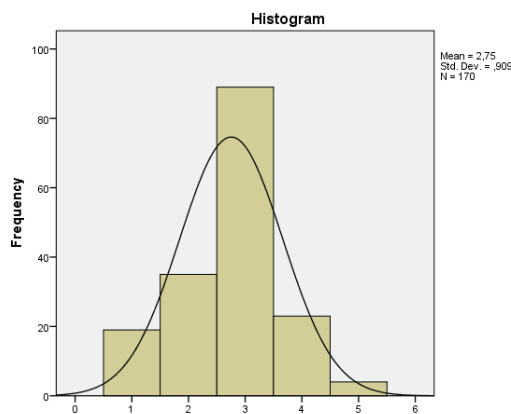
Figure 1: I think that the students did their Croatian language homework and their other homework on their own
Source: Own

It is important to start with the analysis of the satisfaction of the mother tongue teacher at different levels of education. Therefore, the analysis was made and the results show that the attitudes of Croatian language teachers at primary schools indicated the greatest dissatisfaction with the achievement of teaching [2] [mean = 2.67 and SD = 0.92), the attitudes of high school teachers can be classified as secondary satisfaction [3] (mean = 2.79 and SD = 0.93), while the highest grade is seen in primary school teachers [1] (mean = 2.83 and SD = 0.88). The question that arises is whether there is a correlation between different levels of teacher education

in the answers, and a one-way analysis of ANOVA variance (F = 0.55; p > 0.05) (*Figure 2*) was conducted, which showed that there is no significant relationship between education levels.

Most teachers concluded, regardless of their level of education, that parents were involved in the performance of student duties. This greatly disrupted the students' independence. Considering that the parents participated in the fulfilment of the teaching tasks, a satisfactory level of achievement of the teaching goals was not met. The students were thus deprived of the knowledge, skills and abilities that had been envisioned at the time.

In considering these data, it is important to investigate how the evaluation of students was conducted and whether the grades from that period are objective indicators of the adoption of outcomes and teaching content.
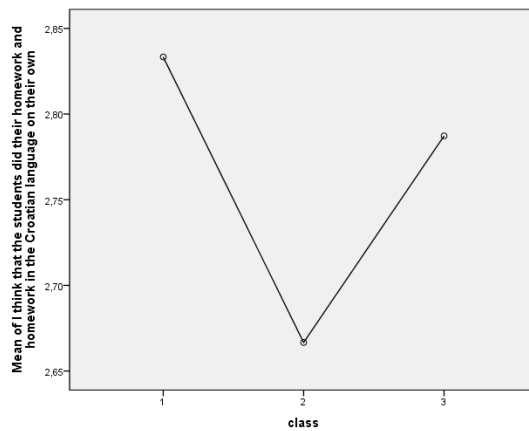
Figure 2: Correlation between the variables of attitude level and education level[1]
Source: Own

7.2 Cooperation with Parents

When asked about the satisfaction and level of cooperation between teachers and parents, the following results were obtained: mean = 2.6; M = 3.00; SD = 1.14; lean. = 0.003; min = 1.00; max = 5.00 (*Figure 3*). This data shows extreme dissatisfaction

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[1] Variable class in histogram refers to the level of education, where 1 represents class teaching, 2 represents subject teaching and 3 represents secondary school.

with parents during emergency distance learning. The parents participated in large numbers in the performance of student obligations, thus preventing the objective and real achievement of educational outcomes in one of the most complex subjects –the Croatian language. This confirms the fact that 22.9% of teachers working with parents rated this statement with a grade of 1, which indicates the lowest grade and extreme dissatisfaction. Still, the results are very scattered. The high level of standard deviation indicates that there were large differences in the teachers' assessment of parental cooperation, mostly in a negative direction.
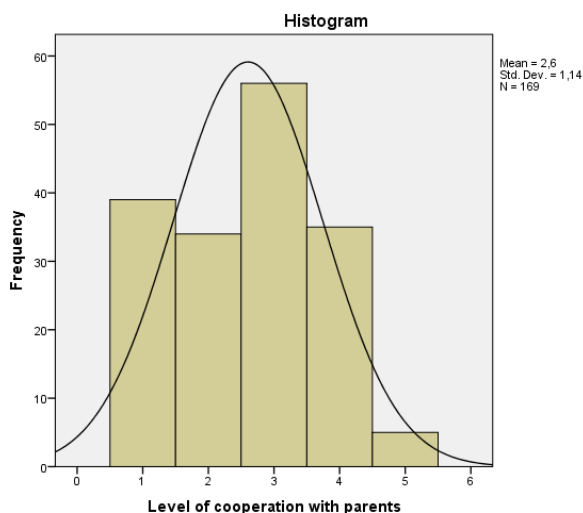
Figure 3: The satisfaction and level of cooperation between teachers and parents
Source: Own

In the analysis of the difference in satisfaction between primary school teachers, Croatian language teachers, and Croatian language secondary school teachers, the most dissatisfied were primary school teachers (mean = 2.5 and SD = 1.3), subject teachers were less satisfied (mean = 2.64) and SD = 0.94), while the highest score, albeit with a small difference, was among high school teachers (mean = 2.67 and SD = 1.23) (*Figure 4*). These results raise the question of what caused the satisfaction of primary school teachers, given that primary school students are the youngest and need the physical presence of teachers most. At this age, students rely heavily on a teacher who fully manages the teaching process and constantly guides them. Teachers are expected to support learning and directly develop independence in learning. This is especially evident in the teaching of initial reading and writing, which

was, based on the opinion of the teachers, the most difficult to perform. Teachers in this area relied on the cooperation and assistance of parents, who were often forced to follow the teacher's instructions and guide their children, and often to take on the role of teacher. If these facts are considered, then the primary school teachers' satisfaction makes sense, because they asked for and received help from parents. This challenging situation was also reflected in evaluation, which was a significant methodological problem for teachers in the field of initial reading and writing. Considering that primary school students are still in the process of developing work habits and learning, the question arises of whether these habits are realized and developed in older students. From the (dis)satisfaction of teachers, it can be assumed that the habit of learning and working has not been realized. This raises the question of whether the quality of direct teaching has indeed achieved its educational tasks to any great extent.
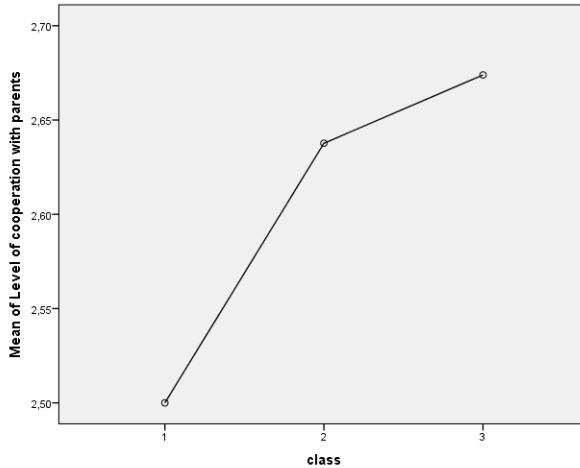

Figure 4. The level of cooperation between teachers and parents at different levels of education[2]
Source: Own

7.3 Achieving Goals and Outcomes

This research question referred to the assessment of the achievement of goals and outcomes in distance learning of the Croatian language, according to the opinion of

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[2] Variable class in histogram refers to the level of education, where 1 represents class teaching, 2 represents subject teaching and 3 represents secondary school.

Croatian language teachers. The results show the following: mean = 2.26; M = 3.00; SD = 1.09; lean. = 0.51; min = 1.00; max = 5.00 (*Figure 5*). In other words, the teachers expressed the greatest dissatisfaction in their answers to this research question. The teachers showed a very high level of dissatisfaction with the achieved goals and outcomes in distance learning of the Croatian language. The fact that as many as a third of the respondents (30.6%) rated the achievement of goals and outcomes as 1, i.e., that they were completely dissatisfied with the achievements, also contributes to this. The causes of dissatisfaction need to be investigated, and a partial answer can be found in the previous facts, given that parents played a large role in fulfilling the students' educational obligations.
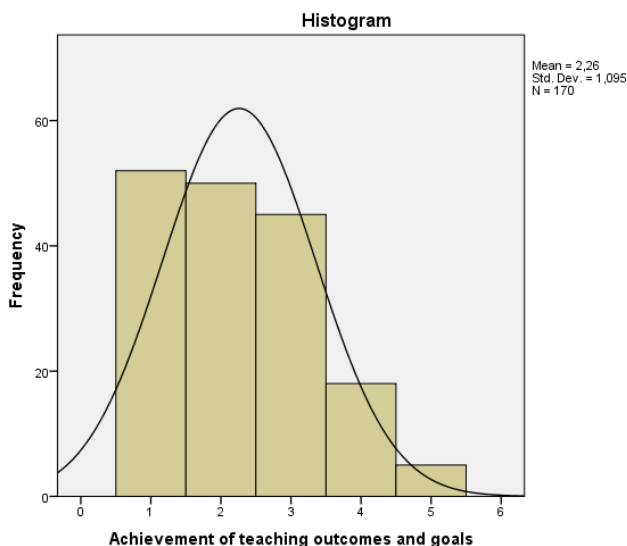

Figure 5: The assessment of the achievement of the goals and outcomes of Croatian language distance learning
Source: Own

When observing the assessment of the achievement of goals and outcomes according to the levels of education, the following results were obtained: the highest assessment was by primary school teachers (mean = 2.44 and SD = 1.13), followed by secondary school teachers (mean = 2.4 and SD = 1.03) and the lowest were subject teachers (mean = 2.01 and SD = 1.08). A one-way analysis of ANOVA variance was performed (F = 2.97; p = .05 (*Figure 6*), which shows the existence of a boundary correlation between the variables for assessing the achievement of goals

and outcomes with the level of education. A T-test was also conducted (F = 1.3; t = 2.15; p < .05), which shows a statistically significant difference between the assessment of primary and secondary school teachers' lower satisfaction. Moreover, assessment of the achievement of outcome goals leads to the conclusion that these were the least achieved. This is in line with the low results in terms of student independence and cooperation with parents, which are certainly related to these negative assessments.
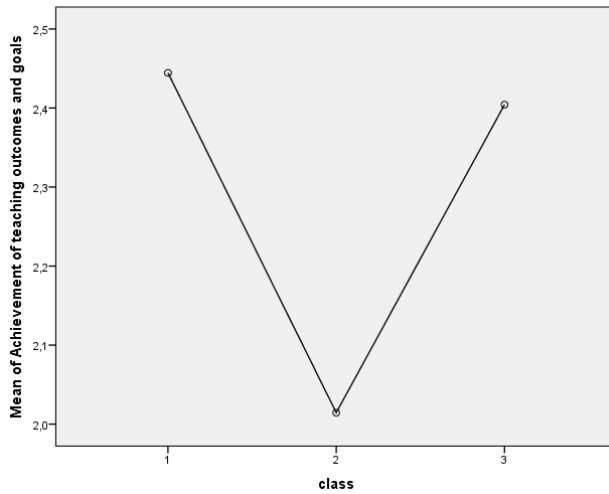

Figure 6: The assessment of the achievement of goals and outcomes according to level of education[3]
Source: Own

7.4 Assessments of the Quality of the Teachers' Own Teaching

In this part of the study, the teachers had to assess the quality of their teaching. The evaluation results show the following: mean = 3.63; M = 4.00; SD = 0.73; skew. = 0.32; min = 1.00; max = 5.00 (*Figure 7*). Here one can see a deviation from the results of previous research in which the work of teachers was assessed. They now assess the quality of their work as significantly higher than the previous results related to the student and cooperation with parents. This means that the teachers invested

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[3] Variable class in histogram refers to the level of education, where 1 represents primary school teaching, 2 represents subject teaching, and 3 represents secondary school.

effort into teaching the Croatian language. Thus, one can conclude that teachers do not consider their work to be the cause of poor performance. Also, despite their unpreparedness for this form of teaching, teachers believe that they have made a sufficient contribution to the quality transmission and adoption of new content.
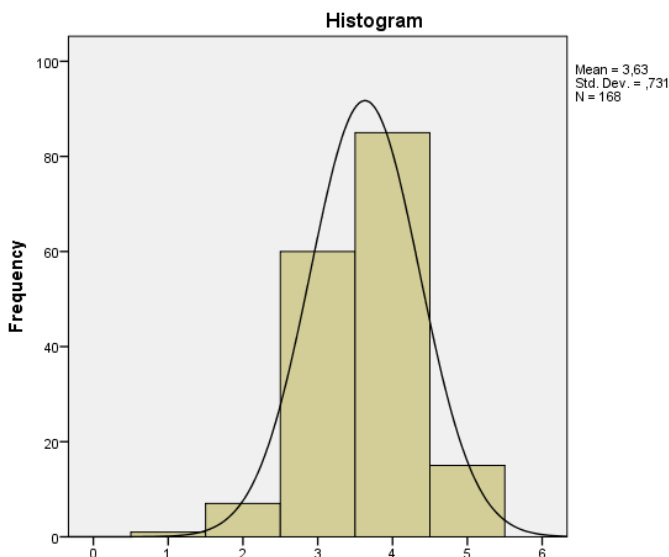

Figure 7: Quality of distance teaching the Croatian language
Source: Own

According to the level of education, the lowest self-assessment results were shown by subject teachers (mean = 3.48 and SD = 0.65), in the middle were high school teachers (mean = 3.62 and SD = 0.75) and the highest were primary school teachers (mean = 3.83 and SD = 0.77). The teachers' self-assessment as a whole did not correspond to the results that showed that primary school teachers exhibit the most dissatisfaction with cooperation with parents and doubts about their students' independence. However, it coincides with their assessment that they achieved the required educational outcomes. Given that teachers emphasized the cooperation of parents and the lack of independence of students, it can be asked on what base the teachers assessed their performance. There are many other questions that need to be explored. For example, what are the consequences of this approach to student evaluation, especially for the youngest students who had just become familiar with their school obligations, but also for students in the final grades of primary and secondary schools who enrolled in higher education in the coming period. First of

all, it is important to find answers on how teaching could be improved and what needs to be done in educating teachers and preparing teachers for new methodological challenges. Special attention should be paid to students who gained knowledge of initial reading and writing during the pandemic, because literacy (fully achieved) is the most important task of Croatian language education in general.

8   Conclusion

The implementation of teaching the Croatian language at a distance was a challenge for all teachers. It was especially challenging to prepare and conduct initial reading and writing classes – according to some, this is still almost impossible today. Despite all the challenges, the classes were conducted. Here, one may question whether teaching during complete lockdown fulfilled its purpose and whether it was successful. The digital competences of teachers were crucial for this type of teaching.

A total of 170 teachers participated in the study presented in this paper. The teachers believed the students were very dependent and that they mainly relied on their parents when performing their school assignments. It is worrying that the communication between teachers and parents was quite disrupted, a fact that was emphasized by the primary school teachers. Furthermore, the teachers stated that there was an extremely low level of achievement of outcomes and teaching objectives, which was also highlighted by primary school teachers, although they believed that they had achieved the expected outcomes to a greater extent than the subject teachers themselves estimated. Thus, despite achieving disappointing outcomes, the teachers estimated that the quality of their work was higher than that of other teachers at other educational levels. This study also raises certain questions that should be explored. One of these is certainly to explore the ways in which teachers evaluate students during distance learning and to conduct a deeper analysis of the working methods used during this time.

This period has prompted many methodological questions that will surely be explored for many years to come; what can be done to make grades in the digital environment real indicators of knowledge, how can classroom communication be improved through digital tools, how does one attract parents to the teaching process through ICT? All this for the sake of developing a responsible, conscientious, but also independent society, even through computers. On the other hand, the question

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arises as to whether distance learning can replace contact teaching, while keeping the quality of the teaching process the same, and what needs to be done to achieve this.

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The Effect of Integration Among 1st Grade Primary School Students on the Writing of Letters and Words

Marija Ropič Kop,[1] Saša Klar Zadravec[2]
University Maribor, Faculty of Education, Maribor, Slovenia
marija.ropic@um.si
Primary school Turnišče & Primary school Odranci, Odranci, Slovenia
klar.sasa @gmail.com

Abstract The integration of immigrants into the Slovenian school environment is still topical. As a result, some primary schools have significantly more foreign students than others. The inclusion of multicultural students brings mainly difficulties in the knowledge of Slovene and also a lack of literacy. The study examined 190 first grade students. A comparative method was used at the level of describing facts with the aim of discovering similarities and differences in the writing of letters and words in 1st grade students. The first group included more foreign students than the second group. The results of the t-test for independent samples reflected a statistically significant difference between the groups in writing letters and words of varying difficulty. The inclusion of multicultural students influences the teaching of Slovene in the 1st grade and requires the differentiation and individualization of teaching.

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1   Introduction

Children encounter writing in preschool. In a stimulating environment, children are surrounded by a variety of activities that encourage them to write spontaneously. Writing is a demanding communicative activity that is often consciously learned later, in primary school in systematic literacy. The child says what they want to write, out loud or in their mind, so we say that writing is the conversion of sounds into letters. Writing can also be explained as a transformation in form – from auditory to visual (Križaj Ortar et al., 2000; Curriculum, 2002; 2011). To convert sounds into letters, children need to hear individual sounds in a word and break them down. Individual sounds are strongly connected in syllables and are more difficult to perceive, distinguish, and parse. Some sounds have an instantaneous pronunciation, yet others have an extended pronunciation. All of this affects the conversion of sounds into letters. Students learn letters and sounds together in monographic letter processing procedures.

Systematic learning of writing requires certain skills, including posture when writing, hand posture, positioning and use of various pens, orientation on paper, direction of writing (from left to right), and drawing basic strokes that are an integral part of the letters and digits (Ropič et al., 1999; Curriculum, 2002).

Research highlights the link between phonological awareness and reading and writing. Poorly developed phonological awareness skills bring difficulties in initial reading and writing. Early systematic stimulation of phonological awareness has a positive effect on the ability to decode (Tafa, 2008; Manyak, 2008; Strickland, 2011; Papadimitriou & Vlachos, 2014).

Phonological awareness includes several levels that follow one another in a particular sequence (Chard & Dickson, 1999). In the period at the end of preschool and at the beginning of the 1st grade, we pay the most attention to the initial sound, the final sound, the sound within the word, and the sounding out (breaking down the word into individual sounds). Research shows that the ability of phonological awareness is significantly influenced by exercises in the preschool period and at the beginning of school (Ropič, 2014; 2016; 2017; Ropič Kop, 2020).

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Primary schools in Slovenia also include children whose mother tongue is not Slovene. These children have immigrated to Slovenia with their parents in recent years. What they all have in common is that they have problems communicating in Slovene. Their parents also have language problems and are unable to help their children. Primary schools in Slovenia include differing numbers of immigrant students. In fact, some primary schools have more immigrant students and others fewer (Hanuš, 2010), but all have some degree of integration. The inclusion of immigrant students in 1ˢᵗ grade is a challenging task, so special attention is drawn to the immigrant students involved. Teachers and professional teams in primary schools provide appropriate assistance to these students. The effectiveness of the assistance is also reflected in the number of immigrant students in the same institution.

The immigrant students involved are often affected by the poorer socioeconomic status of their families. Children from different cultural, linguistic, and socioeconomic backgrounds do not progress as expected by researchers (Lathouras et al., 2019) even after prolonged provision of additional organized help (oral narration, vocabulary comprehension, phonological awareness). A study in Latin America that examined the effects of help (phonological awareness, spelling, fluent reading, and comprehension) on students with poor family socioeconomic status and poor language skills showed only partial effects (Balbi et al., 2020).

At the beginning of 1ˢᵗ grade, the quality of life in the preschool period is reflected in the students. The involvement of children in kindergarten in Slovenia is actively linked to activities that promote language skills. The kindergarten curriculum ensures active participation in the communication process. In addition to all this, the role of educators (both male and female included) is important because they set a speech example for the child in all activities. It is also said to have a direct impact on the development of a child's language ability. In addition, children in kindergarten receive literary education and pre-literacy. Pre-literacy includes visual discernment and dissection, auditory discernment and dissection, care for the expansion of children's vocabulary, etc. Children have the opportunity for verbal and nonverbal communication, symbolic play, etc. In kindergarten, children are also introduced to the concept of printing letters. The educators read to the children, tell them stories, and play audio and video cassettes to the children (Kindergarten curriculum, 1999).

In recent decades, we have been confronted with the term "emerging literacy". The term includes pre-literacy skills that a child develops in the period before formal learning in a printed word environment (Grginič, 2005). The authors (Goodman, 1992; McGee, 1987; Miller, 1996; in Grginič, 2005) describe the initial reading and writing development of a child as a process of spontaneous birth of literacy or emerging literacy. D. Golli (1991) coined the term "initial literacy" for spontaneously acquired literacy before primary school. This term is still used by primary school teachers. The term "family literacy" is also often used in connection with literacy. Children also experience spontaneous emerging literacy at home, in the family. The biggest differences in the acquisition of emerging literacy in children can be predicted right in the home environment.

Since there has been an increase in intercultural classrooms in the 1st grade of primary school in recent years, the goal of this study was to research the effect of intercultural classrooms on prior knowledge in the field of writing letters and words in a group with a higher share of multicultural students.

2   Methodology

The study examined whether integration had an effect on students' ability to write letters and words at the beginning of 1st grade, or whether there was a difference in this ability between groups of students, where integration was present and where it was not or was rarely seen. Students come to Slovenia from Bosnia, Kosovo, Macedonia, Syria and other countries. The number of these students is not evenly distributed across primary schools. The null hypothesis was that there is no statistically significant difference between the two arithmetic means in the ability to write letters and words.

For this purpose, the study included a random sample of 190 first grade students from northeastern Slovenia, who were divided into two groups. In group 1 multiculturalism was present, which contributed to various problems in the knowledge (mastery) of Slovene and certain deficits in prior knowledge in the field of literacy. There were 96 students in this group, of which the authors recognized interculturality in 45 students. There were 94 students in group 2, six of whom had immigrated to Slovenia. The inclusion of multiculturalism in this group was very

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weak, which meant that in general the students' mother tongue was Slovene. All these students attended kindergarten before entering school.

At the beginning of the 1st grade of primary school, the students were tested individually in writing letters and words from dictation. The selected letters N, U, G and R differ in the complexity of the basic strokes, namely the letter N is a combination of basic strokes (vertical, oblique), the letter U is a combination of the basic arc stroke, the letter G is a combination of the basic strokes of a left semicircle and a horizontal line, and the letter R is difficult from the perspective of writing, as it is a combination of various basic strokes (vertical, right semicircle, oblique). The test was performed in two phases. In the first phase, four letters were dictated to the students to write down. If they were not successful in writing any of them, the test was not continued. In the second phase, the students had to write four dictated words: NA, MIŠ, JEŽEK, ČEBELA, in order from the easiest to the more difficult words. In both tests, the spelling of the correctly written letter/word was graded with one point. Incorrect letters, including mirrored letters, were not considered. The data were processed with the SPSS program. The t-test for independent samples was used to determine the differences between the groups in writing letters/words.

3   Results and Interpretation

3.1   Writing the Letters N, U, G and R

The last part of the table shows a statistically significant difference between groups 1 and 2. Statistical testing of the homogeneity of variances (Levene's Test for Equality of Variances) showed a statistical characteristic between groups 1 and 2 (p = .000). The difference between the groups in the spelling of the **letter N** was statistically significant, as p = .024. The students in group 2 were more successful in writing the letter N. In group 1, the influence of multiculturalism was present, and this was reflected in their weaker ability to write at the beginning of the 1st grade. *Table 1* shows that there was a significant difference between the arithmetic means of the two groups and a smaller one in the standard deviation. A few students in both groups had no prior knowledge of writing letters at the beginning of 1st grade. The results of writing the **letter U** by dictation show a significant arithmetic difference between students of group 1 and group 2. There was also a significant difference in the standard deviation of the two groups. The null hypothesis that there

would be no statistically significant difference between the arithmetic means was rejected, since there was a statistically significant difference of .001 between group 1 and group 2. The students in group 1 had significantly less prior knowledge in the field of writing the mentioned letter at the beginning of 1st grade.

The results of writing the **letter G** show a statistically significant difference (p = .040) between students of groups 1 and 2. The arithmetic means indicated higher performance in group 2 compared to group 1. There were no major differences in groups 1 and 2 in the standard deviation. In comparing the arithmetic means of writing the individual letters in groups 1 and 2, the students of both groups were least successful in writing the letter G. The results show that the notation of this letter was the most demanding.

Table 1 shows a statistically significant difference between students in groups 1 and 2 in the writing of the **letter R** at the beginning of 1st grade (p = .019). The students in group 2 showed greater ability in writing, and they had greater prior knowledge. In the arithmetic means of groups 1 and 2, there was a greater difference in the writing of the letter R, but not between the standard deviations. Both groups were the most successful in writing the letter R.

The t-test showed a statistical difference in the spelling of the **letters N, U, G, R** between students of groups 1 and 2, namely p = .003. The students in group 2 were significantly more successful in the joint writing of letters. The students in group 2 were able to write almost three out of four letters on average, while the students in group 1 managed only 2.3. The difference in standard deviation between the groups was smaller. The multicultural students certainly had an impact on the lower writing performance in group 1. Individual students in group 1 had a weak vocabulary in Slovene, as Slovene was not their mother tongue. An additional problem was that the parents of the mentioned students did not know Slovene or their knowledge of it was insufficient. A certain proportion of students in group 1 only communicated in Slovene at school or in their free time with their peers but not at home with their family. These students received additional professional help at school.

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Table 1: Results of the t-test for independent samples of the students in groups 1 and 2 in writing the letters N, U, G, R

Letter	Group	N	M	SD	F (p)	t (p)
N	1	96	0.61	0.489	19.878 (.000)	-2.277 (.024)
	2	94	0.77	0.426		
U	1	96	0.57	0.497	37.361 (.000)	-3.240 (.001)
	2	94	0.79	0.411		
G	1	96	0.48	0.502	6.099 (.014)	-2.071 (.040)
	2	94	0.63	0.486		
R	1	96	0.65	0.481	22.425 (.000)	-2.362 (.019)
	2	94	0.80	0.404		
Total	1	96	2.29	1.660	15.706 (.000)	-3.057 (.003)
	2	94	2.97	1.379		

3.2 Writing the Word NA

As can be seen in *Table 2,* there was a statistically significant difference between the groups of 1st grade students in the writing of the **word NA** (p = .002). The arithmetic mean between the groups reflects a significant difference but not in the standard deviation. The presence of prior knowledge in the field of writing the word NA was less shown in group 1 students, which stems from different language groups, varying preparation of children for school, and different sociocultural environments.

Table 2 shows the results of the t-test of differences between the groups of students in the correctness of the **letter N** in the word NA and is reflected in the statistical difference (p = .004). The students in group 1 students were less successful in writing the initial consonant of the given word, as evidenced by the significant difference of arithmetic means. The standard deviation shows that there were differences in the ability to write between the students of both groups, but among the students of group 1, the individual differences were even greater.

The difference between the groups of students in writing the **letter A** from the word NA is statistically significant (p = .005). In comparing these findings with others, one can conclude that there is a connection with Lenin's findings (2007). Students were more successful in writing the first letter – the consonant – as it allows easier perception. The second letter – the vowel A – represents a more demanding perception in the field of phonological awareness. This is also reflected in writing.

Table 2: Results of the t-test for independent samples of the students in groups 1 and 2 in writing the word NA

	Group	N	M	SD	F (p)	t (p)
Word NA	1	96	0.44	0.499	6.589 (.011)	-3.139 (.002)
	2	94	0.66	0.476		
Letter N (N̲A)	1	96	0.49	0.503	16.173 (.000)	-2.877 (.004)
	2	94	0.69	0.464		
Letter A (NA̲)	1	96	0.46	0.501	8.685 (.004)	-2.838 (.005)
	2	94	0.66	0.476		

3.3   Writing the Word MIŠ

The results of the t-test (*Table 3*) in the writing of the **word MIŠ** showed a statistically significant difference (p = .001). The arithmetic mean showed lower performance in group 1. These students were successful in writing the word with an average of 0.21 words. The arithmetic mean in group 2 indicates much greater prior knowledge, since the students were successful at 0.43. The standard deviation, however, indicates individual differences among students of both groups.

The results do not show a statistically significant difference between the students in group 1 and group 2. They nevertheless show a tendency (0.056), which reflects poorer ability in writing the **letter M** in the word MIŠ in group 1 compared to group 2. In both groups, a certain proportion of students were able to write the first letter in the word. The initial letter is a consonant, which facilitates the perception of the sound in the word and affects the writing.

Table 3 presents the results of the t-test, which did not show a statistically significant difference between student groups at 0.083. However, there was a tendency that indicated that the students of group 2 had greater prior knowledge in the field of writing. This was also confirmed by the arithmetic mean. The standard deviation indicates large individual differences between students in the ability to write. The students in both groups were less successful in writing the second **letter I** in the word MIŠ. "I" is a vowel that allows for extended pronunciation, which affected proper perception and correct spelling.

Table 3 shows the results writing the **letter Š** in the word MIŠ, which showed a statistically significant difference between group 1 and group 2 (p = .001). There was a significant difference between the arithmetic means of both groups. The standard

deviation in group 1 and 2 also indicated significant individual differences between students in the ability to write the letter Š in the word MIŠ. The word MIŠ has two consonants, the initial and final sound in the word. These results are comparable with other studies (Levin, 2007; Ropič, 2016). The consonant as an initial or final sound facilitates phonological awareness. It also affects phonological awareness of shorter and non-syllabic words. This applies not only to phonological awareness, but also to the ability to write at the beginning of 1ˢᵗ grade.

Table 3: Results of the t-test for independent samples of the students in groups 1 and 2 in writing the word MIŠ

	Group	N	M	SD	F (p)	t (p)
Word MIŠ	1	96	0.21	0.408	38.300 (.000)	-3.288 (.001)
	2	94	0.43	0.497		
Letter M (<u>M</u>IŠ)	1	96	0.49	0.503	6.489 (.012)	-1.925 (.056)
	2	94	0.63	0.486		
Letter I (M<u>I</u>Š)	1	96	0.41	0.494	2.371 (.125)	-1.740 (.083)
	2	94	0.53	0.502		
Letter Š (MI<u>Š</u>)	1	96	0.23	0.423	35.531 (.000)	-3.392 (.001)
	2	94	0.46	0.501		

3.4 Writing the Word JEŽEK

In the ability to correctly write the **word JEŽEK**, there was a statistically significant difference of 0.036 between groups 1 and 2. The arithmetic means showed lower performance in the students in group 1. Writing the word JEŽEK is challenging, as the word consists of five letters. It follows the sequence: consonant, vowel, consonant, vowel, and consonant. The initial sound/letter and the final sound/letter are consonants that contribute to successful perception (Levin, 2007). The standard deviation indicated individual differences in both groups.

The writing of the **letter J** showed a statistically significant difference (p = .040) between groups 1 and 2. The students in group 2 were more successful, which was also confirmed by the arithmetic mean. In both groups of students, the authors observed mirrored writing of the letter J. There were also individual differences in the students of both groups, which was shown by the standard deviations.

Table 4 shows a statistically significant difference (p = .001) in the writing of the second letter from the word JEŽEK, the **letter E**, which appeared in the test for the first time here. The arithmetic means indicated large differences in the ability to write a vowel that comes second in a word.

The writing of the **letter Ž** showed a statistically significant difference (p = .030) between groups 1 and 2 in favour of the students in group 2. In comparing the ability to write the first consonant in this word – J – and the third letter in the word – Ž, which is also a consonant – a small difference is found between the arithmetic means of the writing of J and Ž. Consonants facilitate the ability of phonological perception, and this can also be related to writing (Levin, 2007; Ropič, 2016). The ability to write in both groups decreased at the third letter in the word.

Table 4: Results of the t-test for independent samples of the students in groups 1 and 2 in writing the word JEŽEK

	Group	N	M	SD	F (p)	t (p)
Word JEŽEK	1	96	0.09	0.293	19.321 (.000)	-2.114 (.036)
	2	94	0.20	0.404		
Letter J (JEŽEK)	1	96	0.20	0.401	17.382 (.000)	-2.073 (.040)
	2	94	0.33	0.473		
Letter E (JEŽEK)	1	96	0.26	0.441	27.542 (.000)	-3.334 (.001)
	2	94	0.49	0.503		
Letter Ž (JEŽEK)	1	96	0.16	0.365	20.047 (.000)	-2.186 (.030)
	2	94	0.29	0.455		
Letter E (JEŽEK)	1	96	0.13	0.332	48.489 (.000)	-3 (.001)
	2	94	0.32	0.469		
Letter K (JEŽEK)	1	96	0.16	0.365	62.282 (.000)	-3.932 (.000)
	2	94	0.40	0.493		

Table 4 shows a statistically significant difference (p = .001) between the students in groups 1 and 2 in writing the **letter E** in the word JEŽEK, which is the fourth letter in the word. This is the letter's second appear in this word. The arithmetic mean demonstrated that significantly worse results were achieved by the students in group 1. The authors also paid attention to the results of the arithmetic mean of both groups in the first and second notation of the letter E in the word JEŽEK. The students' ability to write the letter E was lower in the second case. This can be explained by the connection of phonological awareness abilities and not by the ability to write.

Table 4 shows statistically significant differences between the students in groups 1 and 2 in the ability to write the **letter K** in the word JEŽEK. The arithmetic means in the writing the letter K reflected the biggest difference in the spelling of the word JEŽEK. The letter K is in fifth position, which is also a more difficult task for phonological awareness (the perception of the sequence of sounds in the word).

3.5   Writing the Word ČEBELA

The writing of the **word ČEBELA** showed a statistically significant difference (p = .005) between groups 1 and 2. The arithmetic mean of 0.28 in group 2 showed higher performance in the ability to adequately write down the said word compared to group 1, where the students were successful only 0.11 on average. The standard deviation indicated individual differences in the writing ability of students in both groups. These were even higher among the students in group 1. The structure of the word ČEBELA consists of three simple syllables. Each of these syllables has a consonant and a vowel. The initial letter (sound) is a consonant, which offers help in the ability of phonological awareness, namely it is easier to detect the initial consonant (Levin, 2007, Ropič, 2016). Students who have properly developed phonological awareness and the ability of knowing how to write individual letters were successful in writing the word.

The writing of the letter Č showed a statistically significant difference between the students in groups 1 and 2 in the ability to write the initial **Č** in the word ČEBELA. The arithmetic mean showed greater performance in students from group 2. The standard deviation indicated individual differences between students in both groups, however, they were larger in group 1.

The writing of the second **letter E** in the word ČEBELA reflected a statistically significant difference (p = .000) between the students in groups 1 and 2. The writing of this letter in the word ČEBELA showcased the largest difference between groups in the ability to write. Individual differences in the ability to write were present in both groups, although again there were larger differences in the ability to write among the students in group 1. The poorer results can also be explained by the students' lower phonological awareness, the division (segmentation) in distinction (discrimination) of sounds.

The difference in the writing of the third letter in the word ČEBELA between the groups was statistically significant (p = .005). The students in group 2 were more successful in writing the **letter B**. The standard deviation indicated greater individual differences among the students in group 1, which included students from different cultures, languages, etc. To write the word ČEBELA, the students needed successful sound analysis, perception of the sequence of sounds, and proper spelling of the letter.

Table 5 shows a statistically significant difference (p = .001) between the students in groups 1 and 2 in the writing of the **letter E** in the word ČEBELA, which stands in fourth place. Differences in the arithmetic means of both groups indicated significantly lower performance in the students from group 1. The writing of this letter also showed significantly greater individual differences among the students in group 1. The students were similarly successful in writing the letter E in both positions in the word. Also, in both cases, the ability to divide a vowel next to a consonant in a word had a similar effect. Thus, in group 2, the spelling "ČEBLA" was noted, which is a typical error in the field of weak phonological awareness (sound omission – vowel).

Table 5 presents a statistically significant difference (p = .005) between groups 1 and 2 in the writing of the **letter L**, which stands at the penultimate position in the word. The students in group 2 were significantly more successful, which was also shown by the arithmetic means. Special attention was also paid to the standard deviation in group 1, which again pointed out the very large individual differences between students.

The results presented in *Table 5* show that there was a significant difference (p = .002) between the arithmetic means of the two groups (1, 2) in the writing of the **letter A** in the word ČEBELA. The standard deviation indicated large individual differences between students, which was certainly influenced by the inclusion of multicultural students. In comparing the arithmetic means of the writing of individual letters in both groups (1, 2), the greatest ability was found in writing the letter A in the word ČEBELA. This phenomenon is logical. It is a longer word in which the student focuses first on the initial sound/letter, then on the other sounds/letters, and finally on the final sound/letter. The appearance of the

sound/letter A is equally as important in the everyday environment (e.g., "A" in the name: at the beginning, end, within the name).

Table 5: Results of the t-test for independent samples of the students in groups 1 and 2 in writing the word ČEBELA

	Group	N	M	SD	F (p)	t (p)
Word ČEBELA	1	96	0.11	0.320	36.417 (.000)	-2.855 (.005)
	2	94	0.28	0.450		
Letter Č (ČEBELA)	1	96	0.20	0.401	37.646 (.000)	-3.161 (.002)
	2	94	0.40	0.493		
letter E (ČEBELA)	1	96	0.17	0.375	58.497 (.000)	-3.890 (.000)
	2	94	0.41	0.495		
Letter B (ČEBELA)	1	96	0.20	0.401	31.692 (.000)	-2.852 (.005)
	2	94	0.38	0.489		
Letter E (ČEBELA)	1	96	0.18	0.384	45.050 (.000)	-3.382 (.001)
	2	94	0.39	0.491		
Letter L (ČEBELA)	1	96	0.21	0.408	30.339 (.000)	-2.825 (.000)
	2	94	0.39	0.491		
Letter A (ČEBELA)	1	96	0.23	0.423	32.025 (.000)	-3.085 (.002)
	2	94	0.44	0.499		

4   Discussion

The feature of this study is that it found differences between the students in groups 1 and 2 – the significantly lower ability to write letters was found in the group 1. In group 2, there was little inclusion of multicultural students, as the children had gone to kindergarten, and their mother tongue was Slovene. The basic idea of the study was to reflect on integrated classrooms on the prior knowledge of writing at the beginning of the 1st grade of primary school. The students in both groups were individually tested in writing four dictated letters. At the beginning of the 1st grade, significant differences in the prior knowledge of letter writing became apparent. More than half of the students in group 2 wrote all four dictated letters. All students from this group had gone to kindergarten in Slovenia and had partaken in a program that promoted the basics of writing (Curriculum for Kindergartens, 1999). A large proportion of children from group 1 had also attended kindergarten. Nevertheless, poorer performance was recorded in group 1. This could be explained by the fact that certain students came from a weaker socioeconomic background and had a poorer knowledge of Slovene along with their parents. It is important to point out that some students in this group were very successful, but there were fewer than in group 2. These results are consistent with research that also points to a weaker foundation in literacy (Lathouras et al., 2019; Balbi et al., 2020). Students from

different cultures, with poorer language skills and from weak socioeconomic environments also need long-term help in acquiring the basics of writing.

The results of writing the word NA confirmed the claim that students have fewer problems with phonological awareness in shorter words and words where the initial sound is a consonant (Levin, 2007; Ropič, 2016). Students in both groups were most successful in writing this word. Prior knowledge in the field of writing was greater in group 2. In both groups, there were large individual differences in the ability to write the word NA. In focusing on the spelling of an individual letter in a word, the students had greater success in writing the initial consonant compared to the final vowel.

The percentage of students who could already write simple words was significantly reduced when writing the word MIŠ compared to the word NA. The students in group 1 were significantly less successful in writing this word. Their writing ability was significantly affected by the presence of major language problems and inferior phonological awareness. Certain students were less motivated at first glance and reflected a language deficit. After a detailed review of the writing performance of individual letters, the authors found that the students in group 2 were more successful in writing the letter M. This can be explained by the fact that non-syllabic or short words and words that begin with a consonant facilitate the ability of phonological awareness (Levin, 2007; Ropič, 2016). It was also found that writing was aggravated by the second letter in the word, which in this case was a vowel (I). The latter allows for a pronounced pronunciation, but the vowel elsewhere in the word causes problems in the case of insufficiently developed phonological awareness. An even greater difference occurred among students in their ability to write the last letter in this word. The sound/letter was a consonant. Words that have a consonant at the beginning or at the end allow for better perception. The students who had gone to kindergarten and had previously done phonological awareness exercises were more successful in their ability to break down words into sounds and in their writing skills. The latter findings can also be confirmed by various research (Levin, 2007; Ropič, 2016).

Writing the word JEŽEK was the most challenging task for the students in both groups. The word's structure is interesting from the point of view of phonological awareness. It starts with a consonant, ends with a consonant, there is a consonant in

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the middle of the word, and the same vowel E appears in the second and fourth place. Very few students in group 1 and slightly more in group 2 were able to write the word JEŽEK. When writing the letter J, the authors came across mirrored writing of the letter in both groups. There were also a few similar examples when writing the letter Ž. This error is an error in writing caused by improper stroke direction. Because of this, it cannot be said that the students had problems with phonological awareness or with the ability to detect the initial consonant. The latter is considered an easier task (Levin, 2007). In the writing of the whole word and in the writing of all individual letters, the authors observed significantly lower writing ability in group 1, which was certainly also influenced by its interculturality. Furthermore, the largest difference was observed in the writing of the letter K, and then in both letters E. In the word JEŽEK, the letter E is in the second and penultimate position. The students had already demonstrated their ability to write this letter in its first appearance in the word. If they had had well-developed phonological awareness, they would have also written the second letter E in the appropriate place. But that was not the case. The students in group 1 had the most problems with this sound and consequently with the letter. The students had developed varying levels of phonological awareness, which is also associated with other findings (Ropič, 2017).

Word length affects the ability to perceive sounds in a word (Levin, 2007; Ropič, 2016). The authors anticipated that the most difficult word to write down would be ČEBELA. The results of the study did not confirm this. In both groups, the most difficult challenge was the word JEŽEK, where mirrored writing appeared. The students will acquire the appropriate direction of writing when reading the letters.

The students' phonological awareness in group 2, namely the initial sound in the word, the final sound in the word, and all other sounds in the word, also enabled greater success in writing the word ČEBELA and in writing all individual letters in the word. The largest difference between the students in groups 1 and 2 was recorded in their performance in writing the three vowels (E, E, A). The results of the study can be linked to other research (Levin, 2007; Ropič, 2016), which found that the perception of vowels is more demanding than the perception of consonants. When writing the letter Č, the authors noticed mirroring of the letter or partially written letters (without a tick) in both groups. A longer word with six letters does

not pose an obstacle in writing for students who have developed the ability of phonological awareness.

5   Conclusion

Systematic teaching of phonological awareness should be carried out in the preschool period, and it should continue in the 1st grade of primary school. It is also necessary to emphasize the duration and frequency of exercises. Phonological awareness provides valuable knowledge that students also use in writing. Determining students' prior knowledge in the field of reading and writing before systematic literacy is crucial. Teachers urgently need information about reading and writing skills to differentiate and individualize literacy lessons. The notation of the observed words was sufficient in presenting individual students' prior knowledge of writing. Writing letters and words from dictation is assessed as appropriate for individual checking (teacher-student).

Based on the test results, phonological awareness exercises can be planned in class. Certain writing difficulties (mirrored writing) can also be used in the initial phase to create informed decisions in teaching writing.

This study has confirmed that writing is a complex activity. Writing in 1st grade is primarily influenced by phonological awareness abilities and the basics of writing.

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How Do Teachers' Attitudes Towards Comics Influence Their Use in Slovene Language Classes?

Maja Kerneža

University of Maribor, Faculty of Education, Maribor, Slovenia
maja.kerneza1@um.si

Abstract Teachers' attitudes towards themes, largely impacted by the individual's stereotyped perceptions, may have an important impact on the learning environment they consciously or subconsciously form. Comics are such a theme that, even after decades of prejudice, they are still paving their way into the classroom and are still a source of discomfort for some teachers. This quantitatively designed study included 139 participating teachers. The descriptive and non-experimental causal methods of empirical pedagogical research were used to verify the impact of teachers' attitudes towards stereotypical themes on learning environment formation in terms of teachers' attitudes towards the use of comics in Slovenian language classes. Variable data were obtained through questionnaires for Slovenian language teachers in primary school, focusing on 17 methods and purposes of using comics in class. Statistically significant differences were present in 11 points. The results showed that using comics in class was not particularly influenced by the teachers' attitudes towards comics or their fondness of comics, rather it was influenced mostly by a lack of formed relationships towards comics. This work emphasizes the meaning of teacher education and training in all learning and teaching areas, where a greater inclination for forming stereotypical attitudes exists.

1　　Introduction

Comics had no real place in Europe for a long time, as they were not considered either an art form or literature. Today we know that comics are a multimodal text, characterized by both visual and verbal art (Batič, 2016). Comics are increasingly included in schools – as art literature, as a didactic step, as a didactic method, and as such they are explored in school settings: in language and literature teaching (e.g., Kerneža & Košir, 2016; Reid & Moses, 2020), visual literacy (e.g., Golding & Verrier, 2020; Wallner, 2020), in combining language and/or literature with other areas (e.g., Dallacqua, 2020; Oppolzer, 2020), or entirely in other subject areas (e.g., Azamain et al., 2020; Chu & Toh, 2020; McGarr, 2020; McGarr, Gavaldon & Saez de Adana, 2020; Phoon etc., 2020; Zhang, 2019), etc.

But where do comic stereotypes come from in the first place, and how did negative attitudes toward comics develop among teachers? Groensteen (2009) explains this phenomenon. Since their beginnings, comic books have changed their readership twice. In the 19th century in America, they were intended for adults. At the beginning of the 20th century, readers in Europe could read these comics mainly in the press for children and young people. As a result, comics also attracted the attention of teachers. Since teachers were among the first in Europe to speak out about comics and the idea of comics, their views prevailed over other opinions. Comics were withheld from adult readers, and the more they appeared in the children's and young adult press, the more they provoked educators, who condemned them as harmful to children. Comics were blacklisted for allegedly corrupting and affecting an already limited audience. And this is still evident in the school environment today.

Attitudes in the learning process are an important part of the environment (Connelly, 1998), which includes the teacher as a fundamental part (Tanang & Abu, 2014). Teachers' attitudes are an important concept that shapes the educational environment and the learning process (Ballantine & Spade, 2006; OECD, 2009). Students directly observe teachers' views on a daily basis (Greene, 2006), which can affect students' attitudes towards the topics covered or not covered, their willingness to learn about a particular topic (Gal et al., 1997), various aspects of student motivation (including intrinsic motivation), and attitudes towards learning and opinions about the teacher (Alkhateeb, 2018; Mojavezi & Marzieh Poodineh, 2012).

The learning environment consists of several elements. In this study, the focus is on the teacher, because it is the teacher who creates and maintains an environment in which they do or do not interact positively with the children. A positive classroom environment is an essential component of student and teacher well-being and a foundation for student engagement, effort, and commitment (Potvin, 2021). The role of the teacher is to support the overall development of the child, which they also control with their views, as teachers often pass on their attitudes to their students. Teachers' attitudes can influence students' attitudes towards the topics discussed (or not discussed) in class, students' motivation, students' attitudes towards learning, etc. Teachers' beliefs influence their thoughts and decisions in learning environments (Woolfolk Hoy et al., 2009).

But are teachers of Slovene even obliged to read comics and use them in their teaching? Yes. In the curriculum for the subject of Slovene, comics are mentioned in the first teaching period (grades 1–3) in connection with the objectives in the field of literature. As part of the operational goal of developing receptive skills through reading, listening, and watching performances of artistic texts by talking/writing about them, students should gradually express their understanding of the behaviour of literary characters through a combination of drawing and writing (e.g., comics) (Poznanovič Jezeršek et al., 2018, p. 15). In the first teaching period, comics are also found in the content that children are expected to know. While developing the ability to experience, understand and evaluate artistic texts, they are expected to acquire literary knowledge, which includes the understanding and use of the term comic (alongside the term picture book) in 1st grade (ibid, 18).

In the second teaching period (grades 4–6), students identify the characteristics of comics as part of developing receptive skills and learning about comics is placed in the context of learning about longer realistic narrative prose and summarizing its characteristics. In addition, from 4th to 5th grade, students write two texts using a comic, and they may also turn a shorter literary text into a comic or vice versa (ibid, 28, 30).

Students in the third teaching period (grades 7–9) can also achieve the goal of developing receptive skills through the use of comics. By transforming a shorter literary work into a comic or vice versa, they can develop their ability to receive and create prose texts (ibid, 44).

In the area of language, the curriculum does not list comics as a goal, but the teacher can include them in various ways to achieve the language objectives in the stages before, during and after reading the text (ibid).

Several studies in many research areas examine the topic of teachers' attitudes and beliefs. Research is particularly common in the area of educational inclusion (Lacruz-Perez et al., 2021; Uusimaki et al., 2020) and technology (Ardiç, 2021; Serin & Bozdag, 2020). There are quite a number of studies that focus on stereotypes, especially cultural and ethnic stereotypes (Kleen & Glock, 2018; McGaha, 2015) and gender stereotypes (Gray & Leith, 2010; Nurlu, 2017). However, there is very little research on the impact of teachers' attitudes towards comics, which are certainly one of the stereotypical areas in the school environment because of their turbulent history.

The Present Study

The present study is based on the theoretical background of research in related fields and on the starting point of previous research that investigated comics as a literary-didactic method and their use to reduce gender differences in literacy in the primary level of education, demonstrating that teachers still have negative attitudes and prejudices against the use of comics in any form in the classroom (Kerneža, 2016). The study also examined Slovene teachers' attitudes towards the instruction of comics as a literary and artistic text form in the literary curriculum and towards teaching comics as a (productive) literary and didactic method in the Slovene classroom (Kerneža, 2020). This showed that the field of introducing comics in the classroom is a complex process and that teachers' attitudes towards comics influence their use in the classroom.

The aim of the study was to find out whether and how teachers' attitudes towards comics influence the use of comics in the classroom. Based on the theoretical foundation and the empirical findings reported above, the author hypothesized that the more positive teachers' attitudes toward comics, the more likely they are to use them, and vice versa – the less they read comics, the less they use them in the classroom. The author also assumed that teachers who do not have a particular attitude towards comics are more likely to use them in their work than teachers who do not like reading comics.

The general hypotheses were:

- − H1: The frequency of using comics in the classroom is related to teachers' attitudes toward comics.
- − H2: Teachers who have a positive attitude towards comics are more likely to use comics in some form in the classroom.
- − H3: Teachers who do not have a particular attitude toward comics are more likely to use comics in the classroom than teachers who have a negative attitude toward comics.

2 Method

2.1 Participants and Procedure

The studied sample included teachers of Slovene in primary school from 1st to 9th grade. The topic of interest was how teachers' attitudes towards stereotypical themes affect the design of the learning environment with the use of comics in Slovene class. A questionnaire was prepared for this study. The link to the questionnaire was sent to the heads of all Slovenian primary schools listed in the directories of educational institutions and educational programs published on the websites of the relevant ministry. A link to the online survey was also posted on social networks in groups where teachers meet. The survey was conducted in June 2020.

The questions were asked in two groups. In the first group, the focus was on Slovene teachers' attitudes towards comics in adulthood, with the highest score indicating that they liked reading comics very much, and the lowest score indicating that they did not like reading comics at all. There was also the option to choose an undecided/neutral attitude towards comics. The second set of questions included the following 17 dependent variables that represented the way comics are used in the classroom:

1. as introductory motivation;
2. to promote reading;
3. to promote reading literacy;
4. as a teaching tool;
5. as a learning tool;

6. as an aid to unlocking the meaning of abstract texts;
7. to promote reading in visual learners;
8. as a visual aid in discussing the interweaving of mood and tone through images;
9. in interdisciplinary connection;
10. to teach narrative writing;
11. for vocabulary development;
12. for students to create their own comics;
13. for students to create their own digital comics;
14. as a diagnostic tool to predict future literacy problems;
15. for interpreting literary characters;
16. for researching dramatic dialogue; and
17. to create a timeline of events.

Teachers rated how often they used comics in the above ways using a 5-point Likert scale, where the levels signified how often they used comics: 1 – never, 2 – rarely, 3 – sometimes, 4 – often, 5 – very often. Employing the Likert scale ensured the sensitivity of the questionnaire. The measurement characteristics of the questionnaire were reviewed. The content of the questionnaire was based on theoretical starting points and a review of published research. Objectivity was ensured through precise instructions. Prior to publication and submission, a small group of teachers completed a trial questionnaire.

2.2   Sample

The simple random sample for our survey consisted of 126 teachers of Slovene in Slovenian primary schools from first to ninth grade. Most participants liked to read comics (41.27%), followed by those who did not have a particular attitude towards comics (23.81%), this was followed by those who did not like to read comics (21.43%), and few participants really liked to read comics (7.14%) or they did not like to read comics at all (6.35%).

2.3 Data Analysis Methods

The collected data were analysed using the IBM SPSS 23 program. A descriptive and causal-nonexperimental method was used, where the data were interpreted using the Kruskal-Wallis test, which gave information about the frequency of use of comics in the classroom as a function of teachers' attitudes towards reading comics in adulthood. The data are presented and interpreted with a number, the mean, the χ2 value, and the statistical significance of the test (value $p < .05$).

3 Results

As can be seen in Table 1 the results show that the use of comics in the classroom was not so much influenced by teachers' attitudes towards comics or how much they like to read comics themselves, but by their unformed attitudes towards comics.

Table 1: The results of the Kruskal-Wallis test on the differences in the frequency of use of comics in the classroom according to teachers' attitudes towards reading comics in adulthood

Use of comics	Attitude towards reading comics	n	Mean	χ2	P
As introductory motivation.	I really like reading comics.	9	66.50	6.605	.158
	I like reading comics.	52	72.05		
	I do not like reading comics.	27	60.09		
	I really do not like reading comics.	8	54.31		
	I do not have a particular attitude towards comics.	30	53.30		
To promote reading.	I really like reading comics.	9	58.70	8.471	.076
	I like reading comics.	52	74.65		
	I do not like reading comics.	27	54.69		
	I really do not like reading comics.	8	63.75		
	I do not have a particular attitude towards comics.	30	55.71		
To promote reading literacy.	I really like reading comics.	9	69.55	7.237	.124
	I like reading comics.	52	72.44		
	I do not like reading comics.	27	54.06		
	I really do not like reading comics.	8	61.44		
	I do not have a particular attitude towards comics.	30	55.29		
As a teaching tool.	I really like reading comics.	9	75.80	17.902	**.001**
	I like reading comics.	52	75.13		
	I do not like reading comics.	27	62.00		
	I really do not like reading comics.	8	58.88		
	I do not have a particular attitude towards comics.	30	42.85		
As a learning tool.	I really like reading comics.	9	63.15	13.159	**.011**

Use of comics	Attitude towards reading comics	n	Mean	χ2	P
	I like reading comics.	52	72.69		
	I do not like reading comics.	27	59.52		
	I really do not like reading comics.	8	71.94		
	I do not have a particular attitude towards comics.	30	44.93		
As an aid to unlocking the meaning of abstract texts.	I really like reading comics.	9	51.10		
	I like reading comics.	52	71.17		
	I do not like reading comics.	27	68.29	7.780	.100
	I really do not like reading comics.	8	60.13		
	I do not have a particular attitude towards comics.	30	51.74		
To promote reading in visual learners.	I really like reading comics.	9	55.95		
	I like reading comics.	52	73.20		
	I do not like reading comics.	27	63.74	9.490	**.050**
	I really do not like reading comics.	8	56.25		
	I do not have a particular attitude towards comics.	30	49.55		
As a visual aid in discussing the interweaving of mood and tone through images.	I really like reading comics.	9	67.20		
	I like reading comics.	52	70.94		
	I do not like reading comics.	27	64.44	8.359	.079
	I really do not like reading comics.	8	59.25		
	I do not have a particular attitude towards comics.	30	48.38		
In interdisciplinary connection.	I really like reading comics.	9	63.80		
	I like reading comics.	52	74.13		
	I do not like reading comics.	27	64.26	11.900	**.018**
	I really do not like reading comics.	8	52.88		
	I do not have a particular attitude towards comics.	30	47.71		
Using comics to teach narrative writing.	I really like reading comics.	9	56.00		
	I like reading comics.	52	75.09		
	I do not like reading comics.	27	53.50	11.766	**.018**
	I really do not like reading comics.	8	58.56		
	I do not have a particular attitude towards comics.	30	51.82		
For vocabulary development.	I really like reading comics.	9	57.60		
	I like reading comics.	52	76.01		
	I do not like reading comics.	27	58.72	15.410	**.004**
	I really do not like reading comics.	8	66.69		
	I do not have a particular attitude towards comics.	30	45.84		
For the students to create their own comics.	I really like reading comics.	9	56.90		
	I like reading comics.	52	73.04		
	I do not like reading comics.	27	65.02	9.937	**.042**
	I really do not like reading comics.	8	46.00		
	I do not have a particular attitude towards comics.	30	51.21		
For the students to create their own digital comics.	I really like reading comics.	9	61.50		
	I like reading comics.	52	74.32	12.807	**.012**
	I do not like reading comics.	27	57.62		

Use of comics	Attitude towards reading comics	n	Mean	χ2	P
	I really do not like reading comics.	8	61.75		
	I do not have a particular attitude towards comics.	30	49.52		
As a diagnostic tool to predict future literacy problems.	I really like reading comics.	9	55.60		
	I like reading comics.	52	69.05		
	I do not like reading comics.	27	63.63	6.287	.179
	I really do not like reading comics.	8	64.63		
	I do not have a particular attitude towards comics.	30	52.53		
For interpreting literary characters.	I really like reading comics.	9	61.50		
	I like reading comics.	52	74.32		
	I do not like reading comics.	27	57.62	12.910	**.012**
	I really do not like reading comics.	8	61.75		
	I do not have a particular attitude towards comics.	30	49.52		
For researching dramatic dialogue.	I really like reading comics.	9	66.75		
	I like reading comics.	52	73.75		
	I do not like reading comics.	27	60.70	11.459	**.022**
	I really do not like reading comics.	8	55.06		
	I do not have a particular attitude towards comics.	30	48.02		
To create a timeline of events.	I really like reading comics.	9	62.50		
	I like reading comics.	52	74.23		
	I do not like reading comics.	27	56.96	15.145	**.004**
	I really do not like reading comics.	8	71.44		
	I do not have a particular attitude towards comics.	30	45.19		

There were statistically significant results for 11 of the 17 variables examined. The Kruskal-Wallis test shows that there were no statistically significant differences in the frequency of use of comics in the classroom according to teachers' attitudes toward reading comics in adulthood. This pertained to the use of comics as introductory motivation, to promote reading, to promote reading literacy, as an aid to unlocking the meaning of abstract texts, as a visual aid in discussing the interweaving of mood and tone through images, and as a diagnostic tool to predict future literacy problems.

Among the teachers who most often used comics as a teaching tool were those who *really like* and *like reading* comics, followed by the teachers who *do not like reading comics* and the teachers who *really do not like reading comics*. The teachers who were least likely to use comics as a teaching tool were those who *have no particular attitude towards comics*.

The teachers who most often used comics as a learning tool were those who *like reading comics* and the teachers who *really do not like reading comics*, followed by the teachers who *really like reading comics*, teachers who *do not like reading comics*, and finally teachers who *have no particular attitude towards comics*.

Teachers who *like reading comics* and teachers who *do not like reading comics* were the teachers most likely to use comics to promote reading in visual learners. Less frequently, comics were used by teachers who *really do not like reading comics*, by teachers who *really like reading comics,* and by teachers who d*o have no particular attitude toward comics*.

Comics were used in an interdisciplinary connection by teachers according to frequency of use in the following order: teachers who *like reading comics*, teachers who *do not like reading comics*, teachers who *really like reading comics*, teachers who *really do not like reading comics*, and teachers who *have no particular attitude toward comics*.

Comics for teaching narrative writing were most commonly used by teachers who liked to read comics. This type of use of comics in the classroom was used less often by teachers who *really do not like reading comics*, teachers who *really like reading comics*, and teachers who *do not like reading comics*. Teachers who *do not have a particular attitude towards comics* were least likely to use comics to teach narrative writing.

Teachers who *like reading comics* and those who *really do not like reading comics* were more likely to use comics to develop vocabulary than their colleagues who *do not like reading comics* and those who *really like reading comics*. Teachers who had *no particular attitude towards comics* were more likely not to use them.

Among the teachers most likely to encourage students to create their own comics were those who *like reading comics*, followed by those who *do not like reading comics*, those who *really like reading comics*, those who *have no particular attitude toward comics,* and finally those who *really do not like reading comics*. This way of using comics in the classroom is the only case where the teachers who had *no particular attitude towards comics* were not the least likely to use this form at work.

Students of teachers who *like reading comics* created digital comics quite often, followed by students of teachers who *really do not like reading comics* and those who *really like reading comics*. Digital comics were less often created by students whose teachers *do not like reading comics*, and even less often by students whose teachers *do not have a particular attitude towards comics*.

The use of comics to interpret literary characters was more commonly used in the classroom by teachers who *like reading comics*. Teachers who *really like reading comics* and teachers who *really do not like reading comics* were less likely to include them in schoolwork in an explained form. These were followed by teachers who *do not like reading comics*, and the interpretation of literary characters was used least often in classes where teachers had *no particular attitude towards comics*.

Dramatic dialogue was most often explored by teachers who *like reading comics*, and by teachers who *really like reading comics*. This was followed by teachers who *do not like reading comics* and teachers who *really do not like reading comics*. The students of teachers who had *no particular attitude towards comics* were less likely than their peers to encounter this form of comic use.

Teachers who *like reading comics* and those who *really do not like reading comics* were more likely to use comics to create a timeline of events than their colleagues who *really like reading comics* and those who *do not like reading comics*. Even in this case, the use of comics mentioned above was less frequently used by the teachers who *do not have a particular attitude towards comics*.

4   Discussion

The results show that the frequency of using comics in the classroom was related to teachers' attitudes towards comics, which confirms the introductory hypothesis, since the differences in most variables were statistically significant. It is surprising that teachers who have positive attitudes towards comics are not necessarily more likely to use comics in some form in the classroom than teachers who have negative attitudes towards comics, as this is a stereotypical topic. The likelihood of using comics in the classroom varied between those who liked reading comics and those who did not. The author also rejected the hypothesis that teachers who have no particular attitude toward comics are no more likely to use comics in the classroom

than teachers who have a negative attitude toward comics. The very teachers who did not have a particular attitude toward comics generally answered, except in one case, several times, that they were less likely to use comics. Most of the hypotheses were not confirmed, but they provide an important starting point for further reflection.

The results show that comics have found their place in our schools. Teachers' attitudes also seem to be an important part of the school environment. In choosing the content and methods, the teacher shapes the learning process; in choosing or omitting a topic for discussion, or in using a certain working method in the classroom, they also influence students' motivation and attitudes towards schoolwork. It would be interesting to know how the students of the teachers interviewed experience the classroom environment, because a positive and stimulating learning environment is the basis for the work of both the teacher and the student. The use of comics in the school environment attracts students. Comics represent something new in the learning environment, and students enjoy reading them while growing up. Nowadays, comics are often discovered by teachers together with their students. Indeed, comics are currently experiencing a renaissance in Slovenia, with comics by Dave Pilkey, Boštjan Gorenc and Matej De Cecco, Rene Goscinny, Herge, Božo Kos, Marjan Manček, Matjaž Šmit, Miki Muster, and many other domestic and foreign authors. These authors' comics are either recent editions read for the first time by this generation, or they are comics already read by their parents and grandparents.

Teachers views and beliefs prove to be crucial in the design of the learning environment in most studies, and this was also confirmed in this study. It turned out that the choice to use comic-related methods in Slovene classes was not so much influenced by the teacher's attitude towards comics, but by the absence of a relationship or the lack of a formed attitude towards comics. Indeed, the author had expected that teachers who did not have formed attitudes towards comics would nevertheless use comics in their lessons more often than teachers who had negative attitudes towards comics. However, it turned out that the lack of attitude towards comics in the Slovene classroom had the greatest influence on what kind of learning environment the teacher would create through the choice of methods and forms of work.

The findings shape our awareness of improvements in the area of using comics in various ways in the classroom. We need to think about how to introduce comics to teachers in a way that cultivates what is, at best, a positive attitude before they use them in the classroom. There is a need for teacher education and training in all areas of using comics in the Slovene classroom. Since this is an area of learning and teaching where the spirit of stereotypical opinions about comics still lives in teachers, this is especially important.

It should be remembered that teachers' views are very resistant to complex changes (OECD, 2009), but they can also be easily changed if the programs used to influence their views are implemented with sufficient quality (Darling-Hammond, 2000).

In future research it would be useful to compare particular learning environments created by teachers with positive attitudes toward comics, teachers with negative attitudes toward comics, and teachers who do not have particular attitude towards comics. It would be worthwhile to focus on the learning environment, classroom relationships, the way teaching and classroom management are carried out, working conditions, teacher and student participation, pedagogical focus, and working forms and methods. It would be worthwhile to compare students' learning outcomes depending on teachers attitudes towards comics. With the help of individual interviews, one would get an even broader insight into the field of influence of stereotypical themes on the formation of the learning environment with the use of comics in Slovene language classes.

The results are based on teacher responses, which may be subjective. The way the data was collected is also a limitation– the questionnaire was conducted in an online environment, which is not difficult to leave if one has a negative attitude towards a certain topic, which likely led to the teachers who had stereotypical views about comics not participating in the survey.

The study offers new insights into teachers' views on the use of comics in the Slovene teaching environment and at the same time provides many starting points and space for further research.

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Perspectives on Teacher Education and Development

Alenka Lipovec,[1,2] Janja Tekavc[3]

[1] University of Maribor, Faculty of Education, Maribor, Slovenia
alenka.lipovec@um.si
[2] University of Maribor, Faculty of Natural Sciences and Mathematics, Maribor, Slovenia
alenka.lipovec@um.si
[3] University of Maribor, Faculty of Education, Maribor, Slovenia
janja.tekavc@um.si

Abstract The scientific monograph entitled "Perspectives on teacher education and development" is the work of authors from different professional and scientific backgrounds, coming from a broader international area. The publication consists of 38 original scientific contributions addressing different aspects of teacher education and training and highlighting some of the major challenges in this field. Particular aspects such as contemporary didactic and pedagogical approaches, digital transformation of education, inclusiveness, educational policies, curricula, leadership, and personal and professional development of teachers are highlighted. The monograph highlights some of the important issues that can also be reflected in changes at the systemic level.

Keywords:
education,
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University of Maribor

Faculty of Education