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Center for Educational Policy Studies Journal

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The CEPS Journal is an open-access, peer-reviewed journal devoted to publishing research papers in different fields of education, including scientific.

Aims & Scope

The CEPS Journal is an international peer-reviewed journal with an international board. It publishes original empirical and theoretical studies from a wide variety of academic disciplines related to the field of Teacher Education and Educational Sciences; in particular, it will support comparative studies in the field. Regional context is stressed but the journal remains open to researchers and contributors across all European countries and worldwide. There are four issues per year. Issues are focused on specific areas but there is also space for non-focused articles and book reviews.

About the Publisher

The University of Ljubljana is one of the largest universities in the region (see www.uni-lj.si) and its Faculty of Education (see www.pef.uni-lj.si), established in 1947, has the leading role in teacher education and education sciences in Slovenia. It is well positioned in regional and European cooperation programmes in teaching and research. A publishing unit oversees the dissemination of research results and informs the interested public about new trends in the broad area of teacher education and education sciences; to date, numerous monographs and publications have been published, not just in Slovenian but also in English.

In 2001, the Centre for Educational Policy Studies (CEPS; see <http://ceps.pef.uni-lj.si>) was established within the Faculty of Education to build upon experience acquired in the broad reform of the

national educational system during the period of social transition in the 1990s, to upgrade expertise and to strengthen international cooperation. CEPS has established a number of fruitful contacts, both in the region – particularly with similar institutions in the countries of the Western Balkans – and with interested partners in EU member states and worldwide.



Revija Centra za študij edukacijskih strategij je mednarodno recenzirana revija z mednarodnim uredniškim odborom in s prostim dostopom. Namenjena je objavljanju člankov s področja izobraževanja učiteljev in edukacijskih ved.

Cilji in namen

Revija je namenjena obravnavanju naslednjih področij: poučevanje, učenje, vzgoja in izobraževanje, socialna pedagogika, specialna in rehabilitacijska pedagogika, predšolska pedagogika, edukacijske politike, supervizija, poučevanje slovenskega jezika in književnosti, poučevanje matematike, računalništva, naravoslovja in tehnike, poučevanje družboslovja in humanistike, poučevanje na področju umetnosti, visokošolsko izobraževanje in izobraževanje odraslih. Poseben poudarek bo namenjen izobraževanju učiteljev in spodbujanju njihovega profesionalnega razvoja.

V reviji so objavljeni znanstveni prispevki, in sicer teoretični prispevki in prispevki, v katerih so predstavljeni rezultati kvantitativnih in kvalitativnih empiričnih raziskav. Še posebej poudarjen je pomen komparativnih raziskav.

Revija izide štirikrat letno. Številke so tematsko opredeljene, v njih pa je prostor tudi za netematske prispevke in predstavitev ter recenzije novih publikacij.

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— GÁBOR HALÁSZ

Editorial

This issue of CEPSj introduces papers that are not a part of a specific focus but fall into the category of *Varia*. The content of the papers differs, and they comprise topics from students' understanding of pictures in books, how sustainable development goals are integrated into the home economics context, how to evaluate students' environmental worldviews and concerns, what the relationship between the factors and conditions of the autonomy of pre-school teachers is and how they foster the autonomy of pre-school children, what language teachers' discriminatory practices against students are, to music education with a paper about rhyming in the context of the phonological awareness of pre-school children.

The first paper by Janja Batič entitled *Reading Picture Books in Preschool and Lower Grades of Primary School* introduces the results of a research study that involved 443 pre-school and primary school teachers. The investigation's objective was to discover teachers' views on making picture book reading a part of the teaching process, how picture book reading was incorporated into the process, and how a productive visual response to a picture book was designed. The results indicated that the surveyed teachers do consider picture books to be appropriate, not only for very young children, and they had no difficulties selecting an appropriate picture book. Half of the respondents noted that children or students visually expressed their impressions after reading a picture book. The replies also indicated that, regarding picture books within the teaching process, an unused potential remains in terms of developing children's visual and multimodal literacy.

The second paper entitled *In-service Home Economics Teachers' Attitudes to the Integration of Sustainable Topics in the Home Economics Subject*, by Martina Erjavšek, Francka Lovšin Kozina, and Stojan Kostanjevec, presents education for sustainable development in the discipline of home economics. The purpose of this paper is to ascertain whether in-service teachers of home economics recognise the opportunities to educate students about sustainable development in their courses and if they can identify the topics related to sustainable development that they can integrate into the subject of home economics. A questionnaire was distributed to 89 Slovenian in-service home economics teachers. The results were qualitatively and quantitatively analysed, which revealed that in-service home economics teachers understand that the topics of the subject promote education for sustainable development. They see the most opportunities for integrating sustainable topics arising in food and living environments and less in economics and textiles. Based on the research results,

the authors emphasise that it can be deduced that in-service home economics teachers should be offered ongoing professional development in order to achieve the competences needed to teach sustainable development as part of home economics. They also pointed out that there is a need to update the home economics curriculum subject as it offers numerous opportunities to educate students about sustainable living topics.

The third paper, by Gregor Torkar, Vanja Debevec, Bruce Johnson, and Constantinos C. Manoli, *Assessing children's environmental worldviews and concerns*, illustrates the research about the assessment the environmental worldviews and concerns of students from the fourth to the seventh grades in Slovenia. The New Ecological Paradigm Scale for Children was translated and validated for use with Slovenian primary school students. The students were also asked about their environmental concerns (using statements from the Environmental Motives Scale) and demographic questions. A confirmatory factor analysis was conducted for the New Ecological Paradigm scale using AMOS software, confirming a three-dimensional model with ten items. The students showed the highest agreement with the items in the factor Rights of Nature and the lowest agreement with Human Exemptionalism. The environmental attitudes of the students decreased from the fourth to the seventh grade, while altruistic environmental concerns significantly increased with higher grades. Gender differences were not statistically significant for environmental worldviews and concerns. The results show that biospheric environmental concern positively correlates with the factors Rights of Nature and belief in Eco-Crisis, and negatively correlates with Human Exemptionalism. The New Ecological Paradigm tool will enable the evaluation of education programmes for children in Slovenia.

The purpose of the fourth paper, by Tatjana Devjak, Irena Janžekovič Žmauc, and Jože Benčina, entitled *The Relationship between the Factors and Conditions of the Autonomy of Preschool Teachers and Fostering the Autonomy of Preschool Children in Kindergarten*, argues that fostering the autonomy of children in kindergarten contributes to the positive effects of the individual's autonomy later in life. Various sources substantiate the assumption that there is a relationship between the child's autonomy and the autonomy of educators. In the paper, how pre-school teachers evaluate the factors of their professional autonomy are identified and investigated, the factors and conditions that, in the pre-school teacher's opinion, foster the autonomy of pre-school children are determined, and whether the assessment of both factors and conditions affects the actual state of the stimulation of the autonomy of children in kindergarten is verified. With regard to fostering the autonomy of children, the participation

of children, enabling them to play and learn and to manipulate materials and teaching aids in their own way, so that pre-school teachers can offer them a choice, take into account their feelings and perspectives, and provide them with rational feedback, is under consideration. The authors concluded that an evaluation of the factors and conditions for fostering the autonomy of children by pre-school teachers has a beneficial effect on fostering such autonomy, but it is not crucial. The most important factors in fostering the autonomy of children are the pre-school teacher as a person and the participation of children.

The next paper, entitled *A Classroom Survey of Language Teachers' Discriminatory Practices against Students: Causes, Consequences and Keys*, by Seyyed Hatam Tamimi Sa'd, and Olga Quiñónez Eames, aimed at revealing the incidence of discrimination toward English as a Foreign Language students, the grounds on which it happens, its adverse effects on students as well as potential solutions to it. The data were collected through questionnaires and were further supported by interviews and classroom observations. The participants consisted of sixty-five Iranian students from a variety of ethnic, linguistic, and socioeconomic backgrounds. The authors report that nearly one-third of the students had experienced discrimination of one form or another. Students' perceptions of discrimination were that it is based on skin colour, age, sex, social class, as well as political and religious beliefs. Furthermore, the findings showed that discrimination was perceived to negatively impact students' motivation and overall ability by adversely affecting their class attendance, sense of responsibility, class performance, and assignment completion. It was found that teachers overtly discriminated against students by openly mocking them, neglecting to call on them for class participation, and unfairly assessing the students and their achievements.

The last paper, by Soňa Grofčíková and Monika Máčajová, with the title *Rhyming in the Context of the Phonological Awareness of Pre-School Children* aims to introduce theoretical starting points and the results of research into children's rhyming in the context of phonological awareness. The text explains theoretical circumstances pertaining to the theme and defines key concepts. The main part of the paper includes the results of the research on pre-school children in Slovakia. There were 866 respondents (children) of four to seven years of age. The research subject was the rhyming skills of children, which was tested in three independent areas: completing the rhyme in a nursery-rhyme, awareness of rhymes, and the production of rhymes.

This CEPSj issue ends with a book review. The review deals with the book entitled *Leadership in Education. Initiatives and trends in selected European countries*, Institute for Educational Research by editors Slavica Ševkušić,

Dušica Malinić, and Jelena Teodorović, published by Institute for Educational Research in Belgrade, Faculty of Education at University of Kragujevac and Hungarian-Netherlands School of Educational Management from University of Szeged (ISBN 978-86-7447-149-4) written by Gábor Halász. It can be summarised from the review that the book presents important issues for all those who are engaged in developing school leadership or planning future initiatives in this area, not only in southern and central Europe but throughout the continent. It is a vital resource for those who design leadership training programmes or any development actions in this area. There is perhaps one element that could have strengthened the potential impact of this book: a substantial synthesis chapter going beyond what the relatively short preface could provide.

IZTOK DEVETAK

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Reading Picture Books in Preschool and Lower Grades of Primary School

JANJA BATIČ¹

∞ This article introduces the results of a research survey that involved 443 preschool and classroom teachers. The objective of the investigation was to discover teachers' views on making picture book reading a part of the teaching process, how picture book reading was incorporated, and how a productive visual response to a picture book was designed. The results indicated that the surveyed teachers do consider picture books to be appropriate, not only for very young children, and they had no difficulties selecting an appropriate picture book. Half of the respondents noted that children or students visually expressed their impressions after reading a picture book. The replies also indicated that, as regards picture books within the teaching process, unused potential remains in terms of developing children's visual and multimodal literacy.

Keywords: picture book, multimodal text, visual literacy, preschool teachers, classroom teachers

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Branje slikanic v vrtcu in nižjih razredih osnovne šole

JANJA BATIČ

☞ V članku predstavljamo izsledke raziskave, ki je vključevala 443 vzgojiteljev in učiteljev razrednega pouka. Namen anketiranja vzgojiteljev in razrednih učiteljev je bil ugotoviti, kakšna so stališča vprašanih glede branja slikanic v pedagoškem procesu, kako poteka branje slikanic in kako je zasnovan produktivni likovni odziv na prebrano slikanico. Rezultati kažejo na to, da vprašani prepoznavajo slikanico kot knjigo, ki ni primerna le za mlajše otroke, in da brez težav izberejo kakovostno slikanico. Polovica vprašanih navaja tudi, da otroci oz. učenci po branju slikanic svoje vtise likovno izrazijo. Odgovori vprašanih pa kažejo tudi na to, da je slikanica v pedagoškem procesu še neizkoriščen potencial z vidika razvijanja vizualne in multimodalne pismenosti.

Ključne besede: slikanica, multimodalno besedilo, vizualna pismenost, vzgojitelji, učitelji razrednega pouka

Introduction

Reading picture books in the preschool period and lower grades of primary school, accompanied by a productive visual response to what was read and seen, can be an excellent starting point for developing one's visual and multimodal literacy. Riddle (2009, p. 7) notes:

Just as reading complements writing in traditional literacy, observation and creation jointly form the foundation of visual literacy [...] As teachers, our job is to help students do more than merely look at symbols; we must show them how to interpret and communicate the meaning of images, to develop 'intelligent vision.

Picture books are a special type of book, combining the verbal and the visual codes of communication. According to Haramija (2017, p. 28), picture books are an intermediate stage between comic books, which focus on visual elements, and illustrated books, which focus on the text. In classic picture books, such as *Maček Muri* (*Magic Muri*) by Kajetan Kovič and Jelka Reichman (1975) or *Muca Copatarica* (*Slipper Keeper Kitty*) by Ela Peroci and Ančka Gošnik Godec (1957), the information carried by the text is normally also included in the illustration. We can only rarely find a character that is not mentioned in the text. Some contemporary picture books include distinctly postmodern elements, such as nonlinearity, self-referential text, sarcastic or self-mocking tones, and an anti-authoritarian stance (Goldstone, 2001). In an analysis of Slovenian picture books with postmodern elements, we noted that two elements, in particular, stood out, namely a close interaction between the verbal and the visual (both of them complementing and upgrading each other) and intertextuality, which is a prerequisite for the multiple meanings of a picture book (cf. Haramija & Batič, 2014). The most extreme form of picture book is one that is entirely without text except for instances such as the title, as in the book *Wave* by Suzy Lee (2011), *Maruška Potepuška* (*Maruška's Adventures*) by Marjan Amalietti (1977), *Brundo se igra* (*Grumbly is Playing*) by Marjan Manček (1978), a really brief text such as the introductory verse by Edgar Allan Poe in the picture book *Zgodba o sidru* (*The Story of the Anchor*) by Damijan Stepančič (2010), a longer text on the back cover as in *Ferdo—veliki ptič* (*Ferdo—The Giant Bird*) by Andreja Peklar (2016), or an intra-iconic text as in *Deček in hiša* (*A Boy and a House*) by Maja Kastelic (2015).

The relation between text and illustration is an essential aspect of picture book analysis. Nikolajeva (2003) has dissected the word-image interaction into several stages, ranging from symmetry to contradiction. Sipe (1998) speaks not

only of interaction between these two parts but also of transaction (the text defines the meaning of the illustrations and vice versa). Lewis (2006, p. 36) writes about text-image inter-animation:

[...] words breathe life into the image. They frame the image for the reader by directing attention, and offering interpretation. [...] The words clearly mean something we can understand, but on their own the words are attenuated, partial, and they only come fully to life and gain their complete meaning within the story when read alongside the accompanying picture.

Serafini (2014) characterises picture books as so-called multimodal ensembles. Three key elements of printed multimodal ensembles are text, visual imagery (photographs, drawings, pictures, charts, tables), and design (edges, typography, other graphic elements) (Serafini, 2014, p. 13). He pays special attention to communication codes being wrongfully understood as separate entities of the whole (Serafini, 2014, p. 54):

In many classrooms in which I have been involved in research projects, the image and written text have been understood as separate entities trying to do the same work. I have heard teachers asking students whether they liked the pictures better than the text, whether they learned more from the words or from the images, or whether they would like to add words to a wordless picture book. [...] It is important to remember that one mode is not inherently better than another; they simply do different things in different ways.

Reading picture books

Reading a picture book is reading a multimodal text that has specific features and functions:

The function of pictures, iconic signs, is to describe or represent. The function of words, conventional signs, is primarily to narrate. Conventional signs are often linear, while iconic signs are nonlinear and do not give direct instruction about how to read them (Nikolajeva & Scott, 2006, p. 1–2).

Serafini (2014) formed a special framework to help teachers support their students' experience with multimodal text, which is organised in three stages: exposure, exploration, and engagement. The concept of the framework enables a gradual shift of the responsibility from teacher to student 'as students

gain experience working with various multimodal ensembles and visual images' (Serafini, 2014, p. 91). The first phase focuses on students being exposed to a variety of multimodal texts, or 'ensembles,' as Serafini refers to them. Serafini (2014, pp. 92–93) notes that:

[...] students need to read a variety of multimodal ensembles from a viewpoint of a reader, before they can read them from a perspective of a writer. [...] The exposure phase provides the foundation for the further exploration of the various textual, visual, and design elements and structures of multimodal ensembles that will occur in the next phase.

The second phase is dedicated to the exploration of individual elements. The first step in this phase is about 'the development of a specific vocabulary or metalanguage for discussing and analysing the textual, visual, and design elements in particular multimodal ensembles' (Serafini, 2014, p. 93). For example, learning the vocabulary required for analysing a picture book implies becoming familiar with terms such as front cover, flyleaf, inside cover, text, visual language elements, composition, focus, viewpoint, and others. It is necessary to note that children need enough time to explore individual elements. Arzipe and Styles determined in their study that 'older children are not used to having time to look at a book slowly. Because they read so fast, they sometimes missed details which they only saw when they were pointed out' (2003, p. 192).

The final phase involves students producing, with the help of the teacher (supporting them mostly in the use of less familiar tools), a multimodal text of their own, using the elements they have been introduced to. Serafini notes (2014, pp. 94–95):

In this phase, students are required to make choices concerning the design, production, and distribution of their visual images and multimodal texts. [...] The engagement phase allows students to demonstrate and make visible what they have learned, and forces them to consider the audiences and purposes for their creations, not simply the medium used in its creation.

Doonan (1993) has developed a model for reading picture books in class. She regards the use of picture books in the teaching process (Doonan, 1993, p. 48) 'as part of an education in developing a visual sense generally and being able to make meaning from visual information in particular'. She has adjusted her model to older students (12 to 14 years of age), dividing it into eight stages: (1) introduction, (2) conversation about different codes, (3) students are introduced to working vocabulary, (4) visual investigations (learning about the

characteristics of various media and visual elements), (5) continuation of visual investigations (learning about composition and the relations among different visual elements), (6) relation between word and image, (7) reading the picture book, (8) students write about a picture book (Doonan, 1993, pp. 50–59).

The showcased model has been designed for older students, but it can be modified for use with younger students as well. In her case study involving 22 students aged seven and eight, Sylvia Pantaleo (2016) investigated how a child's understanding of the elements of visual art and design affected their understanding, interpretation, and analysis of illustrations in picture books. Through a number of selected picture books, children learned about colours, colour mixing, various art techniques, the meaning of viewpoint and focus, typography, and picture book structure. The results of the survey showed that:

the students interpreted the elements of visual art and design as conveying information about the plot (events and conflicts), the characters' affective states, and the mood or atmosphere of events. As well, the students noted how the elements under study: communicated meaning symbolically [...] emphasized the importance of a character, object, event or action by focusing the reader's attention; enhanced the appreciation/understanding of characters' actions and their words; and communicated information about character relationship'. (Pantaleo, 2016, p. 248)

Picture books and visual literacy

Reading and understanding picture books are closely related to visual literacy. Reading picture books differs from reading non-illustrated texts, as 'reading' illustrations requires becoming regularly familiar with the visual language vocabulary. Depending on their developmental stage, children and students learn how the elements of visual art and design change the meaning of the text and affect the interpretation of a story, and how, on the other hand, the text influences the interpretation of illustrations. Children and students looking passively at the illustrations in a picture book will not be able to understand and interpret the book as a multimodal text. A research survey among second-grade students (Prior et al., 2012, p. 202) on how illustrations affect the understanding of literary characters showed that students made their judgements of the literary character based on 'facial expressions, body posture, and character actions depicted in illustrations, as well as their understanding of the way that illustrators use color and line to convey character information'. However, the students missed some important elements, such as 'the use of positionality to convey character information [...] children did not make mention of the

symbols illustrators embedded in illustrations or the use of artistic devices of changing the size of a character and showing a character breaking the frame surrounding an illustration' (Prior et al., 2012, pp. 202–203).

The following section is a summary of recommendations for reading multimodal texts such as picture books with younger students. These recommendations were developed as a result of a one-year project involving first-graders, two first-grade teachers, and two university researchers (Martens et al., 2012):

- Foster cooperation between the classroom teacher and the school art teacher.
- Conduct thorough preparation prior to reading picture books with children (the classroom teacher must be well acquainted with the elements of visual art and design, understand the relation between text and image, etc.).
- Include illustrations in the discussion about the picture book (discuss colours, lines, layout, the effect of illustrations on understanding the literary character, which information the child received from illustrations alone and which from the text, etc.).
- Encourage students to talk about their artwork, elaborating on their decisions and choices (e.g., the choice of colours, lines).

Understanding and interpreting visual images are only one part of visual literacy, the other one being the ability to share information visually. Tomšič Čerkez (2015, p. 5) notes:

The ability to analyse and interpret images and other visual material, although critical, is not sufficient in itself; it must be accompanied by an ability to create visual material, in order to use a specific language that allows the individual to consider synthesised images that stimulate hybrid sensitive experiences and operative experiences in a holistic way.

A literary work that is not illustrated can be a good starting point for artistic expression. Artistic expression based on picture books must allow a productive response of children to the text and/or illustrations in a picture book. A picture book can also be used as a basis for planning various visual arts activities and tasks, as it can be used to select the art motif, technique, art problem, or as an encouragement for children to create their own picture books (cf. Batič, 2017). Artistic expression in response to picture book reading, however, can also serve as a means for children to learn about the structure of the picture book as a multimodal text and about art techniques and text-image relation. Children and students can first write the text (younger children being assisted by their teachers), divide it into separate pages (the easiest way is to

make a folded booklet), and then produce the illustrations. Throughout this process, they investigate which pieces of information they will provide through illustration and which through text, and how the interaction between the text and the illustrations will affect their message. Younger children start designing their picture book 'to understand that constructing meaning when reading picture books involves reading both the art and the written text, that each provides information that may or may not be represented in the other' (Martens et al., 2012, p. 289). Reading picture books and artistic production following such reading is, in fact, cross-curricular integration of literature and art. What pertains to the domain of visual arts is the identification of the meaning from high-quality illustrations (which is closely related to the reception of an artwork) and the artistic expression. For this reason, we can speak of specific art education methods that need to be integrated into any discussion about picture books. Tomljenović (2015, p. 78) notes:

The use of specific (visual arts) methods includes: aesthetic communication between teachers, students and artworks; perception and understanding of visual arts phenomena and patterns, as well as their connection with everyday life; and the independent and creative use of visual arts materials.

Research problem and research questions

Reading and interpreting picture books in preschool or in elementary school is in the domain of learning about literature. Although picture books are very popular among children and teachers, the focus is mainly on the words. Pictures are considered less important and are usually not included in the process of picture book interpretation.

Our main research question was to examine the views of preschool and classroom teachers on the ways picture books are integrated into the teaching process. We were particularly interested in the following questions:

- (1) Are picture books appropriate for younger children in particular?
- (2) What is the attitude of pre-schoolers and students towards picture books?
- (3) Do elementary school and preschool teachers experience difficulties in selecting a quality picture book?
- (4) How are picture book reading and discussion conducted?
- (5) What do elementary school and preschool teachers feel about including picture books without text into their teaching practice?

- (6) How do elementary school and preschool teachers normally motivate children to read picture books?
- (7) What is a normal artistic response after reading a picture book?

We were also interested in discovering any statistically significant differences between the responses of preschool teachers and those of elementary school teachers.

Sample

Our survey sample included all teachers and preschool teachers from all statistical regions of Slovenia. We sent our request for participation in an online survey to e-mail addresses of preschools and elementary schools, which are available on the website of the Ministry of Education, Science and Sport of the Republic of Slovenia. Elementary school and preschool teachers who participated in our survey did so voluntarily. We obtained a total of 443 complete questionnaire replies.

Participants

Questionnaires were answered by 435 female (98.2%) and eight male (1.8%) teachers. Slightly over half of the respondents (52.8%) were preschool teachers working in preschools, and the rest (47.2%) were classroom teachers working in primary schools. The largest portion of the respondents had 20 or more years of work experience (41.5%), followed by teachers with between 10 and 20 years of experience (27.8%) and those with under five years of experience (16.3%). The smallest number of responding teachers had between five and 10 years of experience (14.4%). As regards their education level, most had a university degree or higher (73.4%), followed by those with a secondary-school degree (14.2%) and a short-cycle higher education degree (12.4%).

Instruments

An online questionnaire was designed. It was examined by two practitioners (a preschool teacher and a classroom teacher). The survey was conducted from April to June 2017.

The questionnaire comprised both open-ended and closed-ended questions. The respondents were offered 14 statements concerning the use of picture books in the teaching process along with a set of possible answers (strongly disagree, disagree, do not know or cannot decide, agree, strongly agree) and some open-ended questions. The results were analysed using descriptive statistics (frequency distribution) and inferential statistics (χ^2 test).

Results and discussion

Are picture books appropriate predominantly for younger children?

One of the statements included in the questionnaire was 'Picture books are appropriate predominantly for younger children.' Of the respondents, 43.1% disagreed with the statement, and 29.1% strongly disagreed with it. A small percentage agreed (18.1%) or strongly agreed (6.8%) with the statement. The portion of the teachers who responded that they did not know or could not decide was negligible (2.9%). The results of the χ^2 test indicate that there is a statistically significant difference between the responses based on where the teachers work. As many as 35.5% of the responding preschool teachers strongly disagreed with the statement that picture books were appropriate predominantly for younger children, whereas only 11.0% of the responding classroom teachers shared this opinion ($\chi^2 = 26.904$; $P = .000$). The picture book is an important form of the books used in preschools and the lower grades of primary school. Preschool teachers and school teachers recognise that this book form is not intended solely for younger children. In their visual elements, good picture books normally provide a rich context that needs to be 'read'. Even when the narrative is primarily intended for younger children, the visual aspects (i.e., the illustrations with their motifs, symbols, spatial relations, and the characters they introduce) provide further details that can be understood by older readers. One such example is a picture book by Nina Kokelj and Svjetlan Junaković (2006), *Deček na belem oblaku* (*The Boy on the White Cloud*). The first one-sided illustration depicts a boy supporting his head. Next to him, there is a vase with orange flowers and a clock, which is a still-life motif. The flowers in the illustration resemble dried orange lanterns, which have a crucial role in Japanese tradition honouring ancestors' spirits, while the clock symbolises the passing of time. Thus, the illustrator arouses the feeling of the boy's upcoming death as early as in the first illustration, through dull colours, proportions (the boy's big head is leaning on his tiny and fragile hand), and symbols. The text next to the illustration speaks of a boy named Domen, who is looking sadly at a white cloud outside his window and does not notice anything else (cf. Haramija & Batič, 2013).

What is the attitude of pre-schoolers and students towards picture books?

A majority of the respondents agreed (24.8%) or strongly agreed (72.5%) with the statement that children or students liked picture books very much. The share of other responses was negligible (0.2% of respondents strongly disagreed,

1.1% disagreed, and 1.4% did not know or could not decide). The answers from our respondents indicate that children and students like picture books very much. Their answers were, in fact, expected, as the narratives in picture books normally address the topics that children can relate to or in which they are interested. The visual part of the picture book allows children to 'read' it before they can actually read the text. The picture book may also captivate children due to its special design features, for example, a book with movable parts.

Do elementary school and preschool teachers experience difficulties in selecting a quality picture book?

Nearly half of the respondents (49.7%) agreed with the statement that they had no difficulties selecting a good picture book, with over a fifth of the teachers (21.2%) strongly agreeing with the statement. The portion of the respondents who did not know or could not decide on the matter was slightly lower (15.8%), and even fewer teachers disagreed (11.7%) or strongly disagreed (1.6%) with the statement that it was easy for them to select a good picture book. While these answers are promising, we cannot fully support them with the answers that the respondents provided to the third open-ended question, in which they were asked to name the picture book that they had discussed most recently. They did provide the titles but omitted the authors and years of publication. With titles such as *Trnjulčica* (*Sleeping Beauty*), we could not make any judgements regarding the quality of the book, as there are a number of picture books with the same title, which vary considerably in quality. In her diploma thesis, Kalšek (2016) analysed 12 picture books of the fairy tale *Trnjulčica* (*Sleeping Beauty*) that were published between 1954 and 2014. While the storyline in all of them is very similar, the books differ substantially in the quality of the illustrations. The importance of picture book quality is highlighted among others by Saksida (2017, p. 51), who notes that the basic principle in selecting a book is the quality of the text and the illustrations. When judging the quality of illustrations, the authors of book recommendation lists, preschool teachers, and classroom teachers can refer to visual and content-related criteria as defined by Zupančič in his article titled 'Kakovostna književna ilustracija za otroke' ['Quality book illustration for children'] (2012).

How are picture book reading and discussion conducted?

Most respondents agreed (35.2%) or strongly agreed (60.5%) with the statement that they discussed the text with children after having read it. The share of the primary school teachers who strongly agreed was 77%, and the share of the preschool teachers was 45.7%. There is a statistically significant

difference between their answers ($\chi^2 = 46.950$; $P = .000$). A majority of all respondents strongly disagreed (30.2%) or disagreed (47.4%) with the statement that illustrations were shown to the children or students only after reading the picture book text. However, nearly a fourth of the respondents stated the contrary: 12.2% agreed, and 3.6% strongly agreed with the statement that illustrations were shown only after the text had been read. The share of those who did not know or could not decide was 6.6%. Most of the responding teachers confirmed that illustrations were shown while the book was being read: 35.2% agreed and 40.9% strongly agreed with the statement. In contrast, 14.4% of the respondents disagreed with the statement, though only 1.1% strongly disagreed with it. Again, few of the respondents replied that they did not know or could not decide (8.4%).

As regards the statement that the main objective of the illustrations in picture books was to attract children's attention, opinions were varied: 40.4% disagreed with the statement, 27.8% agreed, 14.4% did not know or could not decide, 13.8% strongly agreed with the statement, and 3.6% strongly disagreed with it. Reading picture books requires reading the text as well as meticulous observation of the illustrations. It also requires readers to read the book several times, as they need to interpret the information from the text with the help of the illustrations, while at the same time the information from the text helps interpret the illustrations. The illustrations can, in fact, substantially change the morphological features of the text, so the reader's observation cannot be passive (cf. Batič & Haramija, 2015; Haramija & Batič, 2013). The main purpose of an illustration is not to attract the attention of children or teachers but rather to co-create the meaning of the story.

What do elementary school and preschool teachers feel about including picture books without text into their teaching practice?

Concerning the statement that picture books without text were more appropriate for pre-schoolers than for school children, the results were as follows: 44.2% of the respondents disagreed, and 22.6% strongly disagreed with the statement, 17.6% did not know or could not decide, while 13.3% agreed and 2.3% strongly agreed with the statement. A great many respondents occasionally used picture books without text in their classroom work. The share of the respondents who agreed and strongly agreed with this statement was 52.8% and 21.0%, respectively, while 14.0% of the respondents disagreed with it, 7.7% did not know or could not decide, and 4.5% strongly disagreed. The results of the χ^2 test indicate that there is a statistically significant difference between the responses of the primary school teachers and those of the preschool teachers.

The share of the preschool teachers who strongly agreed with the statement that they occasionally included picture books without any text in their teaching practice was 27.8%, while that of the primary school teachers was only 13.4% ($\chi^2 = 24.856$; $P = .000$). The open-ended question was designed to identify the most recent picture books that the responding classroom and preschool teachers discussed in class or with children. We were particularly curious as to whether the list would include picture books without text. The question was answered by 77.4% of the preschool teachers and 77% of the classroom teachers. No picture book without text was named.

How do elementary school and preschool teachers normally motivate children to read picture books?

The goal of using open-ended questions was to examine how the investigated preschool teachers and classroom teachers motivated children or students to read picture books. We were interested in determining what teaching methods were used by the teachers to motivate children to read picture books. The answers of the classroom teachers and the preschool teachers were analysed separately. The respondents named a number of such methods. We grouped their answers into categories, presenting them with frequencies. Our main point of interest was to discover what share of the answers would be dealing directly with the visual part of picture books (i.e., the illustrations).

Based on the answers of the preschool teachers, we defined the following categories:

- (1) No reply (23.5%)
- (2) Motivation not required, as a picture book is a sufficient motivation in itself (23%)
- (3) Motivation by means of a puppet (14.5%)
- (4) Motivation through play (riddles) (10.3%)
- (5) Motivation not required (7.3%)
- (6) Motivation through a discussion of the topic (6.4%)
- (7) Motivation by the setup of the reading area (5.5%)
- (8) Motivation by singing (4.7%)
- (9) Motivation by discussing the front cover or an illustration from the picture book (4.3%)

The categories based on the answers by the classroom teachers were as follows:

- (1) No reply (22.9%)
- (2) Motivation through play (riddles, wordplay, didactic games) (26.3%)

- (3) Motivation through a discussion of the topic (21%)
- (4) Motivation by discussing the front cover or an illustration from the picture book (8.1%)
- (5) Motivation by singing (4.8%)
- (6) Motivation by means of a puppet (3.8%).

Based on the answers provided by the surveyed preschool and classroom teachers, we can conclude that children and students are mainly motivated to read picture books through various activities, such as games, songs, and or playing with toys. Only a minor share of the respondents reported that they motivate the children or students solely with the picture book, with the illustrations, or above all with the front cover. We can also conclude that the respondents are not aware of the importance of a book's front cover in the process of motivating children to read picture books. The objective of the book's front cover is to attract readers' attention, arouse curiosity, set the mood, and other factors.

What is a normal artistic response after reading a picture book?

In the study, we were interested in collecting information on artistic response to the picture book. Over half of the respondents agreed (48.8%) or strongly agreed (8.8%) with the statement that children or students normally produced drawings after reading a picture book, capturing their impressions of the book in question. Of the respondents, 20.3% disagreed and 2.5% strongly disagreed with the statement, but 19.6% did not know or could not decide. The results of the χ^2 test indicate that there is a statistically significant difference between the responses of the preschool teachers and those of the primary school teachers ($\chi^2 = 45.675$; $P = .000$). Of the responding primary school teachers, 58.9% agreed with the statement, but the percentage of preschool teachers who agreed was only 39.7%. While 13.9% of the primary school teachers strongly agreed with the statement, the equivalent share of the preschool teachers was only 4.3%.

We also designed an open-ended question in the attempt to determine whether the discussion of the most recent picture book our respondents read with their children/students included visual response to the picture book. The answers provided by the responding preschool teachers ($n = 234$) were divided into categories, as follows: (1) No reply (22.6%), (2) No, children were not encouraged to visually represent their responses (44.4%), (3) Yes, children were encouraged to visually represent their responses (33%). The answers of the classroom teachers ($n = 209$) were classified into the same categories: (1) No reply (23%), (2) No, children were not encouraged to visually represent their responses (14.8%), (3) Yes, children were encouraged to visually represent their

responses (62.2%). The share of the classroom teachers who encouraged their students to provide visual representations was greater than the share of the preschool teachers who included children's visual representation in picture book discussions. The difference is statistically significant ($\chi^2 = 52.0466$; $P < .00001$).

As we were particularly interested in visual representations of children's responses to picture books, we further classified the teachers who encouraged children to visually represent their responses ($n = 77$) into three categories, as follows: (1) The type of visual response is not specified (31.2%), (2) Children represent/reproduce the motif from the picture book discussed (e.g., their favourite part) (35%), (3) The visual response involves their reaction to the picture book (e.g., children represent a different ending of the narrative, featuring themselves as the main characters) (25.4%). After reading a picture book with children or students, one needs to discuss it with them. The share of primary school teachers who agreed or strongly agreed with this statement was greater than the share of preschool teachers who thought the same. This indicates that the purpose of reading picture books in preschool is different from that in school. The same is true for visual response to reading. The portion of the school teachers who agreed that students normally draw their impressions after reading a picture book is statistically greater than the share of preschool teachers who felt this way.

A problem that we regularly see in practice is children copying their favourite illustrations. Visual responses are frequently not designed as targeted visual art assignments but are instead a mere copying of a certain motif. Over a third of the responding preschool teachers (35%), as well as a large portion of the school teachers (43.1%) answering the question regarding visual responses to a picture book, replied that children depicted or reproduced their favourite motif from the picture book. About a third of the preschool teachers and slightly over a fourth of the school teachers mentioned a productive response to the picture book (e.g., children representing a different ending to the story). Kordigel Aberšek (2008) notes that after reading, children will represent their imaginary and sensory perception of a literary character in a drawing. Drawings or other kinds of representation are considered a method with which we search our path towards a deeper understanding of a literary text (p. 269). Kordigel Aberšek further notes (p. 269) that the objective of illustrating a specific literary motif, for example, is not the same as in art education, which focuses on encouraging individuals and developing their skills of artistic expression. Instead, it is only a method with which we can bring children to develop a richer imaginary and sensory perception and thus a more intense visual and aesthetic experience. However, one needs to be aware that a representation of an imaginary and sensory perception in the school environment cannot be completely devoid of the principles of visual art didactics.

Students who are instructed to draw or paint their imaginary and sensory perception of a certain literary motif will, of course, need suitable art material as well as a properly designed art task. The teacher is the one who needs to be the judge of which is the one specific material (or visual medium) that will enable the students to create their own visual representations of a specific literary motif. For example, in the case of a motif for which the visual representation requires the use of colours, a pencil drawing is surely an inappropriate choice. It makes little sense to expect that a student can show his or her deeper understanding of a literary text by expressing his or her ideas through a visual medium if the latter is not chosen properly. Thus, a crucial aspect that needs to be considered is how to integrate art into other curricular areas and use its potential to improve learning in a specific school subject, without having any second thoughts about neglecting the basic principles of art didactics.

Conclusion

Reading picture books has several functions within the learning process. One of the more important ones is the development of multimodal literacy (i.e., the ability to read the meanings of different communication codes), thus creating new summative meanings. The usual picture book reading, which in practice implies reading the text along with a passive display of the illustrations, does not allow for integrated reading. The meanings are discerned only to some extent and are therefore incomplete. A productive response to picture book reading used with younger children is frequently of a visual nature, but as our survey results show, it tends to be entirely wrong in its concept (e.g., children copy their favourite motif).

A generalisation of the survey results is limited due to non-coincidental sampling: the questionnaire with our request for participation was sent to all Slovenian preschools and elementary schools, but only some of the teachers responded. Given the subject of our survey, we can assume that the data obtained is biased in a positive direction, meaning that it is more likely that the preschool teachers and elementary school teachers who decided to participate in our survey were the ones that have more experience with regards to picture books being included in the teaching process.

Considering the results of the survey, we believe that it is imperative that further research should be conducted. In the future, we should design and verify a new model (in accordance with the findings of Frank Serafini) of picture book reading within the teaching-learning process, which would support the following:

- Interdisciplinary concept (to include goals both from literature and the fine arts),
- Development and use of vocabulary from the fine arts, and
- Development of multimodal literacy.

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Biographical note

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In-service Home Economics Teachers' Attitudes to the Integration of Sustainable Topics in the Home Economics Subject

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Education for sustainable development is essential for the well-being of present and future generations and is one of the key objectives in the discipline of home economics. The purpose of this research was to ascertain whether in-service teachers of home economics recognise the opportunities to educate students about sustainable development in their courses and if they can identify the topics related to sustainable development that they can integrate into the subject of home economics. To determine this, a study using a questionnaire with a non-random sample of 89 Slovenian in-service home economics teachers was conducted. The results were qualitatively and quantitatively analysed. According to the research results, in-service home economics teachers understand that the topics of the subject promote education for sustainable development. They see the most opportunities for integrating sustainable topics arising in the fields of food and living environments, and less in economics and textiles. This is evident because sustainability topics are predominantly connected to food and the living environment classes in the current education system. Based on the research results, it can be deduced that in-service home economics teachers should be offered ongoing professional development in order to achieve the competences needed to teach sustainable development as part of the home economics subject. The need to update the curriculum of this subject has emerged as it offers numerous opportunities to educate the young in topics related to sustainable living.

Keywords: sustainable development, education for sustainable development, home economics, home economics teachers

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Odnos učiteljev gospodinjstva do vključevanja trajnostnih vsebin pri predmetu gospodinjstvo

MARTINA ERJAVŠEK, FRANCKA LOVŠIN KOZINA IN STOJAN KOSTANJEVEC

≈ Vzgoja in izobraževanje za trajnostni razvoj sta pomembna za kakovostno prebivanje zdajšnjih in prihodnjih generacij; predstavljata eno izmed ključnih izhodišč delovanja discipline gospodinjstvo. Namen raziskave je bil ugotoviti, ali učitelji, ki poučujejo gospodinjstvo, prepoznajo možnosti za vzgojo in izobraževanje učencev za trajnostni razvoj pri predmetu gospodinjstvo, ter prepoznati vsebine, ki jih učitelji gospodinjstva vključujejo v predmet gospodinjstvo in so povezane s trajnostnim razvojem. V raziskavi je bil uporabljen nenaključnostni vzorec 89 slovenskih učiteljev gospodinjstva. Za potrebe raziskave je bil razvit anketni vprašalnik. Rezultati so bili kvalitativno in kvantitativno analizirani. Izsledki raziskave so pokazali, da učitelji menijo, da vsebine predmeta gospodinjstvo spodbujajo vzgojo in izobraževanje za trajnostni razvoj. Največ možnosti za vključevanje trajnostnih vsebin vidijo na področju prehrane in bivalnega okolja, manj pa pri obravnavi vsebin s področja ekonomike gospodinjstva in tekstila, kar se izkazuje tudi v izvajanju vzgojno-izobraževalnega procesa, v katerem trajnostnim vsebinam, povezanim s prehrano in z bivalnim okoljem, namenjajo največ pozornosti. Na osnovi izsledkov raziskave lahko sklepamo, da je treba učiteljem gospodinjstva ponuditi permanentno strokovno izobraževanje, ki bi bilo namenjeno doseganju kompetenc za poučevanje trajnostnih vsebin v okviru predmeta gospodinjstvo. Kaže se tudi potreba po posodobitvi in aktualizaciji učnega načrta predmeta, saj ponuja številne priložnosti za izobraževanje mladih o temah, povezanih s trajnostnim življenjem.

Ključne besede: trajnostni razvoj, vzgoja in izobraževanje za trajnostni razvoj, gospodinjstvo, učitelji gospodinjstva

Introduction

In the literature, there are different definitions of the concept of sustainable development (SD) (Holden et al., 2014; Lorek & Spangenberg, 2014; Meadowcroft, 2007), while the definition most often used is the one given by Brundtland's Commission of 1987, defining SD as a 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (WCED, 1987, p. 43). SD includes several disciplines, such as the environment, biology, medicine, nutrition, agronomics, geography, engineering, architecture, citizenship, sociology, psychology, political science, history, law, economics, and business (DeFries et al., 2012). Thus, due to its disciplinary diversity, home economics has the potential to influence the development of measures in various sectors of society, including the environment (IFHE, 2008), with many authors (Dale & Newman, 2005; Luppi, 2011) emphasising the importance of an interdisciplinary approach for providing effective education for SD.

UNESCO (2014) points out that quality education is crucial for increasing the quality of life for individuals and for advancing SD. Education for sustainable development (ESD) is 'a process of learning how to make decisions that consider the long-term futures of the economy, ecology, and the equitable development of all communities' (UNESCO, 2009, p. 1). It encompasses content from natural sciences and technical studies, social sciences, and the humanities (Devetak & Krek, 2013). Most theoretical concepts of SD include three dimensions: economic, environmental, and social (UNESCO, 2009). Dresner (2008) indicates that there is no existing consensus about whether these three dimensions of SD should be considered equally important. Teachers rarely apply all three dimensions of SD in ESD, generally emphasising the environmental dimension and less often the economic and social dimensions (Burmeister et al., 2013; Haapala et al., 2012; Summers et al., 2004). Breiting (2000 in Borg, Gericke et al., 2012) emphasises that SD is often viewed as an extension of environmental education, which is defined as an 'educational process that deals with the human interrelationships with the environment and that utilizes an interdisciplinary problem-solving approach with value clarification'. (UNESCO-UNEP, 1983 in Pavlova, 2013). Vartiainen and Kaipainen (2012) point out that ESD is every teacher's duty, and this has also been emphasised by Buza (2010) since natural sciences teachers believe that environmental education should be included in the entire education process. Pre-service and in-service students of pre-school education and students of environmental sciences in Slovenia expect their teachers to promote the principles of SD (Torkar, 2013).

As a multidisciplinary field, home economics integrates topics of different disciplines, using an interdisciplinary and transdisciplinary approach (IFHE, 2008). Since the problems of modern times and everyday challenges are far from simple, an individual should possess different types of knowledge and skills in order to solve them successfully. It is for this reason that the importance of home economics as a multidisciplinary field is emphasised (IFHE, 2008; Sproles & Sproles, 2000). Hira (2013) points out that the concept of home economics literacy integrates various literacies: environmental literacy together with nutrition, health, and financial literacies. Gale Smith (2015) notes that increasing environmental problems and the need for SD are undoubtedly an important reason to include the topics of the home economics field in the education process. Moreover, Lice and Reihmane (2015) draw attention to the fact that many SD topics are part of the home economics school subject. The purpose of home economics education is to capacitate a person and families for the development and activities that help increase the quality of life and their readiness for life-long learning, but also to capacitate future generations to manage different global challenges (Pendergast, 2006, 2012; Renold, 2008). One study (Dewhurst & Pendergast, 2011) revealed that home economics teachers think that having sustainable topics within home economics education is essential, and they view themselves to be sufficiently competent in delivering them. Dewhurst and Pendergast (2011) note that it is essential to address sustainable topics in home economics education.

The Slovenian nine-year compulsory school is organised into three-year cycles with students ranging from six to fifteen years old (Eurydice, 2018). Students are expected to acquire knowledge of a healthy lifestyle and sustainable organisational forms of social and economic life. They should also develop a responsibility for their own health and the abilities that will enable them to function in society, engage in life-long learning and continuous personal growth, and develop the necessary skills and knowledge to be able to preserve the natural environment (Kalin et al., 2011). The nine-year compulsory school curriculum includes the home economics subject, which is compulsory for 5th graders (children 10 years of age) and 6th graders (children 11 years of age) and represents the basis of home economics education. Within this education, students acquire knowledge and skills pertaining to natural and social sciences. The subject includes four different teaching modules: 1) Economics, 2) Textiles and clothing, 3) Living and the Environment, and 4) Nutrition. In the 5th grade, the subject is taught for 35 hours. Students learn about the topics of the Economics and Textiles and Clothing modules. In the 6th grade, 52.5 hours are dedicated to home economics education, in which students learn about living

and the environment and nutrition. Home economics education stimulates students to reflect on contemporary problems as they occur at the individual, family or societal level. Students acquire the knowledge and skills for the sustainable use of natural and social resources, which are necessary to meet basic living needs. The topics of individual modules enable them to be taken from the perspective of an SD concept. Economic and environmental principles are intrinsically connected to SD, which are taken into account during the realisation of general curricular goals. However, the term 'sustainable development' is not mentioned in the Slovenian Home Economics curriculum (Elementary school programme, Home Economics ..., 2011).

Research Problem

The main objective of home economics is to improve quality of life and promote lifelong learning (Benn, 2008), thus encompassing individuals' and societal needs. Various research works (IFHE, 2008; Pendergast, 2006; Torkar & Koch, 2012) note that addressing sustainable topics within the home economics curriculum appears to be necessary for society. Kostanjevec et al. (2017) have found that different stakeholders, who deliver or are connected to the process of home economics education, hold the opinion that during the literacy process carried out within formal education, students should develop functional home economics literacy that includes knowledge and skills typical of the area of SD and consumption. Hira (2013) points out that the quality of this process may contribute to the development of adequate home economics literacy among students, which in turn fosters a change in behaviour and a higher quality of life for an individual. Kostanjevec et al. (2017) note that Slovenian teachers reported on having observed the positive effects of home economics education on the students' development of sustainable attitudes to the environment and acquisition of a higher-level environmental awareness. The above-mentioned leads to the conclusion that neither the topics of the subject nor the role of home economics teachers in the elementary school can be of marginal significance regarding sustainable development education (Höjjer et al., 2011; Lichenstein & Ludwig, 2010; Pendergast & Dewhurst, 2012; Slater & Hinds, 2014). Therefore, home economics education should include topics related to SD (Gale Smith, 2015; Grayson, 2013). Zsóka et al. (2013) argue that the attitude and behaviour of current generations of students may influence the future of the environment.

With regard to this, the role of in-service home economics teachers is relevant as they have the didactic knowledge regarding how to effectively integrate SD topics into home economics teaching. However, problems arise

if teachers do not identify the importance of SD topics that are not explicitly stated in the curriculum. To the best of our knowledge, in Slovenia, no relevant research on which topics home economics teachers recognise as being relevant to encourage ESD and which of them they integrate into teaching has been conducted.

The aims of the present research are a) to determine whether home economics teachers recognise the opportunities of their subject to educate students for SD and b) to identify the topics that are integrated into the home economics school subject, which are related to SD, by home economics teachers. Based on the aims of the research, two research questions (RQ) were formed:

RQ1: What are teachers' opinions about the role of the home economics school subject in the process of encouraging ESD?

RQ2: Which SD topics do teachers integrate into home economics courses, and in which teaching modules?

Method

Qualitative and quantitative research approaches were used. Data were collected with a survey questionnaire, which was completed by teachers who taught home economics in the nine-year compulsory school.

Participants

The sample was a non-random, purposeful one. E-mail addresses of all 452 Slovenian nine-year compulsory schools were obtained from the national teachers' database, retrieved from the web site of the Ministry of Education, Science, and Sport of the Republic of Slovenia. Headmasters of all the 452 nine-year compulsory schools were sent a letter with instructions to forward the on-line questionnaire to in-service teachers of home economics in the fifth and sixth grades. Altogether, 89 in-service teachers gave complete answers to the on-line questionnaire. These respondents represent the final sample of the research. The sample consisted of 86 (96.6%) females and 3 (3.4%) males. Most in-service teachers were between 41 and 60 years old (76.4%) and 23.6% of them were between 21 and 40 years old. The average work experience of the respondents was 23.7 years ($SD = 8.76$; $Min = 2.00$; $Max = 36.0$). Altogether, 57 (64%) in-service teachers had completed the Home Economics study programme (biology and home economics teachers, home economics and chemistry teachers, technology and home economics teachers), and 32 teachers (36%) were not educated in home economics (primary school teachers, biology and chemistry

teachers, maths and physics teachers, geography and history teachers, natural history teachers, an arts teacher and a teacher with a degree in food technology studies).

Instruments

An on-line questionnaire was developed for this research. The questionnaire was based on comparable research carried out in the field of home economics (Dewhurst & Pendergast, 2011). The initial part of the questionnaire contained questions about respondents' general demographic data, and the second part contained open-ended questions about the integration of SD topics into home economics courses in reference to the four teaching modules: 1) Economics; 2) Textiles and Clothing; 3) Living and the Environment and 4) Nutrition in the Slovenian Home Economics curriculum (elementary school programme, Home Economics ..., 2011). Teachers' attitudes were measured with a four-point Likert scale (1 – do not encourage at all, 2 – do not encourage, 3 – encourage, 4 – encourage a lot). Participants answered the following questions: (1) How significantly do home economics courses encourage ESD?; (2) How significantly do the four teaching modules encourage ESD?; (3) Which topics related to SD do you integrate into teaching modules?

Research design

At the beginning of the research, the e-mail addresses of Slovenian elementary school headmasters were obtained from the national teacher database. The headmasters were sent a letter inviting them to participate in the research. In-service teachers of home economics who teach in the fifth or sixth grades were also invited to take part. The final sample of participants was formed, after consideration of the response rate by the in-service teachers of home economics. Teachers included in the research filled in the on-line questionnaire, designed on the IKA electronic application for surveys (<https://www.ika.si/>). Teachers' responses were collected in electronic form. Data analysis was carried out with the Statistical Package for the Social Sciences (SPSS, version 22). Descriptive and inferential statistics were used to analyse quantitative data. Basic descriptive statistics of numerical variables (mean, standard deviation and frequency) were employed. One-way repeated measures ANOVA and Bonferroni post hoc test were conducted to compare in-service home economics teachers' attitudes regarding the way how home economics teaching modules encourage ESD.

To analyse the open-ended questions, qualitative data analysis was used. It was carried out by employing the following steps. First, the material was edited, then an inductive approach was used for coding. Formulated according to home economics terminology, codes were determined upon an analysis of responses to the open survey questions. To ensure the adequacy of the codes, coding was carried out by two independent researchers. They compared and reconciled the possible discrepancies between certain codes. After reaching a consensus, different codes were classified into several sub-categories depending on their similarities and differences. Different sub-categories were further classified into main categories.

Results of Research

Attitudes of in-service home economics teachers regarding the way home economics encourages ESD

The home economics curriculum includes many topics that can be integrated effectively with SD. In the research, participating in-service home economics teachers were asked how home economics courses encourage ESD. The results show that a big majority of participating teachers think that home economics courses encourage (69.7%) or strongly encourage (29.2%) ESD (Table 1).

Table 1

In-service teachers' attitudes regarding how home economics courses encourage ESD

How do Home Economics courses encourage ESD?	1		2		3		4		<i>M</i> ^a	<i>SD</i>
	<i>f</i>	<i>f</i> %								
	0	.0	1	1.1	62	69.7	26	29.2	3.28	.48

Note. ^a Average value (*M*) is calculated based on 4-point Likert scale (1 - do not encourage at all, 2 - do not encourage, 3 - encourage, 4 - encourage a lot).

Home economics courses in Slovenia include four teaching modules: Economics, Textiles and Clothing, Living and the Environment, and Nutrition.

The research aimed to establish how home economics teaching modules encourage ESD, according to teachers. Table 2 shows that the teachers believe that the nutrition teaching module is most applicable, followed by living and the environment, and economics. According to the teachers, the textile and clothing teaching module is somewhat less suitable for integration of ESD (Table 2).

Table 2

Attitudes of in-service teachers regarding how home economics teaching modules encourage ESD

Module	<i>M</i> ^a	<i>SD</i>
Textile and Clothing	2.97	.55
Economics	3.27	.58
Living and Environment	3.31	.60
Nutrition	3.65	.50

Note. ^a Average value (*M*) is calculated based on 4-point Likert scale (1 - do not encourage at all, 2 - do not encourage, 3 - encourage, 4 - encourage a lot).

One-way repeated measures ANOVA showed a statistically significant effect of the teachers' attitudes regarding home economics teaching modules and integration of ESD (Wilks' Lambda = .378, $F(5, 86) = 47.13, p < .000$). The Bonferroni test for Pairwise Comparison showed a statistically significant difference between nutrition and all other teaching modules; Economics ($p < .000$), Textile and Clothing ($p < .000$), and Living and the Environment ($p < .000$). Moreover, there is a statistically significant difference between the Textile and Clothing module and all other teaching modules: Economics ($p < .000$) and Living and Environment ($p < .000$). Differences between teaching modules Living and the Environment and Economics are not statistically significant ($p < 1.000$) (Table 3).

Table 3

Results of Bonferroni post hoc test for Pairwise Comparisons between pairs of home economics teaching modules

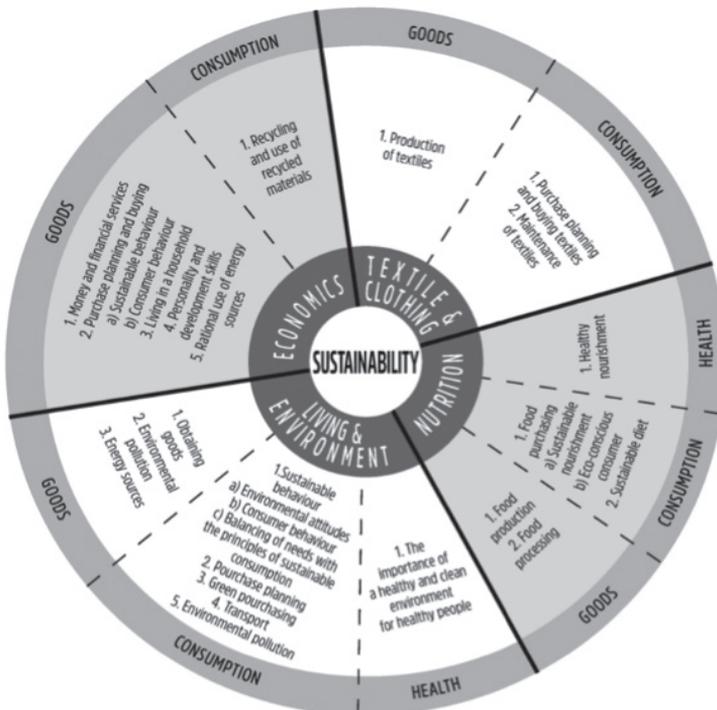
Module 1	Module 2	Mean Difference	<i>SE</i>	<i>p</i>
	Textile and clothing	.303	.067	.000
Economics	Living and the environment	-.045	.069	1.000
	Nutrition	-.382	.057	.000
Textile and clothing	Living and the environment	-.348	.064	.000
	Nutrition	-.685	.059	.000
Living and environment	Nutrition	-.337	.062	.000

Overview of SD topics' integration into teaching modules of Home Economics

Teachers were asked to identify which SD related topics they integrate into their home economics courses and teaching modules (RQ2). They wrote their answers separately for each teaching module. The answers were coded and classified into main categories and subcategories. After coding, three main categories were identified: goods, consumption, and health. Figure 1 presents the SD topics that in-service home economics teachers integrate into the home economics teaching modules. The three main categories do not appear in all teaching modules of home economics subjects. For teaching the modules of Economics, Textiles and Clothing, goods and consumption were identified. For the teaching modules Living and the Environment and Nutrition, the health category was identified.

Figure 1

Main and sub-categories of the topics referring to SD that in-service teachers integrate into home economics teaching modules



Below, a more detailed analysis of sub-categories related to each category and teaching module is presented.

Economics

As mentioned above, two main categories were identified in the Economics teaching module:

- a) goods and
- b) consumption.

The *Goods* category includes five sub-categories related to sustainability topics. The first sub-category, *Money and Financial Services*, includes topics connected to money and its functions, the economy, and saving. The second sub-category, *Purchase Planning and Buying*, includes topics such as sustainable and consumer behaviour connected to the responsible use of financial resources. The third sub-category, *Living in a Household*, includes topics connected to the principles of a person's and family's sustainable lifestyle in a household. The fourth sub-category, *Personality and Development Skills*, includes topics connected to planning one's own needs and organising work. The fifth sub-category, *Rational Use of Energy Sources*, includes topics connected to the efficient consumption of energy, water, foodstuffs, and cleaners with the financial aspect of their use emphasised.

The *Consumption* category includes one sub-category: *Recycling and use of recycled materials*, within which teachers connect the topics of recycling and re-use of various products with reducing costs in the family budget (Figure 1). Participating in-service home economics teachers rarely integrate SD topics into the Economics teaching module ($f = 15$).

Textile and clothing

The Textile and Clothing teaching module includes two main categories: a) goods and b) consumption. The category *Goods* includes one sub-category: *Production of Textiles*. The category *Consumption* includes two sub-categories. The first, *Purchase Planning and Buying Textiles*, is connected to planning purchases and selecting and acquiring clothes. The second sub-category is *Maintenance of Textiles* (Figure 1). Participating in-service teachers of home economics rarely integrate SD topics into the Textile and Clothing teaching module ($f = 5$).

Living and environment

Three main categories were identified in the Living and Environment teaching module:

- a) goods,
- b) consumption and
- c) health.

The category *Goods* includes three sub-categories. The first sub-category, *Obtaining goods*, is connected to agriculture and food production without pollutants. The second sub-category is *Environmental pollution* and the third sub-category is *Energy sources*, referring to the characteristics of renewable and non-renewable energy sources together with the impact of their use on the environment.

The category *Consumption* includes five sub-categories. The first sub-category *Sustainable behaviour*, is connected to a person's proper attitude to the environment and their consumer behaviour. Teachers deal with the influence of hyper-consumerism, fashion trends, and trademarks on a person's purchasing behaviour and point out the importance of rational consumer choices. Teachers also encourage sustainable behaviour in students by addressing topics on sustainable use of different energy sources and waste separation in one's household and about nature conservation and care for the environment. Moreover, teachers emphasise the importance of balancing one's needs with the principles of sustainable consumption. The second sub-category is *Purchase planning*, in which teachers present the influence of advertising and media on consumers' purchase decisions, which should focus on sustainability. The third sub-category is *Green purchasing*, which refers to an eco-conscious and responsible consumer. The fourth sub-category is *Transport*, also connected to the fifth sub-category, which is *Environmental pollution* as the consequence of the negative impact of consumption on the environment.

The category *Health*, includes one sub-category: *The importance of a healthy and clean environment for healthy people* (Fig. 1). In-service home economics teachers integrate many topics related to SD ($f = 68$) in the Living and environment teaching module.

Nutrition

Three main categories were identified in the Nutrition teaching module:

- a) goods,
- b) consumption and
- c) health.

The category *Goods* includes two sub-categories. The first sub-category, *Food production*, is connected to the methods used in food production, featuring concepts such as organic farming, and organic and integrated food production. At the same time, teachers emphasise the importance of food production in terms of local self-supply as they deal with the topics of locally produced food and point out the importance of short-distance transport of such food.

The second sub-category, *Food processing*, includes the topics of different mechanical and thermal food processing in order to preserve the nutrition and sensory quality of foodstuffs. Teachers point out the importance of appropriate food storage to prevent their deterioration and emphasise the importance of food preservation, as it significantly influences the quantity of food waste.

The category consumption also includes two sub-categories. The first, *Food purchasing*, refers to consumers' sustainable behaviour when planning purchases and buying food. This goes together with the significance of eco-conscious consumer who should know and critically evaluate environmental problems of food consumption connected to the carbon footprint, the importance of short production chains and familiarity with labels on food packaging that display information on food production and processing methods.

In the second sub-category, *Sustainable diet*, teachers encourage students' positive attitudes to food and teach them to treat food with responsibility, which should contribute to decreased quantities of food waste.

The third main category, *Health*, includes one sub-category, *Healthy nourishment*, which includes the topics referring to healthy, well balanced and safe nourishment and to the influence of food on a person's health. In connection to the practical preparation of healthy food, teachers draw attention to the rational use of water and energy when food is thermally processed, and to the efficient use of foodstuffs in the preparation of meals (Fig. 1). Most frequently, the participating teachers integrate SD topics into the Nutrition teaching module ($f = 75$).

Discussion

The results of the present research indicate that three-quarters of the participating in-service teachers of home economics think that the topics of the Slovenian Home Economics curriculum encourage ESD. Home economics teachers are the key actors and promoters of the home economics discipline, who are supposed to act according to the principle of uniform philosophy for the discipline and in compliance with its umbrella principles (Hira, 2013; Wahlen et al., 2009). The key starting points for enacting and developing the home economics

discipline in the 21st century are published in the basic IFHE Position Statement, conceived by IFHE in 2008. The key starting points of home economics activities emphasise SD that refers to the question of how to obtain an optimal, yet sustainable life, where the relationship between human needs and the consumption of resources is the most advantageous. Home economics teachers are thus expected to recognise SD as one of the key areas in which home economics has a substantial impact. It is also essential for the teachers to be aware of the role that they have in carrying out high quality home economics education, incorporating the various aspects of SD. Only sufficiently competent and motivated teachers who integrate SD topics using appropriate teaching approaches can encourage the development of home economics literacy.

In-service home economics teachers were asked how home economics courses and teaching modules encourage ESD (RQ1). The results of the present research revealed that all four teaching modules were perceived as encouraging ESD; however, the teachers recognised some as being more relevant than others. In-service teachers recognised the Nutrition teaching module as the most relevant for integrating SD, followed by Living and Environment, Economics, and Textiles and Clothing.

According to the results of the present research, the Nutrition teaching module was identified as the most stimulating and suitable module for the integration of SD topics. One of the reasons could be that, in comparison to other teaching modules, this module is the most extensive one in the Slovenian Home Economics curriculum and is thus more available for teachers to include sustainable topics in this teaching module. Kostanjevec et al. (2018) have found that Slovenian in-service home economics teachers see themselves as the most competent to teach the Nutrition module.

According to the in-service home economics teachers' opinions, the Living and Environment module is similarly important to the Nutrition module for the acquisition of knowledge and skills for SD. The Slovenian curriculum of the module includes topics from the following areas: 1) attitude to the environment; 2) sustainable behaviour; 3) eco-conscious consumer; 4) production of goods, 5) consumer behaviour, and 6) consumer information on products and services (Elementary school programme, Home Economics ..., 2011). In modern society, these topics are frequently connected to SD (Ljice & Reihmane, 2015).

Within home economics education in Slovenia, fifth-graders acquire knowledge and skills in the Economics, and Textiles and Clothing teaching modules. Participating in-service home economics teachers found these modules less suitable for integrating SD topics. They also estimate that both of these

modules have inferior roles in stimulating students to become educated about SD. Given the results of the research carried out by Kostanjevec, Lovšin Kozina, and Erjavšek (2018), it can be deduced that teachers' attitudes also depend on their competence to teach particular topics. Slovenian legislation stipulates that fifth grade home economics can be taught by a primary school teacher (Elementary School Act, 2016). Banič and Koch (2015) have found that in Slovenia, 5th grade home economics is mostly taught by primary school teachers who have acquired general teaching competence during their studies, but not the subject-specific competencies essential to carry out home economics education (Information Booklet ..., 2017-18). This may be one of the factors influencing teachers' perceptions of the potential of the home economics subjects to integrate ESD. Kostanjevec et al. (2018) found that these teachers perceive themselves to be the least competent to teach the Economics and Textile and clothing teaching modules. Gisslevik et al. (2017) point out that inadequate professional qualifications of a home economics teacher can influence the quality of home economics education. This can be one of the factors influencing teachers' perceptions of whether the Economics, and Textiles and Clothing modules were suitable for the inclusion of SD topics.

Modules of Home Economics curricula differ in different school systems (Pendergast, 2012). Considering the key orientations of the home economics discipline (IFHE, 2008) and the findings of some authors (Dixon, 2017; Gale Smith, 2015), it is expected that home economics topics are dealt with in the perspective of SD. The present research aimed at establishing which topics related to SD are integrated by in-service teachers. A connection between a teacher's attitude towards the suitability of home economics teaching modules to integrate sustainable topics and their actual integration in a particular module was established. Sustainable topics are most often integrated into the Nutrition, and Living and Environment teaching modules, less so in the Economics module and the least in the Textiles and Clothing teaching module. Qualitative data analysis of answers showed that various sustainable topics are integrated into the home economics education process by in-service teachers, classified in three main-categories: goods, consumption, and health; moreover, their integration differs depending on the particular module (Figure 1). There are good opportunities for the integration of sustainable topics in all home economics teaching modules. Thus, it might be beneficial to supplement the Slovenian Home Economics curriculum with topics related to sustainability, since the sustainable aspect is at present not explicitly emphasised and the notion of SD is imperceptible in the curriculum. Torkar and Koch (2012) maintain that home economics teachers should pay more attention to the integration of

root sciences (such as natural, social and human sciences) in home economics education as this is important for achieving sustainable living. Literature currently reveals a trend of updating the Home Economics curricula (Dixon, 2017; Gisslevik et al., 2017; Lind et al., 2009; Ma & Pendergast, 2011; Olafsdottir et al., 2017; Pace et al., 2015; Pridāne, 2017; Tamm & Palojoki, 2012; Tuomisto et al., 2017). The actualisation of the curricula primarily tends to satisfy the needs of an individual and society. The process emphasises knowledge and skills that enable children and youths to carry out everyday activities at home and to adopt decisions leading to responsible behaviour (Tamm & Palojoki, 2012). This additionally refers to ESD as being one of the key starting points for the effective functioning of the home economics discipline. At the same time, it would be reasonable to give in-service teachers clear guidelines for dealing with home economics topics in terms of sustainability, which can significantly influence the quality of home economics literacy, the aim of which is also ESD.

Conclusions

The results of the research have shown that participating Slovenian in-service teachers of home economics believe that compulsory home economics school subjects could encourage primary school students to learn about SD. The teachers found all four teaching modules in the Slovene Home Economics curriculum useful for integrating topics that encourage SD. However, the teachers do not view the importance of the selected teaching modules equally. In their opinion, the most appropriate module was the Nutrition module, while the Textiles and Clothing module was of lesser importance. The results have shown that this opinion is also reflected in their integration of sustainable topics into home economics courses. As mentioned, it was found that the integration of sustainable topics in home economics is inadequate and also less frequent in some teaching modules. Reasons for that may be in the fact that topics and competences related to SD are not clearly defined in the Slovenian Home Economics curriculum. This may also be the reason that in-service teachers often lack suitable ideas about how to teach in the context of ESD. Therefore, some improved university study programmes and high quality permanent professional development of teachers should be offered. The results also suggest that in-service home economics teachers understand SD primarily as environmental education. Therefore, we suggest the Slovenian Home Economics curriculum be updated so that SD topics are more clearly defined, and where all three dimensions of SD (economic, environmental and social) are clearly evident.

Limitations of this study

The limitation of the present study is that the participating in-service home economics teachers were not given a definition of SD prior to completing the survey. Therefore, there is a possibility that their limited understanding of the concept influenced their views on the integration of ESD into the home economics subject.

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Assessing Children's Environmental Worldviews and Concerns

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∞ The goal of the present research was to assess the environmental worldviews and concerns of students from the fourth to the seventh grade in Slovenia. The New Ecological Paradigm Scale for Children was translated and validated for use with Slovenian primary school students ($N = 310$). The students were also asked about their environmental concerns (using statements from the Environmental Motives Scale) and demographic questions. A confirmatory factor analysis was conducted for the New Ecological Paradigm scale using AMOS software, confirming a three-dimensional model with ten items. The students showed the highest agreement with the items in the factor Rights of Nature, and the lowest agreement with Human Exemptionalism. The environmental attitudes of the students decreased from the fourth to the seventh grade, while altruistic environmental concerns significantly increased with higher grades. Gender differences were not statistically significant for environmental worldviews and concerns. The reported results show that biospheric environmental concern positively correlates with the factors Rights of Nature and belief in Eco-Crisis, and negatively correlates with Human Exemptionalism. The New Ecological Paradigm tool will enable the evaluation of education programmes for children in Slovenia.

Keywords: environmental worldviews, environmental concerns, New Ecological Paradigm, children

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Vrednotenje otrokovih okoljskih svetovnih nazorov in skrbi

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∞ Cilj raziskave je bil oceniti okoljski svetovni nazor in skrb za okolje učencev od četrtega do sedmega razreda v Sloveniji. Lestvica nove ekološke paradigme za otroke je bila prevedena in validirana za uporabo s slovenskimi osnovnošolci ($N = 310$). Učence smo tudi spraševali o njihovi skrbi za okolje (z uporabo lestvice okoljskih motivov) in zastavljali demografska vprašanja. Za Lestvico nove ekološke paradigme je bila izvedena potrditvena faktorska analiza s pomočjo programske opreme AMOS, ki je potrdila tridimenzionalni model z desetimi trditvami. Študentje so pokazali najvišje soglasje s trditvami v faktorju pravice narave, najnižje pa s faktorjem človeška izjemnost. Odnos do okolja se je od četrtega do sedmega razreda poslabšal, medtem ko so učenci v višjih razredih pokazali bolj altruistično skrb za okolje. Razlike med spoloma niso bile statistično pomembne za njihove okoljske svetovne nazore in skrbi. Izsledki kažejo, da je okoljska skrb za biosfero v pozitivni korelaciji s faktorji pravice narave in vera v ekološko krizo ter v negativni korelaciji s faktorjem človeška izjemnost. Nova ekološka paradigma nam bo omogočila vrednotenje izobraževalnih programov za otroke v Sloveniji.

Ključne besede: okoljski svetovni nazor, skrb za okolje, nova ekološka paradigma, otroci

Introduction

Environmental problems are among the most pressing social issues of our time. Major environmental problems can readily generate strong feelings in anyone delving into the roots of the current situation. Addressing these issues will require people to do things differently. The goal of environmental education is to develop a world population that is aware of and concerned about the environment (Palmer & Neal, 1994). The success of environmental education depends particularly on cognitive development and environmental knowledge (with special attention to knowledge of biology and ecology), affective and motivational factors (especially a connection to nature and feelings about one's ability to achieve effects in the world), and actual behaviour (participating, taking action and problem-solving) (Clayton & Myers, 2009). Schools must play their part in the process of raising the awareness and competence of citizens in managing our planet in a sustainable way, and must accept responsibility for building "environmental literacy" by means of environmental education (Brennan, 1994). The Slovenian school system is expected to assist children and adolescents in developing their knowledge, attitudes and personal commitment with regard to the environment (Krek, 2011). Slovenia has introduced an obligatory curriculum for environmental education as education for sustainable development, which must be autonomously introduced into the curricula of each primary and secondary school (Šorgo & Kamenšek, 2012). However, researchers have stressed that teaching is mostly about environmental issues, and often does not include teaching within the environment nor using the environment in active, vernacular learning (Selby, 2017). Moreover, environmental issues are not taught as cross-curricular and interdisciplinary themes, a failing that can result in insufficient ability to evaluate an environmental problem critically (Šorgo & Kamenšek, 2012; Torkar, 2014). There is a clear need for assessing environmental worldviews and concerns during childhood and adolescence. This concerns those offering both formal and informal environmental education programmes in Slovenia, as well as researchers investigating the development of environmental attitudes.

Environmental Worldviews

Since the 1970s, as people all over the world have increasingly witnessed industrial and nuclear accidents, oil spills, depletion of resources, mismanagement of waste, environmentally induced diseases and other environmental problems, an ecocentric paradigm has arisen, leading to the postulation of the New Environmental Paradigm (Dunlap & Van Liere, 1978), the New Ecological

Paradigm (Dunlap et al., 2000) and the Ecological World View (Blaikie, 1992). The New Ecological Paradigm (NEP) focuses on beliefs about the ability of humans to upset the balance of nature, the existence of limits to growth for human societies, and humanity's proper role as part of the rest of nature (Dunlap et al., 2000). The New Environmental Paradigm Scale and the New Ecological Paradigm Scale (NEP Scale) are widely used instruments for studying environmental worldviews among adults (Dunlap & Van Liere, 1978; Dunlap et al., 2000) and children (Manoli et al., 2007; Johnson & Manoli, 2010). They see environmental perception as a unidimensional construct on a continuum from a biocentric to an anthropocentric worldview, or as three dimensions: Rights of Nature, Eco-Crisis and Human Exemptionalism (Manoli et al., 2007). The NEP Scale for Children is still in use in a variety of locations (e.g., Collado et al., 2013; Izadpanahi & Tucker, 2018), which makes it a useful instrument for cross-cultural comparisons of environmental worldviews among children.

Environmental Concerns

Another line of empirical studies has concentrated on motives that underlie environmental concerns. People around the world are generally concerned about environmental problems because of the consequences of harming nature, but they differ in which consequences concern them the most (Schultz, 2001). Stern et al. (1993) first proposed a value-basis theory. This was modified a year later into a value-belief-norm (VBN) theory (Stern & Dietz, 1994), which extends the existing norm-activation theory of altruistic behaviour (Schwartz & Howard, 1981). Within the VBN theory, values are regarded as the source of environmental concern, as people's attitudes about environmental issues and pro-environmental behaviour are thought to focus either on self and self-oriented goals (egoistic), on other people, such as family members, humanity and friends (social-altruistic), or on the wellbeing of all living things, such as plants, animals and trees (biospheric) (Stern & Dietz, 1994). For example, concern over water pollution can be expressed for fundamentally different reasons: polluted drinking water is dangerous to my health (egoistic), dangerous to the health of all children (altruistic), or damaging for organisms living in freshwaters (biospheric). Thus, concern for environmental issues may originate in an awareness of and belief in harmful consequences with regard to all three sets of values (valued objects) leading to concern for environmental issues (Schultz et al., 2004). Subsequently, scales were developed including egoistic, social-altruistic and biospheric value orientations. The Environmental Motives Scale (EMS) has favourable reliability scores and factor structure (e.g., De Dominicis et al., 2017)

as well as cross-cultural validity (e.g., de Groot & Steg, 2007; Schultz et al., 2005; Torkar, 2016; Torkar & Bogner, 2019). Furthermore, cross-validation studies with other item batteries has assured further insight (Schultz et al., 2005), such as connectedness with nature and the NEP Scale (Schultz, 2001), and pro-environmental behaviour (de Groot & Steg, 2007).

The main aim of the present research was to translate and validate the New Ecological Paradigm Scale for Children (Manoli et al., 2007) for use with primary and lower secondary school students in Slovenia, with the goal of assessing their environmental worldviews and environmental concerns. In previous studies, the environmental concerns of Slovenian upper secondary school students were examined (Torkar, 2016; Torkar & Bogner, 2019); however, to the best of our knowledge, there are no studies involving Slovenians in which the NEP Scale for Children has been employed.

Research Questions (RQ)

- RQ1: How do the environmental worldviews of Slovenian students change from grade 4 to grade 7?
- RQ2: Are there any gender differences in the environmental worldviews of Slovenian children?
- RQ3: How do the egoistic, altruistic and biospheric environmental concerns of Slovenian students change from grade 4 to grade 7?
- RQ4: Are there any gender differences in the environmental concerns of Slovenian students?
- RQ5: How are the environmental concerns of Slovenian students related to environmental worldviews?

Method

Participants

The survey was carried out in the autumn of 2018. Four of the seven schools invited agreed to participate in the survey. Teachers administered the questionnaires in the classrooms and the instructions were read aloud to the students. A total of 310 primary and lower secondary school students from the fourth to the seventh grade (aged 9 to 13) participated in the survey. In Slovenia, the education system consists of nine years of compulsory education (from age six to fifteen). The first six grades can be identified as primary (ISCED 1) level, and from seventh to ninth grade can be identified as lower secondary school level (ISCED 2) (Eurydice, 2018). In the period of nine-year compulsory

school, students learn the most about environmental education in the compulsory school subjects Knowing the Environment (grades 1–3), Science and Technology (grades 4–5), Home Economics (grades 5–6), Science (grades 6–7), Biology (grades 8–9) and Chemistry (grades 8–9).

Measures

The students' environmental worldviews were explored with the Slovenian version of the New Ecological Paradigm Scale for Children (Manoli et al., 2007) with ten items. It was translated from English to Slovenian by the first author and then reviewed by two experts in educational research (for details, see Table 1 and Appendix). The Environmental Motives Scale (EMS) (Bruni et al., 2012; Schultz, 2000, 2001; Schultz et al., 2004) had been previously translated into Slovenian and used in research by Torkar (2016) and Torkar and Bogner (2019). In the present research, only three items of the EMS were used to measure concern for environmental problems: the egoistic item "me", the altruistic item "all people" and the biospheric item "all living beings". The students rated items about which they were concerned from 1 (not important) to 7 (supreme importance). They were also asked demographic questions (gender, grade). Full anonymity was guaranteed to the participants during all of the data collection steps. Under Slovenian regulations, such studies do not require the approval of an ethics committee.

Data analysis

A confirmatory factor analysis (CFA) was conducted for the NEP Scale using AMOS software. The initial research reporting the development and validation of the NEP Scale for Children (Author) recommended that the factor structure of the scale be tested each time it is used in a new context, in order to verify whether a 1-factor model or a 3-factor model should be used. Significant values of Shapiro–Wilk statistics ($p < .001$) for each of the groups suggest a violation of the assumption of normality. The non-parametric Mann-Whitney U test and the Kruskal-Wallis H test were used to analyse the differences between students' NEP and EMS results with respect to grades and gender. Spearman rank correlation r_s was calculated for exploring correlations between the NEP and the EMS.

Results

In order to test this with the current data, we conducted a CFA for both the 1-factor and 3-factor solutions using AMOS software. The 1-factor model showed a poor fit of the model to the data: Chi^2/df ratio = 2.396, CFI = .692, TLI

= .517, RMSEA = .063. However, the 3-factor model showed a much better fit: χ^2/df ratio = 1.865, CFI = .847, TLI = .700, RMSEA = .050. The three factors are Rights of Nature, Eco-Crisis, and Human Exemptionalism. A Shapiro-Wilk Normality Test was used to assess the normality of the distribution of scores. Table 1 contains response frequencies, mean and standard deviation for all 10 NEP items. The students agreed most (strongly) with the statements “People must still obey the laws of nature” and “Plants and animals have as much right as people to live”. The students disagreed most (strongly) with the statement “People are supposed to rule over the rest of nature”.

Table 1

Frequency distributions of the responses to the New Ecological Paradigm Scale for Children

Scale items	Responses (% of students)					M	SD
	5-Strongly agree	4-Agree	3-Not sure	2-Disagree	1-Strongly disagree		
1. Plants and animals have as much right as people to live.	71.8	23.1	3.9	1.0	.3	4.65	.64
2. There are too many (or almost too many) people on Earth.	7.8	25.6	38.9	16.9	11.0	3.02	1.09
3. People are clever enough to keep from ruining the Earth.	11.1	24.2	26.8	23.9	14.1	2.94	1.22
4. People must still obey the laws of nature.	81.4	14.7	2.6	1.0	.3	4.76	.58
5. When people mess with nature it has bad results.	33.9	29.6	23.4	6.9	6.3	3.78	1.16
6. Nature is strong enough to handle the bad effects of our modern lifestyle.	5.8	12.0	23.7	27.6	30.8	2.34	1.20
7. People are supposed to rule over the rest of nature.	6.2	4.9	13.4	23.9	51.5	1.91	1.18
8. People are treating nature badly.	41.4	29.8	14.4	8.0	6.4	3.93	1.22
9. People will someday know enough about how nature works to be able to control it.	11.1	17.3	28.7	21.2	21.8	2.75	1.28
10. If things don't change, we will have a big disaster in the environment soon.	63.3	22.1	9.7	2.6	2.3	4.42	.93

Next, the scores for each of the three factors – Rights of Nature, Eco-Crisis and Human Exemptionalism – were calculated (see Table 2, Figure 1). Mean scores ranged from 1 (strongly disagree) to 5 (strongly agree). The students showed the highest agreement with items in the factor Rights of Nature and the lowest with Human Exemptionalism.

Table 2

Factor scores for Children's NEP

	<i>M</i>	<i>SD</i>	<i>N</i>
1. Rights of Nature (items 1, 4, 7*)	4.05	.52	309
2. Eco-Crisis (items 2, 5, 8, 10)	3.78	.68	309
3. Human Exemptionalism (items 3, 6, 9)	2.67	.81	309

Note. *Item 7 was a reverse scored.

Figure 1

Boxplots for the 3-factor Children's NEP

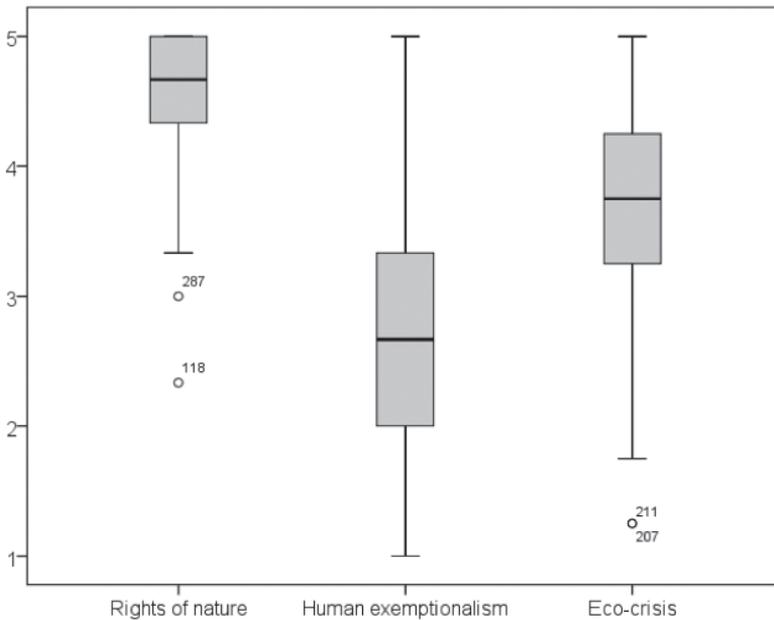
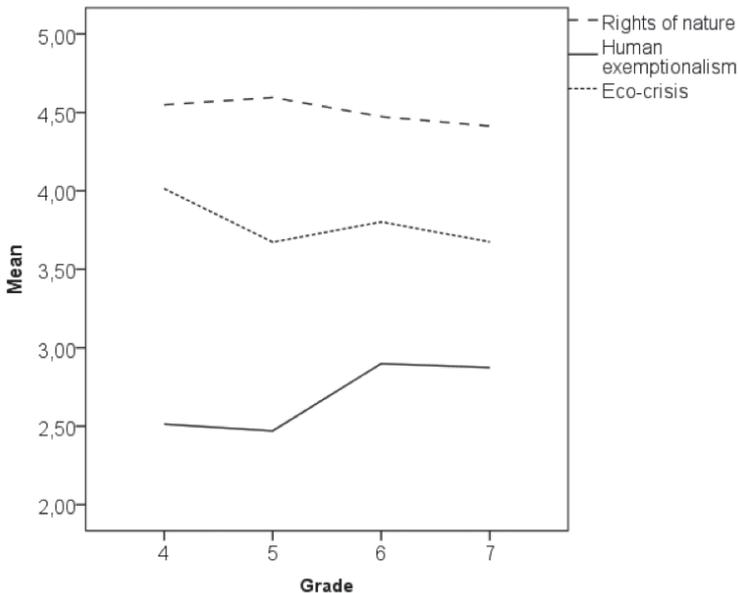


Figure 2 shows the differences in the scores for the three factors: Rights of Nature, Eco-Crisis and Human Exemptionalism. The Kruskal-Wallis H test showed no significant difference from grade 4 to grade 7 in the Rights of Nature

factor ($H(3) = 6.815, p = .078$). There was a statistically significant increase from grade 4 to grade 7 in the Human Exemptionalism factor ($H(3) = 21.836, p < .001$). There was also a significant decrease in the average score from grade 4 to grade 7 in the Eco-Crisis factor ($H(3) = 15.928, p = .001$).

Figure 2

Multiple line graphs for environmental worldviews from grade 4 to grade 7



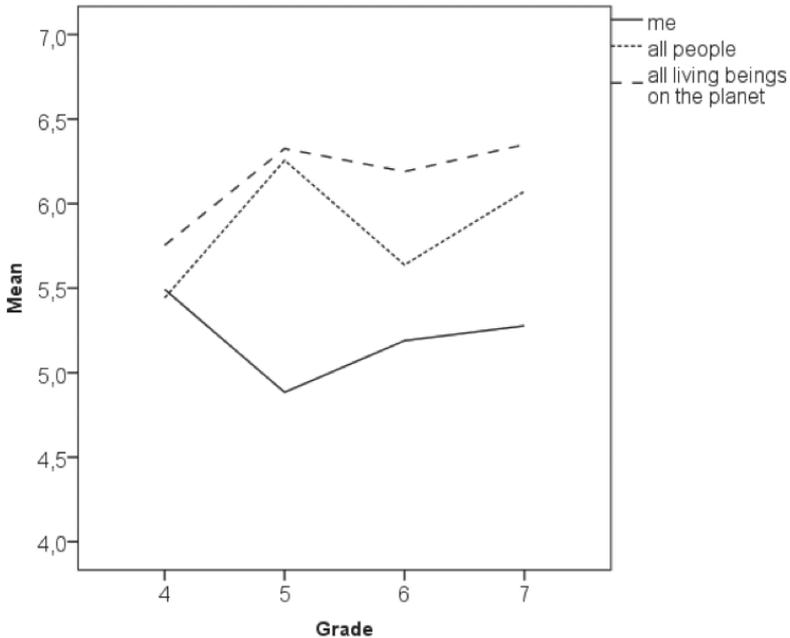
The Mann-Whitney U -test was used to test for gender differences. The difference between male and female students in factor mean scores for Rights of Nature ($U = 10897.0, p = .520$), Eco-Crisis ($U = 10257.5, p = .140$) and Human Exemptionalism ($U = 11053.5, p = .675$) were found to be not statistically significant.

Figure 3 shows the differences in the students' environmental concerns. The results show that they are most concerned for all living beings. The fourth-grade students are equally concerned for themselves and all humans, but, with age, their altruistic concern for the environment increases and their egoistic environmental concern decreases slightly. The Kruskal-Wallis H test showed no significant difference from grade 4 to grade 7 in the students' environmental concern for themselves (egoistic environmental concern) ($H(3) = 2.681, p = .443$) and for all living beings (biospheric environmental concern) ($H(3) = 5.286, p = .152$). There was a statistically significant change in environmental

concern for all of the students (altruistic environmental concern) ($H(3) = 11.957$, $p = .008$) in favour of students in the higher grades.

Figure 3

Multiple line graphs for environmental concerns from grade 4 to grade 7



The Mann–Whitney U -test was used to test for gender differences. The differences between male and female students in egoistic environmental concern ($U = 9725.0$, $p = .576$), altruistic environmental concern ($U = 9728.5$, $p = .698$) and biospheric environmental concern ($U = 9324.0$, $p = .121$) were found to be not statistically significant.

Correlations between the NEP and the EMS are presented in Table 3. The Rights of Nature factor is significantly negatively correlated with Human Exemptionalism, $r_s(308) = -.195$, $p < .001$, and positively correlated with the Eco-Crisis factor, $r_s(308) = .175$, $p = .002$. The Rights of Nature factor is significantly positively correlated with biospheric environmental concern, $r_s(308) = .209$, $p < .001$. The Human Exemptionalism factor is significantly negatively correlated with biospheric environmental concern, $r_s(308) = -.170$, $p = .004$. The Eco-Crisis factor is significantly positively correlated with biospheric environmental concern, $r_s(308) = .120$, $p < .037$. Altruistic environmental concern is significantly positively

correlated with biospheric environmental concern, $r_s(308) = .368, p < .001$. Altruistic environmental concern is also significantly positively correlated with egoistic environmental concern, $r_s(308) = .118, p = .038$.

Table 3

Correlations between environmental worldviews and concerns

		1.	2.	3.	4.	5.	6.
1. Rights of Nature	r_s	1	-.195**	.175**	.029	.019	.209**
2. Human Exemptionalism	r_s	-.195**	1	-.062	.008	-.081	-.170**
3. Eco-Crisis	r_s	.175**	-.062	1	-.024	.043	.120*
4. Egoistic environmental concern	r_s	.029	.008	-.024	1	.118*	.092
5. Altruistic environmental concern	r_s	.019	-.081	.043	.118*	1	.368*
6. Biospheric environmental concern	r_s	.209**	-.170**	.120*	.092	.368**	1

Note. * $p < .05$, ** $p < .001$.

Discussion and Conclusion

The results show that a 3-factor model (Rights of Nature, Eco-Crisis and Human Exemptionalism) is a more suitable structure for use in the Slovenian context than the 1-factor model of the NEP Scale for Children. Manoli et al. (2007) found a good fit for both the uni-dimensional and the three-dimensional models. Some studies in other contexts have confirmed the uni-dimensional model (e.g., Boeve-de Pauw et al., 2011; Collado et al., 2013). In the present study, the students showed the highest agreement with items in the factor Rights of Nature and the lowest with Human Exemptionalism, which is in line with previous studies (e.g., Manoli et al., 2007).

The present research aimed to better understand how environmental worldviews and concerns develop from childhood to adolescence. Årlemalm-Hagsér (2013) argue for the need for a critical discussion about sustainability education for developing environmental awareness as early as in the preschool period. As in some previous studies (e.g., Liefländer & Bogner, 2014), primary school students in the fourth grade showed higher environmental attitudes than students in the seventh grade. There was no significant improvement in their egoistic and biospheric environmental concern with age. However, there was a statistically significant change in altruistic environmental concern in favour of students in higher grades.

The findings show no significant gender difference for environmental worldviews and concerns. Regarding gender effects, Evans et al. (2007) reported that children's environmental attitudes were unrelated to gender. Torkar (2016) reported

that Slovenian female upper secondary school students were more concerned for all people and for the biosphere than male students. Schultz (2000) found that adult women scored higher than men on all three measures of environmental concern. Stern et al. (1993) found that women tend to see environmental quality as having more consequences for personal wellbeing, social welfare and the health of the biosphere. One possible explanation for these differences is the consequences of child socialisation, which become a source of gender differences in concern for the environment with age. Sociological theories of gender emphasise gender differences in the socialisation process and/or social roles and status in society (e.g., Davidson & Freudenburg, 1996; Gilligan, 1982; Xiao & McCright, 2015).

The results show that only biospheric environmental concern correlates with environmental worldviews: positively with Rights of Nature and Eco-Crisis, and negatively with the belief in Human Exemptionalism. This is an unexpected result. In past research (Schultz et al., 2004), all three environmental concerns correlated significantly with the 1-factor model for NEP: egoistic and altruistic negatively, and biospheric positively.

The present research was the first attempt to use the NEP Scale with children in Slovenia, and it provides first-hand information about how the NEP Scale worked for children in the Slovenian context. However, the research includes a very limited sample of students from 9 to 13 years of age, attending four different schools from the west of Slovenia, and could therefore be limited in representing the general population of school children in Slovenia.

As across Europe, Slovenian education policy recommends actions to improve environmental attitudes. The NEP Scale for Children has been used as a tool several times to evaluate the effectiveness of education programmes in different countries (e.g., Johnson & Manoli, 2010; Manoli et al., 2007; Pauw et al., 2011). Johnson and Manoli (2010) stressed that the development of appropriate measures with strong psychometric properties and clear theoretical frameworks is essential for the evaluation and improvement of education programmes, as are investigations of the relationships between environmental attitude and other variables. Despite some criticism of the NEP Scale for Children (e.g., Harrison, 2019; Wu, 2012), the 3-factor model (Rights of Nature, Eco-Crisis and Human Exemptionalism) showed a good fit in the Slovenian context.

Many syllabuses of primary and lower secondary school subjects in Slovenia, such as Science and Home Economics, strive to develop students' environmental worldviews. The NEP tool will enable us to determine expected changes in environmental worldview among Slovenian students participating in formal and informal environmental education programmes. Due to time constraints, the number of items is an important issue. In this respect, the 10-item NEP tool

is very practical for use. The scale is also very practical due to the simplicity of its item wording, and is therefore very useful for assessing students aged 9 to 11, whereas other commonly used instruments for measuring environmental attitudes, such as the 2-MEV scale (Bogner & Wiseman, 2006; Kibbe et al., 2014), are not so suitable. Follow-up research of the same children after completing lower secondary school is planned, allowing investigation of the long-term impact of the education programme on students' environmental worldviews and concerns.

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Appendix

Translation of questionnaire in Slovene

NEP (Nova ekološka paradigma)

Na lestvici **od 1 (zelo se ne strinjam) do 5 (zelo se strinjam)** navedite, koliko se strinjate ali ne strinjate z naslednjimi izjavami:

Izjave	1 = zelo se ne strinjam	2 = ne strinjam se	3 = neodločen	4 = strinjam se	5 = zelo se strinjam
1 Rastline in živali imajo prav toliko pravice živeti kot ljudje.	1	2	3	4	5
2 Preveč (ali skoraj preveč) je že ljudi na Zemlji.	1	2	3	4	5
3 Ljudje smo dovolj pametni da bomo ohranili Zemljo delujočo.	1	2	3	4	5
4 Ljudje moramo še vedno spoštovati zakone narave.	1	2	3	4	5
5 Ko se ljudje vmešavajo v naravo se slabo konča.	1	2	3	4	5
6 Narava je dovolj trdna, da prenese negativne vplive našega modernega načina življenja.	1	2	3	4	5
7 Ljudje naj bi vladali preostali naravi.	1	2	3	4	5
8 Ljudje slabo ravnamo z naravo.	1	2	3	4	5
9 Ljudje bomo nekoč vedeli dovolj o delovanju narave, da jo bomo lahko obvladovali.	1	2	3	4	5
10 Če se stvari ne bodo spremenile, bomo imeli zelo kmalu veliko okoljsko katastrofo.	1	2	3	4	5

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The Relationship between the Factors and Conditions of the Autonomy of Preschool Teachers and Fostering the Autonomy of Preschool Children in Kindergarten

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☞ In the paper, we argue that fostering the autonomy of children in kindergarten contributes to the positive effects of the individual's autonomy later in life. Various sources substantiate the assumption that there is a relationship between the child's autonomy and the autonomy of educators. In the paper, we identify and investigate how preschool teachers evaluate the factors of their own professional autonomy, we determine the factors and conditions that, in their opinion, foster the autonomy of preschool children, and we verify whether the assessment of both factors and conditions affects the actual state of the stimulation of the autonomy of children in kindergarten. With regard to fostering the autonomy of children, we have in mind the participation of children, enabling them to play and learn and to manipulate materials and teaching aids in their own way, so that preschool teachers can offer them a choice, take into account their feelings and perspectives, and provide them with rational feedback. The results of the research show that an evaluation of the factors and conditions for fostering the autonomy of children by preschool teachers (N = 524) has a beneficial effect on fostering the autonomy of the children, but it is not crucial. The most important factors in fostering the autonomy of children are the preschool teacher as a person and the participation of children.

Keywords: preschool teacher, preschool children, autonomy, factors of autonomy, fostering the autonomy of children

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Razmerje med dejavniki in pogoji avtonomije vzgojiteljev in spodbujanje avtonomije predšolskih otrok v vrtcu

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∞ Avtorji v prispevku zagovarjajo tezo, da spodbujanje avtonomije otrok v vrtcu prispeva k pozitivnim učinkom avtonomije posameznika v poznejšem obdobju. Različni viri utemeljujejo predpostavko, da obstaja razmerje med avtonomijo otrok in avtonomijo vzgojiteljev. V prispevku so avtorji ugotavljali in raziskovali, kako vzgojiteljice in vzgojitelji vrednotijo dejavnike lastne strokovne avtonomije, dejavnike in pogoje, ki po njihovem mnenju spodbujajo avtonomijo predšolskih otrok, ter ali ocena obojih dejavnikov in pogojev vpliva na dejansko stanje spodbujanja avtonomije otrok v vrtcu. Ko govorimo o spodbujanju avtonomije otrok, imamo v mislih participacijo otrok, omogočanje možnosti otrokom, da se igrajo in učijo ter manipulirajo z materiali, učnimi pripomočki na svoj način, da vzgojitelji in vzgojiteljice nudijo otrokom možnost izbire, upoštevajo njihova čustva in perspektivo otrok ter jim dajejo racionalne povratne informacije. Izsledki raziskave kažejo, da vrednotenje vzgojiteljic in vzgojiteljev ($N = 524$) dejavnikov in pogojev spodbujanja avtonomije otrok ugodno vpliva na spodbujanja avtonomije pri otrocih, ni pa ključnega pomena. Najpomembnejša dejavnika spodbujanja avtonomije otrok sta vzgojitelj kot oseba in participacija otrok.

Ključne besede: vzgojitelji, predšolski otrok, avtonomija, dejavniki avtonomije vzgojiteljev, dejavniki spodbujanja avtonomije otrok

Introduction

In modern democratic societies, autonomy is one of the most important organisational principles of the public education system. The importance of the autonomy of professionals in education is connected to monitoring and quality assurance in the field of education. Increasing the autonomy of schools and kindergartens is one of the main trends in every modern education policy. The quality of preschool education is not only important for the autonomy of preschool teachers, but also for fostering autonomy in children. The preschool teacher's conception and the fostering of autonomy in children should be connected, while also being a condition for more independent behaviour in children, developing competence in their behaviour, and attaining higher achievements.

The main aim of the research is to determine whether the actual fostering of autonomy in children is affected by the importance given to the factors of the autonomy of preschool teachers and to the factors and conditions of fostering the autonomy of children. The findings of previous research already show that the autonomy of preschool teachers is a prerequisite for fostering autonomy in children. We assume that the factors of the autonomy preschool teachers and the factors and conditions of children's autonomy affect the actual autonomy of children. The actual autonomy of children and preschool teachers' autonomy are interdependent, occurring simultaneously and reinforcing each other. The preschool teacher plays the most important role in fostering the autonomy of the child, as he or she autonomously decides on the work, activities, goals and rules in the playroom. If preschool teachers want to foster children's autonomy, they must "start with themselves" (Pelletier Sequine-Levesque & Legault, 2002). The more autonomous preschool teachers feel at work, the more they foster the development and autonomy of children and their participation (Woolfolk & Hoy, 1990).

Autonomy as a concept means independent decision-making; at the same time, it is an instrument for exercising powers. If we proceed from morality and philosophy, we can consider it as the basis for determining the responsibility of the individual for his or her own actions. Therefore, "the need for the professional development of the teaching profession arises constantly and is deemed to be a tool for helping teachers cope with the challenges of their teaching practices in a post-modern reality" (Vula et al., 2015, p. 112). Krek and Metljak (2011)⁴ emphasise the importance of the autonomy of professional workers and the autonomy of educational institutions, linking it with monitoring and

4 In the White Paper on Education in the Republic of Slovenia (2011, pp. 13–14), the principle of autonomy was defined by Krek et al.

quality assurance in the field of the work of school. The autonomy of preschool teachers is provided by predefined frameworks within which preschool teachers have the possibility of freedom in their work (ibid.) Some authors (Logaj, 2012; Trnavčević & Zupanc Grom, 2000) associate autonomy with the development of markets (private offers) in education and with the development of the deregulation of the system. Others (Koren, 2006; Marentič Požarnik et al., 2005) understand autonomy as a guiding principle and a working condition, including professionalism, space, individuals, the local environment and legal provisions. Autonomy is not just a synonym for independence; it must also be understood as a principle of social relations. The concept of autonomy is derived from an autonomous individual and autonomous behaviour. Logaj (2012) explains the boundary conditions of autonomy, the interaction between autonomy and responsibility associated with decentralisation, that is, in response to the question of what the aims of education are and who pursues them. Autonomy is therefore always limited and requires the responsibility of its actors.

The reason for the worldwide commitment to autonomy in kindergartens and school systems is the understanding of autonomy as a quality condition (Eurydice, 2008; Iftene, 2014; Koren, 2002; Zupančič, 2013). One of the aims of the Slovenian Curriculum for Kindergartens is greater autonomy and professional responsibility of professionals and kindergartens (Curriculum for Kindergartens, 1999). Some authors associate autonomy with the decentralisation of the school system, with the level of freedom, responsibility and control represented by the school inspectorate, superiors, the environment and legal regulations, while others perceive it as the relationship between kindergarten, school and preschool teachers; still others understand the autonomy of preschool teachers as freedom in decision-making and the selection of teaching methods, the design of work content and tasks, the choice of materials and the creation of didactic aids, and assuming responsibility by linking with the work in the educational process in kindergarten (Parrott & Da Ros-Voseles, 2013; Tehrani & Mansor, 2012).

Thavenius (1999) argues that the autonomy of children and the autonomy of preschool teachers occur at the same time and are mutually reinforcing, as the pedagogical professional must work autonomously with the participants in the educational process and the learning process (ibid.). According to Smith (2001), this means: 1) independent professional action, a participatory relationship with the child in professional action, and the cancellation of traditional supervision of the educational process; 2) the ability of independent professional action; 3) an absence of supervision in professional action; 4) independent professional development and the ability for independent professional

development; and 5) absence of supervision over professional development (ibid.). If we draw from the individual views of the authors described above, the autonomy of preschool teachers and teachers in the process of education is possible only within institutional rules and curricula, so that the child/pupil takes control of legitimate arrangements. From the point of view of the child/pupil, however, autonomy primarily refers to the learning process, and more generally to his or her attitude towards life outside the classroom (Masouleh & Jooneghani, 2012).

The key conditions for preschool teachers' autonomy and responsibility are: a high level of knowledge, a willingness to critically handle new information, an ability to make decisions in a particular context, and rational thinking, which includes an ability to identify problems and create solutions based on analysed evidence (Castle, 2006; Kalin, 2002; Rutar Ilc, 1999). The preschool teacher's task is to "respect the child's or pupil's freedom, creativity and spontaneity" (Tašner et al., 2017, p. 52). From the children's point of view, the key condition for fostering autonomy in children is fulfilled when the preschool teacher provides a competence-support structure, which means leadership that is sensitive to the problems and wishes of the children (Vansteenkiste et al., 2012). The first factor in fostering the autonomy of children in kindergarten is the preschool teacher⁵ (Hardre & Reeve, 2003; Kroflič, 2001; Reeve et al., 2004; Su & Reeve, 2011), his or her education (Castle, 2004; Parrott & Da Ros-Voseles, 2013), and his or her attitude and readiness for proper thinking and behaviour (Little, 2002). The ability to create the conditions for the development of autonomy in children at preschool age can have a long-term effect. Preschool teachers who have had an opportunity to study in programmes based on constructivism (own reflection and building knowledge based on experience for best practice) put the child's autonomy at the forefront. Not only the kindergarten culture, but also the wider social culture has an impact on fostering autonomy in children. Culture influences three dimensions of fostering autonomy: thinking, fostering autonomous decision-making, and fostering psychic separation (from adults) (Manzi et al., 2012).

Preschool teachers can foster the autonomy of children by respecting children's opinions and ideas, by giving them choices, by encouraging them to explore their interests, and by explaining the importance of the learning activities (Skinner & Belmont, 1993; Tucker et al., 2002; Wellborn et al., 1992). This way, children "can learn and implement techniques for idea production, such as brainstorming

5 Preschool teachers are one of the main conditions for fostering the autonomy of children. They are considered to have a key role because they are influenced by many factors (social context and culture, the personality traits and beliefs of the preschool teacher, the professional knowledge and attitude of preschool teachers, their ability to empathise and communicate, legislation, etc.) that must be fulfilled to encourage the autonomy of children.

and techniques for stimulating lateral thinking, so that work on the development and production of ideas is not limited to the unconscious level” (Vuk et al., 2015, p. 56). Preschool teachers can foster the autonomy of children by asking for their opinion and then taking that opinion into account. Mooney and Blackburn (2002) believe that, if we ask children for their opinion and then fail to take that opinion into account, we convey the message to children that we in fact have little interest in knowing their view, which can have long-term consequences for their willingness to later engage as adult citizens. The more preschool teachers feel effective in their work, the more they encourage the development and autonomy of children and their cooperation (Woolfolk & Hoy, 1990).

Encouraging children’s autonomy refers to the degree of freedom that the preschool teacher allows children, the preschool teacher’s encouragement of children’s self-initiative and decision-making, and the preschool teacher’s ability to share the child’s perspective in solving problems or providing advice (Reeve, 1998). Fostering the autonomy of children means listening and accepting the child’s opinion, which requires the preschool teacher to provide secure communication, to encourage children to share their thoughts, opinions, suggestions and views, to listen carefully and respond, and to take into account and accept the negative feelings of children (Reeve, 2006). Preschool teachers should offer children advice and information when they are stuck in a task, thus encouraging and motivating them to continue the task (Grolnick, 2001). In addition, they should provide children with opportunities to make choices, understand and trust their abilities, encourage them to ask questions and think, etc. (Williams & Deci, 1996).

Method

Research shows that the level of the factors of the autonomy preschool teachers, as well as the factors and conditions for fostering the autonomy of children, affect the autonomy of children.⁶ In different environments, the levels of autonomy can vary, so we established the following hypothesis in order to verify the impact:

H: The factors of preschool teachers’ autonomy and the factors and conditions for fostering the autonomy of children (as assessed by preschool teachers) affect the actual autonomy of children. The hypothesis was dealt with by means of three sub-hypotheses: (1) Ha: The factors of preschool teachers’ autonomy influence the actual fostering of children’s

6 Findings by Skinner & Belmont, 1993; Tucker et al., 2002; Hardre & Reeve, 2003; Su & Reeve, 2011 and Parrott & Da Ros-Voseles, 2013 are described in the theoretical introduction.

autonomy; (2) Hb: The factors of fostering the autonomy of children affect the actual fostering of children's autonomy; (3) Hc: The conditions for fostering the autonomy of children affect the actual fostering of children's autonomy.

The hypotheses were verified by means of a regression model in which the dimensions (factors) of the factors of preschool teachers' autonomy and the factors and conditions for fostering the autonomy of children appear as predictive variables, while the response variable is a one-dimensional construct of an assessment of the actual state of children's autonomy. The model variables were determined by means of exploratory factor analysis (principal component analysis with varimax rotation) for each of the considered concepts.

The data were analysed using the SPSS Statistical Processing Program. The IBM SPSS Statistics 25 statistical package was used at the level of descriptive statistics, dimensional reduction and regression modelling. For assessment of the normality of distributions, the values for asymmetry and kurtosis between -2 and +2 were considered (George & Mallery, 2010).

In research conducted in the spring of 2016,⁷ 163 randomly selected Slovenian public kindergartens were included. The target population of the research was preschool teachers and preschool children in the Republic of Slovenia. The obtained sample included 524 preschool teachers, representing 10.13% of all preschool teachers in public kindergartens in the Republic of Slovenia (Statistical Office of the Republic of Slovenia, 2016).

After examining the research data, we moved to the definition of the variables of the regression model. The steps of exploratory factor analysis were carried out using principal component analysis with varimax rotation. First, some variables with a low-value of communalities were eliminated (one variable in the factors of preschool teachers' autonomy and the factors fostering the autonomy of children, and two variables in the conditions for fostering the autonomy of children). Next, we acquired three factors for the factor of preschool teachers' autonomy, four factors for the factor of fostering the autonomy of children, two factors for the conditions of fostering the autonomy of children, and a uniform factor for assessing the state of children's autonomy. Finally, we confirmed the appropriateness of the characteristics of the factor model. For all four models, the Cronbach alpha is greater or equal to .685 (.852, .848, .685, .811), the Kaiser-Meyer-Olkin measure of sampling adequacy is greater than or equal to 0.812 (.812, .851, .849 and .816), and the statistical feature of Bartlett's test of sphericity is equal to .000.

7 The descriptive and causal-non-experimental method of pedagogical research was used.

Interpretation of results

Factors of autonomy of preschool children

The positive attitude of preschool teachers towards their work is one of the factors of their autonomy. Slovenian preschool teachers judge that their own autonomy is comprised of their responsibility, professionalism and competence, the possibility of making decisions and choices, planning (group work, goals, etc.), creativity, decision-making and selection, defending their positions, developing knowledge and education, and independence.

Different factors influence preschool teachers' autonomy. We have examined how the factors and their influence are perceived and evaluated by preschool teachers themselves.

Table 1

Factors of preschool teachers' autonomy

	Factors of autonomy	N	Min	Max	M	R	SD	SK	K
f	Preschool teacher's positive attitude towards work	524	1	5	4.76	1	.62	-3.73	17.42
d	Satisfaction with work	524	1	5	4.63	2	.70	-2.52	8.11
b	Skills of educators	524	1	5	4.62	3	.69	-2.40	7.80
h	Climate	524	1	5	4.45	4	.72	-1.07	.27
e	Working conditions	524	1	5	4.43	5	.83	-1.57	2.54
k	Cooperation with parents	524	1	5	4.14	6	.94	-1.20	1.43
g	Dynamics	524	1	5	4.07	7.5	1.00	-1.01	.48
j	Management of kindergarten	524	1	5	4.07	7.5	.86	-.71	.18
c	Subjective theories	524	1	5	3.71	9.5	1.11	-.78	.05
i	Regulations	524	1	5	3.71	9.5	.96	-.37	-.25
a	National culture	524	1	5	3.12	11	1.16	-.36	-.59
l	Independence of preschool teachers from support	524	1	5	2.22	12	1.09	.82	.22

All 524 of the preschool teachers surveyed agreed that these factors influence the autonomy of preschool teachers. According to a 5-point scale from 1 to 5, the preschool teachers strongly agreed that a positive attitude towards work is a factor of preschool teachers' autonomy ($M = 4.76$). This factor also displayed the lowest standard deviation ($SD = .62$), while rather high values of asymmetry and kurtosis ($SK = -3.73$ and $K = 17.42$) indicated a greater number of higher values. A positive attitude towards work (Erden, 1995; Gürsoy, 2016) is

a factor in preschool teachers' autonomy, as it contributes to the behaviour and motivation of individuals. Satisfaction with work, together with reflection on one's own practice, gives preschool teachers self-confidence (Noormohammadi, 2014) when planning work. The competence, professional knowledge and good skills of preschool teachers contribute to the realisation of their own autonomy (Öztürk, 2012); together with subjective theories and beliefs about professional competence, these are a factor in preschool teachers' autonomy (Kroflič et al., 2002). National culture is also an important factor in preschool teachers' autonomy (Benson, 2001), as the belief of society regarding the permitted extent of preschool teachers' autonomy is a precondition to that autonomy. It is regulations (Curriculum 1999; ZVrt, 2005; ZOFVi, 2006; White Paper, 2011) that determine the autonomy of preschool teachers at the implementation level. The support of management, as well as the good working conditions and positive climate of the kindergarten, contribute to preschool teachers' autonomy and the realisation of that autonomy (Meng & Ma, 2015; Usma Wilches, 2009).

The autonomy and independence of preschool teachers from the support of colleagues and external pressures (Zgaga, 1990) is a factor in preschool teachers' autonomy. In a free answer about the key factors of autonomy, 57.6% of the preschool teachers surveyed agreed that their autonomy is influenced by various factors, but above all depends on their professional competence and professional development (continuous professional education, self-confidence, decision-making and assuming responsibility, attitude towards work, working conditions, etc.), as well as on the personality of the individual preschool teacher and his or her pedagogical Eros. Smaller proportions of the respondents also highlighted the factors of support from management, the continuous professional education and lifelong learning of preschool teachers, the positive attitude of preschool teachers (towards work, children, etc.), good self-image, the working conditions and good climate in the kindergarten, satisfaction (with work, with the profession, with themselves), and the possibility of making decisions and assuming responsibility. Only 1.15% of the preschool teachers found it crucial that preschool teachers themselves could contribute to their professional autonomy.

Factors that influence the fostering of children's autonomy

In order to foster the autonomy of children, several factors are needed, the key factor being the preschool teacher and his or her way of working. In Table 2, we present the respondents' evaluation of factors that influence fostering the autonomy of preschool children.

Table 2

Factors of fostering the autonomy of children, in the opinion of preschool teachers

	Factors of autonomy	N	Min	Max	M	R	SD	SK	K
c	Preschool teachers' positive attitude towards fostering the autonomy of children	524	3	5	4.82	1	.43	-2.22	4.30
d	The opportunity for children to express their feelings	524	1	5	4.76	2	.47	-2.18	7.83
e	The opportunity for children to think in their own way	524	2	5	4.75	3	.48	-1.79	3.04
f	Preschool teachers' acceptance of the children's perspectives	524	3	5	4.63	4	.56	-1.20	.47
g	Encouraging children to exercise self-control	524	2	5	4.47	5	.71	-1.35	1.66
a	The preschool teacher's personality	524	2	5	4.42	6	.66	-.82	.11
k	The opportunity for children to choose (e.g., toys, materials, seats, etc.)	524	2	5	4.41	7.5	.71	-1.13	1.18
o	Preschool teachers' skills, qualifications	524	1	5	4.41	7.5	.74	-1.08	.72
j	The opportunity for children to participate in learning	524	2	5	4.40	9	.77	-1.17	.83
b	Preschool teachers' values and beliefs	524	2	5	4.37	10	.67	-.72	-1.10
h	The higher level of the preschool teacher's own autonomy	524	2	5	4.35	11	.79	-.89	-.24
r	The number of children in the group	524	1	5	4.00	12	1.17	-1.04	.17
m	A kindergarten support structure that is sensitive to the problems and wishes of the children	524	1	5	3.90	13	.90	-.42	-.41
q	Cultural rules	524	1	5	3.81	14	.87	-.37	-.42
n	Educational attainment of the children	524	1	5	3.76	15	.98	-.57	-.01
p	Social expectations	524	1	5	3.45	16	.95	-.46	.09
l	The opportunity for children to decide (e.g., what they will eat, whether they will sleep, etc.)	524	1	5	3.25	17	1.13	-.02	-.80
i	The preschool teacher's non-disrupting teaching style	524	1	5	2.96	18	1.21	-.13	-.85

A total of 524 preschool teachers evaluated the degree to which they agree with the above factors of fostering the autonomy of children by expressing their agreement on a 5-point scale from 1 to 5, with 1 indicating that they disagree and 5 that they completely agree. Most of the preschool teachers agreed with the assertion that preschool teachers' positive attitude towards fostering the autonomy of children ($M = 4.82$) is a factor in fostering the autonomy of children. The lowest standard deviation was also found in the positive attitude towards fostering

the autonomy of children ($SD = .43$), while rather high values of asymmetry and kurtosis ($SK = -2.22$ and $K = 4.30$) indicated a greater number of higher values. The lowest level of agreement was with the assertion that a non-disrupting teaching style ($M = 2.96$) is a factor in fostering the autonomy of children. It was in response to this assertion that the answers of the preschool teachers showed the greatest difference ($SD = 1.21$), being near normally distributed ($SK = -.13$, $K = -.85$). This may have resulted from the less understandable expression of the factor, causing the teachers to grade the assertion randomly. A more appropriate expression would be a democratic style of teaching. The preschool teachers expressed quite a high level of agreement with most of the factors of fostering the autonomy of children. Knowing the factors of fostering the autonomy of children is the key to autonomous preschool teachers fostering, improving and implementing the theory of fostering the autonomy of children in practice. In order to foster children's autonomy, it is important that preschool teachers have a positive attitude in the adoption of this theory (Walsh & Gardner, 2006) and possess relevant expertise, skills, methods and experience (Morrow & Richards, 1996).

The preschool teachers mainly agreed that children having an opportunity to decide what they will eat and whether they want to sleep is a factor of fostering children's autonomy ($M = 3.25$). However, as in the assertion that a non-disrupting teaching style is a factor in fostering the autonomy of children, the teachers' answers differed substantially ($SD = 1.13$) and were distributed near normally. In order to foster children's autonomy, they need to be given more decision-making opportunities, such as deciding whether or not they are hungry or sleepy. We checked the distribution of this variable with the coefficient of asymmetry, which can be asymmetric to the right or positive asymmetry (if the value of the coefficient is greater than zero), symmetric or normal distribution (if the value of the coefficient is zero), or asymmetric to the left or negative asymmetry (if the value of the coefficient is less than zero). With the coefficient of flattening, we verify that the variable is conical (if the coefficient value is greater than 0), normal (if the coefficient value is 0), or flattened (if the value of the coefficient is less than 0). A coefficient value of more than 0.8 indicates a lot of flattening, or abnormal flattening. Where the negative values of KA are less than 0, the asymmetry is to the left or negative asymmetry. Negative values of KS below -0.80 show a lot of flattening, or abnormal flattening (the distribution is less sharp, the top is more straightforward and has shorter beets).

In free answers, the preschool teachers cited several factors as key factors in fostering children's autonomy: knowledge of the child's development, flexibility and perceptions of the preschool teachers, participation of parents and preschool teachers, etc. (37.4%); ensuring choices, participation, expressing feelings,

children's educational attainment (11.07%); professionalism and training of preschool teachers (5.73%); the autonomy of the preschool teacher (4.59%); the positive attitude of the preschool teacher towards children and their independence (4.01%); the preschool teacher's personality (4.01%); the preschool teacher's ability to empathise (3.24%); respect and acceptance of children (3.24%); the example of the preschool teacher and his or her behaviour (3.24%); and clearly set boundaries and rules and daily routine, trust in the child, education of the preschool teacher, fewer children in the group (less than 3%).

The conditions for fostering children's autonomy must be met. We present the evaluation of Slovenian preschool teachers regarding the conditions for fostering the autonomy of children.

Table 3

Conditions for fostering the autonomy of children, in the opinion of preschool teachers

	Factors of autonomy	N	Min	Max	M	R	SD	SK	K
b	Authorisation and fostering of thinking	524	1	5	4.70	1	.55	-1.67	1.86
i	Children have the opportunity to solve problems	524	1	5	4.65	2	.56	-1.40	.98
c	Authorisation and fostering of feelings	524	1	5	4.64	3.5	.59	-1.46	1.36
l	Providing incentives to children	524	1	5	4.64	3.5	.60	-1.59	1.89
g	Supporting children's self-initiative	524	1	5	4.56	5	.72	-1.64	2.18
m	Responding to questions from children	524	1	5	4.51	6	.76	-1.85	4.30
n	Making realistic statements to children	524	1	5	4.47	7	.71	-1.20	.98
k	The autonomy of preschool teachers	524	1	5	4.45	8	.70	-1.36	2.73
j	Preschool teachers provide feedback and rationale for children	524	1	5	4.42	9	.72	-.84	-.63
h	Children have the opportunity to make decisions	524	1	5	4.41	10	.73	-.97	.09
a	Accepting the perspective of children	524	1	5	4.22	11	.77	-.68	-.19
e	Encouraging children to exercise self-control	524	1	5	4.19	12	.93	-1.34	2.06
d	Authorisation and fostering of behaviour	524	1	5	3.90	13	.90	-.29	-.74
f	The preschool teacher's command communication	524	1	5	1.97	14	1.01	.83	.05

The preschool teachers ($N = 524$) evaluated the degree to which they agree with the above conditions for fostering the autonomy of children by expressing their agreement on a 5-point scale from 1 to 5, with 1 indicating that they disagree and 5 that they completely agree. The preschool teachers strongly

agreed that allowing and encouraging the child's thinking was a condition for fostering the autonomy of children ($M = 4.70$). At the same time, they agreed that authorising and encouraging children to behave like children was a condition for fostering the autonomy of children ($M = 3.90$). The differences in the answers were rather small ($SD = .55$ and $.56$), while the values of the coefficients of asymmetry ($SK = -1.67$ and -1.40) and kurtosis ($SK = -1.67$ and $.98$) positioned in the interval $(-2.0, 2.0)$ allowed the assumption that the distribution is near normal.

The child's behaviour should not, of course, be detrimental to the child him or herself or to the others in the group. The condition for fostering children's autonomy is to allow the child's (innocent) behaviour as a way of encouraging him or her to find his or her own way of solving a problem (Reeve, 2009). The preschool teacher's command communication is not a condition for fostering the autonomy of children. The preschool teacher's communication with the child must be decisive, so that the child has the possibility of choice and reflection (Assor et al., 2002; Reeve, 2009, 2015). The greatest deviation in the responses occurred in condition f) the preschool teachers' command communication ($SD = 1.0$). Similar to the previous reported variables with a higher standard deviation, the coefficients of asymmetry and kurtosis were small ($SK = .83$ and $K = .05$), indicating near normal distribution of the assessment of assertion f) the preschool teachers' command communication.

We check the distribution of the variable with the coefficient of asymmetry. In this case, the KA values are greater than 0.20, which means a lot of asymmetries. Negative values of KA indicate a large asymmetry to the left. The coefficient of flattening tells us whether the variable is point-sensitive (if the value of the coefficient is greater than 0), normal (if the coefficient value is 0) or flattened (if the coefficient value is less than 0). KS values above 0.80 show a lot or abnormal flattening.

The impact of the assessment of both factors and conditions on the actual condition of fostering the autonomy of preschool children

Analysis of the main components above the variables of the factors of autonomy of preschool teachers (Table 1) brought three factors explaining a total of 62.5% of the variance. The first factor, which we named **qualification and job satisfaction** (Table 1, variables b, d, e, f) explains 24.9% of the variance. This includes the professional qualifications of the preschool teachers and their satisfaction at work, as the professional qualifications of preschool teachers are a prerequisite for their autonomy. Moreover, the satisfaction of educators at work influences their motivation and professional autonomy (Van Gelderen, 2010). The second factor,

which we named **the systemic, legal factors of autonomy and the climate of the kindergarten** (Table 2, the variables g, h, i, j, k) explains 24.5% of the variance. It concerns the fact that autonomy is enabled within legal regulations, as it is conditioned by the curriculum, the system vision and instrumental procedural autonomy (Iordóchescu, 2013), legislation (The Organisation and Financing of Education Act, 2007; The Preschools Act, 2005) and the kindergarten climate, which varies from one kindergarten to another and affects the behaviour of each member of the kindergarten (Hoy & Miskel, 1996; Kim et al., 2009). The third factor explains 13.0% of the variance and was named **the “hidden” factors of autonomy** (Table 1, variables a and c). It covers the effects of national culture and subjective theories of preschool teachers (Dweck et al., 1995; Turnšek, 2013). Different cultures (societies) differentiate the individual's autonomy differently (Rudy et al., 2007), thereby encouraging autonomy to a greater or lesser extent. The prevailing values of society or the social context also affect preschool teachers and their way of teaching (Downie et al., 2004; Taylor et al., 2009).

In the opinion of the preschool teachers surveyed, 60% of the total variance is explained by the four factors of the model of factors of fostering children's autonomy. The first factor, which we named **the didactic factor of fostering the autonomy of children** (Table 2, variables d, e, f, g, h, j) explains 21.9% of the variance. This includes the behaviour of preschool teachers that fosters the autonomy of children. At work, the preschool teacher must follow the principles of the process and development model of planning, which includes two-way communication between the child and the preschool teacher; the self-inflicting authority of the preschool teacher, which provides the child with security and acceptance, while at the same time encouraging him or her to become independent and, consequently, to deal with attachment to the preschool teacher; and the preschool teacher enabling the child to judge and learn about moral principles (Kroflič, 1997). In so doing, the preschool teacher must take into account the conditions for fostering the autonomy of children, including the adoption of a child's perspective; authorising and encouraging the child's thinking, feelings and behaviour; and encouraging the child's ability to exercise self-control or autonomous self-regulation (Reeve, 2009). The second factor, which we named **the qualification of the preschool teacher and the cultural aspect of fostering the autonomy of children** (Table 3, variables n, o, p, q) explains 14.4% of the variance. It relates to the professionalism and expertise of the preschool teacher, society's expectations, and the influence of culture. This contributes to a greater or lesser fostering of children's autonomy. Preschool teachers should be able to teach children how to take responsibility for their own learning (e.g., helping them to find their strong and weak areas,

to set their own goals, to evaluate their own learning and progress) (Chang, 2007; Little et al., 2002; Spratt et al., 2002). Additional professional education of preschool teachers and changes in the preschool teacher's practice affect not only the work of preschool teachers and their professional identity (Hargreaves, 1998; Palmer, 1997), but also the quality of their pedagogical work with children. The education of preschool teachers is one of the quality indicators in kindergarten (Marjanović Umek et al., 2002). The third factor explains 12.9% of the variance and was named **the preschool teacher as a person** (Table 2, variables a, b, c). It relates to the preschool teacher's values and beliefs, his or her personality, and his or her positive attitude towards work, which influences the preschool teacher's way of teaching. Fostering children's autonomy also has an impact on the preschool teacher's personal disposition (Van den Berghe et al., 2013). The fourth factor, which we named **the child's choice, participation** (Table 2, variables k, l, m) explains 11.5% of the variance. It refers to opportunities for making decisions, choosing and participating. It is the preschool teacher's encouragement of the autonomy of the children with behaviours that support the learning and interests of children, such as listening, providing choices and opportunities, providing feedback with a meaningful rationale, providing incentives and advice, answering questions, and making realistic statements (Deci et al., 1996; Reeve & Jang, 2006). From the child's perspective, a key element in fostering autonomy in children is when the preschool teacher provides a supportive structure, that is, leadership that is sensitive to the problems and wishes of the children (Vansteenkiste et al., 2012). A condition for the preschool teacher to foster the autonomy of the children is listening to them and taking their suggestions into account, providing them with opportunities to choose, understanding them and trusting their abilities, encouraging them to ask questions and think, etc. (Williams & Deci, 1996).

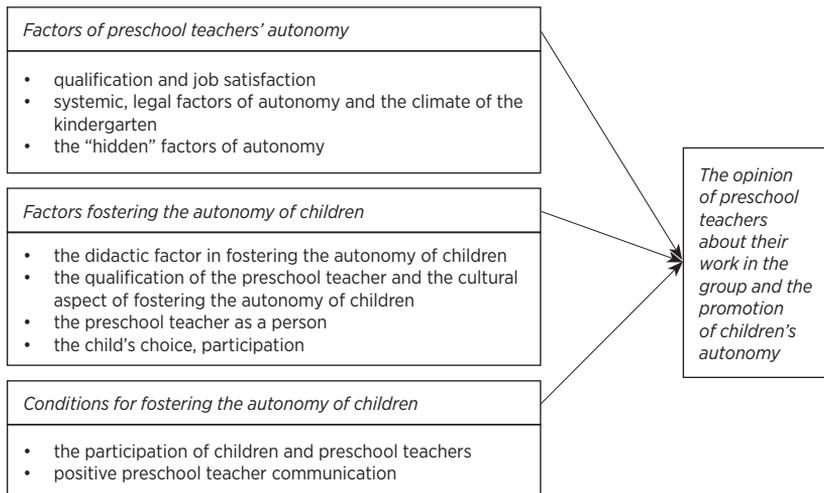
In the opinion of the preschool teachers surveyed, the conditions for fostering the autonomy of children are composed of two factors, which explain 62.6% of the total variance. The first factor explains 38.8% of the variance and was named **the participation of children and preschool teachers** (Table 3, variables a, b, c, g, h, i, j, k). In the process of child-rearing and education, preschool teachers give the children an opportunity to make decisions and solve problems, they accept the children's perspective, allow and stimulate the children's thinking and expression of emotions, support the children's initiative, and provide feedback to the children (Deci et al., 1996; Reeve & Jang, 2006; Williams & Deci, 1996). For preschool teachers, their own autonomy ensures the adoption of such decisions and the possibility of enabling children to participate. The appropriate pedagogical communication of the preschool teacher

in a clearly structured environment (clear rules) is a prerequisite for fostering the autonomy of children. The second factor explains 23.8% of the variance and was named **positive preschool teachers' communication** (Table 3, variables f, n, m, l). It refers to the preschool teacher giving realistic statements to children, answering their questions, showing non-indicative communication, and providing incentives for children. In order to foster the autonomy of children, preschool teachers must ensure safe communication and encourage the children to share their thoughts, opinions, suggestions and views. Moreover, preschool teachers must listen carefully to the children and respond with realistic statements (Reeve, 2006), otherwise we can suppress positive communication and the children's willingness to cooperate.

The opinion of the preschool teachers surveyed about their work in the group and the fostering of childhood autonomy form a single factor that explains 51.5% of the total variance.

Figure 1

Model of the influence of factors and conditions on the actual autonomy of children



The model of the influence of the factors and conditions on actual child autonomy shown in Figure 1 was realised with a linear regression model in which the predictive variables of the above-presented dimensions (factors) of the factors and conditions of autonomy and the response variable are a uniform factor for assessing the actual autonomy of children. Linear regression is statistically significant (ANOVA, $p = .000$) and explains 36.8% of the total variance

of the phenomenon (Adjusted R Square = .368). Variables with statistically significant coefficients explain more than one-third of the overall phenomenon.

Table 4

Calculation of the model of the influence of factors and conditions on the actual autonomy of children

	B	Std. Er.	Beta	t	Sig.
(Constant)	.000	.035		.000	1.000
<i>Factors of preschool teachers' autonomy</i>					
qualifications and job satisfaction	.002	.037	.002	.059	.953
systemic, legal factors of autonomy and the climate of the kindergarten	.023	.040	.023	.579	.563
"hidden" factors of autonomy	-.066	.037	-.066	-1.792	.074
<i>Factors fostering the autonomy of children</i>					
the didactic factor in fostering the autonomy of children	.091	.048	.091	1.876	.061
the qualification of the preschool teacher and the cultural aspect of fostering the autonomy of children	.081	.040	.081	2.057	.040
the preschool teacher as a person	.133	.041	.133	3.261	.001
the child's choice, participation	-.010	.037	-.010	-.263	.792
<i>Conditions for fostering the autonomy of children</i>					
the participation of children and preschool teachers	.484	.050	.484	9.699	.000
positive preschool teacher communication	-.022	.037	-.022	-.579	.563

As can be seen from Table 4 above, no dimension of the factor of the autonomy of preschool teachers has a statistically significant influence on the estimation of the actual autonomy of children; therefore, sub-hypothesis Ha (The factors of preschool teachers' autonomy influence the actual fostering of children's autonomy) is discarded.

Statistical significance is shown by the coefficients of two variables of the concept factors of fostering the autonomy of children (Table 4, the variable preschool teacher's qualification and the cultural aspect of fostering the autonomy of children ($p = .040$) and the preschool teacher as a person ($p = .001$)) and the coefficient of one variable of the concept conditions for fostering the autonomy of children (Table 4, the variable child participation ($p = .000$)). Therefore, the sub-hypotheses Hb (The factors of fostering the autonomy of children affect the actual fostering of children's autonomy) and Hc (The conditions for fostering the autonomy of children affect the actual fostering of children's autonomy) are confirmed.

The factors of the autonomy of preschool teachers have no influence on fostering the autonomy of children. This is in line with Nakata's findings (2011), which explain that being autonomous as a professional does not necessarily help preschool teachers to foster the autonomy of children. Many authors argue that there is a symbiotic relationship between the autonomy of children and the autonomy of preschool teachers, since fostering the autonomy of children depends on the autonomy of preschool teachers (Aoki, 2002; Benson, 2001; Křoflić, 2001; Nakata, 2009). However, based on our analysis, we agree with Nakata (2011) that, in order to foster the autonomy of children, it is not enough for preschool teachers to have professional autonomy; rather, preschool teachers must have an appropriate attitude towards this concept (Iordăchescu, 2013; Roth & Weinstock, 2013) and must possess the expertise and methods by which they can encourage children to be autonomous (Castle, 2004; Reeve & Yang, 2006).

Of the two dimensions of the conditions for fostering autonomy in children, the first, the participation of children and preschool teachers, demonstrates an effect by taking the perspective of children, supporting children's self-initiative, enabling children to make decisions and solve problems, allowing and encouraging the child's thinking and expression of feelings, sharing information with children, and encouraging the autonomy of the preschool teacher. Preschool teachers need autonomy to be able to judge professionally and decide upon and prepare the learning process by giving children the opportunity to make decisions and solve problems, encouraging them to think and allowing them to express their feelings. In order to foster the autonomy of children, non-indicative communication is needed (Reeve, 2009), enabling children to decide and think. Providing incentives for children, using realistic statements and preschool teacher responses (Reeve & Yang, 2006), encourages children to solve problems and find new solutions, which contributes to fostering their autonomy.

Conclusion

According to preschool teachers' evaluation of the factors of their own autonomy, we find that these factors have no impact on fostering children's autonomy. Being autonomous as an expert does not mean that preschool teachers will consequently foster autonomy in children. Certain authors mentioned in the theoretical starting points explain that there is a particular symbiotic relationship between the autonomy of children and the autonomy of preschool teachers, especially from the point of view of the preschool teachers' professional knowledge. In order to foster the autonomy of children, what is needed

above all is a proper attitude of preschool teachers towards this concept and appropriate expertise. In the study, we found that the evaluated factors of fostering the autonomy of children affect the actual fostering of children's autonomy, and that the evaluated conditions for fostering the autonomy of children affect the actual fostering of children's autonomy. In addition to professional knowledge, appropriate beliefs of preschool teachers about the usefulness of the concept, and knowledge of the concept of fostering the autonomy of children, the actual fostering of childhood autonomy is crucial, and it is important that preschool teachers believe that this way of working in the process of childcare in kindergarten is indispensable. In order to foster the autonomy of children, which has many positive effects (greater motivation and self-confidence of children, learning of responsibility, academic success, etc.), appropriate circumstances are also needed (kindergarten climate, small groups of children, professional leadership of the kindergarten, social context), which are not in the overall domain of preschool teachers.

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A Classroom Survey of Language Teachers' Discriminatory Practices against Students: Causes, Consequences and Keys

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Previous research confirms that individuals frequently become subject to various forms of discrimination for a variety of reasons. This study aimed at revealing the incidence of discrimination toward English as a Foreign Language students, the grounds on which it happens, its adverse effects on students as well as potential solutions to it. The data were collected through questionnaires and were further supported by interviews and classroom observations. The participants consisted of sixty-five Iranian students from a variety of ethnic, linguistic, and socioeconomic backgrounds. The findings indicated that nearly one-third of the students had experienced discrimination of one form or another. Students' perceptions of discrimination were that it is based on skin colour, age, sex, social class, as well as political and religious beliefs. Furthermore, the findings showed that discrimination was perceived to have a negative bearing on students' motivation and their overall ability by adversely affecting their class attendance, sense of responsibility, class performance, and assignment completion. It was found that teachers overtly discriminated against students by openly mocking them, neglecting to call on them for class participation, and unfairly assessing the students and their achievements. Some suggestions to raise awareness of implicit attitudes and biases, identify and end the practice of discrimination among English as a Foreign Language teachers included setting up teacher education programmes, raising learners' awareness, raising teachers' awareness of their responsibilities and students' rights, institutional warning, punishing 'discriminating' teachers, and suspending teachers from work.

Keywords: discriminatory practices, English as a foreign language classrooms, language learners, language teachers, discrimination

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Raziskava o diskriminatornih praksah učiteljev jezikov do učencev pri pouku: vzroki, posledice in napotki

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≈ Dosedanje raziskave potrjujejo, da so posamezniki zaradi različnih razlogov pogosto izpostavljeni raznim oblikam diskriminacije. Namen raziskave je bil ugotoviti diskriminatorno obnašanje do učencev angleškega jezika kot tujega jezika, razloge zanj, škodljive posledice za učence in mogoče rešitve. Podatki so bili zbrani z vprašalniki, intervjuji in z opazovanjem pouka. V raziskavi je sodelovalo petinšestdeset iranskih učencev iz različnih etničnih, jezikovnih in iz socialno-ekonomskih okolij. Ugotovljeno je bilo, da je bila skoraj tretjina učencev deležna raznih oblik diskriminacije, ki je po njihovem mnenju temeljila na barvi kože, starosti, spolu, pripadnosti družbenemu razredu ter tudi na političnih in verskih prepričanjih. Poleg tega so izsledki pokazali, da je diskriminacija zavirala motivacijo učencev in njihove splošne sposobnosti, saj je negativno vplivala na udeležbo učencev pri pouku, njihov občutek odgovornosti, učni uspeh in na opravljanje nalog. Raziskava je razkrila, da so učitelji odkrito diskriminirali učence na način, da so jih javno zasmehovali, da jih niso spodbujali k sodelovanju pri pouku in da so nepravilno ocenjevali njihovo znanje. Predlogi za večjo ozaveščenost o implicitnih stališčih in predsodkih za prepoznavanje in ustavitve diskriminatorne prakse učiteljev angleščine kot tujega jezika so vsebovali oblikovanje programov za izobraževanje učiteljev, ozaveščanje učencev, ozaveščanje učiteljev o odgovornostih in pravicah učencev, institucionalna opozorila, kaznovanje »diskriminirajočih« učiteljev in odpuščanje učiteljev.

Ključne besede: diskriminatorne prakse, poučevanje angleščine kot tujega jezika, učenci jezika, učitelji jezika, diskriminacija

Introduction

A good deal of socio-linguistic research has centred on the issue of discrimination, and its subsequent silencing and suppression of students (Delgado & Stefancic, 2001; Litosseliti, 2013; Madrid, 2011; Morley, 2010; Rich & Troudi, 2006; Solórzano, 1998). While it is true that discrimination against students has declined compared to the past, by and large, it continues to exist. Researchers have found that students are discriminated against on a variety of grounds, including ethnicity, race, religion, and being of an international status (e.g., Rich & Troudi, 2006). For instance, Delgado and Stefancic (2001) stipulate that, 'Still, by every social indicator, racism continues to blight the lives of people of color, including holders of high-echelon jobs, even judges' (p. 10). To give another example, gender-based stereotyping is, sadly, a common and serious issue in most academic settings (Morley, 2010). In fact, as Morley (2010) points out, most of what is perceived as incompetence or lack of intellectual ability, particularly with regards to females, is based upon hypothetical, and anecdotal rather than concrete evidence. Sexism is believed to constitute a significant area of discrimination (Litosseliti, 2013). Research has revealed that females are discriminated against in academic settings as they are not taken seriously, or their intellectual ability or motivation is doubted (Morley, 2010).

Discrimination occurs in Iran and other countries, on an international level (Kubota, 2001; Kumaravadivelu, 2003). It has been argued that English as a Second Language teachers, especially in Asia, continually stereotype and label their students (Kumaravadivelu, 2003). It is reasonable to argue that some overt discrimination will, in all likelihood, stem from such stereotyping. Kubota (2001) confirmed that the current practices in classrooms perpetuate the discursive practices and images that are presented of American versus Asian classrooms. Kubota contends that these practices develop and strengthen a sense of the *Self* as opposed to a notion of the *Other*, a dichotomy that, according to Kubota, is based upon the power relations present in discourses. Thus, research has decidedly revealed the improper practices of many language teachers. According to van Dijk (2009), racism may manifest itself in a wide variety of forms such as prejudices, stereotypes, and racist ideologies that might be implemented through the dominant institutional discourse (See also van Dijk, 2009).

The present study is an attempt to show the adverse effects discrimination has on Iranian English language students as well as possible solutions to it. It is important to point out that research on the topic of student discrimination in Iranian English language classrooms is almost non-existent.

Review of Literature

Research reveals that students are still subjected to discrimination in classrooms (Despaigne, 2013; Ibrahim, 1999; Madrid, 2011; Marks & Heffernan-Cabrera, 1977; Solórzano, 1998). However, this confirmation has not yielded corrective measures to diminish or end discrimination. This lack of corrective measures might partly originate from the interdisciplinary nature of the act, and the phenomenon of discrimination in discussions concerned with discrimination is often associated with areas as diverse as critical discourse analysis, critical applied linguistics, power relations, identity (re)construction, and sociology. Therefore, such discussions might not be directly related to education. Further, as each of these areas has its own set of principles and tenets, it seems essential to borrow findings of research from the areas mentioned above to examine discrimination. For instance, Despaigne (2013) investigated indigenous and minority students' perceptions of identity, unequal power relationships and autonomous learning in a Mexican university, informed by critical applied linguistics and post-colonial theories. Despaigne's study revealed the sense of fear and inferiority among these minority students as well as the lack of recognition of their local knowledge and languages. Despaigne's conclusion and recommendation are that students' multi-cultural and multi-lingual values be recognised and appreciated within the classroom setting.

Similarly, Marks and Heffernan-Cabrera (1977) showed that majority group teachers discriminated against minority group students. In another study examining employment discrimination exercised against Sulochana Mandhar, an Indian woman who was not allowed to work as a librarian in the United States, Lippi-Green (1994) explained how individuals are likely to suffer discrimination for linguistic (i.e., speaking English with an accent) or ethnic (i.e., being of colour) reasons. Likewise, Solórzano (1998) examined the extent to which Chicana and Chicano doctoral scholars suffered discrimination as a result of their race and gender. Applying Critical Race Theory to education, Solórzano found that these scholars identified three patterns of microaggression: feeling out of place, lower expectations from them, and feelings of worthlessness as a result of sexist and racist attitudes. Solórzano's research was taken a step further by Ibrahim (1999) who carried out a critical ethnography of a group of French-speaking African immigrant and refugee youths in Canada. Ibrahim demonstrated that these students are discriminated against by the majority group. This research confirms that such discrimination has a considerable impact on students' identity perceptions and on how they linguistically and culturally learn. Reisigl and Wodak (2001) discussed the various forms of

phobias, for instance, black-phobia, Arab-phobia, homophobia or sexism that lead to discrimination against a special group as different forms of racism.

Furthermore, it must also be borne in mind that discrimination and racism do not constitute the same thing. While discrimination refers to '*actions* against members of races', racism denotes '*stereotypical beliefs* toward races' (Bonilla-Silva, 2005, p. 2; emphasis in original). Each of these concepts, thus, warrants separate research attention. Palfreyman (2005) examined processes of *othering* in an English language centre at a Turkish university and revealed that native Turkish teachers and international students viewed each other in terms of difference. Rich and Troudi (2006) undertook a study of five male Muslim Saudi Arabian students' sense of *othering* and *racialisation* at a university in the United Kingdom. The findings revealed that these students were discriminated against based on religious background and beliefs, race and ethnicity, as well as their status as international or international students. In a similar study, Sengstock (2009) reported a good number of cases of discrimination against students based on gender, skin colour, ethnicity, belonging to minority groups, and sexual orientations in the United States. In a more recent study, Seider and Hillman (2011) examined discussions about race and social class among the 'privileged group' students who participated in a university-based community service-learning programme. Their findings indicated that these students utilised a special 'othering' language to differentiate themselves from those students whom they perceived as different, in a word, 'other'. Madrid (2011) examined social and racial discrimination as perceived by English as a Foreign Language students and teachers with special reference given to Roma (gipsy) minority students. Utilising Critical Race Theory to analyse his findings, Madrid (2011) posited that discrimination, inequity and racism are exerted against people from various ethnic, religious, and racial backgrounds. He stipulated that both teachers and students believed that various forms of discrimination were practised against some students.

Similarly, Goodman and Rowe (2014) studied biased internet discussion forums about Roma in the UK. The analysis of a corpus of discussions and responses to accusations posed against Roma showed that the discussions were replete with racism and prejudice.

Finally, a recent study of two Filipino English language students in Canada by Darvin and Norton (2014) demonstrated that migrant students are subjects of discrimination. They postulate that teachers must capitalise on the transnational values and knowledge that migrant students bring with them to assist them in gaining more learning opportunities.

The current study embarks on investigating student discrimination based on a student's race, gender, place of residence, ethnicity, religious, political beliefs and attitudes, age, and intelligence, amongst other things.

Method

Participants

Sixty-five Iranian male English as a Foreign Language students, constituting three classes in a prestigious and popular language institute in the central town of Ahvaz, Iran, participated in this study by responding to self-administered purpose-made questionnaires and attending focus-group interviews. Their classes were subsequently observed for further data. The participants constituted pre-intermediate (62%) and intermediate (38%) students. Forty-one participants (63%) were from a Persian background and spoke Persian as their native language with limited knowledge of Arabic, and 24 students (37%) were bilingual Arabs speaking Arabic and Persian. As for their socioeconomic status, 11 (16.9%) students stated that they were from a higher class, 35 (53.8%) from a middle class and 19 (29.2%) from a lower class. The participants' age ranged from 14 to 39 years, with 33 (50.7%) participants falling within the age group of 14–8 years, 18 (27.6%) within 19–27 years and 14 (21.5%) within 28–39 years.

Instruments

Three data collection instruments were used: questionnaires, interviews, and class observations. Each instrument is described separately below. Triangulated data were used because three data collection tools, were utilised ('methodological triangulation', see Mackey & Gass, 2005, p. 181). Using varied data collection tools has been recommended in the scholarly literature (e.g., Madrid, 2011). As Friedman (2012, p. 186) states, 'Qualitative research often draws upon multiple methods and sources of data in order to achieve triangulation and strengthen the validity of interpretations.' Therefore, the current study is mainly descriptive in design in that the data collection tools used generated both qualitative and quantitative data.

Questionnaire

The questionnaire (see Tables 1-4) was developed based on a review of the relevant literature, the researchers' conceptions, experience with student discrimination in English as a Foreign Language classes and predictions of what and how the teachers' discrimination might be. The questionnaire inquired as to four major issues and was accordingly divided into four parts, which constituted 32 statements altogether. The first part, comprising seven statements, investigated the extent of language teachers' discrimination against students. The second part, with 13 statements, dealt with the consequences and adverse effects on students. The reasons for language teachers' discrimination against

their students were explored in the third part, which consisted of five statements. Finally, the fourth part, with seven statements, looked at how teachers carried out discriminatory actions. All the questionnaire parts comprised items that were to be responded to on a five-point Likert-scale, i.e., 1) Strongly agree, 2) Slightly agree, 3) Uncertain or No idea, 4) Slightly disagree & 5) Strongly disagree).

Interviews

The interview questions focused on four issues concerning teachers' discrimination against students: a) definition, b) cause(s), c) effects on students, and d) solutions. The focus-group interviews aimed to delve more deeply into the questionnaire data. To conduct the interviews, the researchers divided the participants into five groups and audio-recorded the interviews with each group. The interviews were conducted in the Persian language to ensure that the participants encountered no difficulty in understanding the interview questions and to enable them to express themselves more freely and conveniently. Prior to the interviews, the students were ensured that their identity would be kept confidential and that their responses would be used solely for academic purposes. Afterwards, the interviews were first content-analysed and then coded into recurrent themes with interview excerpts provided for the readers to become familiar with them.

Classroom Observations

To obtain more sensible and objective results, the researchers devised an observation checklist, with Yes/No markings, to gain more illuminating insights into classroom dynamics and interactions arising between teachers and students (see Appendix). These observations took the form of participant observation and were conducted by one of the researchers. The items on this checklist constituted a variety of grounds on which discrimination was likely to occur on the part of the teacher, such as teachers' reactions to students of colour. The classes that were observed included students within the age range of 13 to 39.

Results

The results of the interviews and questionnaires are presented in this section with the results of the observations reported separately. The participants were asked to provide answers to four questions dealing with: a) definitions, nature and extent, b) reasons for and causes, c) consequences, and d) ways to counter teachers' discrimination.

Definition(s) of discrimination

The first interview question asked the participants to define discrimination, particularly in classrooms. Some definitions were as follows:

Interviewee 1: *Discrimination means segregation between individuals without any sensible reasons.*

Interviewee 2: *Discrimination means paying more attention to some students and less to other students. It means differentiating among students.*

Interviewee 3: *A teacher discriminates when he/she prefers some students over others, pays more attention to them and calls on them more frequently for class activity.*

Interviewee 4: *Discrimination means unequal rights for individuals who are equal.*

The analysis of the participants' responses showed the main components of discrimination to be:

- Differential, unequal treatment of individuals
- Differentiating/differentiation among individuals/students
- Preference for some students over others
- Unequal judgement/assessment
- Unequal rights
- Mockery, contempt, abuse, injustice, oppression
- Segregation based on a division of/among students
- Attention vs lack of attention

Accordingly, the first part of the questionnaire aimed to delve further into the phenomenon of student discrimination by enquiring as to the issues raised in Table 1.

Table 1*Nature and extent of language teachers' discrimination against learners*

Statement	Strongly agree (%)	Slightly agree (%)	Uncertain or No idea (%)	Slightly disagree (%)	Strongly disagree (%)
1. Only some teachers discriminate against students, not all teachers.	22.4	18.4	14.3	34.6	10.2
2. Teachers discriminate against some students, not against all students.	28.6	22.4	18.4	24.5	6.1
3. Teachers' discrimination against students always exists and cannot be eliminated.	14.3	10.2	36.7	30.6	8.2
4. There are a variety of ways to combat teachers' discrimination against students.	34.7	28.6	18.4	18.3	0
5. I have been discriminated against thus far at times.	6.1	18.4	14.3	28.6	32.7
6. Teachers' gender, place of residence, and socioeconomic status affect their discrimination against students.	10.2	16.3	16.3	32.6	24.5
7. Teachers' place of teaching (public schools or private language institutes) affects their discrimination against students.	16.3	14.3	18.4	30.4	20.4

According to Table 1, the participants responded with an equal level of agreement and disagreement on Item 1, which stated that only some teachers practice discrimination against learners. However, most respondents agree that only some learners are subjects to discrimination. Further, most learners doubt that discrimination can be stopped. Nevertheless, they agree that discrimination can be combatted through a variety of techniques and methods. The responses also indicate that most participants have not been discriminated against before. Finally, the highest level of disagreement is seen in the last two items, which indicate that teachers' gender, place of teaching, and residence are not highly influential in their discrimination against learners.

Reasons for teachers' discrimination

The results of the reasons for teachers' discrimination against learners are presented in Table 2.

Table 2*Grounds based on which language teachers discriminate against learners*

Teachers discriminate against students on the grounds of:	Strongly agree (%)	Slightly agree (%)	Uncertain or No idea (%)	Slightly disagree (%)	Strongly disagree (%)
1. Students' skin colour (e.g., black, white)	6.1	16.3	20.4	14.3	42.9
2. Students' race and ethnicity (e.g., Arab, Kurdish, Persian, Turkish)	6.1	30.6	10.2	16.3	36.7
3. Students' place of residence (e.g., city, town, suburbs, village)	6.1	12.2	18.4	16.3	46.9
4. Students' socioeconomic status (e.g., well-off, poor)	6.1	16.3	14.3	16.3	46.9
5. Students' gender (male & female)	4.1	24.5	22.4	12.2	36.7
6. Students' face/complexion	6.1	24.5	18.4	14.3	36.7
7. Students' age (e.g., kid, teenager, adult)	18.4	24.5	24.5	12.2	20.4
8. Students' physical condition (e.g., healthy, physically challenged)	10.2	16.3	20.4	20.4	32.7
9. Students' religion and religious beliefs (e.g., Muslim, Christian)	4.1	16.3	28.6	10.2	40.8
10. Students' political beliefs (e.g., conservative, reformist)	4.1	8.2	32.7	12.2	42.9
11. Students' clothing style and dress code	14.3	24.5	16.3	10.2	34.7
12. Students' place of study (one's hometown or somewhere else)	14.3	14.3	26.5	8.2	36.7
13. Students' intelligence and linguistic ability (e.g., smart, slow)	32.7	32.7	6.1	10.2	18.4

Table 2 demonstrates that the participants disagree that three specific factors are possible causes of teachers' discrimination: learners' age, intelligence, and linguistic ability. That is, teachers are more likely to discriminate against learners who are less able than other learners in terms of linguistic abilities and intelligence.

The reasons for teachers' discrimination were further examined in the interviews. The responses included the following:

Interviewee 5: *Discrimination occurs because of deficiency in the teacher's personality and his/her ethical weakness.*

Interviewee 6: *Everyone may indeed have his/her reasons for discrimination, but I think teachers' discrimination comes from their childhood psychological problems.*

Interviewee 7: *Teachers may discriminate against some students because of the students' economic condition or even their complexion.*

Interviewee 8: *I think that some teachers discriminate against some students with whom they have previous undesirable encounters, like when they have been in their classes before and have exhibited unfavourable behaviour.*

The interviewees mentioned the following features of the students that lead to teachers' discrimination against students: a) learning ability, Intelligence Quotient, mental capabilities, b) ethnicity and race, c) age, e) complexion, f) students' behaviour and class discipline, g) skin colour, h) clothing style and appearance, i) socioeconomic status, j) political and religious beliefs, k) previous acquaintance with a teacher, l) teachers' psychological issues and lack of ethical commitment, m) favouritism and nepotism, n) students' ingratiatory behaviour, o) place of residence, p) native language, q) nationality, r) place of study, s) weak managerial techniques, t) bribery and financial issues, u) location in the classroom, v) overall beliefs, and w) lack of enthusiasm.

Ways of discriminating against students

The results regarding the ways in which teachers discriminate against students are presented in Table 3.

Table 3

Techniques of language teachers' discrimination against students

Item description	Strongly agree (%)	Slightly agree (%)	Neutral or No idea (%)	Slightly disagree (%)	Strongly disagree (%)
1. Teachers rarely call upon some students for class activity.	26.5	24.5	6.1	26.5	16.3
2. Teachers pay scant attention to some students.	30.6	22.4	6.1	20.6	20.4
3. Teachers mock some students.	10.2	18.4	12.2	38.7	20.4
4. Teachers punish some students more than other students or are harder on them.	22.4	14.3	6.1	40.8	16.3
5. Teachers do not give some students their real scores.	16.3	22.4	12.2	36.7	12.2

According to Table 3, the participants agree with three items, namely 1, 2, and 4. The most disagreement is seen for items 3 and 5, which deal with teachers' mockery of students and avoidance of giving the students their true scores (i.e., teachers give lower scores to students than they had achieved). This issue was the focus of the interviews as well, which were clearly supportive of the questionnaire findings, indicating that student discrimination manifests itself in the following ways: a) paying scant or no attention to students, b) mockery and scorn against students, c) rarely calling on students for class activity, d) unfair assessment of students, e) unfair strictness on students, f) grudges and contempt against students, and g) unequal treatment of students.

Consequences of student discrimination

As is to be expected, discrimination has adverse effects on students, which were examined in Table 4.

Table 4

Consequences of language teachers' discrimination against students

Teachers' discrimination against language students is likely to:	Strongly agree (%)	Slightly agree (%)	Neutral or No idea (%)	Slightly disagree (%)	Strongly disagree (%)
1. have a negative effect on students' language learning abilities.	63.3	24.5	8.2	4.1	0
2. have a negative effect on students' English language learning motivation.	53.1	28.6	4.1	14.3	0
3. have a negative effect on students' motivation to attend language class.	42.9	38.8	8.2	6.1	4.1
4. have a negative effect on students' sense of responsibility and doing homework.	24.5	36.7	20.4	12.2	6.1
5. have a negative effect on students' behaviour and discipline in class.	26.5	30.6	22.4	12.2	8.2
6. cause students to choose teachers from the same ethnic group/hometown as the students'.	10.2	22.4	28.6	6.1	32.7
7. cause students to choose teachers of the same gender as the students'.	10.2	18.4	34.7	14.3	22.4

Table 4 shows that the participants consider all of the consequences of student discrimination to hold true. The participants agree that discrimination adversely affects students' language learning abilities, motivation, class

attendance, sense of responsibility, discipline, and students' inclination towards teachers from certain ethnic and social groups. Most participants, however, did not agree to 'choosing teachers from the same ethnic group/hometown/gender as the students' (Items 6 & 7) as a reaction to teachers' discrimination.

The participants were then interviewed regarding the negative consequences of discrimination against students. Student discrimination has adverse effects on students': a) language learning motivation, b) learning ability, c) class attendance, d) sense of responsibility and preparation, e) class discipline, and f) performance of class activities and g) completing assignments. It is, therefore, seen that the interview findings firmly support the questionnaire results.

Possible solutions to discrimination

The interviewees were then asked to provide suggestions for ending student discrimination. The participants put forward the following solutions to teachers' discriminatory practices: a) setting up teacher education programmes, b) raising students' awareness of student discrimination, c) raising teacher awareness as to their responsibilities and students' rights, and educating teachers on covert and overt discrimination, d) institutional warning, e) punishing 'discriminating' teachers, f) teachers' suspension from work, g) avoidance of prejudice against students, h) surveillance, and i) changing the seating arrangement of students in the class.

Observational Data

The class observations focused on those features of teachers' behaviour in the classroom that were most likely to be regarded as biased and discriminatory. The observations indicated that most cases of teachers' derogatory behaviour were reflected in their mockery of some ethnic groups, particularly Arabs with reference especially to their accented speech while speaking English or Persian and their skin colour. The classes that were observed had a number of Arab students, although they were a minority in general. Most of these Arab students were from low socioeconomic status but were studying English in a wealthy neighbourhood with the Persian population being the majority. This information might give some clues as to the causes of indirect ethnic references which were implicit in the teachers' behaviour.

For instance, a striking observation was that of two white middle-class adult English teachers who were observed speaking with a sarcastic tone about an Iranian black teenage boy and associating his origins with Africa. The teachers' exact words were, "Where is he from? Africa?" The teachers' tone was

sarcastic, because they were aware that that student was not from Africa. In all likelihood, these teachers might have considered 'whiteness' to be the norm and the teenage boy in the exchange as the 'violation' of that norm. Wortham (2008) narrates a similar exchange between a working-class African-American girl and a middle-class European-American male teacher. Wortham demonstrates how the exchange is indicative of 'a powerful teacher silencing a disempowered student' (p. 205). According to Pickering (2004, p. 91), 'Racial stereotyping cannot be understood without reference to whiteness, the racially unmarked, normative centre from which it stems'. This type of discrimination in academic settings has also been reported by other researchers, such as Rich and Troudi (2006) in the UK who have named it 'racialisation'.

Discussion

Three major issues concerning student discrimination are discussed here: a) causes, b) consequences, and c) solutions.

Causes

As to the question of why and on what bases students are discriminated against, the results indicated that, from the participants' perceptions, the most likely predictors of student discrimination are students' age, clothing style, learning abilities and intelligence, ethnicity and race, amongst others. These results support previous research findings that learners are discriminated against on the basis of their race (Rich & Troudi, 2006; Seider & Hillman, 2011; Tevis, 2012), national origins (Delgado & Stefancic, 2001; Palfreyman, 2005), skin colour and hearing ability (James & Woll, 2004) and speaking a language with an accent (Chin, 2010; Delgado & Stefancic, 2001; Fought, 2006; Lippi-Green, 2012; Nguyen, 1994). Lippi-Green (2012) states, 'such behaviour is so commonly accepted, so widely perceived as appropriate, that it must be seen as the last back door to discrimination' (p. 74). In this regard, accent-induced discrimination warrants plenty of research attention since native-speaker competence as the criterion upon which to assess non-native-speakers has been seriously called into question in recent years (see, e.g., Holliday, 2009; Lurda, 2009; Widdowson, 1994). Furthermore, such discrimination has been severely condemned in the constitutional law of many countries, for instance, the United States (see Lippi-Green, 1994). Cook (1999) called for a recognition of the L2 users as learners in their own right and not 'failed native speakers'. Cook implies that this recognition leads to an improved understanding of L2 learners as multicompetent. There is no reason, Cook explains, to assume that

L2 learners are to be compared and contrasted with another group, say, native speakers. Students, therefore, might be discriminated against, particularly in native-speaker communities due to their non-nativeness. The results confirm Fought's (2006) prediction that in most modern societies, accent, and the inability to speak the 'Standard Dialect', is one of the bases for discrimination against non-native speakers. Research has shown that accent might be used by non-native speakers to exhibit their L1 identity (Tamimi Sa'd & Modirkhamene, 2015). Norton (1995), for instance, narrates the story of Maria, an Italian girl, who strived for acceptance in a community that resisted her efforts. Maria's story indicates discrimination against her on the basis of 'foreignness'. This is a clear example of *Othering* or *Otherising*, which is the basis for much research into discrimination in education. Further, individuals might be subjects of discrimination on the basis of their speech called 'linguistic profiling' (Alim, 2003). Similarly, Palfreyman's (2005) study in Turkey demonstrated that native Turkish teachers' perceptions of international students in a university English language centre drew upon various factors such as class, gender, and national and institutional features.

Gender-based discriminatory practices are also well-documented in the scholarly literature (see, e.g., Taylor, 2004). In a discussion on ethnocentrism, Labov (1969) asserts that it is neither reasonable nor fair to measure foreign language students against the norms of another group. Solórzano (1998) believes that the investigation of racism must go beyond the black/white dichotomy to include notions of gender and ethnicity. Reisigl and Wodak (2001) assert that 'racism' might result from a combination of factors including religious beliefs, pseudoscientific doctrines and stereotypical opinions. Therefore research confirms the complicated nexus among power, control, and dominance (Kumara-vadivelu, 2006).

Also, most participants stated that they had not suffered being discriminated against, which might have been because the participants were themselves the dominant group in this study. Such a group has been described in the literature as 'white, male, affluent, heterosexual, and able-bodied' (Seider & Hillman, 2011, p. 2). This description might be used to characterise disadvantaged students: black or of colour, female, of low socioeconomic status, homosexual, and physically handicapped. The literature confirms that individuals might be subjects of discrimination on the basis of skin colour and hearing ability (James & Woll, 2004). Power seems the most outstanding feature by which this dominance is characterised. Resistance is the solution scholars have proposed: 'Standards and institutions created by and fortifying white power ought to be resisted' (Bell, 1995, p. 901).

Another major aim of the study was to explore the consequences of student discrimination. The participants contend that teachers' discrimination affects their motivation, language-learning abilities, and class attendance more than anything else (see Table 4 above). Noels (2009) confirms the debilitating effect of discrimination on students' desire and motivation for language learning. Highly dynamic, unstable, and changing, motivation is under the constant impact of myriad social, individual, and even biological factors (Dörnyei & Ushioda, 2009). Discrimination also influences students' sense of responsibility, assignment completion and level of discipline, which are intimately associated with motivation. Discrimination can also affect students' identities and their process of identity reconstruction (Despaigne, 2013; Ibrahim, 1999; MacIntyre et al., 2009; Tsui, 2007). The negative effects of teachers' discrimination on learners' language learning might lead language learners to acquire a language in certain ways as it limits their access to learning sources, restricts their participation in learning activities and inhibits them. Tsui (2007), for instance, investigated the identity reconstruction of a Chinese English as a Foreign Language learner and teacher, asserting that identity formation is closely tied to power relations: 'The marginality of membership was the result of an unequal power relationship, which was socioeconomic as well as symbolic' (p. 674). Tsui posited that, 'Participation as well as nonparticipation in negotiating meanings is shaped by power relationships among members of a community' (p. 678).

Moreover, discrimination denies individuals the necessary social interaction required for language development (Norton, 2000). In conclusion, asymmetry in power relations in a community (e.g., a language classroom) can lead to inequality and, finally, discrimination against one group. Finally, the participants did not agree that the students would choose teachers from the same ethnic group/hometown/gender as the students as an outcome of student discrimination, perhaps because of their lack of authority to choose their teachers since learners are assigned to classes regardless of their desires.

One of the objectives of the current study was to find ways to counter teachers' discrimination. According to Chou (2007), discussions of racism and discrimination are avoided by a myriad of researchers. The fact that most individuals are aware of the existence of discriminatory practices against students but do not wish to take actions against it, a sort of 'wilful blindness', is perhaps the first issue that must be raised with regard to discrimination. Therefore, the first step to combating discrimination is to admit that it exists.

The consensus among the participants was that teacher education courses and programmes must assume responsibility for preventing discrimination. Institutions and schools should set and enforce anti-discrimination policies.

Furthermore, despite the discrimination that students may experience in the language classroom, the 'discriminated' students can profitably use the classroom setting to their advantage, feasible through what Despaigne (2013) calls a 'hybridization process': '[a] process through which they put their different identities into perspective' (p. 167). According to Despaigne, this process results in a resistance agency which is utilised by the disadvantaged students to position themselves in classroom settings. Marks and Heffernan-Cabrera (1977) maintain that teachers with favourable attitudes must be selected for teaching minority group students to counter discrimination against them. They also predict that '[...] bilingual education and training can change the attitudes of teachers who actually are discriminated against minority group students' (p. 401).

Similarly, Chou (2007) strongly argued that since classrooms are getting increasingly culturally diverse, prospective teachers should have the essential skills, knowledge and attitudes to deal with this enormous cultural and ethnic diversity. Chou regards mainstream teacher training/preparation programmes as responsible for preparing teachers for this diversity. In confronting supremacist ideologies, Allen's (2004, p. 124) statement is insightful: 'As people of color around the world engage in the struggle against global white supremacy, they should work to humanize both themselves and whites, *when strategic*'. Other areas of education where discriminatory practices must be banned are curriculum design and the production of materials. Most language teaching materials comprise textbooks that promote 'the ideal male', described as white, middle-class and a native speaker, a description which is viewed as the norm and an image universally accepted. Allen (2004) contends that, 'In educational institutions, from kindergartens to doctoral programmes, whiteness is pervasive and constitutive' (p. 131). Various curricular reforms such as including more culturally diverse contents, pictures of students of colour and from various ethnic, cultural and religious backgrounds can be implemented.

Concluding Remarks

Breaking the culture of silence surrounding the issue of discrimination seems to be the first step to stop student discrimination. Preventive action to combat student discrimination can be taken through teacher education programmes with institutions to bear the onus of dealing with this phenomenon in classrooms. Discrimination is led by hidden processes that are produced, reproduced and maintained through discursive practices that are used, consciously or unconsciously, by the powerful groups in society (Burr, 2006). Chisholm (1994) advocates for the promotion of multi-cultural diversity and tolerant education in pluricultural and multi-lingual or multi-ethnic settings are of importance and

relevance here. Chisholm (1994) suggests that, 'preservice teachers can observe classrooms in a variety of socioeconomic, racial, and ethnic community settings, tutor at community centers or local schools with diverse populations and interview minority members about their experiences, values, or beliefs' (p. 10). Sengstock (2009) spoke of the success of 'the Diversity Program' in accommodating students' needs and ending discrimination. The implication is that students' awareness should be raised, which is where critical pedagogy comes in to intervene where the hidden layers and structures of pedagogy and curriculum are uncovered and proved to be far from innocent (e.g., Gillborn & Ladson-Billings, 2010; Morley, 2010). 'For critical pedagogy to become anti-racist,' Allen (2004) posits, 'it will need to be much more serious about the race-radical philosophies of people of color around the world' (p. 122).

Discrimination might occur unintentionally on the part of the teacher. I was once addressed by a teenage student who said: 'You barely call upon me to answer the questions you ask in class!' The researcher should admit that only then did he notice that that student was present in class, which might suggest that some student discrimination is unintentional, occurring due to the widely practised pedagogical routines that have been shaped, strengthened and practices for long. All of this happens through discourse: '[...] through discourse, discriminatory exclusionary practices are prepared, promulgated, and legitimised' (Reisigl & Wodak, 2001, p. 1). This finding should be of central importance to language teachers and institutions that should be made cognizant of such discriminatory, biased acts.

Most participants reported that they had not confronted discrimination. This finding is not surprising as most of them were white middle-class male teenagers. Such students are much less likely to be discriminated against because they constitute the majority group in the context of the study. Similarly, Cotterill (2003) reported that while African-American respondents of her study felt a keen sense of racism, white prospective jurors did not regard racism as an important and pervasive issue. Therefore, research on discrimination must be based upon data gathered from minority students as insights from such subjects are more valid and reliable. Such research should both be contingent on data from and benefit those discriminated against, not those who are not.

Implications of the Study

We hope that the study has implications for disadvantaged students. In line with Despaigne (2013), we recommend that students create and perish their own 'imagined communities', subjectivities and values and develop 'plurilingual and pluricultural learning strategies' (to borrow Despaigne's terms) while

resisting undesirable features of the learning environment. Students should be made aware of their rights in educational settings and should demand this awareness. It seems that, at least in the context of this study, most students were not aware of their rights or educational legislation, for example, how assessment was done by their teachers. Gaining 'critical language awareness' cannot be emphasised, and other researchers have also called for it (e.g., Despagne, 2013).

Such awareness is one way to combat discrimination that might be directed at students. Learners' awareness of how to create opportunities to use the target language will help them to overcome the biased practices directed against them. Norton (1993), for instance, reported on how Katarina, a Polish immigrant woman, could attain immense success in learning English when she reconstructed her identity in the target language even though she did not know English when she came to Canada. Another way to prevent student discrimination is 'empowerment' and 'empowering education' (Shor, 1992). Gaining an understanding of the practices of *Othering* in an English as a Foreign Language context can enhance our vision toward and strive for what Rich and Troudi (2006) referred to as 'equitable practices and democratic learning communities' (pp. 624–625). In their study of the racialisation of students of Teaching English to Speakers of Other Languages in the UK, Rich and Troudi (2006) stipulate that, in order to prevent such discriminatory practices, one needs to develop a deep understanding of what constitutes racist community practices from the viewpoint of students.

Limitations and Suggestions for Further Research

One promising area for future research is to examine disadvantaged learners' perceptions and experiences of discrimination. Further research should also trace the consequences of bias and discrimination against students in the long run and focus on how to combat such discrimination through teacher education programmes and academic institutions. Researchers might investigate if policies are anti-discrimination and if they are followed by teachers. Research shows that this is not always the case and that 'policy as text and as lived experience' constitute two different issues (Morley, 2010, p. 392). A major limitation of the current study was that, due to practicality issues and lack of access to more participants, the instruments were not piloted. In addition, discrimination can be examined in areas such as curriculum design and material development. Sunderland (1992), for instance, investigated 'gendered' use of English (i.e., sexism) in favour of males in textbooks, English as a Foreign Language classrooms and the English language itself.

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Appendix. Observation checklist

Item/Statement	Yes	No
1. Teacher uses sarcastic tone about some students.		
2. Teacher only walks around in some areas in class.		
3. Teacher makes discriminatory comments about some students.		
4. Teacher does not call upon students for class activities equally.		
5. Teacher does not pay enough attention to some students during class time.		
6. Teacher makes comments about students' ethnic groups.		
7. Teacher makes culturally stereotypical comments about some students.		
8. Teacher makes derogatory and mocking comments about some students.		
9. Teacher is stricter on some students than on others.		
10. In general, teacher favours some students over others.		
11. Other: _____		

Biographical note

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Rhyming in the Context of the Phonological Awareness of Pre-School Children

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∞ Rhyming is one of the basic skills associated with phonological awareness. This paper aims to introduce theoretical starting points and the results of research into children's rhyming in the context of phonological awareness. The text explains theoretical circumstances pertaining to the theme and defines key concepts. The main part of the paper includes the results of the research of pre-school children in Slovakia. There were 866 respondents (children) of 4 to 7 years of age. The subject of the research was the rhyming skills of children, which was tested in three independent areas: completing the rhyme in a nursery-rhyme, awareness of rhymes, and the production of rhymes.

Keywords: rhyming, rhyme, phonological awareness, nursery-rhyme, rhyme awareness, rhyme production

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Rima v kontekstu fonološke ozaveščenosti predšolskih otrok

SOŇA GROFČÍKOVÁ IN MONIKA MÁČAJOVÁ

≈ Rimanje je ena izmed osnovnih veščin fonološkega zavedanja. V prispevku so predstavljena teoretična izhodišča in izsledki raziskav o rimanju otrok v kontekstu fonološkega zavedanja. V nadaljevanju so podana teoretična dejstva v povezavi z navedeno temo in opredeljeni njeni ključni termini. Osrednji del prispevka je namenjen izsledkom raziskave predšolskih otrok na Slovaškem, v kateri je sodelovalo 866 otrok v starosti od 4 do 7 let. Predmet raziskave so bile veščine rimanja pri otrocih, preverjene na treh neodvisnih področjih: dokončanje rime v otroški pesmi, zavedanje rime in rimanje.

Ključne besede: rimanje, rima, fonološko zavedanje, otroška pesem, zavedanje rime, rimanje

Introduction

The initial teaching of reading as well as the preceding preparation of children for reading have long been primarily associated with the development of sight perception and focused on the mutual harmonising of eye movements with the movement of the hand. When a child was failing in the acquisition of reading and writing, the reason was sought specifically in the area of the processing of visual information; this was supported by many research studies in reading, which were connected with a relatively intensive interest in sight-perception or sight-spatial processes in reading. However, research into language teaching began to indicate that problems with reading and writing largely result from the shortcomings in processing not visual but acoustic information. Recently, theoretical and empirical findings have shown that phonological factors are involved in the process of mentally representing written words (Ehri, 1992 in Wimmer et al., 1994). There have been growing doubts that we read primarily with sight, especially in connection with the growing knowledge regarding the importance of phonological skills in reading. Many studies have shown that the awareness of the phonological structure of spoken speech, distinguishing phonological units (words, syllables, morphemes and, especially, phonemes), including the ability to work effectively with them at the level of operational memory, is, from the aspect of learning to read, much more important, if not even decisive (Adams, 1990; McBride-Chang, 1995; Mann & Foy, 2007; Torgesen, 2002).

Theoretical background

Each of the elements of literacy is unique; talking, listening, and paying attention are expected to occur without any specific interventions. However, reading and writing are activities based on experience, relying on the child's capabilities (hear, see, say, and store words) and on specific activities encouraging the skills of visual and auditory discrimination, physical maturity, particularly of fine motor control, underpinned by a desire to communicate (Featherstone, 2017). Therefore, language literacy is one of the most important competences in life, which predicts later development of critical and creative thinking. Rhyme awareness, the ability of children to become aware of and produce rhymes are the essential abilities developed at the level of pre-primary and the beginning of primary education of children. One of the starting points and arguments for their development is the fact that rhyme awareness may be a significant help in the development of phonological awareness in case of some beginning readers. Performance in the rhyming tasks is a predictor of the later success in reading

(Catts et al., 2001; Culatta et al., 2007). The essence lies in the fact that the identification of rhyme requires the child to hear sounds within words, which gives the child a basic idea that the word is divided into sound parts. The awareness of syllables and rhymes is developed prior to literacy, but the awareness of the smallest elements of sound symbolised by letters (phonemes) is changed with the orthographical transparency of language. It is necessary to work on skills such as letter recognition, as well as sound and phonological awareness. Research results demonstrate the importance of phonological awareness for ongoing literacy development.

Furthermore, the importance of working in a structured way to develop phonological awareness in children at risk of having future reading and writing difficulties is underscored (Andersson et al., 2019). A strong causal link exists between rhyming skills and reading. Children with weak phonological skills and decreased sensitivity to rhythm are at risk of dyslexia; therefore, the exercises improving rhyme awareness in language (based on music, poetry) may make reading development easier (Goswami, 2015). Also, research findings (Ozernov-Palchik et al., 2018) suggest a connection among rhythm perception, phonological awareness, and letter-sound knowledge (a significant precursor of reading); the authors determined that ‘the association between rhythm perception and letter-sound knowledge is mediated through phonological awareness’ (p. 354).

Phonological awareness is a term that is frequently substituted by phonemic awareness. Phonological awareness denotes the conscious ability to differentiate and manipulate phonological units bigger than individual phonemes (syllables and rhymes), while phonemic awareness is associated only with the smallest units: the phonemes (Ehri et al., 2001; Hogan et al., 2005; Moats, 2000; Reading & Deuren, 2007). Phonological awareness is understood as a general concept of the awareness of sound units, either words, syllables, onsets, and rimes or phonemes, which play a crucial role in this process (Anthony & Francis, 2005; Grofčíková & Máčajová, 2017). Phonological awareness is the ability to pay attention to the sound structure of words, to divide and manipulate sounds. Children learn the sounds and their combinations that are present in their languages and thus form phonological representations for real words. Reading acquisition is predicted by the quality of these representations (Goswami, 2015; McBride-Chang, 1995). Nagy and Anderson (1995) ask whether in the case of the youngest children’s representations of words involve phonemic units at all. In the beginning, words may be represented from the point of view of bigger units, analysed into phonemes only when the discrimination of phonemes is necessary, that is, in the case of the child’s growing vocabulary. Adams (1990) distinguished

four skills that form the basis of phonological awareness. They include rhyming, division of words into syllables, isolating individual sounds (acoustic analysis), joining syllables and sounds (acoustic synthesis), and manipulating sounds (phoneme awareness). As a skill related to phonological awareness, rhyming requires considering that similar sounding words differ in their onset and are the same in their final part. Phoneme awareness is thus acquired by the child in the following order (Cséfalvay & Lechta, 2013):

1. the rhyming of words begins with rhyme perception, then gradually becoming aware of the fact that, for example, the word 'cat' rhymes with the word 'hat';
2. division of words into syllables;
3. identification of the first syllable in the word (the word 'water' begins with the syllable /wa/);
4. identification of the last syllable in the word (the word 'computer' ends with the syllable /ter/);
5. identification of the first sound in the word (the word 'cat' begins with /k/);
6. identification of the last sound in the word (the word 'hat' ends with /t/);
7. identification of the sounds in a word with CVC form (e.g., 'cat'), CCVC (e.g., 'skin') and other longer words, to compose words of sounds (trousers, rhinoceros, and so on), segmenting the words into individual phonemes;
8. manipulation and play with sounds in words and exchanges of sounds, deletion of concrete phonemes in the word.

Four operations are required from the child in the process of phonological awareness. The first is the acoustic perception of certain speech segments. Subsequent to this is its retention in memory sufficiently long for the required operation to be carried out. Then the performance of the given operation (manipulation, leaving out, identification, etc. of speech segment) and the result of the operation must be communicated, most often orally (McBride-Chang, 1995). The development of the concept of phonemes and joining the letters with sounds depends on the ability to listen to the sounds of words and analyse the sounds of individual components. It is thus not surprising that training the awareness of sound units bigger than phonemes accelerates the process of reading. The development of phonological awareness in the pre-school age occurs when it is specifically trained. A striking development of phonological awareness then takes place when the beginning reader begins to be formally educated and trained in the manipulation with sounds and letters, as well as in their

correspondence. The skill to search for words that rhyme is an indicator of the feeling for language, of the ability to perceive the sound structure of words and to become aware of the identity, and, at the same time, the onomatopoeic nature of the last syllable (Máčajová et al., 2017).

Both speech and nonlinguistic rhythm processing require accurate processing of the temporal structure in acoustic stimuli. Temporal patterns in speech contain important cues to phonological units such as phonemes, syllables, and stresses. These collective cues help language learners to segment syllables and words from the acoustic stream and develop a phonological template (Ozernov-Palchik et al., 2018, p. 364).

Phonological awareness is a crucial skill for reading acquisition. Therefore, performing on PA tasks is considered to be a strong predictor of later reading success or impairment.

Rhyme is characterised by the acoustic agreement of sounds (vowels and consonants), words or a group of words at the end of lines, or half-lines. To be able to rhyme requires understanding the concept of rhyming and having the abilities that are key components of the phonological awareness (as discussed above) specifically how to segment words, delete sounds, substitute sounds, and join sounds into words. The child must know which part of the word is important in the rhyme. A child who does not have a sufficient feeling for rhyme often concentrates on the first or last sound of the word, or rather on the meaning of the word, than on the entire rime. Such children, for example, say that 'hat' and 'coat' rhyme (rime is the second half of the word h-at, c-oat). They can also have difficulty with multi-syllable words. Nonsense words are acceptable for the creation of rhymes, because they point to the ability to create a rhyme, not to knowing vocabulary (Adams et al., 1998), which was also confirmed in the results of our testing via our Test of Phonological and Phonematic Awareness (Máčajová, 2013). Such neologisms were not considered to be wrong. The basic instrument for the development of the ability of children to work with rhymes is nursery-rhymes, which are a frequently used genre aimed at children, with appealing aesthetics in rhythm, rhyme, intonation, instruction, entertainment, and fantasy. As for their extent, they are short verse formations, rhythmical texts in which sound instrumentation prevails. It is the connection of the text with a concrete situation or characterising a situation by its naming. The theory understands nursery-rhymes as the characteristic talking of children or adults to animals, plants, or various effects and phenomena in nature. In the nursery rhyme, the rhythmic qualities of an utterance are actualised with a certain aim,

which is associated with the content of the text and has a form of play; This is one of the reasons that nursery-rhymes gradually became part of children's play. In verbal play, children learn how to distinguish verbal models, and then use this knowledge in reading and building their vocabulary (Žilka, 2011).

Rhythm is a regular repeating of the same or similar phenomena in their temporal or spatial succession. It is the regular repeating of an acoustic element, which is associated with the phonetic and phonological system of the language. The repeating can be carried out through the alternation of long and short syllables, through the same number of syllables or accents in the verse, which is the basic unit of poetic rhythm, usually one line of a poetic text. It is characterised by its sound structure which is based either on the regular distribution of stressed and unstressed syllables or on the regular alternation of long and short syllables. This sound organisation is repeated in several verses (Žilka, 2011). The subject of many scholarly discussions is the question of whether rhyme awareness in the early age of the child is significant for the subsequent reading acquisition. Various research studies have proposed several hypotheses:

1. rhyme awareness relates to the ability to read,
2. rhyme awareness influences the acquired level of reading (performance),
3. rhyme awareness leads to the development of phonemic awareness.

This paper presents just one part of a larger study whose aim was to create, for the purposes of pedagogical diagnostics, the Test for the Evaluation of Phonological and Phonemic Awareness (Máčajová, 2013) for pre-school age children, which consists of five main areas, each of which is focused on testing various skills within sub-areas:

- rhyme (described below; there are 15 tested items);
- analysis and synthesis (word-to-syllable analysis, word-to-sound analysis, synthesis of syllables into words, synthesis of sounds into words; there are 40 tested items);
- omission (sound omitting, syllable omitting; there are 10 tested items);
- auditory isolation (isolation of the initial sound, isolation of the initial syllable, creation of the word with particular sound; there are 15 tested items);
- auditory differentiation and localisation (differentiation of words with visual support (pictures), differentiation of words without visual support, localisation of changes within the sentence, localisation of changes within the word, differentiation of nonsense words; there are 25 tested items).

In this paper, we have focused on the detection of the following abilities

in the work with rhymes:

1. ability of children to complete rhyme in a known child's nursery-rhyme;
2. ability to become aware of rhyme, i.e., to determine whether two words rhyme;
3. ability to produce (create) rhymes.

Drawing on the above, we were interested in obtaining answers for the following research questions: What is the level of children, in all age categories, in the fields completing the rhyme in nursery-rhymes, rhyme awareness, production of rhymes?

Method

The research included 28 kindergartens, which were selected by random choice of a western Slovak region. The children tested were from four to seven years of age. In total, there were 866 respondents. Children with speech disorders and those with delayed schooling start were excluded from the testing. In total, we have evaluated 12,990 children's utterances (15 tested items).

Instruments and procedure

First, we tested the ability of the child to complete the rhyme in a well-known child's nursery-rhyme. Five familiar Slovak children's nursery-rhymes were tested: 'Ďap-ďap-ďapušky, išli mačky na hrušky'; 'Osievame múčku, v slamenom klobúčku'; 'Kujem, kujem podkovičku, koníkovi na nožičku'; 'Adam v škole nesedel, abecedu nevedel'; 'Cip, cip, cipovička, mak, mak, makovička'.

Second, we tested the ability of the child to become aware of the rhyme. The child's task was to assess whether the two words, provided by the administrator, rhyme or do not rhyme. Five pairs of the following words were tested: 'čaj-daj', 'auto-slnko', 'huby-zuby', 'myška-liška', and 'komín-kominár'.

Third, the ability of the child to produce (create) rhymes was tested. The child's task was to create a word rhyming with the stimulus word. The following five words were tested: 'pes' (dog), 'dom' (house), 'deti' (children), 'opica' (monkey), 'hračka' (toy). These test tasks were ordered as the last ones; in ascending order of difficulty.

The obtained data were processed using the ANOVA (Analysis of Variance) statistical method. The test aimed to detect whether the differences in the means of individual groups, detected in the sample, were statistically significant, or merely accidental. ANOVA represents an enlargement of the

two-sample t-test. If two groups are compared (the factor has just two levels), ANOVA shows the same result as the t-test (Tomšik, 2017). The LSD analysis (Fisher's Least Significant Difference Analysis) was used in the case of obtaining a significant result via the ANOVA analysis, which means that at least one of the tested groups differs from the remaining ones. The LSD analysis is the test of the smallest difference, used when the zero hypothesis is rejected as a consequence of the results of the hypotheses tests. The LSD calculates the smallest difference between two means, which allows a direct comparison of two means from two independent groups (Tomšik, 2017). To measure the strength of the relationship between two continuous (interval) accidental values, we used the Pearson correlation coefficient. The value r moves from 0 to ± 1 . The values close to 0 signify no relation and the absolute values close to 1 the strong relation. There is a relation between the variables if all points $[x_i, y_i]$ are on the straight line. It equals zero when the values are independent. Positive values signify that variables tend to change in the same direction, and the negative values in different directions (Tomšik, 2017).

Results

Table 1

Percentage success rate of children in rhyme testing

Variable	Age						Overall
	4.0-4.5	4.6-5.0	5.1-5.5	5.6-6.0	6.1-6.5	6.6-7.0	
Completing the rhyme in a nursery-rhyme	74.2%	80%	81%	86.8%	89.6%	90.8%	85%
Rhyme awareness	44.8%	56.4%	62.4%	67.6%	79.2%	80.8%	67%
Rhyme production	33.4%	38.2%	48.6%	55.6%	68.8%	72.8%	54%

In the first step of the result assessment, we were interested in determining whether there is a statistically significant difference between age categories in individual tested areas (completing the rhyme in nursery-rhymes, rhyme awareness, rhyme production). The ANOVA (Analysis of Variance) test was used for these purposes. Based on the significant results obtained through the ANOVA analysis, we decided to use the LSD test for a more detailed analysis (Fisher's Least Significant Difference Analysis).

Table 2*Statistical significance of differences in Completing the rhyme in nursery-rhymes*

Variable	Age category	Age	N	M	SD	df	F	p
Completing the rhyme in a nursery-rhyme	1	4.0-4.5	83	3.71	1.264	5	11.340	.000
	2	4.6-5.0	160	4.01	1.200			
	3	5.1-5.5	130	4.05	1.203			
	4	5.6-6.0	192	4.34	.919			
	5	6.1-6.5	204	4.49	.791			
	6	6.6-7.0	97	4.54	.817			

Note. $p < .05$

The results in Table 2 show that in the tested area completing the rhyme in a nursery-rhyme, the results in all age categories were statistically significant, on the level of significance of .000. It may thus be stated that if differences found in individual age categories are assessed, they are statistically significant across the entire research sample. For the interpretation of the results and making a conclusion about the research, of key importance are the results in Table 1, which present the children's success rate in the testing of rhymes. The results in the area completing the rhyme in nursery-rhymes demonstrate that children were improving by age (74.2%, 80%, 81%, 86.8%, 89.6%, 90.8%), meaning that the older the children were, the more successful they were, being able to better complete the rhyme in the tested nursery-rhymes. The comparison of statistical significance of the difference for the entire research sample showed that if the children at the ages of four to seven years are assessed in a complex way, the increase in their ability is highly evident and may be valid for the whole population. To analyse the differences between the individual age categories in more detail, the LSD test was used; its results are shown in Table 3.

Table 3

Statistical significance in individual age categories in Completing the rhyme in nursery-rhymes

Variable	Age Category	Mean Difference (I-J)	SE	P	Age Category	Mean Difference (I-J)	SE	P		
Completing the rhyme in a nursery-rhyme	1	2	-.295*	.138	.033	4	1	.633*	.134	.000
		3	-.343*	.144	.017		2	.338*	.109	.002
		4	-.633*	.134	.000		3	.290*	.116	.013
		5	-.774*	.133	.000		5	-.142	.103	.169
		6	-.825*	.153	.000		6	-.192	.127	.131
		1	.295*	.138	.033		1	.774*	.133	.000
	2	3	-.048	.121	.694	5	2	.479*	.108	.000
		4	-.338*	.109	.002		3	.431*	.115	.000
		5	-.479*	.108	.000		4	.142	.103	.169
		6	-.530*	.132	.000		6	-.051	.126	.687
		1	.343*	.144	.017		1	.825*	.153	.000
		2	.048	.121	.694		2	.530*	.132	.000
3	4	-.290*	.116	.013	6	3	.482*	.137	.000	
	5	-.431*	.115	.000		4	.192	.127	.131	
	6	-.482*	.137	.000		5	.051	.126	.687	

Note. $p < .05$

A more detailed look at the comparison of the statistical significance of the differences between age categories showed that there is no statistically significant difference between the four age categories. They include the following: second and third (age: 4.6–5.0 and 5.1–5.5), ($p < .694$); fourth and fifth (age: 5.6–6.0 and 6.1–6.5), ($p < .169$); fifth and sixth (age: 6.1–6.5 and 6.6–7.0), ($p < .687$); fourth and sixth (age: 5.6–6.0 and 6.6–7.0), ($p < .131$). Therefore, it can be stated that even though the ability of children to complete the rhyme in nursery rhymes improved, this increase is not statistically significant from the age of two to three, from the age of four to five, and from the age of five to six. The given ability thus develops continually for one year, without significant acceleration. The exception was recorded for the children at the age of 4.0 to 4.5 years, for which the results are statistically significant with regard to all age categories, also concerning the category 4.5–5.0. It may thus be stated that from 4.0 to 4.5 years of age, the ability to complete the rhyme to the nursery-rhyme develops the fastest.

Table 4*Statistical significance of differences in rhyme awareness*

Variable	Age Category	Age	N	M	SD	df	F	p
Rhyme Awareness	1	4.0-4.5	83	2.24	1.686	5	24.005	.000
	2	4.6-5.0	160	2.82	1.722			
	3	5.1-5.5	130	3.12	1.565			
	4	5.6-6.0	192	3.38	1.551			
	5	6.1-6.5	204	3.97	1.362			
	6	6.6-7.0	97	4.03	1.131			

Note. $p < .05$

The results in Table 4 show that with regard to the rhyme awareness tested area, the results in all age categories were found to be statistically significant, on the level of .000. It may thus be stated that if the differences found in individual age categories are assessed, they are statistically significant across the entire research sample. For the interpretation of the results and making conclusions, of the research of key importance are the results in Table 1, presenting children's success in rhymes testing. The results in the area rhyme awareness clearly demonstrate that children were improving by age (44.8%, 56.4%, 62.4%, 67.6%, 79.2%, 80.8%). The older the children, the more successful they were at being able to determine better whether two words rhyme. The comparison of statistical significance of the difference for the entire research sample clearly showed that if the children at the age of four to seven years are assessed in a complex way, the increase in their ability is highly evidenced and may be considered to be valid for the whole population. To analyse the differences between the individual age categories in more detail, the LSD test was used; its results are shown in Table 5 below.

Table 5

Statistical significance of differences in individual age categories in the area of rhyme awareness

Variable	Age Category	Mean Difference (I-J)	SE	p	Age Category	Mean Difference (I-J)	SE	p
Rhyme Awareness	2	-.578*	.205	.005	1	1.139*	.199	.000
	3	-.882*	.213	.000	2	.561*	.162	.001
	1	-1.139*	.199	.000	4	.257	.172	.136
	5	-1.725*	.198	.000	5	-.585*	.153	.000
	6	-1.790*	.227	.000	6	-.651*	.189	.001
	1	.578*	.205	.005	1	1.725*	.198	.000
	3	-.304	.179	.090	2	1.147*	.160	.000
	2	-.561*	.162	.001	5	.843*	.170	.000
	5	-1.147*	.160	.000	4	.585*	.153	.000
	6	-1.212*	.195	.000	6	-.065	.187	.727
	1	.882*	.213	.000	1	1.790*	.227	.000
	2	.304	.179	.090	2	1.212*	.195	.000
3	-.257	.172	.136	6	.908*	.204	.000	
5	-.843*	.170	.000	4	.651*	.189	.001	
6	-.908*	.204	.000	5	.065	.187	.727	

Note. $p < .05$

A more detailed look at the comparison of the statistical significance showed that there is no statistically significant difference between three age categories. They include the following: second and third (age: 4.6–5.0 and 5.1–5.5), ($p < .090$); third and fourth (age: 5.1–5.5 and 5.6–6.0), ($p < .136$); fifth and sixth (age: 6.1–6.5 and 6.6–7.0), ($p < .727$). Therefore, it can be stated that even though the ability of children to become aware of rhyme improved, this increase is not statistically significant from 4.5 to 5.5 years, from five to six years, and from six to seven years of age. The given ability thus develops continually for one year, without significant acceleration. It was shown again that for children at the age of 4.0 to 4.5 years, the results are statistically significant and are different from all other age categories. It may be claimed that the ability to become aware of rhyme develops the fastest in the case of this age group.

Table 6*Statistical significance of differences in the area of rhyme production*

Variable	Age Category	Age	N	M	SD	df	F	P
Rhyme Production	1	4.0-4.5	83	1.66	1.684	5	25.381	.000
	2	4.6-5.0	160	1.90	1.716			
	3	5.1-5.5	130	2.44	1.953			
	4	5.6-6.0	192	2.78	1.899			
	5	6.1-6.5	204	3.43	1.667			
	6	6.6-7.0	97	3.65	1.595			

Note. $p < .05$

The results in Table 6 show that regarding rhyme production, the results in all age categories were found to be statistically significant, at the level of significance of .000. It may thus be stated that if the differences found in individual age categories are assessed, they are statistically significant across the entire research sample. For the interpretation of the results and making conclusions, of key importance are the results in Table 1, presenting children's success in rhymes testing. The results in the area of rhyme production clearly demonstrate that children were improving by age (33.4%, 38.2%, 48.6%, 55.6%, 68.8%, 72.8%). The older the children, the more successful they were in rhyme production. The comparison of statistical significance of the difference for the entire research sample clearly showed that if the children at the age of four to seven are assessed in a complex way, the increase in their ability is highly evident and may be considered to be valid for the whole population. To analyse the differences between the individual age categories in more detail, the LSD test was used. Its results are shown in Table 7.

Table 7

Statistical significance of differences in individual age categories in rhyme production

Variable	Age Category	Mean Difference (I-J)	SE	p	Age Category	Mean Difference (I-J)	SE	P
Rhyme Production	2	-.237	.239	.321	1	1.119*	.232	.000
	3	-.776*	.248	.002	2	.881*	.189	.000
	1	-1.119*	.232	.000	4	.343	.201	.088
	5	-1.764*	.230	.000	5	-.645*	.178	.000
	6	-1.987*	.264	.000	6	-.868*	.220	.000
	1	.237	.239	.321	1	1.764*	.230	.000
	3	-.538*	.209	.010	2	1.526*	.187	.000
	2	-.881*	.189	.000	5	.988*	.198	.000
	5	-1.526*	.187	.000	4	.645*	.178	.000
	6	-1.749*	.228	.000	6	-.223	.218	.307
	1	.776*	.248	.002	1	1.987*	.264	.000
	2	.538*	.209	.010	2	1.749*	.228	.000
3	-.343	.201	.088	6	3	1.211*	.237	.000
5	-.988*	.198	.000	4	.868*	.220	.000	
6	-1.211*	.237	.000	5	.223	.218	.307	

Note. $p < .05$

A more detailed examination of the results showed that there is no statistically significant difference between three age categories: first and second (age: 4.0–4.5 and 4.6–5.0), ($p < .0321$); third and fourth (age: 5.1–5.5 and 5.6–6.0), ($p < .088$); fifth and sixth (age: 6.1–6.5 and 6.6–7.0), ($p < .307$). Thus, it can be stated that even though the ability of children to create rhyme improved, this increase is not statistically significant from 4.0 to 5.5 years of age, from 5.0 to 6.0, and from 6.0 to 7.0 years. The given ability thus develops continually for one year, without a significant acceleration.

In the next step of the assessment of results, we attempted to determine whether there is a relation between the tested variables, specifically between the age and the individually tested areas (completing the rhyme of nursery-rhyme, rhyme awareness, rhyme production) as well as between the areas themselves. For these purposes, the Pearson Correlation test was used. The results are presented in Table 8.

Table 8*Results of correlations between individual correlations*

		Age	Completing Rhyme in Nursery-Rhyme	Rhyme Awareness	Rhyme Production
Age	r	1	.242**	.343**	.355**
	p		.000	.000	.000
Completing Rhyme in Nursery-Rhyme	r		1	.422**	.452**
	p			.000	.000
Rhyme Awareness	r			1	.510**
	p				.000
Rhyme Production	r				1
	p				

Note. $p < .05$, r - Correlation, ** Correlation is significant at the 0.01 level.

The results show a strong relationship between all the variables. Therefore, the following conclusions may be stated: the correlation relation increases with the child's age with regard to the tested areas. The older the child, the better s/he is able to complete the rhyme of a nursery-rhyme, to become aware of the rhyme, and to produce it. With the increasing age, the ability of children to work with rhymes also becomes better. A very high level of correlation is also shown in the comparison of individually tested areas: to complete the rhyme in nursery-rhymes, to be aware of rhyme, and to produce it. These results show an even stronger relationship than in the comparison of the tested areas with age. One can thus claim that these three variables are in a very strong relation. The ability to complete the rhyme in a nursery-rhyme is a condition for rhyme awareness and the subsequent production of words which rhyme. The strongest correlation was found between rhyme awareness and rhyme production, which means that if the child is not aware of rhyme, s/he is not able to produce it.

Discussion

This study focused on testing children's ability to complete a rhyming word in a familiar nursery rhyme, to identify a rhyme and, consequently, to create a rhyming word to stimulus words. The final results in individual areas showed that children were most successful in the task of completing rhyme in nursery rhymes, for which 85.65% of successful responses were observed. The second-highest level of success (66.79%) was recorded in the task of becoming aware of rhyme. The least successful was children when producing rhymes (54.18%).

When interpreting the results for the task of completing rhymes in nursery rhymes, verbal answers were assessed in detail. The results point to the conclusion that the highest number of non-traditional answers occurred in the nursery rhymes with the lowest percentage of success. At the same time, it can be concluded that the higher the percentage of the most frequent answers, the fewer new (non-traditional) answers occurred. Therefore, it can be concluded that if children did not know the nursery rhyme, they needed to think about new rhyming words. The ability to complete rhyme in nursery rhymes improves with age, and the difference is statistically significant. Simultaneously, the development of this ability is continual and most rapid between the ages of 4.0 to 4.5 years. The phonemic awareness development is emphasised in the age group of four to five years old, since some research studies have implied that children younger than four years do not tend to show this ability reliably (Nagy & Anderson, 1995). From the age of four years, phonemic awareness starts to develop through sensitivity to larger sound units, such as phrases and words, proceeding to smaller sound units, such as syllables and phonemes. All children aged four to seven years should be able to pass the Test of Phonologic and Phonemic Awareness successfully by completing rhymes in nursery rhymes (Máčajová, 2013) in all tested nursery rhymes.

Children's ability to become aware of rhymes (i.e., to determine whether two words are rhyming) improves with age, and the difference is statistically significant. The development of this ability is continual, and it develops most rapidly between 4.0–4.5 years of age. Children were more successful when identifying two rhyming words in comparison with words which do not rhyme. Significant difficulties were displayed when determining a rhyme in the pair 'komín-kominár' (42% success). The total success in this area (66.79%) indicated that children manifested pronounced weaknesses in identifying rhymes of words that were similar in sound but different in meaning.

Regarding rhyme production, meaning the ability to create a rhyming word to a stimulus word, it was concluded that it improves continually with the age of children and the difference is statistically significant. Relatively equivalent results in rhyme production imply that this ability of children is equal in output, without any marked relationship to the character of the tested words. No significant difference was recorded when assessing the variability of answers either, because none of the words stimulated production of a significantly higher percentage of new, non-traditional rhymes.

Children are able to become aware of a rhyme much quicker and much sooner than of individual phonemes, which can be considered to be an adequate starting point for the activities with rhymes in the pre-school age. Rhythm and

rhymes start to develop as the earliest phonological awareness skills. Rhythm is created by syllables, and if children can ‘clap’ the syllables of their names or other multisyllabic words, they can ‘attune’ themselves to the rhythm of the language. Dividing words into syllables is an essential skill in learning to read. The child usually starts to become aware of sound similarities at the end of words and can distinguish them. The understanding of the rhyming requires the knowledge of which part of the word is key in rhyming; thus, the teacher should train the distinction and production of rhymes. If the child can identify and produce rhyme models, such as ‘ring’, ‘sing’, ‘king’, and ‘wing’, s/he demonstrates early phonemic awareness, because the child leaves out the first phoneme (onset) in the syllable and substitutes it with other ones. Although, in the beginning, the child is not aware of this process, a space is opened for the realisation that words consist of the sequences of simple sounds, which underscores the importance of rhyming activities in kindergarten (Ehri et al., 2001; Nagy & Anderson, 1995). Therefore, it is recommended that the development of rhyme awareness should begin with nursery rhymes that teach children to become aware of rhyme, followed by training rhyme awareness via determining correspondences between two mutually rhyming, or non-rhyming words, and, finally, asking children to produce rhymes themselves, specifically, by requiring them to create rhymes in response to stimulus words.

What kind of relationship there is between rhyme awareness, phonological awareness, and reading remains an open issue. Some research studies (Dunst et al., 2011; Goswami, 2019; Kuppen & Bourke, 2017) claim that there is a close relation between rhyme awareness and reading. The findings provide support for ‘a relationship between young children’s nursery rhyme abilities and their phonological and print-related skills, including emergent reading’ (Dunst et al., 2011, p. 1). Macmillan (2002) drew on the findings of some researchers who maintained that rhyme awareness is the cause of reading; she conducted a research in which she tried to detect sensitivity to rhyme, the ability to create rhyme, and, at the same time, the test of reading. The relation of both performances was in the population, especially among beginning readers, very close. However, to create a causal relation from such findings was impossible. While rhyme awareness may be a good starting point for phonological awareness, it does not necessarily have to mean a better awareness of individual sounds. The training and development of rhyme awareness stimulate phonemic awareness, which has a favourable effect on reading performance. Rhyme training, however, does not influence phonematic awareness directly since its development occurs only during the targeted training. Rapid progression may be observed in the tasks aimed at the manipulation with sounds and letters (Macmillan, 2002).

Jošt (2011) has tested the hypothesis that claimed that the training and development of phoneme awareness stimulate phonemic awareness, and thus, in fact, are decisive in reading performance. The research has shown, however, that the training of rhymes does not have a direct effect on phonemic awareness. Anthony and Lonigan (2004) dealt with children at the age of four to seven years, searching for the relation between rhyme sensitivity and other forms of phonological awareness. In the case of younger children, no difference could be distinguished between rhyme sensitivity and phonemic, segmental, and global phonological awareness. However, in the case of older children, there was a difference between rhyme sensitivity and above-mentioned phonological skills. The result of this was that the sensitivity to rhyme is highly predictive for these phonological skills. Although rhyming is part of phonological awareness (Anthony & Lonigan, 2004), it seems that it is not necessarily the simplest skill of phonological awareness to master. This means that the rhyming activities include identification and differentiation, in which two or three words rhyme with a chosen word or which one word of the three does not rhyme with the given word (rhyme oddity). Another relatively significant challenge is the activity to produce rhymes. These tasks depend on the fact that words rhyme because they share a common ending sound, and these rhyme tasks represent an assessment of skills in the development of phonological awareness. The evidence from some developmental and intervention samples shows that the competence with the types of tasks for the rhyme completion, rhyme oddity, rhyme production, is formed, on average, at an older age than the ability to manipulate parts of compound words, syllables, and perhaps even some phoneme skills (Philips, Menchetti, & Lonigan, 2008). Exposing the child to nursery rhymes may help in drawing his/her attention to the sound structure of words, as well as to semantic structure. However, there are several recommendations. For example, with regard to appropriate metalinguistic skills, it could be best to teach rhyming explicitly in the onset-rime context, not as an independent activity. Phonological awareness may be taught through the manipulation of words, syllables, onset-rime, phonemes, and not exclusively or primarily through traditional rhyming activities. Wimmer, Landerl, and Schneider (1994) also determined a relationship between rhyme awareness and reading. The main finding was that it is a developmental change. Rhyme awareness was only slightly predictive for the performance of reading and spelling at the end of the first grade but reached a substantial, predictive meaning with the reading and spelling in the third and fourth grades (results from the structure of the German language), which may be explained through the role it plays during fluent reading and a high level of orthographic skills. The authors assumed that the awareness

of bigger phonological segments than rhymes affects the fluency of reading and orthographic spelling skills because they influence the ability of the child to create memory representations for written words. Memory representations have a function of distinguishing the units in reading, where they facilitate direct access to pronunciation and meaning and ensure orthographically correct spelling (Perfetti, 2007). The acquisition of the predictive meaning of rhyme awareness is explained by its usefulness for the creation of mental representations of written words. Some scholars emphasised the importance of sensitivity to rhyme in the initial reading, while others underscored the sensitivity to phonemes. Anthony and Lonigan (2004) determined that the measurement of rhyme sensitivity (except for rhyme production) and sensitivity to phonemes were indicators of the same ability, which led them to the conclusion that 'the effects of sensitivity to rhyme and phonemes are probably not unique in the situations in which words may be read analogically or through letter-sound correspondence' (p. 49). The conceptualisation of phonological awareness provides a certain advantage of rhyme sensitivity in the case of reading through analogy and sensitivity to phonemes in the case of reading through letter-sound correspondence. Both these phonological skills influence reading (Anthony & Francis, 2005; Catts et al., 2001; Ehri et al., 2001, etc.). The above research identified rhyme awareness as a precursor to the development of literacy. Kuppen and Bourke (2017) determined that knowing nursery rhymes at the age of three was predictive to the reading of words at the age of six. Metanalyses also indicate a slightly predictive role of rhyme awareness in subsequent literacy development. Learning the spoken rhythmical nursery rhymes may thus support phonological awareness.

Conclusion

The importance of rhyme awareness is undeniable concerning phonological awareness. The studies and research that both support and challenge the importance of rhyme awareness in connection with initial literacy are relatively numerous. Our testing of the pre-school age children with regard to phonological and phonemic awareness was expected to point to empirical findings that help predict possible problems in the initial literacy and the importance of these activities in pre-primary education. We can state that the tested items on rhyming are possible to generalise on a population of pre-schoolers; these items were approved statistically and became a part of a large diagnostic instrument evaluating the level of phonological awareness. It was determined that children in the investigated age groups were able to complete rhymes in well-known

nursery rhymes, able to become aware of rhyme and could produce rhymes. According to these tested items and possible poor results (under the norm), we can detect children who are at risk in initial instruction of reading and writing; they need special attention before entering the first year of primary school, and activities are oriented on teacher's intervention in kindergarten. As mentioned above, the diagnostic instrument is focused not only on rhyme testing but also on following subtests. Other tested abilities in close connection to phonological and phonemic awareness were analysis and synthesis at the level of words, syllables, and sounds (phonemes); omission of phonemes and syllables; isolation of phonemes and syllables; word differentiation and localisation of changes in the sentences. We can conclude that phonological and phonemic awareness predict a child's level of abilities to read and write. Therefore, it is necessary to continue identifying various language abilities related to phonological awareness and research their part (proportion) in successful reading. This diagnostic test should be a valid and reliable instrument for a teacher to assess the level of phonological and phonemic awareness of pre-schoolers, and to detect children at risk in initial reading and writing. Teachers' competences in developing children's early literacy are developed during undergraduate studies in pre-school and primary education study programmes. Courses are focused on the theory of language development and early literacy as well as training in methods and strategies for developing a child's pre-reading and pre-writing skills.

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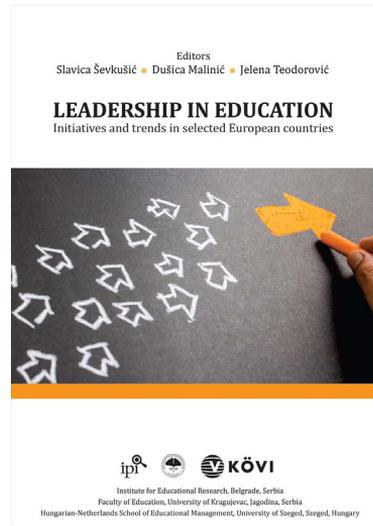
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Slavica Ševkušić, Dušica Malinić and Jelena Teodorović (Eds.), *Leadership in Education. Initiatives and trends in selected European countries*. Institute for Educational Research, Faculty of Education, University of Kragujevac, Hungarian-Netherlands School of Educational Management, University of Szeged, 2019; 242 pp, ISBN 978-86-7447-149-4

Reviewed by GÁBOR HALÁSZ¹

This book is one of the outcomes of a TEMPUS project (EdLead) coordinated by the Faculty of Education of the University of Kragujevac in Serbia, implemented in cooperation with three other Serbian universities (Belgrade, Nis and Novi Sad) and the Institute for Educational Research (Belgrade) between 2013 and 2017.² The project has aimed to develop a master's programme for school leaders in Serbia with the support of three international partners: the Netherlands School for Educational Management (Netherlands), the University of Jyväskylä (Finland), and the University of Szeged (Hungary).

The EdLead project included several knowledge-generating events and activities. One was an international scientific conference entitled 'Challenges and dilemmas of professional development of teachers and leaders in education,' organised in Belgrade in 2015. This event contributed to the birth of the idea to produce a collection of analytical national case studies presenting the state of the art and recent developments in school leadership in various countries. Many potential contributors were contacted, particularly in southern and



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 2 "Master program in educational leadership (EdLead)" (2013-2017). Project Reference: 543848-TEMPUS-1-2013-1-RS-TEMPUS-JPCR

central Europe: internationally known academics with a significant record in research and development work on school leadership and management. They became the authors of this collection of studies.

All the authors of the book 'Leadership in Education. Initiatives and trends in selected European countries' rightly emphasise that the quality of school leadership has been recognised globally and in Europe as a major factor determining education systems' effectiveness. Several European countries have made remarkable efforts to define the competencies school leaders need and create appropriate institutional frameworks to develop these competencies and strengthen the knowledge base of these efforts through academic research and professional communication. This has received significant support from the European Union, for example, through the creation of a policy network in 2011 focusing specifically on this area.³

Developments, however, have been uneven, especially in central and southern Europe. In some countries, the need for improvement in this area was recognised early, and some international development projects were initiated with funding from the European Union or through bilateral projects supported by various national governments. Most of these projects are mentioned in one or more chapters of the book. The authors highlight their importance in raising awareness, creating the necessary knowledge base, and building institutions and capacities. The EdLead project is one of the most recent initiatives of this kind, again proving the importance of international support and cooperation.

The editors of 'Leadership in Education. Initiatives and trends in selected European countries' collected case studies from 12 countries (Serbia, Montenegro, North Macedonia, Bosnia and Herzegovina, Croatia, Slovenia, Bulgaria, Hungary, Czech Republic, Slovakia, Austria, and Finland). Most of them are from southern European countries, but four central European cases are also presented, and one of the chapters is about a Nordic country, Finland. The authors of the chapters followed a common analytical framework: all presented the relevant elements of national legal frameworks. They provided an analysis of the most important developments in the field (including capacity-building arrangements and related research). They also included recommendations and suggestions for the future. However, they enjoyed significant freedom to shape the content of their chapters in the function of the specific national context and in the function of the relevant knowledge and information available for them in the given country. The reader can appreciate both the structural similarity

3 See the website of The European Policy Network on School Leadership (EPNoSL): <http://www.schoolleadership.eu/portal/project>

of the chapters, facilitating comparisons and their diversity, allowing a deeper exploration of what is specific to the different national systems.

The book reveals a high-level variety of national patterns in policy-makers recognising the importance of developing school leadership and taking actual policy actions to promote improvement in this area. In some countries (e.g., Austria, Finland, Slovenia), there has been a high-level of political awareness of the crucial role of school leaders in making schools effective for many years, and one can witness the emergence of strong and stable institutional frameworks capable not only of generating and maintaining advanced quality but also the creation and spread of innovative solutions. In other countries, policy efforts in this area are almost completely missing or, when they appear, they are fragile, not sustained, and overly dependent on temporary international development projects.

This book demonstrates that even in those countries where policy support for school leadership development is missing or fragile, there is a strong small professional community that is not only fully aware of the importance of the area but also capable of mobilising resources, producing high quality relevant knowledge and exploiting the potential of international development actions. Several members of these communities are among the authors of the book, which can also be described as a pool of their shared, common knowledge. They form a well-connected community of thinking and practice, with a significant potential for promoting nationally and internationally the cause of leadership development.

The different chapters of the book show that educational management and leadership has become a well-established research area: an important sub-discipline within the large domain of educational research. In every chapter, we see the presentation of the outcomes of several research studies on various problem areas, such as leadership impact, leadership-related beliefs and opinions, the skills needs of school leaders or the relationship between organisational capacities and leadership styles. In some chapters, we find the outcomes of qualitative studies, which enables the reader to obtain a deeper insight into the way school leadership works.

One of the book's strengths is the combination of studies written by those of the 'receiving side' of the EdLead project and those who were supposed to bring relevant international knowledge through Serbia's development activities. This is a good example of mutual international learning, when those participating in the process of 'policy transfer' or 'policy borrowing' are learning from each other. The advanced Finnish approaches focusing on professional learning communities, knowledge-sharing networks, the promotion of 'systemic

leadership' or 'distributed leadership' generated valuable insights in the Serbian context, where the establishment of basic institutional frameworks remains on the agenda. The same is true for the experiences of the Austrian 'Leadership Academy'. Both have attracted the attention of the OECD analysts when that organisation launched its thematic survey on school leadership (Pont, 2008).

The editors of the book, summarising the recommendations of the various chapters, underline three major options for further improving policy and practice. In the first place, they stress that there is a clear need to professionalise further school leadership. This includes the 'establishment of better defined, more stringent and transparent criteria for the selection of principals as well as the creation of appropriate mechanisms and instruments for evaluation of their work' (p. 9). They suggest that this can only be achieved if the political influence on the appointment and the activity of principals is minimised. This recommendation also includes references to a wide variety of capacity development tools. As the authors put it: 'the improvement of competencies of principals through appropriate initial, advanced, and in-service training and mentoring, creation of opportunities for principals' career progression and efforts to make principalship more attractive' (p. 9).

In the second place, the editors recommend, again on the basis of what each author emphasises, initiating systemic reforms changing the regulatory environment in which school leaders work, 'synchronising legislative and professional aspects of leadership and giving more autonomy to schools and principals, especially in the field of financing and budgeting' (p. 9). They demand actions for reducing the administrative burden of school leaders so that they could focus more on the core tasks of their school: the improvement of teaching and learning.

The third recommendation of the editors, again echoing what the authors of the various chapters suggest, is related to improving the knowledge base of leadership-development. As they stress, 'future research should, among other things, focus on studying the effects of existing training programs and examine what competencies are needed for principals to lead schools as they become more autonomous' (p. 10). This book is, in fact, a good example of how research can support policy development and the development of effective new institutions and processes.

A key challenge most southern and central European countries face when they envisage designing school leadership development programmes is to position themselves on a continuum that stretches from classical university- and course-based management training to school-based professional development embedded into the daily operation of schools and school networks. The

chapter on Finland, which is the only one to rely significantly on case-presentation and to follow an ethnographic approach, promotes the involvement of school-leaders in professional learning communities as the most effective way to develop their capacities. The author stresses that if schools and school networks are to be developed into professional learning communities, they have to develop a collaborative culture and network orientation, which makes it necessary to overcome the tradition of teacher isolation and also the building of strong inter-institutional horizontal connections. Perhaps the most important message of a reviewer on this book is that one should not be overly committed to the classical forms of professionalising leadership through formal training by professional, often university-based trainers. There is a need for openness to capacity development forms based on mutual, horizontal learning in less formal environments, such as communities of practice and learning supporting networks.

There is one additional element in the book to which I would like to draw the reader's attention: the role of entrepreneurship in school leadership. This appears in several chapters but receives the strongest attention in the chapter on Slovenia, which devotes a whole section to the entrepreneurial competencies of school leaders. As the authors of this chapter note: 'School heads need entrepreneurial skills in order to effectively manage their schools' (p. 219). They recall the definition of the relevant working group created by the European Commission: 'entrepreneurship refers to an individual's ability to turn ideas into action, to be innovative, take risks, plan and manage projects with a view to achieving objectives, and being able to seize opportunities' (p. 219). In fact, there are too few school management and leadership training programmes that recognise the importance of entrepreneurial skills, incorporate this into their intended learning outcomes and make concrete efforts to develop this necessary skill. Focusing on this specific aspect is a particular strength of the Slovenian chapter.

'Leadership in Education. Initiatives and trends in selected European countries' is an important book for all those who are engaged in developing school leadership or plan future initiatives in this area, not only in southern and central Europe but everywhere in the continent. It is a vital resource for those who design leadership training programmes or any kind of development actions in this area. There is perhaps one element that could have strengthened the future impact of this book: a substantial synthesis chapter going beyond what the relatively short preface could provide.

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