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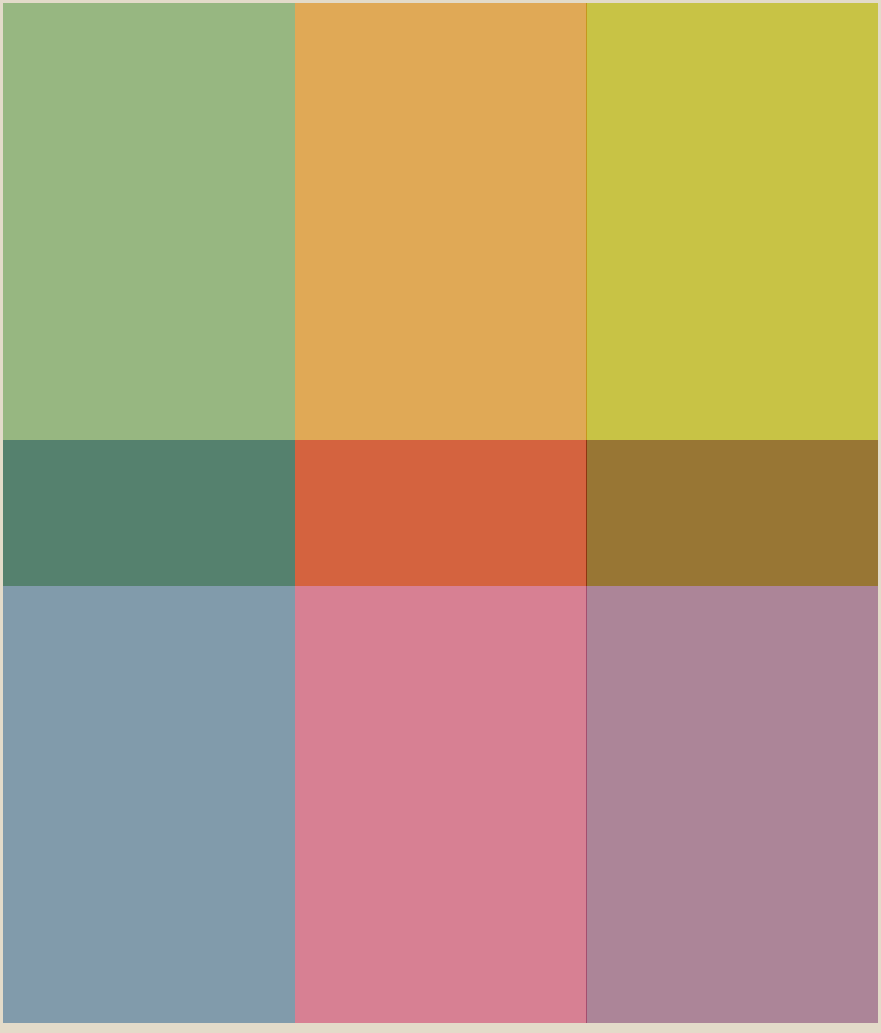

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The CEPS Journal is an open-access, peer-reviewed journal devoted to publishing research papers in different fields of education, including scientific.

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.

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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 kvantitavnih 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 predstavitve ter recenzije novih publikacij.

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Editorial

Globalization, the development of technology, mobility, the labour market, the diversity of learners, educational reforms and the like have already directly and indirectly affected higher education and faced higher education institutions and lecturers with new challenges.

Higher education has already been discussed in two previous issues of CEPS, in 2012/2 and 2014/2 but from the point of view of educational policies. This issue is focused on higher education didactics, i.e. on the processes of teaching and learning at the higher education level and on the importance of the development of higher education institutions as professional learning institutions that have contextual influence on the quality of the higher education learning process. The development of learning communities and the professional development of each individual that is understood as "a process of significant and lifelong empirical learning in which teachers develop their own comprehensions, and are changing their teaching practice; it is the process that includes teachers' individual, professional and social dimension, and it is also teachers' progressing towards the direction of critical, independent, responsible decision-making and acting" (Valenčič Zuljan, 2001, p. 131) are interdependent. The professional development of individuals contributes significantly to the development of communities and, in return, the learning community is an important foundation for the development and learning of each of its members.

Hord (1997) identifies basic characteristics of professional learning communities in education: shared values and vision, collective responsibility, reflective professional inquiry, collaboration and promoting of individual as well as group learning. Stoll, Bolam, Mc Mahon, Wallace, and Thomas (2006) confirm these characteristics at universities and emphasize the mutual trust, respect and support among staff members, inclusive school-wide membership, and openness, networks and partnerships that look beyond the school for sources of learning. Professional community building is not just about creating or defining collaborative work for teachers as Talbert (2010) stresses, but it means "[…] shifting a focus on teaching toward student learning", and "changing the way schools and the school system operate and how professionals at all system levels work to foster success for all students" (p. 568). All these accents encourage consideration of how to achieve quality in higher education and the role of higher education teaching.

The Focus section comprises seven articles. All articles are the result of teamwork of several authors, often of diverse levels of expertise. Thus, twenty researchers from four countries were included into the thematic part. Some

articles are comparisons over different countries while others are the results of cooperation of researchers from the same institutions. All contributions are empirical with qualitative or quantitative research approaches.

Faculties as learning communities emphasize the learning process of each lecturer. The analysis of competencies stimulates such development and can appear in the form of the self-evaluation of a lecturer, the research of direct measurement of competencies, the research of opinions and experiences of students and lecturers, etc. The competencies are the topic of four articles; two are focused on competencies of higher education lecturers while the others are on the achievement of student's competencies over the study.

The first article "Towards Competence-Based Practices in Vocational Education – What Will the Process Require from Teacher Education and Teacher Identities?" is authored by four Finnish researchers from the Oulu University of Applied Sciences, School of Vocational Teacher Education, *Nissilä Säde-Pirkko, Karjalainen Asko, Koukkari Marja and Kepanen Pirkko*. In the first part of the article, the development of competence approach is reviewed, including its advantages and limits, with an emphasis on vocational education. The authors contemplated vocational education upon collegial cooperation that often seems to be problematic in schools and universities and wondered if there are certain social structures or behavioural patterns that influence the cooperative culture in teacher communities. The article answers four research questions: What are vocational teachers' conceptions of cooperation in their work contexts?; What obstacles and promoters of cooperation do the teachers find in their work contexts?; What are teachers' experiences of mutual relationships in their work communities?; and What attitudes and intentions seem to guide teachers' cooperation at work?

The research was carried on 39 newly qualified and experienced vocational teachers at all levels. The findings show that the prevailing model in teacher communities is individualistic, discipline-divided and course-based, especially among older teachers. The obstacles are teachers' self-image and a deeply rooted fear of criticism or revelation of incompetence. The promoters of cooperation were connected to the changing practices and the desire to share with colleagues.

Klara Skubic Ermenc from Faculty of Arts, University of Ljubljana**,** *Nataša Živković Vujisić and Vera Spasenović* both from Faculty of Philosophy, University of Belgrade (Serbia) in their article "Theory, Practice and Competences in the Study of Pedagogy – Views of Ljubljana and Belgrade University Teachers", examine the issue of competence-based approaches in the context of the Bologna process. In the theoretical framework, a short history of the

development of pedagogy is presented, as well as its identity and status as a science and the gap between pedagogical theory and practice. The empirical research attempts to illuminate the relationship between the theoretical and practical education of pedagogues at the university level. Eleven university professors from the departments of pedagogy and andragogy at the universities of Ljubljana and Belgrade were interviewed. The semi-structured interviews focused on two main research questions regarding how they understand the relationship between pedagogical theory and practice, and the identity of pedagogy as a science in that context, in addition to their opinion about the competence-based approach in the context of the study of pedagogy. The findings show that the majority of the interviewed university teachers hold the opinion that pedagogy is primarily a theoretical science and, accordingly, that mastery of the theory is crucial for the development of pedagogues' competences. Furthermore, most of them are rather reserved and critical towards the competence approach as well as practical skills development. Although there are some differences in opinions between professors from Ljubljana and Belgrade, the study shows that similar discourses prevail. The gap between pedagogical theory and practice is one of the major issues that have become current in pedagogical science in recent decades. The findings of this research indicate that there is dissatisfaction with the relationship between modern pedagogical theory and practice; therefore, authors emphasize the need for its reconceptualization.

The article "Didactic Strategies and Competencies of Gifted Students in the Digital Era" is by *Grozdanka Gojkov, Aleksandar Stojanović, and Aleksandra Gojkov-Rajić***,** all from Teacher Education Faculty, University of Belgrade and Preschool Teacher Training College "M.Palov" Vršac (Serbia). The paper presents findings of an explorative research undertaken on an intentional sample consisting of 112 master students of pedagogy in Serbia, assumed to be potentially gifted and to have manifested academic giftedness. The intention was to examine the influence of didactic strategies and methods on the competencies of gifted students, thus verifying the hypothesis of the positive effect of certain didactic strategies and methods in faculty classes on the encouragement of intellectual autonomy of learning in the case of the gifted. The method of systematic non-experimental observation was used as well as an assessment scale used by students to estimate the level of presence of the enlisted strategies, methods or procedures during studies and to what an extent learning and teaching strategies used in lectures, exercises, seminars, consultations addressed their needs and contributed to competencies development. The basic finding refers to the following: the achieved competencies with higher average values were, predominantly, those that are important for intellectual functioning, but which

were not directly connected to what explains critical thinking (but not completely) and intellectual autonomy, and they referred to the knowledge of basic concepts, the understanding of facts, and giving explanations of events.

In recent decades, several researchers have been engaged in studying the quality of university education; they have researched different aspects of teaching and learning and contemplated the improvement of the study process. Varieties of these studies have shown that good teaching in higher education is a concept with no universally accepted definition (Devlin & Samarawickrema, 2010).Different studies determined that higher education teachers are the pillars of HE quality. Higher education teachers should be successful as researchers and educators. How we esteem both areas is shown by studies that enlighten both competences of lecturers and their relations. In the article "Fostering the Quality of Teaching and Learning by Developing the 'Neglected Half' of University Teachers' Competencies", *Barica Marentič Požarnik and Andreja Lavrič* from the University of Ljubljana emphasized that the quality of teaching and learning in universities has been undervalued too long in comparison to research. Current social, economic, ecological and other challenges require that more attention be given to measures to improve the situation. Academic staff must receive incentives, policy support, and high-quality pedagogical training to develop key competencies for excellence in teaching. The case study from the University of Ljubljana is based on experiences gathered from four groups of participants during a course on Improving University Teaching in 2013 and 2014. They gave their opinions on the relative importance of different competencies in teaching, to what extent have they developed them during the course and, finally, which of the activities and methods used have contributed the most to their development. The significant contribution of authors is some measures to foster excellence in teaching at the level of policy and exposed some areas for further research.

One of the most important goals of universities is to enhance students' learning and learning achievements and to outline their professional identity and professional development as well as vocational progress. To reach this goal, it is essential to create learning environments in which a metacognitive approach is stressed, and students are actively included in the planning, implementation as well as evaluation of teaching process. The formation of a supportive learning environment is the topic of two articles; the first is directed to ICT and the second to the relations between students' motivation, and perceptions of the learning environment.

The usage of ICT in higher education teaching and learning has been the subject of numerous discussions and studies. *Maja Lebeničnik* from the

Faculty of Education, University of Primorska and Faculty of Civil and Geodetical Engineering, University of Ljubljana (Slovenia), *Ian Pitt* from Department of Computer Science, University College Cork (Ireland) *and Andreja Istenič Starčič* from Faculty of Education, University of Primorska (Slovenia) authored the article "Use of Online Learning Resources in the Development of Learning Environments at the Intersection of Formal and Informal Learning: The Student as Autonomous Designer". The authors categorize different online learning activities into principles of Universal Design for Learning. The survey was conducted on 138 Slovenian university students, comparing student teachers with students in other study programs. The aims of the research were to investigate the incidence of certain ICT-supported learning activities among Slovenian university students, following by the comparison between student teachers and students in other study programs and by an appraisal of the diversity of ICT-supported learning activities among student teachers and students in other study programs. The findings indicate that among all students, activities with lower demands for engagement are most common. Some differences were observed between student teachers and students from other programs. Student teachers were more likely than their peers to perform certain activities aimed at meeting diverse learner needs, but the percentage of students performing more advanced activities was higher for students in other study programs than for student teachers. The categorization of activities revealed that student teachers are less likely to undertake activities that involve interaction with others. The authors conclude that student teachers should be encouraged to perform more advanced activities, especially activities involving interaction with others, collaborative learning and use of ICT to plan and organize their own learning processes.

University teachers often face dilemmas regarding how to create a stimulating learning environment in large and more diversified/heterogeneous university classes along with motivating students to undertake work tasks and to study more intensively, as well as how to support them in achieving academic standards.

Marko Radovan and Danijela Makovec, both from University of Ljubljana, in their article "Relations between Students' Motivation, and Perceptions of the Learning Environment", examined the characteristics of university students' motivation and its connection with perceptions of learning environment. The authors attempted to determine which characteristics of the learning environment best predict the motivational orientation of students and their course satisfaction. The survey included 120 postgraduate students of the Faculty of Arts at the University of Ljubljana. For measurement motivation, the authors

used several scales of the Motivated Strategies for Learning Questionnaire and for evaluation of the learning environment further to the creation of a new questionnaire for the purpose of this research. The main research questions of the study were how the perceptions of the learning environment are connected to students' motivation and which aspects of the learning environment and motivation predicts students' course satisfaction. The results revealed a high correlation between the intrinsic goal orientation, self-efficacy, and control beliefs. The most important factors of the learning environment that are connected with the formation of intrinsic goal orientation and enjoyment of education are the perception of the usefulness of the studied topics, a feeling of autonomy, and teacher support. The authors conclude that the research findings support the student-centred model of teaching and learning to a certain extent.

In contrast to the traditional practice of teacher training grounded in a transmission paradigm, modern models of teacher training presuppose educating teachers to conduct reflective practice and thus transforming teachers into reflective practitioners. *Lidija Vujičić, Željko Boneta, and Željka Ivković*, all from the University of Rijeka, Faculty of Teacher Education (Croatia) present an example of a research-based, reflective approach to practice grounded in action research and the co-construction of knowledge with students as an example of quality practice at their faculty. Such a form of practice creates knowledge through action itself and through deliberation upon one's own actions and the actions of others, all with the purpose of strengthening the practical competencies of future teachers. Their conclusion is that mutual learning, as propounded by the social constructivist approach to education, within the context of the mutual discussions between students and teachers that they organized, directly contributed to the development of (self-)reflection competencies among future teachers. Moreover, all participants immersed in an environment conducive to deliberation and the (re)definition of oneself and one's own pedagogical work.

The Varia section comprises two articles. The first article, "L1 Use in EFL Classes with English-only Policy: Insights from Triangulated Data", is authored by Iranian researchers *Seyyed Hatam Tamimi Sa'd and Zohre Qadermazi* from Urmia University (Iran) and discusses the use of L1 (the students' mother tongue) in English as a Foreign Language Classes and on the base of theoretical and empirical study presents the advantages and disadvantages of its use.

The article "The Social Acceptance of Secondary School Students with Learning Disabilities" by three Slovenian authors. *Teja Lorger* from the Third Gymnasium Maribor, *Majda Schmidt* from Faculty of Education, University of Maribor and *Karin Bakračevič Vukman* from Faculty of Arts, University of Maribor imparts an important challenge to the social exclusion of pupils with

learning difficulties. Based on the research findings, the authors emphasize the teacher's role within appropriately developed strategies for strengthening students' social skills, as well as positive attitudes and sufficient knowledge about the special needs of students that has a significant influence on social inclusion and acceptance of special needs students into class community.

Jana Kalin and Milena Valenčič Zuljan

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Towards Competence-based Practices in Vocational Education – What Will the Process Require from Teacher Education and Teacher Identities?

Säde-Pirkko Nissilä*[1], Asko Karjalainen[2], Marja Koukkari[3], and Pirkko Kepanen[4]

Competence-based education refers to the integration of knowledge, skills, attitudes and interactivity as the intended outcomes of learning. It makes use of lifelong learning and lifelike tasks in realistic settings and requires the cooperation of teachers. This research was prompted by the desire to explain why collegial cooperation often seems to be problematic in schools and universities. Are there certain social structures or behavioural patterns that influence the cooperative culture in teacher communities? The research material was collected in 2013 and 2014 in Oulu, Finland. The target groups were both newly qualified and experienced vocational teachers at all educational levels (N=30). The data collection methods were open questions in interviews and questionnaires. The research approach and analysis methods were qualitative. The theoretical background is in humanistic-cognitive and experiential learning as well as in dynamic epistemic conceptions. The findings show that the prevailing model in teacher communities is individualistic, discipline-divided and course-based, especially among older teachers. The obstacles refer to teachers' self-image and a deeply rooted fear of criticism or revelation of incompetence. The promoters of cooperation were connected to the changing practices and desire of sharing with colleagues.

Keywords: attitude, cooperation, learning in work places, life-long and life-wide learning, professional development

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Proti kompetenčnemu sistemu poklicnega izobraževanja – kaj bo proces zahteval od izobraževanja učiteljev in učiteljevih vlog?

Säde-Pirkko Nissilä*, Asko Karjalainen, Marja Koukkari in Pirkko Kepanen

Kompetenčni sistem izobraževanja pomeni, da so v predvidene dosežke učenja integrirani znanje, spretnosti, odnos in interaktivnost. Naslanja se na vseživljenjsko izobraževanje in realistične naloge v realnih situacijah ter zahteva sodelovanje učiteljev. Raziskavo je spodbudila želja ugotoviti, zakaj se kolegialno sodelovanje v šolah in na univerzah pogosto zdi problematično. Ali obstajajo določene socialne strukture ali vzorci obnašanja, ki vplivajo na sodelovalno kulturo v učiteljskih skupnostih? Podatki so bili zbrani v letih 2013 in 2014 v Ouluju na Finskem. Ciljna skupina so bili učitelji začetniki in tudi izkušeni učitelji v poklicnem izobraževanju na vseh stopnjah izobraževanja (N = 30). Zbiranje podatkov je potekalo z intervjuvanjem in anketiranjem z odprtimi vprašanji. Raziskovalni pristop je bil kvalitativni. Teoretična ozadja predstavljajo humanistično-kognitivno in izkustveno učenje pa tudi dinamični epistemološki koncepti. Rezultati so pokazali, da med učitelji prevladuje individualističen model, razdeljen na discipline in osnovan na učnem načrtu, še posebej med starejšimi učitelji. Ovire pri sodelovanju so predvsem učiteljeva samopodoba ter globoko ukoreninjen strah pred kritiko in razkritjem nekompetentnosti. Spodbujevalci sodelovanja so bili povezani s spreminjanjem prakse in z željo po izmenjavi med sodelavci.

Ključne besede: stališča, sodelovanje, učenje na delovnem mestu, vseživljenjsko in celostno učenje, profesionalni razvoj

Introduction: Competence-based education system

Competence-based education is becoming increasingly dominant in European countries and Australia (Clarke & Winch, 2007; De Bruijn, 2004). In Finland it began in 1994 in secondary vocational education. Since the European Bologna process was launched in 1999, it has become a common aim of all tertiary education. The term "competence-based education" seems to cover various ideas: teachers taking into account the changes in the education system, a greater access to A-levels, the students' heterogeneity, the inclusion of children with special needs as well as the growing autonomy for junior high school and grammar school. Consequently, teachers' roles and work as previously defined have changed. Nowadays, there is an emphasis on teacher autonomy in order to adapt oneself to the local contexts. (FNBE, 2014.)

One meaning seems to be shared: it refers to the integration of knowledge, skills and attitudes as the intended outcomes of learning, relying on lifelong learning and lifelike tasks in realistic settings. The theoretical background is in humanistic-cognitive and experiential learning as well as in dynamic epistemic conception. All forms of competence are seen important, and should be identified and recognized. Assessment is supportive to professional development and focuses on professional performances in authentic contexts. (FNBE, 2014; EU, Bologna Declaration, 1999.)

Competence-based system in adult and vocational education

In adult and vocational education in Finland, a competence-based education system has been established. Vocational upper secondary, further vocational and specialist vocational qualifications can be completed through competence-based qualifications or through vocational upper secondary education and training. A competence-based qualification is completed by demonstrating vocational skills, as stipulated in competence-based qualification requirements, in workplaces in authentic work tasks.

Key principles of the system in vocational training include 1) tripartite cooperation between employers, employees and teachers when planning, arranging and assessing competence-based qualifications; 2) independence of the manner in which the skills were acquired; 3) completion of the qualification/ qualification module by demonstrating the skills at competence tests; and 4) personalization. Depending on the subject covered, a vocational upper secondary qualification attained in the form of a competence-based qualification (nominal extent 120 credits) or a corresponding earlier qualification

confer general eligibility for further studies at universities of applied sciences in the corresponding field. From there, they can continue in science universities. (Heiskanen & Sairanen, 2013.)

Competence-based vocational education covers various ideas and practices. Authentic and functional learning is supported by learning underlying knowledge and training in specific skills. Assessment is supportive to professional development and focuses on the quality of performances in authentic contexts. (De Brujin, 2012.) Teachers are expected to be adaptive coaches and role models. Team teaching is seen as highly relevant (Biemans et al., 2009; Billet, 2001; Nijhof et al., 2002). Being a role model either in school or in the workplace is often perceived as being demanding (Aarkrog, 2005; Griffith & Guile, 2003; Tynjälä, 2008; Van der Pol et al., 2011; Van Schaik et al., 2011).

Earlier research reports described how teachers in competence-based vocational education changed their teaching practice (e.g. de Bruijin & Van Kleef, 2006). The studies concentrated on pre-vocational and senior secondary vocational education in the formal education system in the Netherlands.

De Brujin's study (2012) revealed four main characteristics and guidance features in competence-based education. They were 1) powerful learning environments (adaptivity & expansion of tasks), 2) proven teaching methods and experiential ones in a new educational concept (flexible use), 3) professional identity learning (modelling, coaching) and 4) self-regulation (monitoring, guiding, scaffolding). (De Brujin, 2012, pp. 644-655.) Professional identity formation of a teacher was seen as crucial to connecting the framework for the contents and for teaching and learning activities that make up these courses. No deeper analyses of self-concept, self-efficacy, and relationships with colleagues and students were made in De Brujin's study.

Competence-based teacher education

Competence-based teacher education has been a controversial issue in many countries. What is seen positive is that the clear learning objectives clarify the aims of the training program to be realized. It can be a tool for professional development to the extent that it helps student teachers, teacher educators, and all teachers to formulate goals, develop self-assessment and reflection upon practice (Koster et al., 2008). A competence-based approach also makes clear the difficulty of high quality performance in teaching. As such, it contributes to the demystification of teaching and opposes the charismatic image of a good teacher whose competence results from his/ her natural talent (Connell, 2009; Whitty & Wilmott, 1991).

In contrast, detailed lists of skills to be achieved may lead to a fragmentary

approach to teaching in which the teacher's action seems to be an inconsistent sum of given skills. Separate skills do not guarantee efficient behaviour in professional contexts. Curricula should aim at holistic views. Teachers are part of the school and teachers' community; therefore, performing well also depends on how colleagues are doing. (Connell, 2009; Korthagen, 2004; Pantic & Wubbels, 2010; Cosnefroy & Buhot, 2013.) Teachers are likely to face problems that cannot be solved solely with technical skills. Values, ethical commitment, and personality have an impact on teachers' decision-making and their choice of technical skills to be used.

Although several pilot experiments are promoted in the Oulu School of Vocational Teacher Education (SVTE) (Karjalainen & Nissilä, 2008; Länsitie & Kepanen, 2014), this presentation does not primarily concentrate on pre-service teacher education. The main target is to determine what kinds of readiness qualified academic, vocational in-service teachers need when encountering the challenges of the new system.

Workplace learning in competence-based teacher communities

Competence-based education and especially teachers' pre-service and in-service education imply that academic and vocational knowledge are insufficient to support a teacher's work. To bridge the gap between theory and practice, competence-based education reassesses the roles of school and workplace. Within this framework, both workplace and on-the-job learning play an overriding role. (Struyven & Meyst, 2010.)

Tynjälä's (2008) framework for workplace learning made a distinction between three basic learning modes evident in the workplace: 1) incidental and informal learning that takes place as a side effect of work; 2) intentional, but non-formal learning activities related to work; and 3) formal on-the-job learning. Incidental/ implicit learning produces tacit knowledge, while non-formal learning takes place outside the training program but can be planned and produce explicit knowledge. For example, peer group mentoring at school is a kind of formal on-the-job learning, while interacting with colleagues or learning by oneself from the teaching experiences takes place outside the training program. (Tynjälä, 2008.) Eraut (2007) sees learning as a by-product of working with colleagues or unplanned observations of them.

It could be argued that research on workplace learning in vocational education/ training should adopt an extensive view including learning by oneself, learning with/ from colleagues and investigating how these modes and interactions complement each other.

About teacher competences and qualifications in vocational contexts in Finland

Teachers in secondary and tertiary vocational education in Finland are intended not only to teach a subject with high pedagogical standards but, particularly at the secondary level, also identify and help students with emotional and behavioural difficulties, to challenge bullying, or to promote communication with family. Caring for students is part of teacher's work. The cognitive skills comprise knowledge, skills, values and attitudes and capability to use them in certain contexts/ situations. Knowledge dimensions can be expressed by factual, conceptual, procedural and metacognitive knowledge which are to lead to understanding. (Krathwohl, 2002.) Teachers also need active work life contacts and a wide orientation in their trades and professions. This is the background of the teachers who formed the research group in this study.

The research: purpose, data collection, and analysing methods

This research will be targeted to secondary and tertiary vocational teachers' cooperation practices and teachers' willingness, ability and skills for joint working. It emphasizes the necessity to identify the obstacles of cooperation for promoting collaborative teaching in competence-based teaching programs.

More specifically this research attempts to delve deeper to teachers' mind sets and discover how teachers experience the cooperation needed in competence-based approaches, what are the emotions and attitudes connected to the change and how teachers see themselves amidst the change. How do teachers share their ideas, methods and materials? How do they ask for help from colleagues inside and outside their nearest work environment? Do vocational teachers feel dependence, trust, suspicion or even envy towards their colleagues in their daily work and professional issues?

The research material was collected in Oulu University of Applied Sciences, in the SVTE by open questions in interviews and questionnaires. The target group was newly qualified and experienced vocational teachers (N=30). The research approach was phenomenographic; the analysis methods were qualitative.

The research questions were:

1. What are vocational teachers' conceptions of cooperation in their work contexts?
2. What obstacles and promoters of cooperation do the teachers identify in their work contexts?

3. What are teachers' experiences of mutual relationships in their work communities?
4. What attitudes and intentions seem to guide teachers' cooperation at work?

Findings

The answers revealed that the situation was complex. The prevailing model of everyday behaviour in teaching communities seems to be partly proactive, partly reactive going back to earlier adopted action models.

General observations

Although efforts have been made in Finland since 1994 to promote competence-based vocational education, change remains a work in process. In secondary education skills demonstrations, scoring of competences and concentrating on core skills have already been adopted. In higher education, change has been slow to start. Subject-oriented thinking in teaching still prevails.

In their work communities, all respondents experienced that there were actions and attitudes typical of the culture of sharing, but sincere cooperation was not taken for granted. The teachers experienced that sharing and collaboration were fully dependent on the personal characteristics and relationships between the teachers in the work community. Although teachers are known to work well together, they do not necessarily share their expertise with others: for instance, by voluntarily giving their teaching material to colleagues. All respondents said that helping the colleagues is one of the teacher's duties; however, it is not always possible for many reasons.

It seems that in educational communities there are no "rules of the game" or action models for mutual responsibility for developing teaching. Teachers would especially need advice how to share mental and material resources to benefit the initiation of new teachers. The lack of collective responsibility was apparent: the mentality of the teachers was to keep teaching material only in personal usage because it had required much individual work. Temporary lecturers also took their teaching materials with them when leaving the post.

Team teaching was temporary in all work places within the study. If it occurred, it usually took place between the assigned teachers. Nearly all respondents emphasized that team teaching required additional resources, and for that reason it was not discussed as a pedagogical alternative. The general economic depression of society was observed in educational organizations according to the next respondent:

Now we only go forward within these strict economic limitations, and we don't have time to develop anything.

The statement sends a message of nonchalance, perhaps also sadness and defensiveness.

In the following, learning with colleagues will first be examined, and then the obstacles and promoters of cooperation studied. Following that, a deeper analysis and efforts will be made to interpret the meanings expressed from the points of view of communication, leadership, and management.

Learning with colleagues

A major criticism of competence-based teaching is directed towards cooperation and sharing. Teaching activities have historically been an individual enterprise in Finland. The capacity to deploy specific competences depending on the context is a critical meta-competence. However, teachers are likely to face problems that cannot be solved solely by technical skills. Values and ethical commitment as well as personality have an impact on teachers' pedagogical thinking and decision-making. Competence-based teaching requires collective teaching work:

You *can ask for help from you colleague if you need it, helping is a part of good manners. Helping must not be continuous, and it shall not resemble manipulation.*

Competence-based education values the role of school and workplace in the learning process of both the students and the staff. Within this framework, the implementation of the curriculum and the whole system play an important role:

The course material bought from the publisher is freely at use, the files are changed, and with acute problems you can always ask for help.

Learning with colleagues occurs through discussions, observation or joint activity, i.e. by sharing experiences and materials or collaborating in a project. Teachers can improve pedagogical competencies by becoming consciously aware of the consequences of their actions and by adjusting their practices. For that reason, mentoring is one important dimension of workplace learning. Interaction with colleagues in informal contexts is also a major learning mode to gain access to practical knowledge:

In small teams, cooperation is a daily practice. Bigger communities do not develop, since cooperation is scarce. New teachers need encouraging and mentoring to support their skills.

Continuing learning is a social process by which newcomers and experienced colleagues can acquire skills necessary in the community of practice. (Lave & Wenger, 1991.)

Teaching competencies include communicative interaction and listening

skills. They imply the ability to listen to another person, identify his or her feelings and thoughts and fit to his or her specific needs. As a consequence of tight economic pressure and time frames, there is little room for cross-curricular teaching. Teachers do not work together so much as would be useful, and this fact possibly explains why teachers, especially in crowded teacher rooms, do not know each other well enough and are not entirely active in sharing their methods and teaching material with others.

Obstacles to cooperation

The findings of this research concerning the obstacles of cooperation can be viewed more closely and listed as the fears of the teachers which were numerous.

1. *The fear of revealing personal incompetence to the colleague(s)* is deeply rooted.

One reason for that can be the old system of teacher training in Finland. In teaching practice periods, trainees were trained by focusing on the mistakes they made and the defects they had. This frequently resulted in low self-esteem. Generations of teachers have gone through their careers by believing that they are not good enough.

Sharing the material prepared by the teacher is prevented by selfishness and the revelation of the sources of the material. Fearing for the borrower entitling the material to him/herself. Fear for the critique of the material by colleagues.

Along with the new generation of teacher educators, this culture will hopefully be dying off.

A teacher's personality, especially at the beginning of one's career, needs strong and caring support. Although the teacher's role has greatly changed, and the work is defined through joint action, the teacher is exposed to public criticism.

2. *The fear of the revelation of the defects in the teaching material* is connected to the previous fear.

It is not only a teacher's appearing and acting, but also writing, collecting material, drawing conclusions and preparing the material to be presented, which is important to the author:

I have prepared this myself; nobody has paid for it.

The material is a reflection of me.

Consequently, criticism hurts the author personally.

3. *The fear of being evaluated by the colleague in team teaching and getting negative feedback.*

This fear is again connected to the teachers' weak self-image and their lacking self-efficacy. They find it difficult to hear "the truth" (as they express it),

and they interpret even positive or neutral remarks in a negative way. The trust appeared to be the key word:

> *You can trust in some people better than others, especially in substance matter knowledge.*

4. *The fear of the colleague(s) rewriting the teaching material and spoiling the work of the owners* is one way to hurt the author's autonomy.

According to the respondents, the rewriters can misunderstand something and lead the contents to a wrong direction, they can cut the presentation with negative consequences. Such fears are common still: nobody's material can be used without changes or explanations. The rewriters have to create something that is suitable to their ways of teaching. This is again another point of fear and envy: the rewriters are benefitting from another's work.

5. *The fear of allowing the colleague(s) take a smaller load* of the teaching burden:

> *I don't give out of my own resource bank.*
>
> *In my work community, there is a teacher who prepares teaching material very pedantically and carefully. He will never give his slides to anyone, but chooses between them and gives something like a paper version so that everybody has to do something him/herself.*

One of the respondents complained that there are teachers who always ask for help from others without ever taking responsibility for actively promoting teaching themselves.

This fear is evidently connected to envy. Teachers are often very strict with the time resources that they are given, and they do not want to exceed the allotted schedule without extra pay. Moreover, the question is deeper than time resources: it is a kind of misconception of measuring teacher efficiency with a watch in the hand. The profession should, however, be a global effort.

6. *The fear of the colleague(s) taking the ownership of the knowledge produced by its author*.

It is as if knowledge should be untouched as if it were not common capital. Clarifying shared aims and finding time for joint discussions might help in overcoming this misconception.

7. *The fear of going beyond the author's range of expertise.*

Teachers sometimes have the desire to be seen as the only or the main experts in their specialist areas and feel hurt if somebody wants to prove him/herself in his or her "territories". A joint effort, however, might be a much more fruitful approach. If there are teachers who find common interests despite the fact that one of the group is a greater expert that the other(s), it should be taken as a benefit. However, it can lead to the next fear.

8. *The fear of one's task becoming unnecessary*, when the colleagues share

the material and can teach the expertise without the presence of the original author.

The fear of losing one's status or work has become common in these times of uncertain economic resources. Nevertheless, teachers should fight as one united front, not attacking each other.

9. *The fear of breaking the copyright*, for instance, releasing the material on a public network is a subject of real concern.

The problem can be easily solved by defining the rights of the material usage. Furthermore, general discussion about copyrights and citation referencing at work is usually necessary. Such information should be forwarded to students as well.

10. *The administration* was afraid of team teaching taking too many resources (time and money).

In part, this fear is based on a misconception. Nowadays, most secondary and all tertiary teachers have a system of an annual quota of working hours. Team teaching can be organized within this framework. The greatest obstacle is unwilling teachers who are afraid of unknown, untested solutions.

The promoters of cooperation

The research has shown that professional development is a contextualized process that depends on school culture and school management (cf. Flores, 2004; Flores & Day, 2006; Kardos et al., 2001).

The results highlight the prevailing role of colleagues, which is the *learning mode* that comes first in teachers' conceptions when evaluating their teaching competencies. The researchers refer to informal mentoring to depict planned and unplanned interaction and cooperation with colleagues in work places and to support the development of teachers' positive self-images and identity.

In order to make learning with colleagues an effective learning mode, the schools should provide collaboration opportunities for teachers (also Kardos & Johnson, 2007; Kardos et al., 2001). The schools should tend to favour a shared responsibility and responsiveness to each other's specific needs. In other words, they should attempt to create integrated professional culture. School leadership is important in creating the conditions for the school and its teachers. Successful leaders share common features, such as providing opportunities for teachers to develop a shared vision of the school's mission and goals, strengthening the sense of self-efficacy among teachers, developing a close working relationship with staff members and securing adequate resources (Flores, 2004). In contrast, in older professional cultures, the norms of privacy prevailed with little room for exchanges on professional issues. (Flores et al., 2006; Kardos et al., 2001).

A closer examination of the findings of collaboration promoters leads to

the following conclusions/factors:

1. The first is the *general atmosphere* to which the staff is socialized.

A positive working context promotes open and trusted relationships between colleagues. They can experience becoming appreciated and encountered caringly:

> *In open and discussing atmosphere […] all have shared aims. Openness and tolerance are important.*
>
> *The change of culture: workshops, teamwork, on-the-job learning have given positive experiences.*

These experiences prompt collaboration and strive towards shared goals. When a teacher feels that she/he has been helped by others, she/he will also do the same in new situations. When teachers discuss together on the curricula and the affairs connected with them, it motivates cooperation.

2. The second factor is connected to *developing expertise*.

No one is an expert in the beginning, but in the course of time, in *dialogical interaction* with others, expertise will develop. The dialogue will also develop team teaching in appreciating the exchange of thoughts and measures: *If a conflict arises, we know how to act.*

3. The basis of successful team teaching is *teachers' self-esteem and competence*.

If this is not attained, problems will arise in the work community. Teachers often prefer individual work to cooperation. In this case, the teacher may be fighting with his/ her social emotions (pride, envy, contempt, and shame), feelings that are born along with cultural learning. They need a change of attitudes: *The pedagogy of joy deters envy and bullying.*

4. In connection with the factors above, a respondent experienced that *cooperation is prevented by personal attitudes* and dislike of changing old ways of individual acting:

> *I have tried to get rid of the old ways and have not stayed milling around in them, along with which I feel that the atmosphere has become better, because earlier it was not good.*

5. *The employer can also obligate the teachers to cooperate*. A respondent describes the phenomenon in the following way:

> *The employer has ordered me into a team that has a clear assignment and, accordingly, it is compulsory to work as a team with others.*

6. *At the level of feelings*, the necessity is connected to the formation of a motivational state that relies on rewards and punishment as motivating factors. At the level of basic feelings, the compulsion to act can bring pleasure, if action is successful. However, it can also bring fear, hatred,

disgust and sorrow. In order to make teamwork genuinely motivating and pleasant, it should have an inspiring and interesting goal:

There is one team that I belong to, and it is active and has clear aims so that we know why the team has been set up and what is its task, what are its members' roles, what are the responsibilities and authorities. The team has an awesome spirit, and we value each other.

Two major factors behind the findings above appear to be: human relationships at work place and leadership.

You can ask for help from some colleagues, but not from others. You can sense from a person who will help, who won't.

It is easier to ask for help from the ones who are sympathetic. If a person has a fame of being difficult, I don't approach him/ her.

Everybody is busy. – It is rewarding if you can ease someone's burden amidst everyday duties. If you have been wrestling with the same problem and found a solution, you can share it.

Human relationships and school leadership and management are mentioned in all answers. In the following, they will be examined more closely in order to answer the questions 'What is the source of knowledge about my colleagues?' and 'What is the role of leaders and managers in promoting teachers' professional development?'

Human relationships and communication in work contexts

Collaboration for professional development means sharing power and mutual interaction. It means a change in teacher culture. It is important to reflect individually and collectively about the work place practices, personal experiences, and situations.

It is easier to work as a team with some than others. In principle, a teacher is always individually responsible for teaching (i.e. If your colleague makes mistakes, you will also be responsible for them).

Besides possibly being a collective event, reflection means an interactive process between one's earlier experiences, actions, personal theorizing and understanding theories. Its significance is in making implicit things explicit. (Nissilä, 2013.)

Much knowledge of *other people* is tacit: although one might gossip about them, he/ she does not often have to put knowledge of people into words unless it is a specific part of one's job. Yet some knowledge provides the basis of unhesitating daily interactions with others. (Horvath et al., 1996.) Knowledge about another person is mainly collected from series of encounters set up for other purposes: only a small percentage of meetings will lead to getting to

know that person as an objective, most often it is an incidental side effect. The knowledge gathered in this way is not questioned and is not likely to be created under one's critical control. Explicit knowledge can be created through reflection or from other sources, but is not supposed to replace the tacit knowledge that enables one instantly to respond to people one knows. Thus knowledge of other people is taken-for-granted, is self-confirming and includes:

- our encountering with another person, which may be influenced by situational factors;
- most obviously, remembering the long-established events connected to the person in question;
- preconceptions created by earlier encounters, i.e. the sample is not constructed from genuinely independent events;
- personal constructs by people (Kelly, 1955) as the result of their life experiences, which affect people's understanding of those whom they meet. (Eraut, 1994.)

Tacit knowledge continues to influence, because it is available. It is seldom as valid and unbiased as we like to assume.

Communication in schools is another feature to be considered. It can serve purposes other than making knowledge or actions explicit. Learning to talk to students, colleagues or managers may be a semi-conscious process during which the latent functions of the discourse are not revealed and may even remain hidden from qualified professionals. Latent functions may tend to maintaining good relations with colleagues while preserving personal freedom, asserting one's professional prestige and rendering account of it to the administration, keeping managers aware of your actions while keeping the superiors behind your back.

> *It is not possible to ask for help from the boss spontaneously. You have to make an official request or question.* (Otherwise you can appear as unskilled, unknowing)
>
> *Among the staff somebody is always excited about something.* (Either sincerely or wanting to show off)
>
> *It is difficult to talk about envy and bullying.* (They belong to the unspoken, tacit area of feelings)

Latent communication tends often to mislead, because implicitly acquired discourse has been developed for that very purpose (Eraut, 1994). Communication is one area that should be analysed to help teachers understand its functions.

Teaching as an ethical practice presupposes self-respect, respect for the others, empathy, and ethics. In work contexts and in continuing education the ability to think and talk about the work situations as well as to analyse

the sequences of events is supported (Wenger, 1998). It is important to be able to talk about personal experiences without blaming other persons or talking about the feelings without addressing the persons absent.

Teachers' practical theory tends to be experiential and is preserved as tacit knowledge. It has many sources, from biographical events to integrated values. How these sources become integrated into a person is defined by the learning situations and their interpretations. They filter the obtained knowledge to the conceptual frame of teachers (Eraut 1994). The change of conceptions will be conscious, if the process is supported by thinking, reasoning and theoretical knowledge.

Leadership and management

In the field of education, as in many other institutional contexts, leadership has taken on increased importance in recent years. Harris (2004) writes about transactional leadership, which prevails in educational contexts in challenging circumstances, in which teachers are expected to obey orders without any explanations and are motivated through rewards and punishments. The leadership style is thus strong, directive and revolves around curriculum and instruction. (Harris, 2004.)

> *Collaboration in my work context is rather weak, since the issues are attended through the leadership and their orders […] The leaders and support staff determine and decide about everything, there is no democracy, and teachers can't influence things.*
>
> *In the staff, there are many teachers with over 25 years of work experience. We are joined together by accusing bosses.*

There is broad dissatisfaction with focusing too much on the leader as the centre of expertise and authority. Teacher leadership has become the centre of interest as to their accountability for their students' learning achievements. Working in a context characterized as a learning organization offers the greatest opportunity to unlock leadership capacities and capabilities among teachers. (Harris & Mujis, 2003; Laajala, 2015.)

In transformational leadership, teachers are committed and self-motivated to respond to changes in the long term. Lieberman and Pointer Mace (2009) described the role played by accomplished, experienced teachers in professional learning communities, and the importance that these practitioners made their teaching public and shared. This resulted in the conclusion that the robust, lasting professional development must begin with what teachers know and do, effecting educational reform from inside the educational units. (Lieberman et al., 2009.)

New teacher professionalism includes mentoring and support in learning and knowing. Team teaching eases the burden of a single teacher. -
School leadership should understand that team teaching does not need more resources than individual teaching. The question is about a different kind of organizing teaching.

Therefore, the whole community can be engaged in the sharing of knowledge that enhances the creation of professional knowledge. The reciprocal dynamics create an environment larger than the task and the individual. It creates a web of relationships and constructs individual and organizational identities. They emerge from a variety of sources depending on the issue or the individuals' expertise and creativity (Harris et al., 2003; Mitchell & Sackney, 2000). Personal strength goes hand-in-hand with effective collaboration. Personal and group mastery cause each other to thrive in learning organizations. (Nissilä, 2006; Fullan, 1993.)

According to Leithwood and Riehl (2003, p. 6), educational institutions are today undergoing critical changes, and they need the combination of different forms of leadership that involve mobilizing the learning community staff and clients to face and take on the task of changing teaching culture. This also requires harnessing and mobilizing the resources needed to support this process of change (Spillane et al., 2001). Transformational leadership presupposes pedagogical approaches from the administration and the teachers.

Conclusion: teacher identities in the change process

The findings of this study can be summarized by choosing the most influential obstacles and promoters in teachers' team work and self-efficacy which seemed to be essential in competence-based education.

First, think proactively!

Teachers are afraid of losing face. They want to hide their problems with student interaction behind their (supposed) expertise. The aspect of development and learning new measures for problematic situations should be proactive. The courage to think proactively is easily lost.

Second, learn to know your colleagues!

Teachers do not rely on their colleagues. They are afraid of being betrayed, if they are too open on issues that they think belong to their privacy. The only way to fight against this fear is to "open up", preferably in a good team. The better you learn to know your colleagues, the easier it is to be confident.

Third, listen to your colleagues genuinely!

Teachers should learn to listen to their colleagues, not only words but also meanings. They should not only rely on the so-called strict talk about professional matters or talk about themselves in a flattering way.

Fourth, balance qualitative and quantitative factors of your work!

Teachers should not only count the workloads or time resources and compare them. In addition to quantitative factors, there are also qualitative ones that are more difficult and certainly more important to take into account.

Fifth, inform your educational administration of topical work issues!

Educational administration should observe the right things and take the teachers' fears seriously and find measures to reduce them.

Being able to communicate with others and exert dialogical skills, i.e. speaking and listening, is a core competence of teachers. Experiences are connected to the formation of professional identity. This process needs space and time as well as the feeling of safety and the control of inner and outer anxiety. A professional is able to combine the demands from outside, his/her own expectations of others and his/her ideal self-image which s/he can compare to his/her real self-image. Professional development is constructed in collegial interaction through individual reflection on conscious wishes and observations. In this autonomous process personal impulses and objectively observed ideal self-image should be balanced. (cf. Nias, 1989; Kelchtermans, 1996, 2009; Little, 1996; Zembylas, 2003.) It will lead to understanding that the issues of collegiality and their impacts on a teacher's self-image should be dealt with in detail hopefully in collegial discussion.

Kelchtermans (1993) has identified five aspects through which teachers' professional identity can be grasped. The first is the vision of oneself as a teacher, i.e. *self-image*. Second, a vision of oneself is closely connected to valuing and evaluating oneself as a teacher, i.e. to *self-esteem*, which is connected to and driven by comparisons with others. It can be defined as the result of balancing the self-image and professional norms. The third identity factor, *job motivation*, includes motives for entering and staying in teaching. Understanding one's tasks as a teacher, *task perception*, is the fourth factor indicating how teachers define their work. In addition to students and didactical abilities, cooperation with colleagues and situational sense in teaching are also related to this factor. Fifth, *future perspectives*, i.e. expectations for future work development and evaluation of options and opportunities are also one of the means of grasping teachers' professional selves. These views can be practiced, visualized and illustrated in many pragmatic ways.

In vocational education, teachers' professional lives are twofold: as teachers

and experts of their vocations/ professions, they are attempting to find ways to include the importance of both aspects in their teaching (Nissilä, 2006). The process of professional development should enable the dialectic of interaction between the forces of autonomy and dependence, of being able to work in an educational system with its constraints and in the field of work life and networks of disciplines and vocations. The dialectic interaction also appears in the attitude to team work and helping colleagues. Sometimes teachers have to be reminded that collaboration benefits both partners. It will hopefully be realized in competence-based programs when they are run throughout vocational and university education.

Discussion

One of the challenges in the competence-based education system will evidently be personalization. It refers to customer-oriented planning and implementation of guidance, advisory and support measures as well as creating and implementing the bases of required knowing together with colleagues. It requires increased cooperation between teachers and other actors in the field. It also requires supporting teachers' professional development and self-efficacy.

How can the identity of teachers be supported? The present research suggests confirming and validating the novice and experienced teachers' images of self as teachers, acquiring knowledge of students and contexts, experiencing cognitive dissonance and questioning the appropriateness of personal images and beliefs and finally acquiring instructional practices. Up-to-date knowledge of vocational secondary and tertiary fields and work life are also important. Throughout a teacher's career, the vision of professional development should stay positive.

The role of emotions is connected to professional identity in two ways: they shall be recognized, and the knowledge must be included in self-knowledge. Emotions can become either an obstacle of the promoter or the power of change, and in this way they reveal the multiple construction of teacher identity and the situationality of emotions (Kelchtermans, 2005). Emotions are indispensable even in rational action. Kasl and Yorks (2002) states that in order to be successful in learning and constructing one's identity, the teacher has to integrate four sub-areas of the psyche: affective, observation, cognitive and practical sub-areas, which come together in reflection. Heikkinen (2000, p. 10) sees a reflective teacher as a problem solver, not a technical rationalist ('bricoleur'). This is also how vocational teachers are to appear. As identity is incomplete and dynamic, narrative and socio-dynamic ways (Peavy, 1998) of completing the identities serve well in teachers' continuing education. Competence-based education will challenge both teacher and student personalities in coming years, preferably for their best.

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Theory, Practice and Competences in the Study of Pedagogy – Views of Ljubljana and Belgrade University Teachers

Klara Skubic Ermenc*[1], Nataša Živković Vujisić[2], and Vera Spasenović[3]

Over the previous decade, higher education in Slovenia and Serbia has undergone considerable reforms, influenced by the Bologna process and its agenda of competence and learning outcomes. In the context of these reforms, the aim of this research is to consider the question of the relationship between the theoretical and the practical education of pedagogues at the university level. Eleven university professors from departments of pedagogy and andragogy at the universities of Ljubljana and Belgrade were interviewed. The semi-structured interviews focused on two main research questions: 1) how they understand the relationship between pedagogical theory and practice, and the identity of pedagogy as a science in that context, and 2) their opinion about the competence-based approach in the context of the study of pedagogy. The findings show that the majority of the interviewed university teachers hold an opinion that pedagogy is primarily a theoretical (reflective) science and, accordingly, that the mastery of theory is crucial for the development of pedagogues' competences. Furthermore, most of them are rather reserved and critical of the competence approach as well as of the practical skills development. Although there are some differences in opinions between the professors from Ljubljana and Belgrade, this study shows that similar discourses prevail. The gap between pedagogical theory and practice is one of the major issues that have been current in pedagogical science in the recent decades. The findings of our research indicate that there is dissatisfaction with the relationship between modern pedagogical theory and practice, accompanied by the need for its reconceptualization.

Keywords: pedagogy, pedagogical practice, competences, university, education of pedagogues, university teachers

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Teorija, praksa in kompetence v izobraževanju pedagogov – pogledi ljubljanskih in beograjskih visokošolskih učiteljev

Klara Skubic Ermenc*, Nataša Živković Vujisić in Vera Spasenović

Zaradi vključenosti v bolonjski proces sta Slovenija in Srbija v zadnjem desetletju doživeli obsežne reforme visokega šolstva, vključujoč uvedbo kompetenčnega pristopa in koncepta rezultatov učenja. Raziskava se navezuje na ta kontekst, zato je njen temeljni namen preučitev vprašanja razmerja med teoretičnim in praktičnim izobraževanjem pedagogov na univerzitetni ravni. V ta namen so avtorice opravile intervjuje z enajstimi visokošolskimi učitelji, ki poučujejo na oddelkih za pedagogiko in andragogiko na Univerzi v Ljubljani in Univerzi v Beogradu. Delno strukturirani intervjuji so se osredinili na dve temeljni raziskovalni vprašanji: 1) kako profesorji razumejo odnos med pedagoško teorijo in prakso ter v tem kontekstu tudi identiteto pedagogike kot znanosti; 2) kakšno je njihovo mnenje o kompetenčno zasnovanem študiju pedagogike. Ugotovitve kažejo, da večina intervjuvancev opredeljuje pedagogiko kot prvenstveno teoretično (refleksivno) vedo, zaradi česar obvladovanje teorije razumejo kot ključni element razvoja kompetenc pedagoga. Večina je zadržana in kritična do kompetenčnega pristopa in tudi do razvoja praktičnih spretnosti bodočih pedagogov. Raziskava nakazuje določene razlike v mnenjih med profesorji iz Ljubljane in Beograda, pa vendarle med vsemi prevladuje podoben diskurz. V zadnjih desetletjih se sicer v pedagoški znanosti kot ena ključnih dilem kaže ravno razkorak med pedagoško teorijo in prakso. Tudi rezultati te raziskave kažejo na določeno mero nezadovoljstva med obstoječim razmerjem in odpirajo vprašanje potrebe po rekonceptualizaciji.

Ključne besede: pedagogika, pedagoška praksa, kompetence, univerza, izobraževanje pedagogov, visokošolski učitelji

Introduction

This paper examines the issue of competence-based approaches in the context of the Bologna process by focusing on the study of pedagogy in Slovenia and Serbia. Pedagogy is a science with a lengthy academic tradition (cf. Ermenc, 2015; Ermenc et al. 2013), which was borne out of a twofold interest: 1) research interest in the phenomenon "[...] of the individual's freedom. [Pedagogy sees] education as more than just a process of adaptation and socialisation, but rather as a process of emancipation" (Biesta, 2014, p. 71); 2) Pedagogy was also borne out of practical interest as it responds to the needs of pedagogical professions (teachers, school counsellors, school administrators, etc.) (Ermenc, 2015, p. 43). The dual nature of the pedagogical science has produced many tensions (Vujisić-Živković, 2008), some at the methodological and epistemological levels, and some at the level of the conceptualization of teacher and pedagogue education. Moreover, the study of pedagogy is particularly interesting to investigate on the territory of the former Yugoslavia, as it was there that the study underwent specific development since the late 1950s when the pedagogy graduates, called "pedagogues", began to be employed as regular members of the school staff. Their primary role has until today been to encourage students' personal and academic development and to contribute to the improvement of the educational process in school settings (Ermenc et al., 2013).

Throughout the history of pedagogy, the twofold nature of the science has raised questions on the relationship between pedagogical theory and practice, and produced different conceptualizations of the identity of pedagogy as a scientific discipline. Currently, these debates are linked to the issue of competence-based approach in curriculum design and pedagogical practice. A question arises whether competence-based approach opens up new possibilities for bridging the gap between the theoretical and the practical education of prospective pedagogues. In the first part of the paper, these questions are historically and theoretically discussed; in the second part, the results of a comparative empirical study are presented and discussed.

Historical reflection on the problem of relationship between pedagogical theory and practice

Examining the historical dimension of the relationship between theory and practice in pedagogy is a common topic in foreign pedagogical literature (Carr & Kemmis, 2000; Lenzen 2002). Authors often begin by considering Aristotle's definitions of the terms *techne*, *poiesis,* and *phronesis*. Understanding

a person's *actions* as craftsmanship (*techne*) or as practical (moral) reasoning (*phronesis*) crucially determines Aristotle's answer to the question of how to bridge the gap between pedagogical theory and practice. To explain the origin of the currently generally accepted attitude that practice sovereignly rises above theoretical competence, Gadamer (2000) informs us how the terms *theory* and *practice* changed their meanings through history and how the return to Aristotle's viewpoint can aid in understanding these terms in a way that goes beyond the modern binary theory–practice opposition. For Aristotle, theory (*theoria*) denoted a person's ability of "pure observation of the world" – this "observation" did not mean "[...] ascertaining a state of affairs without taking part in or observing a sumptuous scene, but actual participation in the event, actual presence" (Gadamer, 2000, p. 19). Furthermore, the original concept of practice (*praxis*) was differently structured: "Practice is characterised by the ability of the human attitude that we call theoretical [...], the ability of theoretical behaviour itself falls under practice" (Gadamer, 2000, p. 156).

Aristotle's answer is particularly useful to pedagogues, and to the issue of the relationship between theory and practice. He does not put theory in opposition to practice as we often do today, but he observes theory in contrast to art and distinguishes four forms of human activity: *techne* – craftsmanship/skill, *poiesis* – art/creation, *phronesis* – reasoning or proper decision-making and *reflection* – thinking focussed on learning the truth (Gadamer, 1999, p. 80). Furthermore, according to Aristotle, there are three types of sciences: *theoretical* (mathematics, metaphysics), *practical* (politics) and *productive* (art). Theoretical sciences are based on *reflection*, practical sciences on *phronesis* (moral reasoning), while arts on *poiesis* (creation). Moreover, *techne* is craftsmanship (not practice) but implies the application of a proper sequence of actions and procedures in making objects. Aristotle would have told us that modern pedagogy has changed the meaning of the word "practice", which it has defined as *techne* and that this is the reason that the idea of the possibility of a linear transfer from theory into practice has occurred. According to Aristotle, *practical sciences* are close to practice and are inseparable from it, but it is practice that is different from *techne*, primarily because it raises the question of the good, of the best way of life and, therefore, requires *phronesis* (Gadamer, 2000, p. 54). Aristotle would have certainly placed pedagogy among practical sciences that focus on the issue of proper and ethical decision-making (*phronesis*).

From the perspective of the history of pedagogy in Slovenia and Serbia, the question of the relationship between theory and practice was shaped in the first half of the 19th century by the phrase "pedagogical tact", which referred to the formative aspect of teaching: in the terms of a dominantly patriarchal

upbringing, in which rewards and punishments were the main educational resources and in which students were expected to respect their teacher unconditionally; the teacher's pedagogy required from teachers to have the "pedagogical tact", in terms of a more liberal attitude to students and a focus on personality and individuality of each child. In the final decades of the 19th century, pedagogy was established as an autonomous scientific discipline, relying mostly on the pedagogical system of Johann Friedrich Herbart (1776–1841) and his successors (Vujisić-Živković, 2012, 2014). Herbart and Herbartians contributed to changing the meaning of the "pedagogical tact"; it occurred as the answer to the question of how to apply deductively derived pedagogical norms into educational practice. Thus, "pedagogical tact" became the central concept through which the researchers attempted to base pedagogical activities on scientific knowledge. The concept was differently interpreted by individual pedagogues (Protner, 2014). For example, Serbian pedagogue Vojislav Bakić (1847–1929) (1873, pp. 166–167) believed that both theory and practice participate in forming the pedagogical tact: education belongs completely to the practical sphere, but the ideas guiding education are not directly given in experience but are the result of critical thinking, generalization and reflection; pedagogical principles and specific educational situations are merged into "pedagogical tact", determining the teacher's course of actions; "pedagogical tact" is a psychological, intellectual, reflective phenomenon, which implies a possibility to be developed through practical actions. Bakić's understanding is close to Aristotle's viewpoint.

In Slovenia, the concept of "pedagogical tact" was later studied by Stanko Gogala (1901–1987). He was a central figure of cultural pedagogy, the successor to *Geisteswissenschaft* (humanistic) pedagogy, which prevailed in the Slovenian pedagogy after the decline of Herbartism. Gogala (2005) understood "pedagogical tact" as an innate ability, a pedagogue's core quality. In his opinion, a teacher is more an artist than a scientist who uses her intuition to guide students. Gogala nevertheless claimed that a pedagogue is also required to master the theory. The theory helps to stir this innate ability, and – being culturally valuable – also helps her become a warm and open person. Moreover, theory helps a pedagogue to understand her actions and to reflect on them. Knowing the theory also prevents a pedagogue from over-generalizing her experience, and to perceive her single actions as a reflection of general pedagogical principles (Kroflič, 2000; Peček Čuk & Lesar, 2009). Gogala's ideas are close to the Aristotle's concept of *phronesis*: a teacher as an enlightened individual is able to identify formative elements in the teaching content and to autonomously select the most appropriate method that will help students to become autonomous individuals. If the method is prescribed, teaching activity is reduced to *techne*,

and teacher's and student's autonomy limited (Medveš, 2000, p. 89). Therefore, the teacher, claims Gogala, has to develop her "own method", a method that is based on the knowledge of didactics, but that nevertheless evolves out of the teacher's personal essence (Ermenc, 2000, p. 150).

Identity and status of pedagogy as a science and the gap between pedagogical theory and practice

Historians of pedagogy see J. F. Herbart as most deserving for constituting pedagogy as an autonomous scientific discipline, but simultaneously with the implicitly present criticism that he contributed to deepening the dichotomy between theoretical and practical pedagogy as he emphasized the superiority of deductively derived pedagogical norms over pedagogical experience. Herbart divided pedagogy into the theoretical (general) realm, which relies on philosophy and which, as a deductive science, determines the objectives and principles of education, and the practical realm, which is based on psychology and which is inductive and experiential. In an effort to constitute a science of education and to provide it with theoretical dignity and an autonomous status in relation to philosophy and psychology, Herbart partly suspended its praxeological objectives. Herbart's original viewpoints, in the interpretation of Serbian and Slovenian pedagogical science of the final decades of the 19th century, were given a different meaning: pedagogical teleology, dealing with aims and tasks of education and the principles of pedagogical work derived from them became synonymous with pedagogy as a science (Bodroški, 2009; Vujisić-Živković, 2012).

In the interwar period in Serbia, the division into theoretical and practical pedagogy, which at the time was increasingly directed not so much to the methodology of pedagogical work as to the methodology of teaching, remained. In this period, the debate on the relationship of these two "parts" of pedagogy was intensified: a number of pedagogues advocated for the term *pedagogy* to be used for the "skill of upbringing and educating", as well as that the term *pedagogics* is more appropriate for the science on education (Mladenović, 1936). This etymological dilemma referred to the question of the relationship between pedagogical theory and practice.

Slovenian pedagogues often advocated pedagogy as a reflective science and have even demonstrated an aversion towards applied pedagogy. When the first pedagogy chair was opened at the University of Ljubljana in 1927, pedagogical practice and theory were established as two separate areas (Medveš, 2010a, p. 92). Pedagogy graduates of the time mainly found employment at teacher training schools, where they taught pedagogical and psychological

theory to future primary school teachers and the methods of instruction of all of the primary school subjects. The teachers graduating from these schools had been well trained in teaching methods, because the teacher trainers did not base their pedagogical process solely on the academic pedagogy, but also on teacher pedagogy, which had been developing since the mid-1800s within the framework of teachers' associations (Medveš, 2010b, pp. 88-89).

With the development of experimental pedagogy and psychology in the interwar period, the issue of the "usefulness" of pedagogical science, whose dominant stood fast in philosophy, was strongly raised. From the science, which was perceived in the 19th century as the most significant for teachers' education to which today dominantly applies the value judgement that its development on the national level had a key role in modernizing the school system and improving the quality of teaching, pedagogy has been faced with criticism that without knowledge gained by experimental methods it does not have a reliable basis for pedagogical practice. The renaissance of the neo-positivist approach that we are witnessing today and often take part in, the evidence-based approach that has directed pedagogical research towards quantitative methodology with the aim of detecting casual relations by a randomized experiment on large random samples and to prove reliably "what works" in education (Slavin, 2002, 2008), has re-actualized the old issue of the relationship between pedagogical theory and practice. The educational policy, along with the scientific and research policy in the field of education related to it, which so positively evaluate the applied research, equally contributed to this, while fundamental research is seen as needed *per se*, but there is less interest in it. Pedagogy has been faced with the requirement to provide an answer to the question "how", i.e. in what way, to increase education quality by using ICT, and how to make each student achieve knowledge standards via the individualization of teaching. Although these questions are legitimate in scientific terms, when queried by the education policy, pedagogical research is not expected to critically consider the question "why", i.e. a socio-historical, economic, political context, within which certain innovation ("how") can be successful, while the habitus of the researcher is recognized by the need to understand, explain and try to answer the question "why". Trapped by increasingly louder demands coming from the education policy sphere to provide an answer through its research to the question of "what works" in education, the pedagogical research community has been facing the danger of neglecting its analytical and critical function, which it had at the time of being created as an autonomous scientific discipline in the 19th century, although at that time it was accused of being "a maidservant to philosophy", and by analogy it may become today "a maidservant" to the education policy.

The analysis of pedagogical science development in Switzerland carried out by Hofstetter and Schneuwly (2001, 2002) indicated that the contradictory relationship between the requirements that come from the professional field and from the scientific field, the tension between the guild and professional needs on one hand, and the search for scientific affirmation on the other, placed pedagogy into the space between pragmatic and scientific imperatives. The need for pedagogy to distance itself from practice in order to attain the knowledge that exceeds praxeological objectives has led to the suspension of the praxeological dimension.

Today, perhaps as never before, pedagogy has been faced with practitioners' criticism that pedagogical research is irrelevant for their everyday work that it is unclearly written, that instead of clarifying the issues it opens up new dilemmas. At the same time, the tension between theory and practice has been followed by blind faith that learning from experience occurs automatically and by aversion to the systematic analysis and research into practical work (Keiner, 2002; Rusell, 1993). How can the trends described be explained? Gadamer (2000) estimates that the final decades of the 20th century were characterized by the victory of practice over "purely theoretical competence" in the field of all social sciences and humanities, i.e. that scientific and theoretical knowledge "lost its former dignity, while suspicion to theoretical knowledge of those lacking experience was enthroned [...], an antidogmatic tone in the word practice took a victory over purely theoretical competence" (Gadamer, 2000, p. 33).

Modern philosophy indicates that the key issue is that today we are accustomed to seeing practice as the application of theory (Gadamer, 1999, p. 28). In this context, it is important to emphasize that education is not understood as behaviour (*techne*), but as doing (*praxis*). Social sciences have *praxis* as their subject. Gadamer (2000, pp. 124–146) emphasized that practice is not the application of science; rather, practice is the source of experience and knowledge. Therefore, the ability that we need in practical activity is not the ability to apply science, but the ability to choose and make right decisions; we ask the question about the good (*phronesis*), and our ideal is not to exclude all that is subjective from rational examination, since in practice we always *personally* decide and choose.

Thus, in pedagogy we have to go back to the *most difficult* and *the oldest* question, since only with understanding the relationship between a pedagogical opinion and an activity can we find what Jan Bengstsson (2006) called "the self of pedagogical science", i.e. its autonomous identity that would enable a productive dialogue between practitioners and researchers. Pedagogy has a task to provide a synthetic framework and unity of the discipline, to "canonize"

a methodological approach that would take into account scientific, ethical and socio-political objectives and scientific disciplines and educational practice.

Competence-based approach in the context of the study of pedagogy

The concept of the competence-based approach in curriculum design and pedagogical practice has been a topic of numerous studies and heated debates in the previous decade (Laval, 2005; Štefanc, 2006). In the pedagogical field, the issue has been often related to the question of teachers' competences and teacher professional development; also in Slovenia and Serbia (Cvetek, 2004; Korać, 2012; Marinković & Kundačina, 2012; Muršak, Javrh, & Kalin, 2011; Peklaj, 2006; Peklaj et al., 2009; Plevnik, 2005; Razdevšek Pučko, 2004; Stojanović, 2008; Vranješević &Vujisić-Živković, 2013). Many researchers support the idea that modern teacher education and teacher professional development need to be based on competences, not only because competence-based approaches focus on the goal of teaching future teachers how to "do things in practice" (Razdevšek Pučko, 2004, p. 71), but also because contemporary teachers need to be able to constantly adapt to changing circumstances (Buchberger, Campos, Kallos, & Stephenson, 2000; Peklaj et al., 2009, p. 9). The competence-based approach fits well within the European life-long learning agenda, including the Bologna process. Thus, supported by European financial mechanisms, many projects have been set up to apply and evaluate the concept of competence in teacher education. Many of them have produced lists of teachers' competences, which are supposed to serve as the basis for teacher education (Peklaj, 2009; *Pravilnik o standardima kompetencija …*, 2011; Vizek-Vidović & Velkovski, 2013; Šteh, Kalin, & Mažgon, 2014).

"A competence is defined as the ability to successfully meet complex *demands* in a particular *context* through the mobilization of psychosocial prerequisites" opens the famous DeSeCo definition of competence (Rychen & Salganik, 2003, p. 43, the authors' emphases), and continues: "The primary focus is on the results the individual achieves through an action, choice, or way of behaving, with respect to the demands, for instance, related to a *particular professional position* […]" (Rychen & Salganik, 2003, p. 43, the authors' emphasis). The definition implies that educational programmes (if they are to be competence-based) need to be based on a clear definition of the "professional positions" for which they are designed. This may not be such a difficult task when one has a teacher's profile in mind. The issue becomes much more complex and controversial when the professional profile of a pedagogue is in question. The

profile of a pedagogue has historically changed considerably, and even today, there is no wider consensus on its nature.

In the past, the study of pedagogy used to be related to teacher education and, since its beginnings, it has also been related to other professional positions in the education system (in administration, inspection, research, etc.). However, in the 1970s, the school counselling service was introduced in the former Yugoslavia; its introduction has had a crucial effect on the study of pedagogy: "Perhaps no profile, neither before nor after, has so decisively influenced the formation of pedagogy study as the very profile of the school pedagogue," argued Medveš (2010b, p. 104). Despite the fact that the profile of school pedagogue influenced the study of pedagogy considerably, there is not much debate about the relationship between the study and the profile. The general impression, based on the comparison of study programmes (Spasenović & Ermenc, 2014), is that (at least at the Belgrade and Ljubljana universities) an equation between the study and the profile cannot be made. Both study programmes, in Belgrade and in Ljubljana, are conceptualized in much broader manner, giving more focus on the study of science than on the training of future (pre)school pedagogues and other professionals in the educational field.[4] This position is well reflected in the formulation of general aims of the pedagogical studies. To mention but one aim of the study of pedagogy in Belgrade: "Training for an understanding of education in the light of the early ideas of classical and modern pedagogical theories and concepts" (Spasenović & Ermenc, 2014, p. 28). As far as the training of practitioners is concerned, it seems that the profile of (pre)school pedagogue has remained the central focus of the programmes, but that also other professional positions have been taken into consideration (reflected in competences related to work in administration, leadership and research). Since the study was limited to the analysis and the comparison of organization and structure of the programmes, their general goals, and the types of educational activities, these conclusions are less reliable, which is why we have studied them further.

Method

The aim of the empirical research was to examine the opinions of university teachers at the Departments of Pedagogy and Andragogy at Ljubljana and

4 Recently, a survey on employment situations was conducted by the Department of Pedagogy and Andragogy in Ljubljana (Radovan, Mažgon, & Ermenc, 2014). The data shows that only 42.2 percent of alumni who graduated between 2010 and the first half of 2014 have found employment in schools or kindergartens. This finding speaks in favour of the existing conceptualization of pedagogy studies; limiting the study of pedagogy to the school pedagogue profile (and thus making it more competence-based) would negatively affect the employability of the graduates.

Belgrade universities on the competence-based approach that was introduced by the Bologna process. Given that the introduction of this approach is closely connected to the issue of the relationship between pedagogical theory and practice and the issue the identity of pedagogy as a science, we set the following research topics: 1) consider how teachers understand the relationship between pedagogical theory and practice and the identity of pedagogy as a science in that context; 2) examine how, from the perspective of the relationship between pedagogical theory and practice, teachers assess the study programme of pedagogy; and 3) examine their attitude towards competence-based pedagogy study programmes.

We have conducted a qualitative comparative study, and chosen the technique of research interview (Kvale & Brinkmann, 2015). The sample includes eleven teachers, six from the Department of Pedagogy and Andragogy at the University of Ljubljana (they teach the following courses: History of Education, Theory of Education, Sociology of Education, Didactics (two professors), Vocational Pedagogy),[5] and five from the Department of Pedagogy at the University of Belgrade (they teach History of Education, General Pedagogy, Didactics (2 professors), Preschool Education). We have selected interviewees based on three criteria: they all have at least ten years of experience working as a university teacher in the field of pedagogy; they teach one of the fundamental pedagogical courses, and have taken part in academic discussions (oral or written) on the issues about the nature and identity of pedagogy.

Semi-structured questionnaires were used. In order to determine the categories for the analysis of university teachers' answers, we have used an inductive approach to develop categories based on an analysis of original data (Cohen, Manion, & Morrison, 2007; Lodico, Spaulding, & Voegtle, 2006). Because of the similarities in the historical development of the pedagogical studies in both countries, we have primarily paid attention to the individual respondents' views, and focused on their comparison regardless of the university at which they work. As shown below, the study shows that similar discourses prevail and that opinions *within* them differ. There are however some differences *between* the two environments as well.

Results

The identity of pedagogy

We can speak of three conceptualizations of pedagogy as a science. Pedagogy can be understood as 1) primarily a reflective (theoretical) science, as 2)

5 We have marked respondents form Ljubljana as RL (RL1 to RL6), and respondents from Belgrade as RB (RB1-RB5).

primarily an applied science, or 3) as both a reflective and applied science. All but two respondents agreed that theory plays a crucial role. Their views were usually expressed in the context of the nature of pedagogy study programmes: "The study has to begin with the theory, so that the students gain the fundamental knowledge. […] the theory equips them with meta-knowledge and […] which enables transfer to different practical situations" (RL6); "It is wrong to assume that the programmes have too much theory. I think it is just the opposite, that they [the students] do not master the theory well enough" (RL4); "The theory develops the tools that enable critical evaluation of practice." (RB5)

All respondents in Ljubljana and three in Belgrade agreed that the mastery of the theory is crucial for the development of pedagogues' competences. Theory enables professionals to solve a multitude of professional problems, to function effectively in diverse professional situations and occupational positions. That is why the main task of the professors is to help students to "[...] develop cognitive apparatus" (RL1); "Being qualified for the occupation implies the mastery of theoretical knowledge. But, knowledge has to be well assimilated and interiorized in order to construct an argumentative network, which enables finding answers to practical dilemmas and the reflection of one's own actions in practical situations." (RL4)

Moreover, not just the mastery of theory, but also the mastery of the research methodology is what is required to meet the above-stated goals. Such a view has been directly emphasized by seven respondents (RL1, RL2, RL3, RL4, RB1, RB2, RB3). RL2 said: "My goal is to teach students to be able to identify didactical issues in pedagogical practice. In my opinion this is a research activity. […] I aim to teach the students to be able to identify a problem, to prepare a research plan, design the instruments, write the report and evaluate the findings critically."

The respondents expressed varied views on the relationship between theory and practice. Our analysis reveals that the majority of respondents (7) share their opinion with the prevailing pedagogical tradition and understand pedagogy primarily as a reflective science. Two of them see it as both, reflective and applied science and two as primarily an applied science.

The two respondents who see pedagogy as both a reflective and applied science explain their views on the relationship between theory and practice as follows. RL2 continuously emphasized the importance of theoretical study and solid mastery of research skills, but she nevertheless sees the drawback of the pedagogy programmes as being that they do not include the training of students for some important professional skills, such as conducting dialogue in a counselling setting.

RL3 defends the position that pedagogy is "both a reflective and applied science […]. Pedagogy is about action. It is a discipline that has to develop conceptual tools for the analysis of the pedagogical reality. It also needs to be able to develop new approaches at the micro-pedagogical as well as at the systemic level." The respondent goes on explaining that analysis is not enough (this is something other social sciences do when analysing pedagogical phenomena), but has to (according to the *Geisteswissenschaft* pedagogy) develop clear normative answers to the questions related to education in given time and space. "We pedagogues think about practical solutions to pedagogical questions." (RL3)

Lastly, one (RB2) of the two respondents who see pedagogy as primarily an applied science, claims that "Practice should be the cause for theory, the source of theoretical problems and motive for the questioning of the theory, only later for the proof of the theory."

The role of the pedagogical practicum within study programmes

Most respondents agree with the idea that the theory is the best teacher of practice, but they interpret it differently. To begin with, all respondents agree that giving the students the opportunity to be engaged in the educational institutions' activities for a certain period is important and valuable. Three respondents (RL4, RL1, RL6) simultaneously warn of the potential negative effect of a practicum: practical engagement can, if not supported by reflection, enhances dogmatic instead of reflective thinking.

The respondents value the pedagogical practicum as a very useful tool that can increase the students' motivation for studying (RL1, RL2, RL5, RL6), and as a tool that can help them understand the theory better (RL1, RL2, RL4, RL6, RB1): "Students have the opportunity to see how theory is useful in practice […] how different theories are applied to different pedagogical situations" (RL2). Such responses show that the prevailing stance among the university professors is that pedagogy in a reflective science, where practical experience supports theoretical study. In their view, practice is certainly not about *techne*, but it is about supporting the development of the students' reflectivity and motivation for studying.

The respondents who understand pedagogy in the interspace between theory and practice (RL2, RL3, RB4), see the pedagogical practicum as having more profound impact. One respondent (RB4) explains: "Taking part in the pedagogical practicum gives the students the opportunity to investigate authentic situations, to reflect on them, and to select, rearrange and integrate knowledge [and by doing this] to construct their own system of knowledge, abilities and attitudes."

Respondent RL2 understands pedagogical practicum as one element of the students' *phronesis* development. He has established a holistic didactic strategy that builds on the students' experience. He explains: "Drawing on Herbart and Dewey, I believe that learning occurs in the combination of theory and practical engagement. […] Practice is not a direct experience; it becomes as such when linked to theory. Theory is the instrument that helps them [the students] gain experience." Students in one of his courses are required to observe some pedagogical phenomena at schools. Before conducting the observation, they participate at lectures to gain theoretical knowledge on the phenomena. When the observation is over, they write papers discussing their observations and evaluating them theoretically. Students receive thorough feedback and are required to make corrections. Later, the students and two professors meet for a weekend seminar where the same issues are discussed from several theoretical viewpoints over the course of three days.

The professional profile of a pedagogue and the views on the concept of competence

The characteristics that stand out the most are: pedagogues should be ethical, intellectual, critical professionals (RL1, RB 5, RB4); they should have good methodological skills (RL1, RL2, RL3, RL4, RB3), and be able to read fundamental texts, defend their professional opinion and keep critical distance (RL2, RB 5, RB4, RB3). They should be able to function effectively in different occupational positions and situations, and reflect on their decisions and actions, on the decisions of others (RL1, RL2, RL3, RL4, RB4). The following characteristics are mentioned less often: good communication and social skills (RB5, RB4, RB2, RB3), the ability to work in teams (RB2, RB3), and "pedagogical tact" (RB3).

Such a profile does not go well with the mainstream competence discourse: all respondents in Ljubljana and three in Belgrade are rather critical about it. More than to the concept itself, the critique is directed towards the global higher education policy, which is attempting to reduce the cost of higher education in a dangerous way (RL3), and therefore promotes a narrow behaviouristic concept of competence. Nonetheless, many agree (RL2, RL3, RL4, RL5, RB1, RB2, RB5) that the competences can be defined so as to be pedagogically valuable: "I draw on the concept of competence but in a way I find it appropriate for the study of pedagogy; I understand it as an integration of knowledge, action, and reflection. By 'action' I understand mostly methodological skills" (RL2).

Similarly, the respondent RB2 understands as the "…integration of academic knowledge, skills, and attitudes […]. To avoid being overly academic,

however, I would not want to transform the pedagogue's profile into a technical one."

Respondent RL3 explains that the concept of competence could be explained in the sense of *phronesis*, but *phronesis* requires a thorough theoretical study, which policy does not support. "You simply cannot comprehend a professional problem without leaning on theory. The issue is not either to choose a discipline-based curriculum model or a practically-based competence model; it is about the integration of the two. Dewey's statement that theorizing is lame and practicing is blind is still valid" (RL3).

Even the respondent who expressed one of the most critical attitudes about the competence concept (RL4), says that she finds MacBeath's conceptualization useful: "Students should reach learning aims at three levels: at the levels of knowing, feeling and acting; […] each level encompasses the dimensions of understanding, abilities (or competences) and values" (RL4).

When confronted with the issue of the professional profile of pedagogues and their competence development, all respondents in Ljubljana and three in Belgrade agreed that focusing on the occupational position of a (pre)school pedagogue/counsellor would require a highly problematic narrowing down of the profile. When having occupational challenges in mind, the professors do often focus on the (pre)school pedagogue's occupational tasks and problems, but simultaneously say that the study of pedagogy has always been much more broadly conceptualized, covering topics from the macro-systemic to the micro-pedagogic levels (RL1, RL5, RL6, RB1, RB4, RB5). Moreover, the graduates have always been able to find employment in very diverse organizations.

Has the Bologna model influenced the respondents' in any way?

A general answer to the question is negative. Some respondents (RL1, RL4, RB3) even claim that the Bologna process enhanced their negative feelings about the competence concept. RB3 comments: "The Bologna reform […] has brought about a set of changes which were for me as a teacher more frustrating than inspiring, especially concerning quantitative evaluation of students' and teachers' achievements." In contrast, the process also had positive influences on her as a researcher: "The Bologna process opened for me a new and utterly challenging field of research – higher education. […] I have realized what traps are hiding in education if the development of education is led by policy platforms based on ministerial conferences, instead of being led by internal theoretical explanations" (RB3).

Despite having a critical stance toward competence-based approach, one respondent (RB4) claimed that insistence on competences in Serbia has

challenged the prevailing encyclopaedism in the study programmes and provided a good opportunity to reflect on the essence of the profession. Moreover, a few respondents from Serbia recognized some positive sides of Bologna process, such as the introduction of new courses (RB2), reconsideration of the professional role of pedagogue (RB1), and the teachers' roles in preparing prospective pedagogues (RB2, RB5).

Respondents RL2 and RL3 explained that they developed their didactic model before the introduction of the Bologna model. When introducing improvements into syllabi and teaching approaches, the professors lean on their expertise and experience, and not on Bologna model directions. The resistance to top-down delegated reform is well described by respondent RB3: "No student-centeredness. Not professor-centeredness. But the academic community in the centre. This implies academic freedom of the professor in the conceptualization of the educational programmes, and the academic freedom of students to study the way they find appropriate." She continues, stating that professors are also researchers, whose work is constantly evaluated in their academic community. Therefore, they are the only ones who can competently decide what to teach. "Nobody from outside cannot know this better than them. That is why the selection of the university teachers is crucial."

Conclusion

The findings of our research show that the majority of the interviewed university teachers hold an opinion that pedagogy is foremost a theoretical (reflective) science: it is more about *theoria* and reflection than about *phronesis* and *techne.* Some of the respondents share the authors' stance that pedagogy is about both, about *theoria* and about *phronesis*: learning the truth and gaining wisdom of ethical decision-making ("pedagogical tact") are more important than merely the craft of coping with everyday teaching practice (Gadamer, 1999, p. 80). Least pronounced is the stance that pedagogy is primarily a practical science that should equip students with practical professional skills.

The stance that pedagogy is more than anything a theoretical science is more pronounced among the respondents from the University of Ljubljana. Not surprisingly, they also see pedagogical theory as having a crucial role in the education of prospective pedagogues. Theory is, in their opinion, also the basis for students' practical training. In spite of the contemporary societal atmosphere in which applied (i.e. useful) knowledge (*techne*) is favoured, the mainstream opinion among academic pedagogues still is that "there is nothing more practical than a good theory" (Medveš, 2010a, p. 92). This stance is also

held by those respondents who see pedagogy as not only reflective but also as an applied science. The difference between the two groups of respondents is the following: the first group understands the students' development of research skills as the main bridge that links theoretical studies and practical training; the second group, however, sees the engagement of students in pedagogical practicum as one of the two fundamental preconditions of the students' *phronesis* development: professional development can be equated with *phronesis* development. The second precondition is that the students need to have the opportunity to develop the ability to reflect theoretically on their practical experience.

Not surprisingly, the last group of respondents (coming from Belgrade University), who see pedagogy primarily as an applied science, have relatively positive attitudes about the competence approach. The analysis also reveals that the competence approach is generally much better accepted by Belgrade than by Ljubljana respondents. Compared to the Ljubljana respondents, the Belgrade ones also express a slightly more pronounced need for the practical skills development. The majority of the interviewees are, however, rather reserved and critical to both the competence approach as well as the practical skills development; they fear that competence-approach would lead to its reduction to *techne* in the given political and societal atmosphere.

Taking that into consideration, it must also be noted that even the harshest critics of the competence concept express the stance that competence approach (if understood holistically) could positively influence the students' ability to use theoretical knowledge and research skills when dealing with complex occupational challenges. If anything, our respondents agree that this is one of the fundamental study aims they strive for, but are only rarely successful at achieving. This is why we believe that it might be useful to further investigate and develop the idea of a competence model, or perhaps, a *phronesis* model that would be suitable for the professional development of pedagogues. Such a model might respond better to the above-mentioned practitioners' criticism on the practical irrelevance of pedagogical research for their everyday work: if reduced to *techne*, the competence approach, is not a solution to the problem. The competence-approach if understood holistically, and with the concept of *phronesis* at the centre, might produce better results.

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Didactic Strategies and Competencies of Gifted Students in the Digital Era

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This paper presents the findings of explorative research undertaken on an intentional sample consisting of 112 master's students of pedagogy in Serbia, assumed to be potentially gifted and to have demonstrated academic giftedness, since their average mark during their studies was above 9.00 on a scale of 1.0 to 10.0. The intention was to examine the influence of didactic strategies and methods on the competencies of gifted students and thus verify the hypothesis on the significance of certain didactic strategies and methods for the contribution of higher education teaching in order to encourage intellectual autonomy in learning in the case of gifted university students. The method of systematic non-experimental observation was used, accompanied by an assessment scale used by students to estimate the level of the presence of the listed strategies, methods or procedures during studies and to what an extent learning and teaching strategies used in lectures, exercises, seminars, and consultations addressed their needs and contributed to the development of competencies. When making a choice between didactic strategies, methods and procedures, particular attention was paid to the 52 offered methods in order to include 30 of those that refer to problem learning, creative approaches to learning, critical autonomy etc., and for the list of 35 competencies of which 30 refer to independent thinking and are elements of critical thinking and indicators of, above all, approaches to the learning of gifted students. The essential finding was that the achieved competencies with higher average values were, mostly, those that are important for intellectual functioning, but that were not directly connected to what explains critical thinking, intellectual autonomy, as well as to the knowledge of basic concepts, the understanding of facts, and the giving explanations of events.

Keywords: gifted students, intellectual autonomy, didactic strategies and methods, digital era

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Didaktične strategije in kompetence nadarjenih študentov v digitalni dobi

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V prispevku so predstavljeni rezultati eksplorativne raziskave, ki je bila izvedena na namenskem vzorcu 112 magistrskih študentov pedagogike v Srbiji. Za vse so predvidevali, da so potencialno nadarjeni in da izražajo akademsko nadarjenost, saj je bila povprečna ocena njihovega študija nad 9,00 na lestvici od 1,0 do 10,0. Namen raziskave je bil ugotoviti, kak vpliv imajo didaktične strategije in metode na kompetence nadarjenih študentov. Tako bi potrditi hipotezo o pomembnosti določenih didaktičnih strategij in metod visokošolskega poučevanja k spodbujanju intelektualne avtonomije v procesu učenja pri nadarjenih študentih. Podatki so bili zbrani s sistematičnim neeksperimentalnim opazovanjem in z ocenjevalno lestvico. Študentje so ocenili stopnjo prisotnosti navedenih strategij, metod ali postopkov med študijem in v kolikšni meri strategije, ki so uporabljene na predavanjih, vajah, seminarjih, na konzultacijah, zadovoljujejo njihove potrebe ter prispevajo k razvijanju kompetenc. Ko so izbirali med didaktičnimi strategijami, metodami in postopki, je bila posebna pozornost namenjena 52 metodam, izmed katerih jih je 30 vključevalo problemsko zasnovano učenje, ustvarjalne pristope k učenju, kritično avtonomijo itn. Na seznamu 35 kompetenc pa je bilo 30 takih, ki so vključevali samostojno razmišljanje, elemente kritičnega razmišljanja in so predvsem kazalniki pristopov učenja nadarjenih študentov. Temeljna ugotovitev raziskave je, da so kompetence, kjer študentje dosegajo višje povprečne rezultate, večinoma tiste, ki so pomembne za intelektualno funkcioniranje, a niso neposredno povezane s kritičnim razmišljanjem, z intelektualno avtonomijo niti znanjem osnovnih konceptov, razumevanjem dejstev in s pojasnjevanjem dogodkov.

Ključne besede: nadarjeni študentje, intelektualna avtonomija, didaktične strategije in metode, digitalna doba

Introduction

The digital age and changes in the field of higher education, which are conditioned by factors such as knowledge expansion, new technologies, new forms of communication etc., are accepted only partially, from the perspective of the gifted. They are the most prominent in the areas of new content selection, the structuring of educational plans and programs, especially with didactic material. The ability of this material to handle new changes in society is continually decreasing on a global level and, therefore, also in regard to gifted children. The entire educational system will expand and grow, the length of education will be increased, the importance of general education will continually increase, and a growing number of people will join this sector because even today individuals are expected to be able to perform a wide range of unforeseen tasks, and this requires the development of key abilities, including analytical thinking, team work, independence, self-initiative, which is followed by expertise and other personal competencies. From the gifted point of view this means, there is a need to view the ideal of critical thinking from the perspective of the "American Philosophical Formulation", which Facione (1990) gives in his Delphi-study. There he shifts the focus from critical thinking as a process to the critical thinker as a person, i.e. the need for the development of the critical thinker, who is curious, well informed, open minded, flexible, who challenges his/her reason, is honest in thinking and evaluation, is honest in the confrontation with personal prejudices, is cautious when making decisions, ready to rethink and reconsider, clear in forming questions, organized in complex matters, diligent in the search for relevant information, responsible for the grouping of criteria, focused on the task, and persistent in the search for solutions that are as precise as the subject and the conditions which enable the research.

In the higher education teaching, student participation, codetermination, research and interdisciplinarity as elements of emancipated studies have long been insisted upon. Therefore, higher education institutions are searching for adequate forms and types of classes and research methods or, (in other words) student guidelines, towards efficient self-learning in which the dominant effect is intellectual autonomy. If this is viewed from the gifted perspective, then it is even more important to take into consideration the possibilities that the digital age gives to the development of the intellectual autonomy of gifted students. Our research results (Gojkov, 2013; Gojkov & Stojanovic, 2012), i.e. the empirical tests of the reach and limitations of the application of innovative potentials of contemporary models in the higher education teaching (project method, discourse method and didactic instructions which convene

with the dimensions of the cognitive style, etc.) from the perspective of the encouragement of gifted students' metacognitive abilities and intellectual autonomy, point to the conclusion that gifted students' metacognitive approach to learning is connected to the ICT technology in the process of self-study and research. This is especially evident in the application of the project method and discourse method, which are easily combined with the classic system of teaching. Students' evaluation of this method of education is positive, while the motivation for participating in projects is intrinsic. Acquiring knowledge through the project and discourse method are considered more interesting and efficient than through the classic academic presentations, usually because students can research, independently find information by networking with students around the globe, consulting with each other on information sources, etc. (Gojkov, 2013; Gojkov & Stojanovic, 2012). Students today efficiently use English, German, and other languages and thus overcome spatial barriers, they access libraries around the world, communicate with students and others who share the same interests, and therefore learn with far more motivation, and manifest high levels of flexibility, creativity, risk-taking and persistence in the search for argumentation which supports their ideas. In this manner, the importance of ICT technologies contributes to the development of the intellectual autonomy of gifted students, because they have the opportunity to prepare for discussions, which occur during lectures, practical classes, and seminars, and thus develop new arguments from different angles of the posed question, or a question that they themselves ask. Therefore, borders are erased, and participation epistemology in the learning approach is enabled, which in turn opens the road to autonomous and self-regulated learning. In other words, a well-known pedagogic maxim was enabled: If you want to be free, educate yourself. The gifted know this well and use it. The world is theirs and, thanks to digital technology, many things are already in the palm of their hands.

Theoretical approach to the problem

Critical thinking in pedagogy and higher education didactic concepts of education of the gifted are rooted in pedagogy; therefore, in higher education, didactics are rooted in emancipated epistemology. It is based on the views of authors such as Paul-Elder, who states:

> Critical thinking is a way of thinking (valid for all subjects, content or problems), in which a person strengthens their thinking quality, by challenging themselves to follow the inherent structures of thinking and to measure them through intellectual norms (as cited in Kruse, 2010, p. 76).

In emancipated didactics, "critical thinking" refers to the aspects of self-government and self-reflection in thinking, which are dependent on following intellectual norms. Critical thinking in didactics is conscious thinking for which the aforementioned authors state:

> Critical thinking in short means: self-governed, self-disciplined, self-organized and self-correcting thinking, which implies strict quality criteria, leads to active communication and problem-solving capability and constant obligation to suppress innate egoism and group-egoism." (Paul-Elder, as cited in Kruse, 2010, p. 124).

Paul-Elder also underscored the importance of quality measurement. They contribute to the definition of the term by adding social aspects such as "communication skills and the capability of finding problems", as well as the ability to be aware of their interest position and realize its influence on thinking. Contrary to the aforementioned views, they see critical thinking as independent of the domain and discipline in which it occurs. Today, this view is often criticized by Willingham (2007). The critical thinking ideal is formulated by the American Philosophical Association in their Delphi study, in which the focus is diverted from thinking as a process to the thinker as a person:

> The ideal critical thinker is curious, well informed, open minded, flexible, who challenges his/her reason, is honest in thinking and evaluation, is honest in the confrontation with personal prejudices, is cautious when making decisions, ready to rethink, clear in forming questions, organized in complex matters, diligent in the search for relevant information, responsible in the grouping of criteria, focused on the task, and persistent in the search for solutions which are as precise as the subject and the conditions which enable the research (Facione, 1990, p. 65).

This is to be expected from the gifted and is most easily developed in them. In this study, there are two key elements of critical thinking singled out: cognitive competency and affective disposition, of which the former is attributed to the procedural side and the latter to the dispositional side of critical thinking. Experts are unsure whether they operate interdependently. With regards to critical thinking, a third of them wanted to strictly define the critical thinker as a person (Heyman, 2008). Everyone is in agreement that the procedural side is the determining one. If critical thinking is to be taught, it is the view of the authors of this text that that both aspects need to be addressed in unison; "Therefore, in good critical thinkers we talk about ideals. Development of critical thinking as a skill is combined with the nurturing of these dispositions which contribute to useful insights and are the basis of a rational democratic society" (Facione, 1990, p. 68). Critical thinking, therefore, according to

this study, cannot be described only on the basis of actions (thinking, argumentation, receiving information), but it requires the person's competencies, opinions and approaches to thinking. This is a part of comprehensive schooling in a democratic society that is founded on rationality.

The aforementioned definitions indicate that critical thinking is not a simple one-dimensional concept. It is a collective concept of all of the attempts to make thinking more precise, to control it and validate it for mistakes, which arise from a person who consciously acts and thinks (Facione, 1990). Critical thinking is not only an academic but also a social requirement. It has cognitive, methodological, ethical and emotional associations. It cannot be developed separately from the character that uses it. Critical thinking is a broader concept than scientific thinking, even though both terms are used as synonyms in the scientific community. Critical thinking is above that and represents an important educational goal to be developed through an array of conscious influences on the thinking quality, independent decision-making, and rational behaviour. The introduction of critical thinking to curricula should be as early as elementary school (Kuhn, 2005, as cited in Gojkov, 2007).

In the digital age, the gifted have great opportunities for the development of intellectual autonomy, on which emancipated didactics insist, and for which there is ample support from the European qualification framework (www.jointquality.org, European Council, 2008), which legitimizes the curricula decided directedness towards the acquisition of critical thinking. Unfortunately, however, there is no guarantee that it will develop, because the didactic support that encourages the intellectual autonomy of the student is necessary for the nurturing of critical thinking. For the gifted, this means even more chances for the development of their intellect, creativity as well as character traits, which are a necessary framework for creativity and critical thinking. How does this look in the pedagogy studies at the Philosophical Faculty in Serbia, where professors know more about the didactic strategies, methods and procedures for the encouragement of intellectual autonomy than the professors from other faculties and where the students also study all of this as well as how to implement that knowledge in the practical work of the schools? This is the question that initiated the study, the results of which are partially represented in this paper in order to argue the view that the didactic strategy and method reached from the perspective of ICT technologies in the work with gifted children is still not sufficient, especially when considered from the perspective of contributions to intellectual autonomy, where they could actually be the most efficiently, the most rationally and the most economically used.

Methodology framework

Represented in this paper are the results of an exploration research on a convenience sample of 112 students (98 women and 14 men) on their master's studies at the Faculty of Philosophy, majoring in pedagogy in Serbia, whose average grade is above 9.00 and who, therefore, are taken as potentially gifted and who have attained academic giftedness. The intention was to examine the influence of didactic strategies and methods on the competencies of gifted students, thus verifying the hypothesis of the positive effect of certain didactic strategies and methods in faculty classes on the encouragement of intellectual autonomy of learning in the case of the gifted. The research was carried out in 2013 and 2014. The students filled in a questionnaire. The first part consisting of Likert scale type statements, i.e. an assessment scale was used by students to estimate the level of presence of the enlisted strategies, methods or procedures during their studies and to what extent learning and teaching strategies were used in lectures, exercises, seminars. The second part of the instrument constructed for the purpose of the research (DSCGS-1 – Didactic strategies and competencies of gifted students) referred to the scale according to which students assessed their competencies regarding critical thinking as an expression of intellectual autonomy.

The method of systematic non-experimental observation was used as well as an assessment scale used by students to estimate the level of the presence of the enlisted strategies, methods or procedures during studies and to what an extent learning and teaching strategies used in lectures, exercises, seminars, consultations addressed their needs and contributed to competencies development. When making a choice between didactic strategies, methods and procedures, particular attention was paid to the 52 methods offered to include the 30 of them that refer to problem learning, creative approaches to learning, critical autonomy, use of ICT, etc., and for the list of 35 competencies to consist of the 30 of those that refer to independent thinking and that are elements of critical thinking and indicators of, above all else, an approach to the learning of gifted students. The data on the reliability of the instrument is high: Cronbach's Alpha is 0.975. From the component matrix of the factor analysis of the part of the instrument that refers to student competencies, it can be seen that seven factors were extracted, of which the first factor explains 68.644% of the variance. From the Pattern Matrix, it can be seen that after 25 iterations of convergence, significance is at 0.004, which shows a significant mutual conformity of items in the instrument.

In the part of the instrument for monitoring of the application of the didactic processes in higher education teaching, 11 factors were extracted using the componential analysis method. From the matrix below, it can be seen that after 25

iterations the convergence is significant at .01. From the communality table, it can be seen that the situation of certain items is from .60 or over .80. The first factor explains 36.6% of the variance, and the total explained variance is 70.46%, which significantly confirms the validity of this part of the instrument.

Research findings and interpretation

Out of the great number of data, the findings outline will include only those that most clearly and significantly indicate underlying issues of the research, i.e. the availability of didactic strategies and methods in higher education teaching (lectures, practical classes, seminars, consults, etc.) of gifted students. The first significant statement refers to the fact that none of the evaluated 60 strategies, methods and procedures completely fulfilled the expectations of gifted students; therefore, all are present but not to level expected. The same data can be seen in Table 1 *Descriptive Statistics,* as well as in the Chart 1 – *The level of prominence of didactic strategies*; they further prove that the following are insufficiently prominent and are not given sufficient attention: reshaping, brainstorming, forming new ideas, anticipating consequences, conceptualizing, writing reports after the implementation of instruments and Socratic method. Those are therefore methods and procedures with the lowest average grade, which spans between 2.17 to 2.93 (the minimal value is 0, and the maximum is 5).

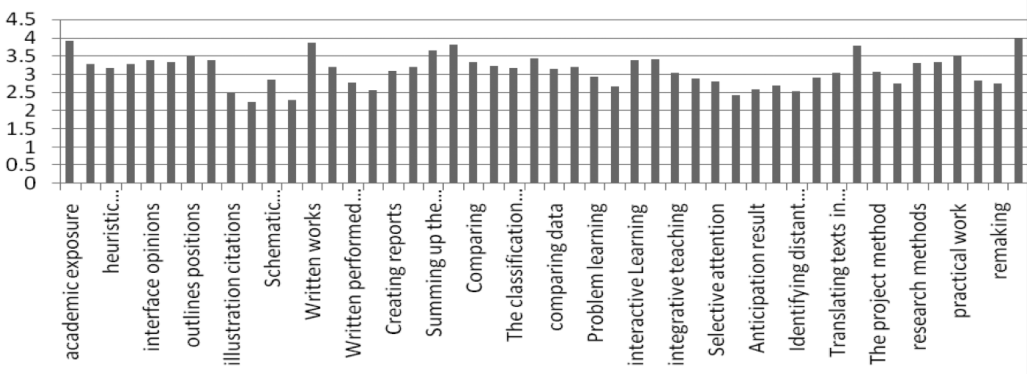


Chart 1. The degree of didactic strategy prominence

Unlike Chart 1, Chart 2, *The level of needs for didactic strategies*, shows that students express a strong need for the following methods and procedures: academic lecturing, evaluation, practical papers, research method, interpretation, forming of new ideas, founding of new procedures, self-reflective learning,

brainstorming, comparison, interactive learning, self-organized learning, research learning, problem learning, data comparison, valuing of products, applying ideas, prominence of sceptical thinking, natural science thinking, prominence of networked thinking and prominence of self-reflective thinking, abstracting of ideas, raising questions, finding examples on the Internet and in the literature, essays, stating interesting details, explanation of attitudes, discussion on a topic, confrontation of opinions, discussion on predetermined problems.

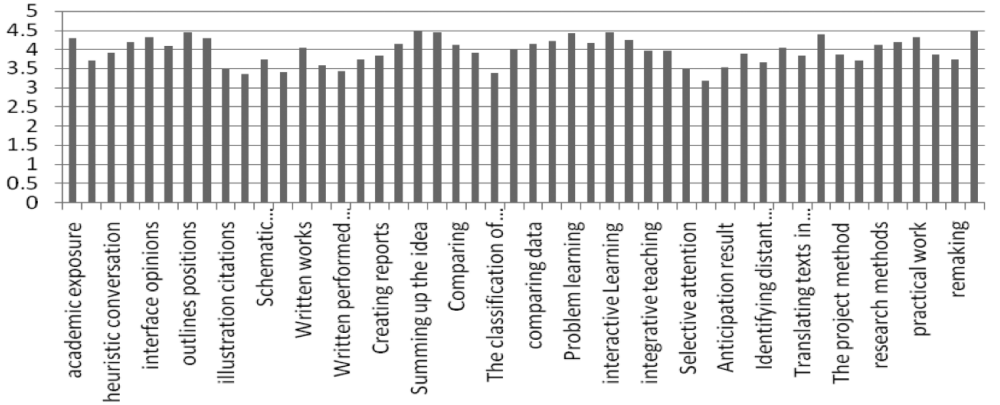


Chart 2. The level of needs for didactic strategies

Apart from the descriptive findings, the issue of self-evaluation of students on competencies achieved during studies is also significant. According to Table 1, *Achieved competencies*, and Chart 3, *Realized competencies*, it can be seen that students evaluate highly realized competences, mostly referring to the abilities of critical thinking, as well as others involved in the set of competencies implied by the notion of intellectual autonomy. It is evident that the ones stated as the weakest were: use of graphic data presentation, demonstration of the correct implementation of methods, demonstration of knowledge use, making an experiment plan, finding hidden connections between data, generalizing findings, product valuing, application of ideas, prominence of sceptical thinking, prominence of networked thinking, and prominence of self-reflected thinking. All these findings open the possibility that gifted students pay more attention than their professors to the question of autonomy, which (in the context of education), both in cognitive and behavioural sense means encouragement of expression of individual opinion, as well as possibility to apply competences involved in the notion of intellectual autonomy in research work. The

aforementioned competencies are stated as being poorly developed, which underscores important elements of research thinking and strategies among which the following are singled out: experiment plan making, generalizing data, valuing products, idea application, prominence of sceptical thinking, natural science thinking, prominence of networked thinking and prominence of self-reflective thinking. Therefore, we could say that it is clear that gifted students recognized the need for developed decision and judgement making. In Piaget's sense, this means that they can take into consideration the perspectives of others, to coordinate their own as well as viewpoints of others in order to make reasonable decisions; in other words, it could be said that they sense the lack of reflexive autonomy better than their professors, i.e. they feel greater need to make a choice based on the awareness of one's own ideas, experiments, observations, interests and values, which has already been found by other studies as significant elements of manifestation of reflexive autonomy (Koestner & Loiser, 1996, as cited by Lalic-Vucetic et.al., 2009). In the interpretation of this finding, another statement could be born in mind, i.e. the students judged that their professors did not pay enough attention to their intellectual autonomy, because they did not sufficiently use didactic strategies and methods for the encouragement of strategies which are the foundation of scientific critical thinking, encouraging use of independence in thinking and decision making, since, as it has been judged by students, the teachers do not give them enough opportunities to learn how to solve problems and make decisions within broader range of choices and in discussions and other techniques of autonomy encouragement (Gronlick & Ryan, as cited by Lalic-Vucetic et al., 2009).

Achieved competencies with higher average values are mostly those that are significant for intellectual functioning, but they are not directly related to what explains intellectual autonomy, i.e. the knowledge of basic notions, the understanding of facts, and the giving explanations of events.

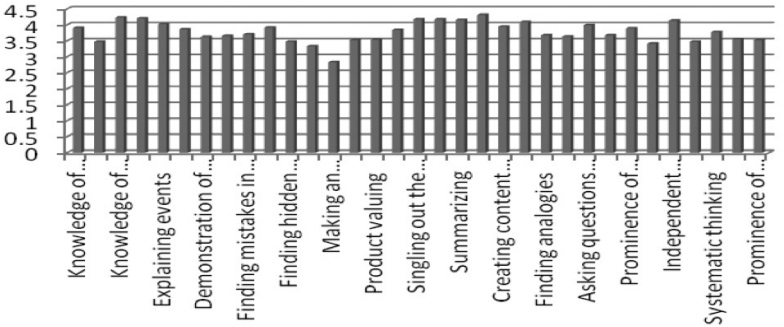
It is interesting to note that standard deviations are smaller for the evaluation of the high prominence of competencies than for the evaluation of the low prominence of those that they consider to be more needed that is more deficient. Regardless, it would be difficult to find the answer to this question in the current research; it should be a subject of another observation, while free interpretation of this finding could be in the direction of the reflection on the abilities of gifted students to assess their advantages well. At the same time, the correspondence at the level of competences assessment are higher, since the competencies are recognized, and the opposite, there is higher standard deviation with underdeveloped competencies, especially in regard to research work; this could be an indicator of insecure, and even incorrect evaluations due

to insufficient participation in these types of activities, i.e. due to the lack of knowledge of the essence and the level of these competencies, which can imply sincerity in providing responses, but it can also mean that students have different learning styles, manifested in these differences.

Table 1. *Achieved competencies*
Number of participants (N), Means (M) and standard deviations (SD) of the acquired competencies

	N	M	SD
Knowledge of terms (acquired competencies)	146	3.91	0.902
Use of graphic data presentation	145	3.48	1.208
Knowledge of basic concepts	146	4.24	0.897
Understanding of facts	146	4.21	0.830
Explaining events	145	4.03	0.837
Usage of terms in new situations	146	3.87	1.052
Demonstration of the correct implementation of methods	145	3.63	1.118
Demonstration of knowledge usage	146	3.66	1.039
Finding mistakes in memory, decisions, and thinking	146	3.71	0.982
Realizing the connection between cause and effect	146	3.92	0.976
Finding hidden connections between data	143	3.48	1.106
Writing creative compositions	146	3.34	1.283
Making an experiment plan	146	2.84	1.365
Establishing findings	146	3.53	1.140
Product valuing	146	3.54	0.976
Assessment	145	3.85	0.877
Singling out the main points	146	4.18	0.973
Singling out the main ideas	146	4.18	0.922
Summarizing	146	4.16	0.945
Text interpretation	146	4.32	0.805
Creating content structure	146	3.95	0.866
Making subtitles	146	4.10	0.949
Finding analogies	146	3.68	1.144
Application of ideas from a given text	146	3.64	1.036
Asking questions connected to the text	145	4.00	0.965
Formation of a concept web	146	3.68	1.057
Prominence of logical thinking	145	3.90	1.039
Prominence of sceptical thinking	145	3.42	1.128
Independent thinking	146	4.14	0.894
Natural science thinking	145	3.48	1.173
Systematic thinking	145	3.78	1.031
Prominence of networked thinking	146	3.56	1.037
Prominence of self-reflective thinking	145	3.53	1.149
Valid N	135		

Chart 3. Realized competences



The question that is relevant for the research refers to the relationship between the achieved competencies and the methods and procedures with which the students were directed to searching for sources of information on the Internet and in the designated readings to which they also gain access via the internet. Noticeable are the important connections of the dependent variable: Search for information (pronounced), and the students' assessment of the competency development level. Therefore, we could say that gifted students' assess a great value to searching for information on the Internet if they are engaged in the following: demonstrating the implementation of methods, demonstrating knowledge use, noticing mistakes in memory, judging, thinking, realizing the connection between cause and effect, writing creative compositions, summarizing, natural science thinking, prominence of networked thinking, application of ideas from a given text, formation of a concept web, prominence of sceptical thinking, prominence of self-reflective thinking.

Previous findings are in accordance with the standpoints expressed by Taisir Subhia Yamin (General Director of the International Centre for Innovation in Education (ICIE), who, in his text "New Horizons for Talented Education in Digital World" (2014), emphasizes the need to use the potentials offered by the digital world in education of the gifted within an educational system, implying the optimized use of technologies and computerized platforms and other systems in education settings. The findings we are commenting on here are in favour of the viewpoints of that author, according to whom it will not be long before the gifted require an increasing number of programs including telementoring, online groupings, e-learning and virtual learning settings; teaching for productive thinking and problem solving, global networks and forums for students, teachers and scientists. Previous findings confirm that students greatly appreciate the possibilities to exchange knowledge, experiences, interests, values and outcomes and advantages. They consider it normal to introduce methods

leading to the introduction of more efficient practices through the use of ICT. The current findings are in accordance with previous statements, implying that the gifted have realized the importance of digital world and that they assess that ICT contributes to competences that could be classified within the set of intellectual autonomy abilities. This is further in favour of the standpoint that gifted students recognize the limits of the application of innovative potentials of contemporary methods in higher education teaching (project method, discourse method, didactic instructions convening with cognitive style dimensions, putting the special accent on the use of ICT in these and other methods), from the angle of metacognitive abilities development, leading to a conclusion that metacognitive approaches to learning in the case of gifted students correlate with ICT in the process of independent learning and research procedures. This is particularly evident in the relations between the project method and the discourse method, which fit well in the classical teaching system, while the use of the potentials of digital world by gifted students encourages intrinsic motivation, mostly because they can research independently finding pieces of information and networking with students worldwide, consulting with them and searching for new sources. Nowadays, students have mastered English, German and other languages, so that they overcome space and language barriers, accessing world libraries, communicating with students and others interested in the same problem issue, thus learning with higher level of motivation, manifesting high level of flexibility, creativity, risk-taking readiness and persistence in search for arguments in favour of ideas they advocate. The importance of the digital world thus contributes to the development of the intellectual autonomy of gifted students, bearing in mind that they have opportunities for discussions during lectures, practical classes, and seminars, since they can prepare original argumentations for new angles of the given issue, or to raise new questions. In other words, boundaries have been erased, and the ideal of participatory epistemology in learning approaches has become possible, opening the way to autonomy and self-regulated learning. Furthermore, there are currently numerous and various models offering possibilities for e-learning of the gifted. One of them is already well-known: the Renzulli Learning System, which is the first integrated system introduced in the educational system in the USA. It is used for the identification and development of the gifted and offers easily accessible learning contents of high quality. It is suitable for the abilities, interests, learning styles and expression styles of the gifted, which can help teachers to ensure packages for productive thinking skills and appropriate differentiations of activities for learners of all levels of achievements and abilities (Taisir Subhia Yamin, 2014).

Conclusions

Previous findings confirm the principles of critical thinking discussed in the theoretical part of this paper. The aforementioned results are in accordance with Facione's view (Facione, 1990), emphasizing the step forward from critical thinking to the critical thinker. In their expectations, students singled out a greater need for teaching methods and didactic instruction, which encourages curiosity, being well-informed, open-minded, flexible, confronting personal prejudices, carefully making decisions, the will for re-evaluation, clarity in asking questions, organization in complex matters, being diligent in the search for relevant information, responsible for the grouping of criteria, focused on the task, planning experiments, globalizing of results, product valuing, the application of ideas, prominence of sceptical thinking, natural science thinking, the prominence of networked thinking and the prominence of self-reflection in thinking. All of this indicates that the gifted feel the importance of cognitive competencies and affective dispositions; therefore, they understand the importance of procedural and dispositional side of critical thinking. It could be further concluded that higher education teachers in their work with the gifted should take these findings into consideration, employing in their work with students strategies, methods and instructions encouraging not only critical thinking (thinking, providing arguments, getting information), but also what could be classified as the competencies, attitudes and approaches of intellectually autonomous critically-thinking individual.

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Biographical note

Grozdanka Gojkov is a full professor of Methodology of pedagogic research and Didactics as well as an author of many monographic studies, textbooks and handbooks in this field. She participated in many research projects and was a visiting professor at lots of universities. She is a honorable member of the Association for the Gifted in Macedonia, Professor emeritus at the University of Banatul in Timisoara, member of ECHA and other organizations and editorial boards in Serbia and abroad, a regular member of C.E.A.S.A. in Paris, SAO in Belgrad and Honorable Doctor of Science at Universities „Aurel Vlajku" (Arad) and "SV. Kliment Ohridski" (Bitola).

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Fostering the Quality of Teaching and Learning by Developing the "Neglected Half" of University Teachers' Competencies

Barica Marentič Požarnik*[1] and Andreja Lavrič[2]

For too long, the quality of teaching and learning in universities has been undervalued in comparison to research. Current social, economic, ecological and other challenges require that more attention be given to measures to improve the situation. Academic staff should receive incentives, policy support and high-quality pedagogical training to develop key competencies for excellence in teaching. Examples of key competencies in this area in different countries are presented as well as some schemes of policy support and pedagogical training. The case study from the University of Ljubljana is based on experiences gathered from four groups of participants during a course on Improving University Teaching in 2013 and 2014. They gave their opinion on the relative importance of different competencies in teaching, to what extent have they developed them during the course and, finally, which activities and methods used have most contributed to their development. At the end, some measures to foster excellence in teaching at the level of policy are proposed, as well as areas for further research.

Keywords: teaching competencies in higher education, pedagogical training of academic staff, key competencies, quality of teaching and learning

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Spodbujanje kakovosti poučevanja in učenja s pomočjo razvijanja »spregledane polovice« kompetenc univerzitetnih učiteljev

Barica Marentič Požarnik* in Andreja Lavrič

Kakovost poučevanja in učenja na univerzah je bila v primerjavi z raziskovalno dejavnostjo predolgo podcenjena. Zdajšnji izzivi na socialnem, ekonomskem in na ekološkem področju ter drugih področjih terjajo več pozornosti ukrepom, ki bi izboljšali situacijo. Da bi visokošolski učitelji razvili ključne kompetence za odličnost poučevanja, bi morali biti deležni spodbud in politične (sistemske) podpore pa tudi kakovostnega pedagoškega usposabljanja. Predstavljeni so nekateri primeri ključnih kompetenc na tem področju pa tudi primeri politične podpore in pedagoškega izpopolnjevanja v raznih državah. Študija primera z Univerze v Ljubljani sloni na izkušnjah, ki so bile pridobljene na seminarjih visokošolske didaktike s štirimi skupinami udeležencev v letih 2013 in 2014. Udeleženci so izrazili mnenje o sorazmerni pomembnosti različnih kompetenc v poučevanju, do kolikšne mere so jih uspeli razviti na seminarju in tudi o tem, katere aktivnosti in metode so k temu največ pripomogle. Na koncu so predlagani nekateri ukrepi na ravni visokošolske politike, ki bi spodbudili odličnost v poučevanju pa tudi področja nadaljnjega raziskovanja.

Ključne besede: kompetence poučevanja v visokošolskem izobraževanju, pedagoško usposabljanje visokošolskih učiteljev in sodelavcev, ključne kompetence, kakovost poučevanja in učenja

Introduction: Increasing importance of quality in teaching in higher education

Universities have three main functions: to conduct research, to offer education, and to serve society. University teachers' career development is usually dependent heavily on the first function, i.e. the quality (and too often quantity) of research, while the quality of teaching remains undervalued and overshadowed by research achievements; teachers also enjoy a thorough training in research methodology and have numerous opportunities to perform and report research results, while competencies linked to quality teaching mostly remain "the neglected half". The research results alone also count in official rankings of universities, such as the popular Shanghai ranking, because of the underlying, but unproven assumption that a good researcher is necessarily also a good teacher (Marentič Požarnik, 2007). Only recently has the U-Multiranking initiative proposed to improve the situation by including broader criteria.[3]

The massification of studies, the increasing heterogeneity of students, rapid developments in different fields of science and technology, economic, ecological and social problems on one side and new research findings about human learning from psychology, cognitive and neuroscience on the other, as well as the globalization and internationalization of higher education: all these require that much more attention be paid to the quality of teaching and learning in universities. As stated in the recent Report to the European Commission on Improving the Quality of Teaching and Learning in Europe's Higher Education Institutions (Report, 2014), the 19th century model of teaching relying mainly on lecturing is no longer compatible with new developments in universities and with societal challenges (Report, 2014, p. 12). There are signs that this situation is changing, but progress is slow. While "the quality of teaching and learning should be at the core of the higher education reform agenda in Europe" (Report, 2014, p. 13), the commitment to this mission at present remains "sporadic and frequently reliant on a few individuals who give practical support for upskilling teachers" (Report, 2014, p. 14) with little or no institutional support or incentives.

It is the responsibility of institutions to ensure that their academic staff are well trained as professional teachers and also the responsibility of staff to ensure that they are proficient in the very best pedagogical practices and striving for excellence in teaching. The best teaching should support the development

3 The U-Multirank initiative of ranking universities, co-financed by the European Commission, is based on a wider conception; it takes into account social relevance, impact on practice, and excellence in teaching and learning at universities. It is becoming increasingly popular; in 2014, 650 universities applied. See: www.u-multirank.eu

of students' critical thinking, creativity, ethical responsibility and commitment to lifelong learning. (Report, 2014, p. 13)

The quality of teaching is also gradually finding its place among quality criteria, elaborated in connection with Bologna reforms. Thus, the Guidelines for National External Quality Assurance Systems of the European Association for Quality Assurance in Higher Education (ENQA) stated that "Institutions should have ways of satisfying themselves that staff involved with teaching of students are qualified and competent to do so", and further: "Institutions should ensure that their staff recruitment and appointment procedures includes a means of making certain that all new staff have at least the minimum necessary level of competence" (ENQA, 2007, cit. after van de Ven, Koltcheva, Raaheim, & Borg, 2008, p. 4).

What are key competencies of teachers in higher education in the area of teaching?

Although the concept of (professional) competencies is difficult to clarify and can be easily misused or oversimplified, it can represent a useful starting point for reflection and the planning of the professional development of teachers. Without entering into controversies about misused and overly narrow conceptions, we can still agree with Weinert's definition that emphasized the complexity of competencies in which three dimensions are tightly interconnected: cognition, skills and attitudes/values. According to Weinert, competencies are "multilayered complex systems of knowledge, beliefs and action tendencies that are constructed from well-organized domain-specific expertise, basic skills, generalized attitudes and converging cognitive styles" (Weinert, 2001, p. 53). All three dimensions are important; it is not productive to reduce competencies to (professional) skills, which is typical for one-sided behaviouristic approaches that should be evaluated more critically (Kotnik, 2006).

There has been a significant amount of effort invested in defining and describing competencies to be developed in students at all levels of schooling and also competencies of primary and secondary teachers (Razdevšek Pučko & Rugelj, 2006; Peklaj, 2006; Marentič Požarnik, 2006). While university teachers share many competencies with other teachers, some are specific, such as to be able to conceive and evaluate study programmes or to link research and teaching by mentoring student research work.

We find numerous attempts to identify key competencies of university staff in the area of teaching and learning, with examples at the level of individual universities, of groups of universities and (which is supposed to have more

impact) at the level of the whole country. The roles of "lists" of such competencies are manifold: to underpin initial and continuing professional development, to influence teaching and learning, to inform promotion and probation policies, to define job requirements and (as emphasized in the frame of the NETTLE project[4]), "to support justifiable pride in the role and work of the teacher, in synergy with their other roles – researcher, administrator, consultant and so on" (Baume, 2008).

In one of earlier approaches, Trigwell, Martin, Benjamin, and Prosser (2000) started with a basic question: what sort of teaching encourages effective learning? They developed a model of *scholarship of teaching* that sees teaching as part of a larger whole of academic work, in order to overcome teaching versus research arguments. This model has four dimensions (each is further elaborated):

- *Informed dimension* (being informed about theories of teaching and learning, etc.),
- *Reflection dimension* (reflection as a part of action),
- *Communication dimension* (communication about teaching with peers, but also on conferences and in scholarly journals),
- *Conception dimension* (changing conceptions from teacher-focused to student-focused teaching)

Bain, in contrast, asked the following question: What are characteristics of outstanding, excellent university teachers? He defined outstanding teachers by results they achieved, as those teachers that "helped their students to learn in ways that made a sustained substantial and positive influence on how those students think, act and feel" (Bain, 2004, p. 5). The result of his in-depth study of over 60 outstanding teachers from 40 disciplines was a rich description of their characteristics, among others:

- Those teachers know their subjects extremely well, as well as broader issues, such as epistemology; they know how to simplify and clarify complex subjects, can think about their thinking and help their students to do so;
- They create a natural critical learning environment, which is safe and simultaneously challenging, in which authentic, fascinating, intriguing, complex questions and tasks are embedded; their methods frequently used the challenge

4 NETTLE (Network of Tertiary Level Educators) is an academic European network (2006-2008) of staff developers from 30 countries and 51 universities with the aim of fostering a common understanding of what it means to be an educator within higher education and to encourage the development of educator skills to ensure a high quality experience for all students in higher education (Baume, 2008). The University of Ljubljana is member of this network (national coordinator: B. Marentič Požarnik).

of provocative questions, which students also see as important, including those that stir imagination, wonder and higher-order intellectual activity;

- The best teachers can capture and keep students' attention; they start a new theme with students' mental model and experiences, not with the content of their respective discipline (student-centred teaching). They care about students as people and as learners, have high expectations and trust them; they are enthusiastic about their discipline and invite students into the "community of learners".

The UK Professional Standards Framework for Teaching and Supporting Learning in Higher Education, issued in 2011 by Higher Education Academy in England, present an example of an official, country-wide approach that recognizes scholarly nature of knowledge creation at universities and a scholarly approach to pedagogy. The standards are elaborated at three levels (new staff, experienced, senior staff) and list competencies in their recognized threefold function: core knowledge, areas of activity and professional values; here are some examples in each category (see heacademy.ac.uk):

- *Core knowledge* - what university teachers should know (about students, theory and practice of teaching and learning) about methods for evaluating the effectiveness of teaching, etc.
- *Areas of activity*: being able to design and plan good programmes of study, to develop effective environments for learning, to ensure good feedback to students, to integrate scholarship and research with teaching and supporting learning, to develop learning communities, to evaluate practice and engage in continuing professional development, etc.
- *Professional values*, principles, code of practice: to have respect for individual learners, commitment to scholarship in the discipline and in teaching, to foster confidentiality, inclusivity, equality of opportunity, proper use of power, etc.

In Germany, a group of universities developed a list of key competencies of teachers in higher education that was presented by Webler at the NETTLE conference (2006). Those encompass, in addition to subject knowledge and the competence to teach and organize learning processes, the competence to support young scholars in their development and categories of self-competence and social competence. Some typical examples:

- *Self-competence*: ability to reflect and learn from experience; curiosity and doubt, ability for holistic thinking in contexts, for thinking positively, for keeping integrity, patience with oneself and others;

- *Social competence*: ability to communicate, to stay behind (to observe and listen instead of speaking), to open space for students, to cooperate with "difficult" people;
- *Subject knowledge*: also historical knowledge, knowledge about borders and "neighbourhood" of one's discipline.

Also included are the abilities to connect research and teaching, to assess professionally, to organize links to practice and to master a wide repertoire of methods. Moreover, it is important also to provoke curiosity, to be careful in giving feedback to students, to keep open "spaces" for independent learning, to create intellectual doubt, to support problem based learning and problem solving. However, above all else, good teachers in higher educating have the ability to apply a system of teaching and learning that supports students in becoming independent and responsible citizens. (Webler, 2006)

Models of structuring competencies in teaching and learning in higher education are varied, but they also share some common basic features. The question remains: How to support teachers in higher educating in developing competencies of "teaching excellence"?

As those competencies are not "in the genes" of teachers in higher education, they have to be developed during their career. How? One way is informal: by self-study, learning from experience, or by imitating one's best teachers. More important is intentional learning that has to be officially supported: -by offering workshops and seminars, counselling and supervision, by encouraging research into one's own teaching and publishing the results, by organizing conferences on teaching and learning, by including it in promotion procedures, by systematically evaluating quality of teaching and using results to improve it; in short, by trying to create an academic approach to teaching, similar to the approach that is usual in research into different disciplines (Trigwell et al., 2000).

What is the situation in different countries? A comparative study within the framework of NETTLE determined that in contrast to the trend towards a greater comparability of study programmes, the area of initial and continuous (pedagogical) training of teachers in higher education in Europe is characterized by extreme variability. Some findings (van de Ven et al., 2008):

- In general, there is no national legislation to state an obligation for teachers in higher education to have an initial entry training certificate;
- nevertheless, in a large majority of universities (93%), there are at least some initiatives of pedagogical formation of higher education teachers;
- In 52% of cases, there are courses for initial training, in 31% other types of courses;

- In the majority of cases, those courses are not mandatory; in 38% of cases, they are mandatory for new staff or staff in applied institutions, e.g. polytechnics in (the Netherlands, Ireland, Norway, Latvia, Cyprus, Finland; for applied sciences, Sweden);
- Courses vary greatly in their scope, from 16 to 1600 hours;
- 71% of institutions have centres that organize courses, consultations, innovative projects. Some centres are attached to the university, some to teacher education institutions; some are specialized (for medical, technical staff in Sweden). In UK and the Netherlands, every university has such a centre.

An overview of international initiatives is also given in the work of Aškerc (2013) and Cvetek (2015). The European situation is described in the Report to the European Commission (2014): There are "a lot of worthy aspirations across EU Member States in relation to quality teaching in higher education, but an actual base line of concern […] is worryingly low." (Report, 2014, p. 22). Some examples of good practice are listed, and the importance of an incentivized national policy framework is emphasized as a prerequisite for the development of university teacher training programmes. The reputation gap between research and teaching should also become smaller by using other criteria for ranking universities in addition to the Shanghai scheme, such as the U-Multirank initiative (see footnote 3). The report concludes with 16 recommendations, one of them being that "all staff teaching in higher education institutions in 2020 should have received a certified pedagogical training" (Report, 2014, p. 31).

Let us conclude this overview with an example of probably the most extensive pedagogical training of teachers in higher education, conceived and carried out by the Teaching Development Unit at the University of Oulu (Karjalainen & Nissilä, 2008). The programme was allocated 60 ECTS, which are associated with 1600 hours of study that can be finished in three years or in one year full time. The starting point of planning was a competence analysis; eight core competencies were identified, and the programme was tailored to develop them:

- Commitment to scholarship of teaching,
- Research-based and reflective practice,
- Creative approach towards challenges,
- Active participation in national and international networks,
- Use of modern learner-centred teaching and assessment methods,
- Capacity for pedagogical leadership,
- Being agent of change in the academic community
- Connections to (working) life outside the community.

In the first round, 50 participants joined the course (chosen from 100 applicants).

What is the situation in Slovenia?

After early pioneer efforts of Prof. Vlado Schmidt (Schmidt, 1972), different training programmes (courses, seminars and summer schools) in the area of improving teaching and learning for teachers in higher education have been offered since late 1970s, mainly by the Centre for Educational Development at the Faculty of Arts, University of Ljubljana. A series of textbooks was developed for the participants, starting with one by Marentič Požarnik (1978).[5] Some short courses were modular, monothematic (on group work, assessment, communication, mentoring, etc.), also carried out by invitation of individual institutions. One longer, 48-hour course on the Foundations of University Teaching was finally officially accredited by the Council of University of Ljubljana in 1999. Later, it was renewed according to Bologna propositions and accredited in 2013 (after a long waiting time). Recently, similar programmes, proposed by the Faculty of Arts and Faculty of Education, University of Ljubljana, as elective subjects of master and doctoral studies, were accredited and they are chosen every year by some students.[6]

Participants (over 1200 in the past four decades) came from different institutions. In most of the courses, we had heterogeneous groups, which was regarded as an asset. The trainers (Barica Marentič Požarnik, Cirila Peklaj, Barbara Šteh, Jana Kalin, Melita Puklek Levpušček, Andreja Lavrič, and Ana Tomić) usually worked in pairs, supporting each other and jointly evaluating the process in order to improve it.

Furthermore, annual summer schools, twelve in all, were organized from 1992 onward by the Centre of Educational Development at the Faculty of Arts. They boasted prominent foreign guests, including Lewis Elton, Roy Cox, David Jaques, Brigitte Berendt, Oliva Peeters, and Marija Bratanić. This fruitful cooperation was made possible by wide international contacts of B. Marentič Požarnik,[7] who also "imported" the philosophy and ethos of

5 For details about early beginnings, see the doctoral thesis of Marentič Požarnik (1994) and Marentič Požarnik (1998).

6 At the Faculty of Education in Ljubljana, ilena Valenčič Zuljan is responsible for carrying out elective doctoral course in university teaching; at Faculty of Arts, Jana Kalin and Cirila Peklaj.

7 B. Marentič Požarnik was a member of the UNESCO CEPES European Network for Staff Development in Higher Education (1985–1991), Maidstone expert group (1979–1997, for details see Marentič Požarnik, 2012); the European Association for Research and Development in Higher Education (EARDHE) (1979–1986), ISSAT – International Study Association for Teachers and Teaching (1999-), the Network of Tertiary Level Educators NETTLE (2006–2008) and the European Forum on Academic Development (EFAD), King's College London 2011.

cognitive-humanistic and constructivist ideas of professional development and promoted approaches, based on experiential, collegial learning – "teach as you preach".

Although these courses were voluntary and did not formally contribute to career advancement, they were always fully booked (in some cases, the number of participants had to be limited as there was more interest than places). Evaluations by participants were highly favourable.

For an overview of other pedagogical courses in Slovenia and participants' opinions about them, see also Aškerc (2013, 2014), Cvetek (2015, in print). To date, none of those initiatives has been recognized or supported by policy makers in Slovenian higher education. In spite of numerous proposals to include them in the criteria for promotion, research achievements, mainly in the form of publishing in internationally recognized journals with a high citation index still dominate (Aškerc, 2013, 2014).

In promotion criteria of the University of Ljubljana (Merila…, 2011), "pedagogical qualification" has the weight of approximately 25% and consists mainly of the authorship of textbooks and other materials for students and the mentoring of master's and doctoral theses (which does not guarantee the "pedagogical" quality of texts or mentorship). In contrast, the candidate can obtain only one point (!) for attending certified in-service courses to improve teaching and no points at all for presenting evidence of actual improvements or innovations in fostering active learning. The main characteristic of pedagogical ability is stated in terms of a teacher who is a "clear and systematic" presenter in lectures, laboratory exercises and seminars (Merila…, 2011, par. 58), the "probation lecture" still being the only evidence of teaching competency required from new teachers (docents), and even this is not always performed (Aškerc, 2014). Several times, improvements of those criteria were proposed, also by the Slovenian Association for Teaching in Higher Education (SATHE),[8] for example by introducing a teaching portfolio that is usual in many countries. However, all those proposals have been ignored up to now, revealing a persisting "immunity toward pedagogical viruses" (Marentič Požarnik, 2013).

Only the University of Primorska recently included the obligation to submit a certificate of participation at an approved pedagogical-andragogical course for all the candidates among the criteria of selection and promotion (Merila…, 2014). At present, an 18-hour course, developed jointly by Sonja Rutar and Tatjana Vonta, is being offered, which covers topics including the mission of university studies, process and strategies of learning and teaching in

8 The Slovenian Association for Teaching in Higher Education was founded in 1996 (see Mihevc & Marentič Požarnik, 1998), but after 10 years it has been dissolved.

higher education, and students with special needs. Participants have to prepare a teaching unit, carry it out and reflect on the process; they also get feedback from the trainer (Rutar, 2012).

In 2013, an accredited 40-hour course on the foundations of university teaching, organized by the Centre for Educational Development at the Faculty of Arts at the University of Ljubljana, was offered as one of the activities within the KUL project (Quality - University of Ljubljana). Five iterations in 2013–2015 have been co-financed by the European Social Fund. The KUL project also includes some shorter courses, offered by different providers, such as the use of ICT in university teaching or rhetoric.

At the moment, there is no official support, recognition, coordination or control of quality of those activities, in spite of the fact that excellence in teaching was stressed as one of the important aims in the Slovene National Higher Education Programme 2011–2020: "To achieve excellence, the programme requires higher education institutions to develop activities of continuing pedagogical training and to provide support for their teaching staff. Mechanisms for promoting excellence in teaching shall include the development of centres for teaching competences". This sounds promising and has even been included as an example of good practice in the Report to the European Commission (Report, 2014, p. 24). At present, at the beginning of 2015, there are still no signs of putting into practice those mechanisms that were intended to start in 2012. At least, these ideas have begun to be a matter of discussion; for example they were a topic of an invited presentation (McMahon, 2014) at the "Bolonja po Bolonji" Rectors' Conference in April 2014

The most important measure in recent years has been to introduce student evaluation questionnaires on teaching and student reports as a part of promotion documents. This has to a certain extent focused attention on the quality of the pedagogical process. However, increasing pressure to publish leaves teachers and assistants less and less time and energy to invest in the work with students "[…] who are often regarded as a nuisance to a busy tutor" (EU Report, 2014, p. 29). A consistent Slovenian policy to support excellence in teaching remains to be implemented.

Case study: The impact of the course Foundations of University Teaching/ University Didactics[9] at the University of Ljubljana on the development of teaching competencies

Description of the course

The course was part of the "Quality - University of Ljubljana" project (the so-called KUL project) and co-financed by the European Social Fund. It consists of 40 contact hours during four weekend sessions in one semester; additionally, the homework tasks take about half of this time. Thus, it is a shorter course in comparison to similar courses in different European countries (see Van de Ven et al., 2008). It was carried out four times in 2013 and 2014 by two cooperating trainers (authors of this paper); the last course is planned for spring 2015.

The number of participants was limited to 16, in order to enable active work, intense interaction and individual attention; however, interest has widely surpassed this capacity. Participants came from different fields (18 from social sciences and humanities, 24 from science and technology and 20 from life sciences (medicine, biology)), which was regarded as an asset, not an obstacle.

The main *goals* of the course were to support participants:

- To master basic procedures in planning and delivering courses, assessing students and to optimally "align" those procedures (Biggs, 1999).
- To become familiar with a variety of teaching methods and approaches and criteria of their choice according to teaching goals and student characteristics.
- To become aware of the importance of student motivation and its relation to the learning environment.
- To acquire a reflective and researching stance/attitude to their teaching practice and a readiness for gathering evidence of its effectivity as a basis for improvement.
- To deepen awareness of one's own conceptions of teaching and learning and of students' perspectives in order to make the transition "from teaching to learning" and to see students as active and independent partners (Kugel, 1993; Marentič Požarnik, 2005).

Included were *topics* on (verbal and nonverbal) communication,

9 The title "Osnove visokošolske didaktike" cannot be translated literally, as there is a semantic problem with the term "didactic" in English. Therefore, we use the term "Foundations of University Teaching".

(interactive) lecturing, models of group work, different uses of ICT, student assessment (in connection with taxonomy of learning objectives), strategies for independent study and changes in conceptions of teachers' and students' role (student-centred teaching).

The prevailing *methods* were based on experiential and peer learning; the participants were put in the role of students in order to experience methods they could later use in their teaching. There were minimal amounts of lecturing and some required reading ("homework"), followed by group discussion ("learning through discussion"- the LTD model, by Rowe). Participants had ample opportunity to present and discuss their expectations and experiences and to receive different kinds of feedback. Every participant had to perform a mini-lecture, which was evaluated by peers and trainers, including video feedback in private by the mentor. They also had to present a written reflection on this experience, a reflective report on one peer observation of real teaching and finally a seminar work based on applied research study into their own teaching, which was shared with other participants during the final meeting.

In the frame of the work with the four groups in 2013 and 2014, we performed a research study with the following *research questions:*

- How did the participants rate the importance of different competencies of teachers in HE after completing the course?
- To what extent did the course help them to develop those competencies?
- Which activities and methods used contributed most to this development?

Methods and instruments

1. A list of competencies that have been developed in the frame of the European thematic network NETTLE mainly on the basis of the list by the TUNING Educational Sciences working group. It has been used in different countries and also in evaluating courses at the University of Ljubljana in 2008 and 2009 (Marentič Požarnik, 2009).
2. The questionnaire on the role of different activities and methods in developing competencies that has been developed by the trainers of the course.
3. The questionnaire on general evaluation of the course that was developed centrally to be used in all KUL training activities.

The questionnaires were presented to participants during the last group meeting.

Results

Table 1. *The importance attached to different competencies by participants of courses in university teaching at the University of Ljubljana (4 groups in 2013–2014)*

	Groups / Numerus	1 / 13	2 / 14	3 / 10	4 / 15
	Competency	**Mean ratings**			
1	Ability to analyse educational concepts, theories and issues of policy (in a systematic way)	2.6	2.6	2.7	3.0
2	Ability to identify potential connections between aspects of subject knowledge and their application in wider policies and contexts	3.4	3.3	3.4	**3.7**
3	Ability to reflect on one's value system	3.4	3.4	3.4	**3.5**
4	Ability to recognize, and respond to the diversity of learners and the complexities of the learning process	3.2	3.4	**3.7**	**3.7**
5	Ability to adjust the curriculum to a specific educational context	3.0	2.9	3.1	**3.5**
6	Awareness of the different roles of participants in the learning process	3.4	3.1	3.3	**3.5**
7	Understanding of the structures and purposes of educational systems	3.1	2.9	3.1	3.1
8	Ability to do educational research in different contexts	2.9	2.7	2.5	3.0
9	Competence in counselling	**3.7**	3.4	3.4	**3.9**
10	Ability to manage projects for improvement of the school / institution learning and teaching environment	2.9	2.3	2.6	2.9
11	Ability to manage educational programmes	2.6	2.3	2.9	3.0
12	Ability to evaluate educational programmes/materials	3.1	2.8	3.4	3.4
13	Ability to foresee new educational needs and demands	3.4	3.2	3.4	3.3
14	Ability to lead or coordinate educational teams across subject groups	2.6	2.9	2.8	2.9
15	Commitment to learners' progress and achievement	**3.7**	3.3	**3.8**	**3.7**
16	Competence in a number of teaching/learning strategies	**3.8**	**3.6**	**3.6**	**3.5**
17	Competence in collaborative problem solving	**3.6**	3.1	**3.7**	3.2
18	Knowledge of the subject to be taught	3.2	**3.5**	4.0	**3.9**
19	Ability to assess the outcomes of learning and learners' achievements	**3.7**	3.4	**3.5**	**3.7**
20	Ability to communicate effectively with groups and individuals	**3.7**	**3.5**	**3.6**	**3.7**
21	Ability to create a climate conducive to learning	**3.8**	**3.5**	**3.8**	**3.8**
22	Ability to make use of e-learning and to integrate it into the learning environments	2.5	2.4	2.8	3.1
23	Ability to manage time effectively	2.9	3.1	3.5	**3.5**
24	Ability to reflect upon and evaluate one's own performance	**3.7**	**3.6**	**3.9**	**3.8**
25	Awareness of the need for continuous professional development	**3.7**	**3.7**	**3.7**	**3.8**

Comments:
- The level of importance of each competence was rated on a 4-point scale: 1-None, 2-Weak, 3-Considerable, 4-Strong
- The competence with a mean of 3.5 or higher (bold) was arbitrarily classified as "very important".

The competencies that the majority of participants rated as very important were those more directly linked to the teaching-learning process and less to the theoretical, analytical, research and management aspects of the teaching role; these are perhaps more relevant for senior staff, administrators and researchers of this field. In addition to more "technical" aspects of delivering and assessing teaching (the "action" side of competencies), participants also emphasized the importance of the "reflective" side, such as the "ability to reflect upon and evaluate one's own performance" and also those based on values and attitudes, such as "creating a good group climate" and "being committed to student progress".

Table 2. *To what extent have the courses helped to develop competencies in participants? (summary of frequencies, indicated by participants in 4 groups in 2013–2014)*

	Competency	Numerus – 46	
		fr	%
1	Ability to analyse educational concepts, theories and issues of policy (in a systematic way)	10	22
2	Ability to identify potential connections between aspects of subject knowledge and their application in wider policies and contexts	9	20
3	Ability to reflect on one's value system	**24**	**52**
4	Ability to recognize, and respond to the diversity of learners and the complexities of the learning process	19	41
5	Ability to adjust the curriculum to a specific educational context	15	33
6	Awareness of the different roles of participants in the learning process	**30**	**65**
7	Understanding of the structures and purposes of educational systems	11	24
8	Ability to do educational research in different contexts	9	20
9	Competence in counselling	11	24
10	Ability to manage projects for improvement of the school / institution learning and teaching environment	6	13
11	Ability to manage educational programmes	4	9
12	Ability to evaluate educational programmes/materials	14	30
13	Ability to foresee new educational needs and demands	9	20
14	Ability to lead or coordinate educational teams across subject groups	3	6
15	Commitment to learners' progress and achievement	18	39
16	Competence in a number of teaching/learning strategies	**38**	**83**
17	Competence in collaborative problem solving	19	41
18	Knowledge of the subject to be taught	3	6
19	Ability to assess the outcomes of learning and learners' achievements	17	37

20	Ability to communicate effectively with groups and individuals	21	46
21	Ability to create a climate conducive to learning	**30**	**65**
22	Ability to make use of e-learning and to integrate it into the learning environments	**26**	**57**
23	Ability to manage time effectively	7	15
24	Ability to reflect upon and evaluate one's performance	**34**	**74**
25	Awareness of the need for continuous professional development	**23**	**50**

Comment: the participants had to indicate which competencies the course had helped them to develop. Those indicated by a half or more participants are shown in bold.

Participants' answers show that they perceived the largest gain from the course in mastering various teaching techniques, including the use of e-learning. It is important and in line with the philosophy of the course that they did not mention only "technical" aspects, but also the gain in cognitive aspects, such as obtaining deeper awareness of different roles of teachers and students in the study process and the increased ability to reflect on one's own value system. Aspects that had to do with counselling and management, research, curricular and policy issues were mentioned less frequently; this would require special courses, more tailored to those special topics and to special audience (senior staff in leading positions).

Table 3. *Participants' perceived gain from different course activities*

	Group	1	2	3	4
	Numerus	13	13	11	15
Course activity		% of gain			
1.	lectures with discussion	13.8	9.6	13.5	11.7
2.	exercises, group work	14.2	16.9	12.0	12.7
3.	mini-lectures with (video) feedback	17.9	19.2	23.0	19.3
4.	assignments, homework	9.6	5.8	4.5	7.0
5.	reading literature	10.0	6.2	4.0	7.6
6.	peer observation with reflection	---*	12.7	14.5	13.3
7.	seminar paper (writing, presenting	15.8	13.1	14.5	13.7
8.	informal discussions	17.3	18.4	15.5	14.0

* In this group, there were no peer observations included
Participants had to distribute 10 points among activities regarding how much they gained from each of them.

What contributed most to their learning? Participants clearly favoured experiential methods and approaches, especially mini-lectures with feedback, as well as peer observations and seminar work. As can be seen also from answers to open questions, they highly valued group discussions, wanted even more of them, and considered even informal discussions to be more relevant for their learning than, for example, reading professional literature. This may seem surprising, but it corresponds to Korthagen's "realistic" model of teacher learning that comes about to a great extent by the help of guided reflection on varied teaching experiences and not by application of previously learned theory, i.e. the "deductive" model (Korthagen, 2005). Nevertheless, the challenge of bringing more relevant "theory" and "reading" into future courses remains.

Discussion

Participants were generally very satisfied with the course; ratings in the official and internal questionnaires were extremely high, especially as regards motivating role of the course to improve their skills and competencies and to foster cooperation and discussions during sessions. The course succeeded in developing some competencies in all three aspects: acting, reflecting and valuing, especially those competencies they regarded as important, such as mastering a number of teaching/learning strategies, but they also reported having improved their ability to make better use of e-learning, which was not so high on their list of priorities. Their improvements in assessment techniques could be larger, so apparently some adjustments in future courses should be made. As regards competence in counselling, specific courses are to be offered, as this area is not being included in this basic course. The same applies to more managerial aspects, such as the ability to manage educational programmes, to foresee new educational needs and to coordinate educational teams; these are competencies needed more by senior staff and staff in leading positions.

We can regard as very encouraging the answers indicating gains in awareness of different roles of participants in the learning process and in creating a climate conducive to learning, as well as in the ability to reflect upon and evaluate one's own performance and being aware of the need for continuous professional development. These belong to the broader cognitive and value dimensions of competencies.

In their answers to open questions, participants appreciated the relaxing, friendly atmosphere, good group climate, many possibilities for formal and informal exchanges of information, competent, motivated and "well-aligned" trainers, innovative and varied methods, active work, experiencing

new approaches that they can later use with students. Thus, the immediate reactions of participants, gathered by official and internal questionnaires, were very favourable. Nearly everyone would recommend the course to their colleagues; some would like to see it as mandatory for every new teacher as well as following other more specialized courses (on assessment, use of ICT in teaching, counselling, etc.).

Of course, their satisfaction does not tell us whether the experiences during the training will lead to sustainable improvements or changes in their teaching and thinking. Our earlier follow-up study showed that the former participants of such courses did introduce some changes into their teaching, mostly in student assessment. They also reported more changes in thinking about teaching and learning than changes in their everyday practice. (Marentič Požarnik & Puklek Levpušček, 2002)

Gibbs and Coffey suggest the following questions for evaluation: has the course led to the improvement of teaching skills, to the development of teachers' conceptions of teaching and learning and to changes in students' learning (Gibbs & Coffey, 2004, p. 88). We may also add changes in the quality of study results that would show students' deeper understanding and a better transfer of knowledge to new situations. Research by Gibbs and Coffey has shown that courses did have impact not only on teaching skills but also on the approach to learning of students: specifically, a change from surface to deep learning which is one of the most important goals.

We need further research to get answers to those broader questions. We can some indications from the participants' answers to the open questions "What have you learned?" and "What is going to influence you in the future?" About half of the answers in all four groups mentioned changes in methods and teaching approaches (more interactivity, methods that activate and motivate students, especially more group work, also problem-based teaching, etc.), another half indicated changes in thinking, feeling and conceptions that can have more long-term effects on their teaching ("I learned to reflect on goals, on my approaches"; "I got more self-confidence, commitment to better teaching").

Offering high-quality training in improving teaching and learning by experts from different disciplines that have this training as their primary responsibility[10] is very important, especially for teachers at the beginning of their careers. As already mentioned, most European universities already have established learning and teaching centres that organize longer or shorter cour-

10 In this regard, the Centre for Educational Development at the Faculty of Arts in Ljubljana with its longstanding tradition and experts experienced in staff development deserves to be supported.

ses, debates, summer schools, annual conferences, publications: in short, fostering "a scholarly approach" to teaching (see Cvetek, 2015) as is usual in research. Innovations and improvements in teaching can also be encouraged by building them into the system of quality evaluation and accreditation of institutions and into the criteria for the hiring and promotion of university staff (possibly by including a "teaching portfolio") (see also Van de Ven et al., 2008; McMahon, 2014; Marentič Požarnik, 2013). Significant learning of university staff can happen in "learning communities" of whole departments or faculties that need to nominate persons responsible especially for this area.

The positive effects of such courses depend to a large extent on the support of a wider academic community and of policy measures that underline the importance of good university teaching. This support is at the moment still sporadic, declarative or non-existent, but it seems that recently it has been obtaining greater prominence in various debates on quality, which will hopefully affect also legislation (the new Slovenian Law on higher education, in preparation).

We can expect significant changes in the direction of excellence in teaching when the whole climate and policy in our system of higher education will value and support it, not only in words but in deeds.

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Biographical note

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Use of Online Learning Resources in the Development of Learning Environments at the Intersection of Formal and Informal Learning: The Student as Autonomous Designer

Maja Lebeničnik*[1], Ian Pitt[2], and Andreja Istenič Starčič[3]

Learning resources that are used in the education of university students are often available online. The nature of new technologies causes an interweaving of formal and informal learning, with the result that a more active role is expected from students with regard to the use of ICT for their learning. The variety of online learning resources (learning content and learning tools) facilitates informed use and enables students to create the learning environment that is most appropriate for their personal learning needs and preferences. In contemporary society, the creation of an inclusive learning environment supported by ICT is pervasive. The model of Universal Design for Learning is becoming increasingly significant in responding to the need for inclusive learning environments. In this article, we categorize different online learning activities into the principles of Universal Design for Learning. This study examines ICT use among university students (N = 138), comparing student teachers with students in other study programs. The findings indicate that among all students, activities with lower demands for engagement are most common. Some differences were observed between student teachers and students from other programs. Student teachers were more likely than their peers to perform certain activities aimed at meeting diverse learner needs, but the percentage of students performing more advanced activities was higher for students in other study programs than for student teachers. The categorization of activities revealed that student teachers are less likely to undertake activities that involve interaction with others. Among the sample of student teachers, we found that personal innovativeness is correlated with diversity of activities in only one category. The results show that student teachers should be encouraged to perform more advanced activities, especially activities involving interaction with others, collaborative learning and use of ICT to plan and organize their own learning processes.

Keywords: higher education, e-learning activities, online learning resources, teacher education, Universal Design for Learning

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Uporaba na spletu dostopnih učnih virov pri razvijanju učnih okolij na križišču formalnega in neformalnega učenja: študent kot avtonomni oblikovalec

Maja Lebeničnik*, Ian Pitt in Andreja Istenič Starčič

Učni viri, ki jih uporabljajo študentje, so pogosto dostopni na spletu. Narava novih tehnologij povzroča prepletanje formalnega in neformalnega učenja, pri čemer se od študentov pričakuje aktivnejšo vlogo pri uporabi informacijsko-komunikacijskih tehnologij (IKT) za učenje. Raznolikost spletnih učnih virov (spletnih vsebin in orodij) olajša zavedno uporabo in študentom omogoča oblikovanje učnega okolja, ki najbolj ustreza njihovim učnim potrebam in preferencam. V sodobni družbi se inkluzivno učno okolje pogosto ustvarja z uporabo IKT. Model 'univerzalnega oblikovanja za učenje' (Universal Design for Learning – UDL) postaja vse pomembnejši pri odgovoru na potrebe inkluzivnega učnega okolja. V članku smo kategorizirali spletne učne aktivnosti po načelih modela UDL. Raziskava preučuje uporabo IKT med univerzitetnimi študenti (N = 138) in primerja študente pedagoških smeri s študenti drugih programov. Izsledki so pokazali, da so pri obeh skupinah študentov bolj izvajane aktivnosti, ki zahtevajo manj udejstvovanja. Pokazale so se nekatere razlike med študenti pedagoških in drugih smeri. Študentje pedagoških smeri so v večji meri kot njihovi vrstniki izvajali aktivnosti za vzpostavljanje inkluzivnega učnega okolja. Odstotek študentov, ki so izvajali zahtevnejše IKT-učne aktivnosti, pa je bil višji med študenti nepedagoških smeri. Kategorizacija aktivnosti je pokazala, da študentje pedagoških smeri manj verjetno kot njihovi vrstniki izvajajo aktivnosti, ki zahtevajo interakcijo z drugimi. Na vzorcu študentov pedagoških smeri smo odkrili, da osebna inovativnost korelira z raznolikostjo izvajanih aktivnosti pri eni izmed kategorij. Rezultati kažejo, da bi bilo treba študente pedagoških ved bolj spodbujati k izvajanju zahtevnejših IKT-učnih aktivnostih, predvsem aktivnosti, ki vključujejo interakcijo, sodelovalno učenje ter uporabo IKT za načrtovanje in organiziranje lastnega učnega procesa.

Ključne besede: visokošolsko izobraževanje, aktivnosti e-učenja, spletni učni viri, izobraževanje učiteljev, model 'univerzalno oblikovanje za učenje'

Introduction

Information and communication technology (ICT) development is bringing new patterns of behaviour to many aspects of society, including university settings. Institutions in higher education mostly use limited forms of ICT-supported learning, such as course management systems, virtual learning environments and web-based applications to deliver curriculum and student support (Jelfs & Richardson, 2013; McLoughlin & Lee, 2010). Some universities provide distance education, and lately some provide video lectures and online courses. Because of the speed and the nature of technological changes, novel ICT technologies are harder to implement in formal learning environments. The official university curriculum is now more oriented towards empowering students' competencies for preparing their own learning environment as well as self-regulation abilities, the setting of learning goals and the acceptance of responsibility. Since universities do not provide fixed e-learning environments, students are expected to be more active and resourceful with regard to the use of ICT to support learning. In this connection, the literature reveals some personal factors in connection with personal innovativeness (Agarwal & Prasad, 1998). University students report that the use of ICT is expected of them at university, even though the formal training for such skills is often missing (Conole, de Laat, Dillon, & Darby, 2008). ICT skills, beneficial for learning purposes, are therefore often developed in informal ways, such as with ICT use for leisure, self-initiated exploratory behaviour and information from peers, family or media (Straub, 2009).

Informal online learning in the university context

Due to the benefits of digitalized online information, online learning resources represent one of the most common sources for learning among university students. Students nowadays are not limited to electronic resources produced and delivered by their universities and can access an abundance of online learning resources themselves. This increases the importance of informal learning environment and personal preferences in the modern university context. According to the International Standard Classification of Education (ISCED) (in UNESCO, 2011, p. 9), informal learning is deliberate, which distinguishes it from random learning, but not institutionalized, which distinguishes it from formal learning. Informal learning activities can be self-, family- or socially-directed. The criterion of institutionalization for formal learning activities is strict, but some scholars introduce a less rigorous distinction on

the formal-informal continuum. Indicators in these cases are related to the structure and process of learning, especially in terms of how much control the student has in the selection of learning content and evaluation of knowledge (Lai, Khaddage, & Knezek, 2013). New online and mobile technologies support new forms of formal, informal and random learning. The boundaries between formal and informal learning are blurring (Mills, Knezek, & Khaddage, 2014; Straub, 2009). Informal online learning, as covered in this chapter, refers to the use of online learning resources: *online learning content* (e.g. video lectures, tutorials, online courses, e-books etc.) and (*online*) *learning tools* (e.g. mind-mapping, quizzes etc.) that students were not introduced to in the process of formal learning. Such informal learning is a consequence of new information seeking and sharing behaviours in Web 2.0 environments (Mills et al., 2014). Anderson (2008) defines forms of interaction occurring between the main players during online learning. The learner can interact directly with online content (*independent learning*) or follow the online content that the teacher prepares for him (*structured online learning resources*). With communication and collaboration technologies, an interaction between teacher and learners (*community of inquiry*) or between students themselves (*collaborative learning*) is possible. "Content-content interaction" is interaction between learning content and automated information sources. It results in the updating of the content or the monitoring of different groups of users. Technology is becoming increasingly pervasive in university learning environments, which is why students and professors must develop their ICT competency and ICT literacy in order to be able to manage the various online learning resources that are constantly emerging.

Use of online learning resources for meeting personal learning needs

Online learning content is accessible through different kinds (text, images, sounds, and artefacts) (Moore & Kearsley, 2012) and forms of media (adaptive, interactive, narrative, productive) (Laurillard, 2002). The informed user can employ various online learning resources to create a learning environment that suits his personal learning needs (e.g. learning styles, individual accessibility needs, motivation, etc.). In addition to the knowledge of different types of ICT, it is important to understand someone's personal learning needs. The survey by Conole et al. (2008) revealed that university students are, in fact, selecting appropriate technologies to suit their personal learning needs. Furthermore, the type of student who benefits the most from using ICT for

learning is the one whose usage of ICT is central to how the learning is organized and orientated. Such awareness in student teachers may even lead towards greater competency for creating inclusive learning environments in the future. Teachers need knowledge and competence regarding technological possibilities in order to encourage learners' choices and decisions about the most appropriate technology. To satisfy the needs and accessibility requirements of diverse students, teachers should be familiar with different kinds of existing ICT: mainstream ICT, as well as specialized and assistive technology.

Because the individual plays an increasingly active role, personal factors play an important part in adopting ICT for learning. One such factor, *personal innovativeness* (PI), is defined as the "willingness of an individual to try out any new information technology" (Agarwal & Prasad, 1998). Personal innovativeness is not strictly defined as a stable personal trait but acts as a moderator between personal traits and behaviour. People who have a higher PI are more likely to adopt IT earlier because they tend to form more positive perceptions of innovation and the consequences of its use than others working with the same information. People with higher PI are also less dependent on the opinions of others, and often act as opinion leaders in their environment (Agarwal & Prasad, 1998).

ICT-supported learning activities from the perspective of Universal Design

Several groups of ICT/online learning activities, commonly performed by university students, were identified by different scholars: use of online resources, use of university e-environments, use of communication and collaboration ICT for learning, and use of tools for production.

Students use online resources to look for information, explore learning topics or for general inquiry (Conole et al., 2008; Sedek, Mahmud, Jalil, & Daud, 2012; Thompson, 2013). This may include watching educational videos and video lectures, reading e-books, online articles, slides, online text and documents, and blogs, and listening to podcasts, etc. Levy (2008) labelled listening, watching and reading of online learning content as passive learning activities. Another relevant ICT-activity is the use of university e-learning environments (Conole et al., 2008). Learning management system software used by universities (e.g. Moodle, Blackboard etc.), "provides learners with a comprehensive environment for communicating with instructors, submitting assignments, reviewing course objectives, downloading course material, participating in course discussions and viewing course progress" (Thoms & Eryilmaz, 2014, p. 113). In

Slovenia, the established expression for LMS is "e-classroom". Furthermore, students use communication and collaboration technologies for learning. They support user interaction, content sharing, communication, collaboration and creation of online social networks. Examples of such tools include wiki software, social networking sites, collaborative document management systems, online forums, chat applications, video/audio conference, etc. (Arkilic, Peker, & Uyar, 2013; Bennett, Bishop, Dalgarno, Waycott, & Kennedy, 2012; Calvo, Arbiol, & Iglesias, 2014; Dabbagh & Kitsantas, 2012)

Students use technology such as creation/productivity tools to prepare study assignments and multimedia products (Conole et al., 2008; Sedek et al., 2012; Thompson, 2013).

Many online learning activities exist, but are less frequently performed by university students and therefore not covered by the abovementioned studies, such as playing educational games, using virtual environments for learning, participating in online courses, using ICT for self-assessment, using ICT for planning the learning process.

Many previous researchers qualitatively or quantitatively explored the use of e-learning activities among university students (Conole et al., 2008; Jelfs & Richardson, 2013; Sedek et al., 2012; Thompson, 2013). Recently, attempts have been made to place e-learning activities within the framework of Universal Design (Izzo, 2012; Ravanelli & Serina, 2014). Universal Design (UD) "is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability" (Centre for Excellence in Universal Design, 2012). It is an approach that considers the diverse needs and abilities of users during the design process, resulting in benefits for all users, not just users with disabilities. It can be applied not only to physical objects such as the built environment and products, but also services and ICT design. UD introduces seven design principles that are, if adjusted, useful in specific fields such as web accessibility (Web Accessibility Initiative, 2005) or in establishing inclusive learning environments. There are several Universal Design educational models that focus on reducing barriers in learning environments, increasing access to the curriculum and providing instruction for diverse learners (Rao, Ok, & Bryant, 2014). One of most established models is Universal Design for Learning, which is a framework for guiding educational practice and a set of principles for curriculum development that give all individuals equal opportunities to learn (National Center on Universal Design for Learning, 2014). Three basic principles of UDL are 1) multiple means of representation, 2) multiple means of action and expression, and 3) multiple means of engagement. Principle 1 takes into account

that learners have different ways of perceiving and comprehending information, depending on their sensory or learning (dis)ability, language or cultural differences or learning styles. Principle 2 acknowledges differences in navigation in learning environments (e.g. because of physical disability) and differences in expressing knowledge (e.g. written/spoken form). Principle 3 reveals affect as a source of differences between learners (e.g. different preferences for routine, collaborative work, internal/external motivators, etc.) Following UDL principles and guidelines, teachers are encouraged to provide multiple activities in order to meet the diverse needs of students, along with the use of appropriate ICT.

Purpose, objectives, and hypothesis

The purpose of the survey was to research the use of online learning resources for learning among Slovenian university students at the intersection of formal and informal learning environments. As pointed out before, knowledge and competencies for ICT use can be acquired through informal activities and can be beneficial for establishing learning environments that are synchronized with an individual's personal learning needs. This should be especially true of student teachers, who will be expected to be able to establish learning environments to meet diverse students' needs. That is why research into habits in this field is crucial, because it may reveal whether important differences exist between student teachers and their peers, and whether the formal curriculum of student teachers should put more emphasis on developing ICT competency. An additional contribution of our study is an attempt to categorize e-learning activities in the framework of Universal Design for Learning.

The research objectives of the survey were:

1. To research the incidence of certain ICT-supported learning activities among Slovenian university students;
2. To compare the incidence of certain ICT-supported learning activities among student teachers with students in other study programs;
3. To compare the diversity of ICT-supported learning activities among student teachers with students in other study programs;
4. To assess the correlation between personal innovativeness and the performance of diverse ICT-supported learning activities among student teachers.

The research hypotheses were:

- Hypothesis 1: There are differences in the performance of specific

ICT-supported learning activities among student teachers and students in other study programs.

- Hypothesis 2: There are differences in the diversity of activities between student teachers and students in other study programs.
- Hypothesis 3: Personal innovativeness is positively correlated with diversity of use of ICT-supported learning activities among student teachers.

Method

Participants and data collection

The survey was conducted on 138 Slovenian university students (14.5% male and 85.5%-female participants); 36.2% of the entire sample were students from education study programs (student teachers), 46.4% students from other social sciences and humanities study programs and 17.4% students from science and engineering programs. Ten students (7.2%) reported having special educational needs.

Participants answered a questionnaire in either online or in paper-pencil form. The questionnaire included demographic questions and questions regarding the performance of 25 different e-learning activities and 13 ICT-activities to support diverse learners needs (e.g. use of assistive technology). For each item, participants could reply with a "yes" or "no" answer. Items were later categorized following UDL principles and Anderson's model. The number of activities performed in each category is a measure of the diversity of activities performed.

ICT-activities listed in the questionnaire were identified in the literature review. We included more common online learning activities as well as less frequently performed activities. Furthermore, activities described as learning activities in the UDL literature (e.g. use of dictionaries, ICT for organizing learning process) are included in the questionnaire.

Because we were particularly interested in student teachers, we also asked them to complete the Personal Innovativeness Scale by Kim, Mirusmonov and Lee (2010).

Data analysis

The analysis was conducted using SPSS. The following tests were used to test the hypotheses: Chi Square test (with continuity correction) for H1, Mann-Whitney U test for H2, and Spearman correlation for H3.

Results and discussion

The incidence of the specific activities and the diversity of activities performed is examined. For a group of students in education programs, the correlation between personal innovativeness and the performance of ICT-supported learning activities is presented.

The incidence of specific ICT-supported learning activities

Activities included in the questionnaire can be divided into two subtypes. The first type (items 1–25) are more general *e-learning activities*, identified in the literature review. More than 90% of students search for online articles, study literature and use e-dictionaries or translation applications. The majority of activities, performed by more than 60% of students, are in fact activities identified by Conole et al. (2008): use of ICT for information seeking and handling, assignment preparation, communication and integrated learning. Activities requiring more active engagement from students (e.g. participation in online courses, playing educational games, using e-tools for managing the learning process, producing multimodal outcomes, etc.) represented less than 45%. Activities involving communication and collaboration with others represented between 60 and 80%.

ICT activities that can be used to meet the accessibility and learning needs and preferences of diverse learners are placed under items 26–38. As expected, the incidence of such activities is much lower. Even though one may think that such activities are beneficial only to students with special needs, mainstream students with different learning styles may also benefit from their use. With the exception of changing the settings of mainstream software and hardware, all other activities have a frequency of around 20% or less.

Table 1. *Frequencies of different groups of students stating "yes" on the question of performing specific ICT activity.*

Item		All (%)	Education programs (%)	Other programs (%)	Chi–square test [a] (df=1)	Sign.
	E-learning activity					
1	Using e-classroom for learning	84.8	82	86.4	0.19	0.66
2	Reading electronic books	60.1	48.0	67.0	4.06	**0.04***
3	Searching articles in scientific databases	94.9	96	94.3	0.00	0.98
4	Searching literature in electronic library catalogues	94.2	90	96.6	1.47	0.23

5	Reading online encyclopaedias	73.2	64.0	78.4	2.68	0.10
6	Reading blogs, concerning my study field	70.3	62	75	1.99	0.16
7	Participating in online courses	12.3	4	17	3.89	**0.05***
8	Listening to educational podcasts	43.5	32	50	3.50	0.06
9	Watching educational videos	84.1	86	83	0.05	0.82
10	Using other (foreign) universities' electronic educational materials and videos	59.4	40	70.5	11.03	**0.00****
11	Playing educational games	39.1	46	35.2	1.13	0.29
12	E-tools for self-assessment (e.g. quizzes, personality questionnaires etc.)	60.1	72	53.4	3.85	**0.05***
13	Using educational mobile applications	36.2	38	35.2	0.02	0.89
14	Using virtual environments for learning (e.g. Second Life, etc.)	11.6	14	10.2	0.15	0.70
15	Composing multimodal text and other outcomes (combining text, audio or video)	43.5	64	31.8	12.16	**0.00****
16	Using electronic citation tools	52.2	58	48.9	0.73	0.39
17	Using social networks for learning: following shared information about my study field	82.6	76	87.4	2.18	0.14
18	Using social networks for learning: learning about events, connected to my study field (e.g. seminars, training, etc.)	89.1	90	88.6	0.00	1.00
19	Using social networks for learning: sharing information about my study field	69.6	58	76.1	4.13	**0.04***
20	Sharing my files with others (using Dropbox, Google Drive, etc.) for purposes of study	81.2	74	85.2	1.94	0.16
21	Producing shared documents with others (using Dropbox, Google Drive, etc.) for purposes of study	66.7	54	73.9	4.80	**0.03***
22	Using electronic dictionaries for searching Slovenian words.	91.3	94	89.8	0.28	0.59
23	Using electronic dictionaries or translation applications for searching words in foreign languages.	96.4	94	97.7	0.42	0.51
24	Using e-tools for making and organizing notes (e.g. OneNote, etc.)	22.5	18	25	0.54	0.46
25	Using e-tools for planning the learning process (e.g. Google Calendar, etc.)	30.4	24	34.1	1.094	0.30
	ICT activity to meet diverse learners needs					
26	Recording lectures	3.6	4	3.4	0.000	1.00
27	Changing settings (e.g. colors, contrast, font size, icons, menus)	91.3	88	93.2	0.524	0.50
28	Changing settings of mouse or keyboard	59.4	52	63.6	1.340	0.25
29	Using word prediction software	20.3	20	20.5	0.000	1.00
30	Using text-to-speech or screen reader software	10.1	14	8	0.701	0.40
31	Using zoom software	18.8	28	13.6	3.414	0.07
32	Using voice recognition software	5.1	12	1.1	5.721	**0.02***
33	Using optical character recognition software	21.7	24	20.5	0.073	0.79

34	Using digital pens	4.3	6	3.4	0.080	0.78
35	Using audiobooks	8.7	16	4.5	3.925	**0.05***
36	Using mind-mapping e-tools (e.g. Inspiration)	18.8	14	21.6	0.756	0.38
37	Using assistive hardware (e.g. Braille display, adapted keyboard, joystick, etc.)	0	0	0	/	/
38	Using augmentative communication	2.2	6	0	2.945	0.09

[a] Chi-square test value with continuity correction.
*$p \leq 0{,}05$; **$p \leq 0{,}01$

Examining the differences between student teachers and other students, we discovered that the study program plays an important role in the performance of some activities. Significantly more student teachers than students from other programs use e-tools for self-assessment, compose multimodal outcomes, use voice recognition software and audio books. These findings indicate that student teachers in this study explore and use ICT that enables the establishment of an inclusive learning environment. It is encouraging that they are aware of assistive technology and the role of mainstream technology in establishing a learning environment that supports diverse needs of learners.

It was discovered that students from other programs prevail in the use of some more advanced activities when compared to student teachers, i.e. using electronic books, e-learning material from other universities, participating in online courses, sharing learning information over social networks and producing shared documents with others.

The survey results are consistent with the research of Ng (2012), which showed that student teachers used more advanced educational technologies only if explicitly requested to do so in learning activities.

Diversity of activities performed

The diversity of activities performed was measured by computing the number of activities reported by each individual. Activities were divided into different categories following Universal Design for Learning principles (multiple means of representation, multiple means of action & expression, multiple means of engagement) and categories of interaction occurring during online learning (learner-content, learner-teacher, learner-learner). The division of specific activities into these two categorizations can be seen in Appendix 1 (Table 4).

Table 2. *Number of performed activities – descriptive statistics of groups and testing for differences between groups.*

	Min	Max	Me_{Tot}	Me_{Ed}	Me_{Othr}	U	z	Sig.
UDL categorization								
Multiple means of representation	2.00	14.00	7.00	7.00	8.00	1736.5	-1.90	0.06
Multiple means of action & expression	0.00	10.00	4.00	4.00	4.00	2327.0	0.57	0.57
Multiple means of engagement	0.00	4.00	1.00	1.00	1.00	2106.0	-0.44	0.66
Interaction categorization								
Learner – content interaction	2.00	15.00	10.00	10.00	10.00	2105.0	-0.42	0.67
Learner – teacher interaction	0.00	3.00	2.00	1.00	2.00	1469.5	-3.52	0.00**
Learner – learner interaction	0.00	6.00	5.00	4.50	5.00	1583.0	-2.76	**0.01****

*$p \leq 0{,}01$

Following the principles, guidelines and checkpoints from the Universal Design for Learning framework (specific guidelines and checkpoints can be found in http://www.udlcenter.org/aboutudl/udlguidelines), we categorized activities from the questionnaires into three different categories. The advantage of using this framework for categorization is that it does not distinguish strictly between assistive technology and mainstream technology. As such, it is consistent with the latest developments in ICT, where many mainstream technologies include accessibility settings, and many settings or technologies that were developed primarily for meeting special needs can now serve the diverse learning needs and preferences of mainstream learners. Most activities (16) in our questionnaire were categorized under multiple means of representation, followed by multiple means of action & expression (11) and multiple means of engagement (4). No significant differences were found between groups in the number of activities performed under each category. Not all items from our questionnaires were appropriate for use in the categorization of UDL. Therefore, we also classified activities for different types of interaction. In this categorization, ICT-activities to support diverse learner needs were not included. Comparison between groups shows there are significant differences between student teachers and other students in performing activities involving learner–teacher and learner–learner interaction. Communication and collaboration technologies (social networks, applications for sharing content and producing common content) are in fact Web 2.0 technologies that should increase the incidence of community of inquiry and collaborative learning in current learning environments. The finding that future teachers use these technologies with less diversity than other populations is not encouraging.

Personal innovativeness and diversity of ICT-activities

With the three-item-scale of personal innovativeness (by Kim et al., 2010), we measured perceived personal innovativeness among student teachers. Within the possible range from 3 to 15, the median of the group of education students was 6.00. It reveals a relatively low self-assessment of this characteristic among student teachers. Contrary to our expectations, the construct of personal innovativeness correlates significantly only with activities categorized into multiple means of engagement (educational games, mobile applications, virtual environments and producing shared documents).

Table 3. *Spearman rho measure of correlation between personal innovativeness and number of performed ICT-activities in the group of student teachers.*

	Rho	Sign.
Personal innovativeness	1.00	
UDL categorization of activities		
Multiple means of representation	0.08	0.64
Multiple means of action & expression	0.11	0.50
Multiple means of engagement	0.37	**0.02***
Interaction categorization of activities		
Learner – content interaction	-0.02	0.891
Learner – teacher interaction	-0.24	0.14
Learner – learner interaction	0.09	0.57
All activities	0.15	0.36

*$p \leq 0.05$

The results show that personal innovativeness may not be a very important factor contributing to the use of ICT for learning purposes.

Conclusions

The survey was conducted to explore the idea that competency in ICT use for learning purposes develops through the process of formal and informal learning. This article reveals the possibility that ICT, if used wisely, can be beneficial for learning. In the constantly-changing environment of ICT, the role of the learner in establishing her learning environment, which today is inevitably technology-pervasive has become more active. The literature suggests that personal factors, such as innovativeness, may play an important part in this, but our survey did not find many significant correlations to support these assumptions. This means that structural factors, such as the formal curriculum, should

compensate for individual differences. If we believe that current ICT use is indirectly connected with future ICT use through experiences, attitudes and motivation, then looking into current ICT use for learning among student teachers is important. ICT can be a beneficial tool for establishing a learning environment that meets personal learning needs and for establishing inclusive environments in classrooms. Because of the constant development of ICT, future teachers (and other students) may not have considered every form of ICT that exists, but by implementing topics on different kinds of ICT, assistive learning, Universal Design for Learning, etc., they may become more informed users.

The results of the study show a mixed picture. The most positive result is that future teachers perform more ICT-supported activities to meet diverse learner needs in comparison to their peers. We have not researched whether they perform(ed) these activities in formal or informal environments, but it could be an effect of the formal curriculum. However, differences should have occurred in more activities, because a teacher's career entails working with diverse learners, especially with the inclusive paradigm being more pervasive. More concerning are the findings that future teachers lag behind in performing activities connected to active engagement and collaboration (e.g. virtual learning, online courses), even though all students are more prone to the passive reception of online educational content than active engagement. This indicates that something should be done to motivate student teachers and other students to be more active online with regard to learning, as developed societies are evolving towards a participative paradigm.

Another field of possible intervention is to educate students about how to exploit existing e-tools for monitoring and planning their learning. If student teachers master this, then knowledge can later be transferred to their learners. Even though we concluded that it is encouraging that not many significant differences exist between different study programs in the use of ICT for learning, all who are working in teacher education should be encouraging students to adopt innovative thinking with regards to ICT for learning, making future teachers agents of change.

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Appendix

Table 4. *Categorization of items into categories of UDL (MR, MAE, ME) and Model of online learning (LCI, LTI, LLI).*

Item		MR	MAE	ME	LCI	LTI	LLI
1	Using e-classroom for learning					X	
2	Reading electronic books	X			X		
3	Searching articles in scientific databases				X		
4	Searching literature in electronic library catalogues				X		
5	Reading online encyclopedias	X			X		
6	Reading blogs, concerning my study field	X			X		
7	Participating in online courses					X	
8	Listening to educational podcasts	X			X		
9	Watching educational videos	X			X		
10	Using other (foreign) universities electronic educational materials and videos	X				X	
11	Playing educational games			X	X		
12	E-tools for self-assessment (e.g. quizzes, personality questionnaires etc.)		X		X		
13	Using educational mobile applications			X			
14	Using virtual environments for learning (e.g. Second life etc.)			X			X
15	Composing multimodal text and other outcomes (combining text, audio or video)		X		X		
16	Using electronic citation tools		X		X		
17	Using social networks for learning: following shared information about my study field						X
18	Using social networks for learning: learning about events, connected to my study field (e.g. seminars, trainings etc.)						X
19	Using social networks for learning: sharing information about my study field		X				X
20	Sharing my files with others (using Dropbox, Google Drive etc.) for purposes of study						X
21	Producing shared documents with others (using Dropbox, Google Drive etc.) for purposes of study			X			X
22	Using electronic dictionaries for searching Slovenian words.	X			X		
23	Using electronic dictionaries or translation applications for searching words in foreign languages.	X			X		
24	Using e-tools for making and organizing notes (e.g. OneNote etc.)		X		X		
25	Using e-tools for planning learning process (e.g. Google calendar etc.)		X		X		
	ICT activity to meet diverse learners needs						
26	Recording lectures	X					
27	Changing settings (e.g. colors, contrast, font size, icons, menus)	X					

28	Changing settings of mouse or keyboard		X				
29	Using word prediction software		X				
30	Using text-to-speech or screen reader software	X					
31	Using zoom software	X					
32	Using voice recognition software		X				
33	Using optical character recognition software	X					
34	Using digital pen	X					
35	Using audio books	X					
36	Using mind-mapping e-tools (e.g. Inspiration)	X					
37	Using assistive hardware (e.g. Braille display, adapted keyboard, joystick etc.)		X				
38	Using augmentative communication		X				
	Number of items	**16**	**11**	**4**	**15**	**3**	**6**

*MR – Multiple means of representation
MAE – Multiple means of action and expression
ME – Multiple means of engagement
LCI – Learner – content interaction
LTI – Learner – teacher interaction
LLI – Learner – learner interaction

Biographical note

Maja Lebeničnik is psychologist and young researcher, employed at University of Primorska, Faulty of Education. She is interested in the use of learning technology with a focus on user perspective. She has been researching the use of learning technology among university students with special needs (ICT-supported informal learning, perceived accessibility barriers, influencing factors) and the use of ICT to support learning by SEN educators and institutions. Currently she is working on her PhD thesis in which she is researching the use and accessibility of online learning resources.

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Relations between Students' Motivation, and Perceptions of the Learning Environment

Marko Radovan*[1] and Danijela Makovec[2]

In this research, we have examined the characteristics of university students' motivation and its connection with perceptions of the learning environment. Higher education teachers often find it challenging to decide how to organize their lectures and what instructional strategy they should use to be most effective. Therefore, we endeavoured to determine which characteristics of the learning environment best predict the motivational orientation of students and their satisfaction with the course. The survey included 120 postgraduate students of the Faculty of Arts at the University of Ljubljana. In order to measure their motivation, we employed several scales of the Motivated Strategies for Learning Questionnaire (Pintrich et al., 1991). For the purpose of this research, we created a new questionnaire for their evaluation of the learning environment. The results revealed a high correlation between the intrinsic goal orientation, self-efficacy, and control beliefs. The most important factors of the learning environment that are connected with the formation of intrinsic goal-orientation and the enjoyment of education are the perception of the usefulness of the studied topics, a feeling of autonomy, and teacher support. To an extent, these findings are supported by the findings of those authors who recommend using those methods of teaching that are in compliance with the student-centred understanding of teaching and learning.

Keywords: Learning environment, Achievement Goal orientation, Course satisfaction, Higher education didactics, University students

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Povezave med motiviranostjo študentov in zaznavanjem učnega okolja

Marko Radovan* in Danijela Makovec

V raziskavi smo analizirali značilnosti motivacije in njeno povezanost z zaznavanjem učnega okolja. Visokošolskim učiteljem pogosto izziv predstavlja odločitev, kako organizirati svoja predavanja in katero strategijo poučevanja uporabiti. V članku smo si zato prizadevali ugotoviti, katere značilnosti učnega okolja najbolje napovedujejo motivacijsko usmerjenost študentov in njihovo zadovoljstvo. V raziskavo smo vključili 120 magistrskih študentov Filozofske fakultete Univerze v Ljubljani. Za merjenje motivacije smo uporabili več lestvic iz vprašalnika motivacijskih strategij (Pintrich et al., 1991), za vrednotenje učnega okolja pa za namen te raziskave ustvarili nov vprašalnik. Rezultati so pokazali visoko korelacijo med notranjo ciljno usmerjenostjo, samoučinkovitostjo in nadzornimi prepričanji. Najpomembnejši dejavniki učnega okolja, ki so povezani z razvojem notranje ciljne usmerjenosti, so: koristnost obravnavanih tem, občutek samostojnosti in učiteljeva podpora. Te ugotovitve so podprte z ugotovitvami tistih avtorjev, ki priporočajo uporabo na študenta osredinjenih metod poučevanja.

Ključne besede: učno okolje, notranja ciljna usmerjenost, zadovoljstvo z izobraževanjem, visokošolska didaktika, visokošolski študentje

Introduction

In the previous two decades, the research conducted on achievement goals and achievement goal orientations has become highly prominent in the field of education (e.g. Ames, 1992; Dweck, 1986; Nicholls, 1984; Urdan, 2004). Moreover, certain meta-analyses have shown that this field has become predominant in the research of motivation (Austin & Vancouver, 1996). In psychology, goals are understood as the subject, activity or phenomenon at which our action is directed and with which we satisfy our need (Locke & Latham, 1990), whilst achievement goal orientations are the individuals' general approaches or schemes with which they undertake tasks and evaluate their achievements (Kaplan & Maehr, 2007; Pintrich & Schunk, 2002; Urdan, 2004). Previous research has shown that, in order to understand the students' approach to studying, it is crucial to know the reasons for their dealing with a particular task and the goals they set for themselves in the process. In this context, the authors predominantly differentiate between *mastery goals* (i.e. intrinsic goals for which the emphasis is placed on the development of competence) and *performance goals* (i.e. extrinsic goals that place an emphasis on achievements and comparisons with others). The positive effects of intrinsic goals have been demonstrated in research on a number of occasions. They express themselves in higher diligence and assiduity in performing the task (Elliot & Church, 1997; Elliot & McGregor, 1999; Middleton & Midgley, 1997), increased self-efficacy (Pajares, 1997), and using advanced learning strategies (Archer, 1994). The negative consequences of extrinsic goals are mostly reflected in the use of superficial learning strategies (Elliot et al., 1999), increased perception of stress (Smith, Sinclair, & Chapman, 2002), and self-handicapping (Urdan, 2004).

In this research, we explore the circumstances that affect the development of an individual achievement goal orientation. Researchers, have primarily discovered that they are affected by characteristics of a learning environment (e.g. Ames, 1992; Ames & Archer, 1988; Church, Elliot, & Gable, 2001). It is typical of these research studies that they focus on the teacher's conduct in the classroom, mainly related to two dimensions, i.e. mastery vs. performance goal structures (e.g. Ames, 1992; Kaplan, Gheen, & Midgley, 2002; Urdan, Midgley, & Anderman, 1998), whilst neglecting the importance of other learning environment elements that also affect their motivation. The relevant literature suggests that various elements of classroom activity, which are also related to a constructivist understanding of learning, affect achievement goal orientations (e.g. Nie & Lau, 2010; Urdan, 2004). In this research, we will, therefore, study the connections between achievement goal orientations and those dimensions

of the learning environment in higher education, which are considered constructivist. We will compare achievement goal orientations with other aspects of learning motivation (control beliefs, self-efficacy, and course satisfaction) and evaluations of learning environments with postgraduate students at the Faculty of Arts, University of Ljubljana, who are studying to become teachers.

Achievement goal orientations

A review of literature reveals that the research of achievement goals orientations derives predominantly from the work of Nicholls (1984) and Dweck (Dweck, 1985; Elliott & Dweck, 1988). They define motivation as achieving goals, which refer to increasing competences and assessing competence, whilst also defining goals as purposes, which explains why an individual undertakes a particular activity. Nicholls (1984) was primarily researching how people define success in performance situations, and established that an individual can compare their achievement with their own progress, either self-reflectively (e.g. "I have learned something new", "I have performed better than the last time") or by applying some normative criterion (e.g. "I have performed better than others have"). Although Nicholls pointed out the importance of the situation in setting goals, he principally focused on establishing interpersonal differences in setting goals or motivational orientations. Being task-involved or being ego-involved expresses differences in aspirations in achieving these performance criteria. These two orientations are supposed to be related to the perception of reasons for success, learning approaches, school evaluation and so on. Explicit differentiation between increasing competences and assessing competence is what led Dweck and Nicholls to define more precisely the two main types of performance goals: the goals that place an emphasis on management and the goals that place an emphasis on achievements.

In terms of their content, we can differentiate between two main goal orientations: 1) intrinsic goals are focused on achieving excellence, whilst with 2) extrinsic goals achievement orientation prevails. Students who set themselves intrinsic goals endeavour to improve their knowledge, performance, and competences in a particular field. The students with such goals will primarily learn to satisfy their quest for new knowledge and understanding, as well as to achieve greater competence (Ames & Archer, 1988; Elliott & Dweck, 1988; Nicholls, 1984). In comparison, extrinsic goals reflect an individual's motivation with good grades, competitiveness, or praise. Students with extrinsic goals are primarily focused on comparing their achievements with the achievements of others, or their abilities with the abilities of others (Ames, 1992; Elliott &

Dweck, 1988; Nicholls, 1984). Consequently, instead of focusing on aspiration, extrinsic goal orientation focuses more on the ability, self-evaluation, and comparison with others (Meece et al., 2006).

As regards extrinsic goals, both Dweck and Nicholls hint at the differentiation between moving towards positive and moving away from the negative evaluations of ability, yet they never explicitly define this differentiation. As a result, these two forms have been merged into a single category of extrinsic goals. Although Nicholls later added avoidance as a motivational orientation to his model, he did not relate it to extrinsic goals (i.e. achievement orientation). Instead, he proposes a new type of goals: *avoidance-of-work goals* (Nicholls, Patashinck, & Nolen, 1985). These kinds of goals reflect the tendency of students to avoid schoolwork or strive to finish a learning task with the least effort. The need for the further particularization of goals has also emerged due to inconsistency of findings of various studies wherein goals and learning strategies have been explored. Wolters, Yu, and Pintrich (1996) established that students who set themselves intrinsic goals more frequently employ advanced cognitive strategies than those who set themselves extrinsic goals. By contrast, achievement orientation is mainly positively correlated with simple and superficial learning strategies (Pintrich & De Groot, 1990). However, the influence of extrinsic goals is not always consistent, since students with extrinsic goals sometimes also employ advanced cognitive strategies and achieve good learning performance. Nearly a decade later, Elliot and Harackiewicz (1996), and Middleton and Midgley (1997) in Skaalvik (1997) established independently of each other that the characteristics and role of extrinsic goals would be better understood if they were differentiated by the components of pursuit and avoidance. Extrinsic goals were thus classified into two independent, but mutually related orientations, i.e. *performance-approach goals* and *performance-avoidance goals.* The first group of goals defines competitiveness orientation and the desire to outperform others, while the second group focuses on "avoiding failure" and a person's desire not to be perceived as incompetent. Empirical verification has confirmed the appropriateness of this tripartite differentiation of goals (Elliot & Church, 1997; Elliot et al., 2011; Middleton & Midgley, 1997; Wolters et al., 1996). By differentiating between performance-approach goals and performance-avoidance goals, authors began to ponder the alleged harmful effects of extrinsic goals. The prospect of extrinsic goals that are "beneficial" is what led the authors to propose a concept of multiple goals, wherein students can be simultaneously internally and extrinsically motivated in a given setting (Senko et al., 2011; Harackiewicz et al., 2002; Harackiewicz et al., 2008; Pintrich, 2000).

The learning environment

The term "learning environment" most frequently defines the social, psychological, or psychosocial environment in which learning or, as the case may be, teaching takes place (Cleveland & Fisher, 2014). For the most part, research has focused on the different elements of classroom context. Bronfenbrenner (1979) defines the classroom context as a microsystem, "a pattern of activities, roles and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics" (Bronfenbrenner, 1979, p. 22), i.e. it contains elements that contribute to the understanding of the happenings in the classroom. The belief that students and teachers should be researched as a whole prevailed, but researchers have shown a tendency to isolate individual variables instead of attempting to understand the complex integration of thinking, motivation, and feelings. The authors found that teaching never directly affects learning; on the contrary, it operates through intermediary factors that include perceptions of teaching, evaluation, the climate in the classroom, the content of the school subject, structure and similar. Research has shown that the student's assessment of teaching characteristics or classroom learning environment influences a number of cognitive and affective results (Fraser, 1989; Fraser & Fisher, 1982; Walberg, 1969). In their meta-analysis, Wang et al. (1990) established that the learning environment is one of the most important factors of learning, which affects both motivation for learning and learning achievements (Wang, Haertel, & Walberg, 1990).

Contemporary and wider understanding of the learning environment is based on Moos' socio-ecological approach, whose aim is to explain the interrelatedness between the individual and psychosocial environments (Moos, 1974, 2002). Moos (1974) conceptualized the psychosocial environment with three dimensions that cover the majority of settings in which we find ourselves in our daily lives (e.g. at home, at workplace), as follows: 1) the relationship dimension, 2) the personal development or growth dimension, and 3) the system maintenance and system change dimension. The relationship dimension defines the quality and power of personal relations in a given context. This includes the level of personal engagement and cohesion, mutual assistance and cooperation between individuals in a social environment. It establishes a variety of social relations, e.g. relations between individuals, tensions in relations and teacher support, as well as their intensity (frequency, severity, and incidence). The personal development or growth dimension includes orientations with which the environment encourages personal development, growth, and promotion. In a learning environment, this is reflected in the perception of autonomy, and the

setting of goals and demands; for example, it is determined by the students' strong orientation towards tasks, competitiveness, and the amount of research or independent action in the environment. The system maintenance and system change dimension includes rules, the clarity of expectations, surveillance mechanisms, and system responsiveness to changes. It can also reflect in the differentiation of lessons, the clarity of rules, school class organization, or the acceptance of differences. By using the instruments based on these dimensions, the authors (e.g. Fraser et al., 1982) wanted to create a tool to measure climate in the classroom in different environments (primary or secondary school, faculty, distance-learning programs). Especially in recent years, they have also wanted to support different questionnaires with constructivist dimensions of learning and teaching (Aldridge et al., 2012; Taylor et al., 1997; Walker & Fraser, 2005). Research results have shown that the dimensions, such as Authentic Learning, Cohesiveness, Task Orientation, Rule Clarity, Satisfaction, and Teacher Support are positively related to motivation and performance of students and reflect what are now known as "constructivist learning environments" (Herrington, Reeves, & Oliver, 2014; Loyens & Gijbels, 2008; Walker & Fraser, 2005).

With this term, researchers have attempted to emphasize teaching strategies that build on dialogue, collaboration, authentic tasks, and active construction of knowledge. According to Cunningham (1992), the objectivistic view of learning is depicted as the process of acquisition and remembering. In contrast, the constructivist view of learning is more accurately described as the process of knowledge construction. Therefore, active collaboration in learning tasks and referring to prior knowledge are viewed as two fundamental processes that enable students to construct new knowledge. Most constructivists would also agree that learning in authentic, real-life situations is most effective (Herrington, Reeves, & Oliver, 2014; Loyens & Gijbels, 2008).

Two major research models were developed to determine the connectedness between learning environment and goal orientation: TARGET (Ames, 1992) and PALS (Midgley et al., 2000).

Ames (1992) developed the TARGET system to research the main aspects of teaching that encourage the development of mastery or performance orientation in the classroom. The TARGET system focuses on instructional strategies related to task assignments (T), authority relations (A), recognition systems (R), grouping procedures (G), evaluation practices (E), and the use of time (T). Greene, Miller, and Crowson (2004) tested this model by examining the influence of students' perceptions of classroom structure (tasks, support of autonomy, management, and evaluation) on self-efficacy, instrumentality of classroom work and extrinsic goal orientation in the classroom environment.

The results of analysis have confirmed the assumptions that perceptions of climate in the classroom play an important part in student motivation. Although certain previous research studies have confirmed the influence of the perceptions of the climate in the classroom on the setting of goals and self-efficacy, their findings were the first to support the line of argument that when students assess learning in the classroom as being relevant and interesting, this affects their positive assessment of learning in the future.

Midgley et al. (2000) developed a questionnaire entitled "The Patterns of Adaptive Learning Survey" (PALS), which has been often used to assess students' perceptions of predominant classroom goal structures, as well as for measuring an individual's goal orientation. By using this instrument, Urdan and Midgley (2003) examined changes in the perceived classroom goal structures when students were promoted to the next year of study. In cases in which students perceived a higher emphasis on mastery goals in the new class, they reported more positive influences, an increased sense of self-efficacy and better learning achievements (Urdan & Midgley, 2003). If the situation was the opposite, their learning motivation, and learning performance declined.

Purpose of the present study

To date, research on the influence of learning context on the formation of goal orientations and other factors of learning motivation has primarily focused on classroom settings, specifically on the characteristics of teaching tasks, assessment, and instructional strategies. We believe that goal orientation is among the most important factors of motivation. The first and most important reason is that goal orientation directly influences many important aspects of student motivation. For example, it is more likely that students with intrinsic goal orientation will have higher self-efficacy, use more complex cognitive learning strategies, be meta-cognitively more active, and achieve better learning outcomes. Previous research shows that goals direct, or at least mediate, the entire process of self-regulation of learning, wherein the use of strategies is only one of the aspects.

Knowing goal orientations and understanding of specific classroom practices is at the core of our research. A number of reviews have been carried out in order to document the different ways in which the classroom and school environment affect the formation of a particular goal orientation (e.g. Ames, 1992; Church et al., 2001; Nie & Lau, 2010; Urdan, 2004). In fact, the psychology of motivation has always been set into a certain context of operation. In order to understand the perception of the learning environment and the influence on

the processes of development of intrinsic motivation, we should also highlight the contribution of Deci and Ryan (1985). They have carried out many studies in which they endeavoured to determine how differently designed environments (and educational materials) affect the development of motivation (Deci, Koestner, & Ryan, 2001; Mažgon & Štefanc, 2012). Deci et al. (2001) have established that three factors are crucial (i.e. autonomy, competence, and relatedness) and positively affect the development or maintenance of an individual's intrinsic motivation.

Less prominent in motivation research are studies that explore motivation in terms of a broader understanding of the learning environment, including the dimensions described by Moss, Fraser and other authors. Research in this field has also been more focused on the samples of primary and secondary education, but fewer studies have examined this topic within the framework of university education. The main research questions of this study are therefore:

1. How are the perceptions of learning environment connected to students' motivation?
2. Which aspects of learning environment and motivation predict students' satisfaction with the course?

Method

Participants and procedure

The survey was conducted between November and December 2014, and included students who were enrolled in the first year of master studies at the Faculty of Arts at the University of Ljubljana. The sample consisted of 120 students (102 female, 17 male, 1 did not reveal his or her gender) who study in different programs, but are also participating in the common teaching module. This means that than 80% of all the students in this module were included in the research. Students from foreign language (e.g. English and German Language and Literature), Slovenian, and Comparative Literature study programs prevailed with 76.7% of the whole sample. Females were also predominant in the sample (86%), which accurately reflects the actual participants in the study programs. Students respondents were 21 to 32 years old (M = 23.3; SD = 1.75). The age category 22 to 25 years represents more than 80% of all students in the research; only 9 students were older than 25 years.

Measures

Characteristics of motivation

In order to establish the connection between motivation and perception of the learning environment, we employed motivational scales from the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia, & McKeachie, 1991), which is based on a social-cognitive approach to motivation and learning characterized by stressing the interconnection of the cognitive and emotional components of learning. In the first part of the questionnaire, 20 items was used from the MSLQ, specifically from the "Intrinsic goal-orientation" and "Extrinsic goal-orientation", "Self-efficacy" and "Control beliefs" scales. The respondents replied to the five-point Likert scale questionnaire with the following answer possibilities: 1 – Definitely not true of me, 2 – Mostly not true of me, 3 – Sometimes true and sometimes not true of me, 4 – Mostly true of me, 5 – Definitely true of me. A five-point scale instead of the original seven-point scale was used to unify scales across the questionnaire.

To identify the underlying structure of motivational scales, we performed several factor analysis. First, we analysed the principal components procedure in order to assess the number of factors. The preliminary results and Cattell's scree test showed there were seven components whose eigenvalues were greater than 1. Since an additional analysis of this table with component weights indicated the existence of four dimensions, we proceeded by carrying out a factor analysis with the principal axis method with four factors. Since items were moderately correlated, orthogonal rotation was chosen (Tabachnick & Fidell, 2013). The Bartlett spherical test was highly significant ($p < 0.001$), whilst the Kaiser-Meyer-Olkin measure of sampling adequacy, although appropriate, was statistically insignificant (KMO = 0.75). Together, these four factors explain 43% of the variance; in terms of content, they correspond to the theoretical expectations of the scale. With regard to the described procedure, we formed four composite motivational variables: *Self-efficacy* (5 items; explains 22% of the variance); *Intrinsic goal-orientation* (5 items; 10% of the variance); *Control beliefs* (3 items; 6% of the variance); *Extrinsic goal-orientation* (3 items; 5% of the variance).

Evaluation of the learning environment

In addition to the scales from Motivated Strategies for Learning Questionnaire, we also used the Evaluation of the Learning Environment Questionnaire. The questionnaire, developed especially for this survey, is based on Moos' (1974) conceptualization of the learning environment, similar to many other

questionnaires that were developed mainly for the use in primary or secondary education. However, the latter instruments are inappropriate for assessing the learning environment in higher education. In this part of the questionnaire, 42 items were formed, representing the main dimensions of the learning environment: teacher support, student interaction, authentic learning, autonomy, and personal relevance. The respondents assessed their perceptions of learning environment on the course level by using the five-point Likert scale, which represented the frequency of individual "events" in lectures. The following answers were possible: 1 – Never, 2 – Seldom, 3 – Sometimes, 4 – Often, 5 – Always. The number of components was first evaluated with the principal component analysis, and the results of this analysis showed six appropriate dimensions. We employed the Varimax rotation with the principal axis method. The solution with four factors (KMO = 0.84, Bartlett spherical test $p < 0.001$) proved to be the most appropriate. Together, these factors explain 46% of the variance. We formed four composite variables: *Authentic learning* (eight items; explains 31% of the variance; e.g. "In this course, we deal with real situations"); *Teacher support* (six items; 6% of the variance; e.g. "In this course, the teacher encourages my active participation"); *Student interaction* (six items; explains 5% of the variance; e.g. "In this course, students collaborate with each other") and *Autonomy* (three items; explains 4% of the variance; e.g. "In this course, I can study at a time that is most convenient for me"). Seven items that achieved loadings under 0.45 (20% of variance) were excluded from further analysis. Factor loadings of the "Evaluation of Learning Environment Scale" are shown in Table 1.

Table 1. *Factor Loadings for the Evaluation of Learning Environment Scale*

	Factor loading			
Item	Authentic learning	Teacher support	Student interaction and collaboration	Students autonomy
AUTH 84	0.75			
AUTH 92	0.66			
AUTH 94	0.63			
AUTH 82	0.60			
AUTH 106	0.57			
AUTH 87	0.53			
AUTH 108	0.52			
AUTH 79	0.51			
TEACHS 99		0.75		

TEACHS 93		0.69		
TEACHS 104		0.68		
TEACHS 76		0.53		
TEACHS 72		0.48		
TEACHS 95		0.47		
STUDINT 109			0.86	
STUDINT 107			0.75	
STUDINT 71			0.58	
STUDINT 89			0.53	
STUDINT 83			0.51	
STUDINT 112			0.45	
AUTON 97				0.78
AUTON 100				0.76
AUTON 78				0.55
% Variance	31.42	6.22	5.09	3.76

Course satisfaction

We also used the "Course satisfaction" ***s***cale in order to obtain data on the interconnection of psychosocial characteristics of the learning environment and enjoyment of education. The scale comprises nine items, which were adapted from the Test of Science-Related Attitudes (TOSRA) (Fraser, 1981). We used the same categories of assessment (Always, Often, Sometimes, Seldom, and Never) as with the learning environment scales.

Data analyses

The psychometric characteristics of the instruments were determined with the exploratory factor analysis (latent structure of questionnaires) and Cronbach's α coefficient (to establish internal consistency). In order to answer our research questions, we employed different bivariate and multivariate analyses: to establish the connection between individual dimensions, the bivariate correlation analysis was used; to understand the predictive value of independent variables on dependent variables, the multivariate linear regression method was used.

Results

Descriptive statistics

Initially, we shall examine the descriptive statistics used for the learning motivation and *learning environment* scales. Table 2 shows means, standard deviations, Cronbach's α coefficient of internal consistency, and the number of items in the scale. The means show that the respondents assessed all items relatively highly (on a five-point scale). All means are above 3, and the results show that items from perceived autonomy and authentic learning scales were assessed the highest, whilst items related to extrinsic goals-orientation and student interaction were assessed the lowest.

Table 2. *Means, Standard Deviations, Alphas, and Number of Items for Motivational and Learning Environment Scales*

Variable	*M*	*SD*	α	N_{items}
Self-efficacy	3.43	.72	.79	5
Intrinsic goal-orientation	3.77	.72	.69	4
Control beliefs	3.97	.72	.58	3
Extrinsic goal-orientation	3.24	.84	.62	3
Course satisfaction	3.44	.82	.90	9
Student interaction	3.21	.12	.85	7
Authentic learning	3.99	.38	.88	9
Teacher support	3.69	.93	.82	6
Autonomy	4.00	.38	.75	3

The analysis of standard deviation values shows that the assessments differ the most with items from the Teacher support (*SD* = 0.93) and Extrinsic goal-orientation scales (*SD* = 0.84), although the average of each of these scales is not among the highest. The standard deviations are the lowest in the perceptions of students in relation to their interactions in class (*SD* = 0.12). The coefficients of reliability are between 0.58 and 0.90, which range between poor to very good according to DeVellis (2003). The cause of low reliability of Control beliefs and Extrinsic goal-orientation scales is most likely the low number of items in these scales.

The connection between motivational variables and dimensions of psychosocial environment

Table 3 shows correlations between the motivational, the learning environment and course satisfaction scales. Correlational connections are mostly positive and their effect sizes range between small and large (Cohen, 1988, pp. 79–81).

Table 3. *Pearson's Coefficient of Correlation between Motivational Strategies, Perception of the Learning Environment and Course Satisfaction*

	1	2	3	4	5	6	7	8	9
1. Self-efficacy	–								
2. Intrinsic goal-orientation	.32***	–							
3. Control beliefs	.47***	.21**	–						
4. Extrinsic goal-orientation	.06	.16	–.03	–					
5. Course satisfaction	.20*	.45***	.24**	–.07	–				
6. Student interaction	.15	.51***	.02	.24	.31***	–			
7. Authentic learning	.17	.60***	.17	.09	.57***	.62***	–		
8. Teacher support	.17	.45***	.13	.01	.57***	.53***	.60***	–	
9. Autonomy	.21**	.33***	.15	.09	.07	.30***	.18*	.20*	–

Note: * $p < .05$ ** $p < .01$, *** $p < .001$.

Self-efficacy is positively correlated to intrinsic goal orientation (r = 0.32) and control beliefs (r = 0.47), and there is no correlation with extrinsic goal orientation. Students with high self-efficacy beliefs are also more prone to feel that they can control their learning and motivation. They are also more motivated to master their learning and are not motivated in comparison with others. We also find low correlation between self-efficacy and course satisfaction (r = 0.20) and autonomy scales (r = 0.21). There are numerous strong correlations between intrinsic goal orientation and other scales.

The highest correlations are between intrinsic goals and authentic learning (r = 0.60) and student interaction scales (r = 0.51). Students with intrinsic goal orientation during their studies see their courses as being tightly connected to real-life examples and can see the connection between theoretical problems in the course and the practical problems that they will face on the job. Results also show moderately high correlations between intrinsic goal orientation and teacher support (r = 0.45). This means that goal orientation that focuses more

on mastery is also correlated to perceived teacher support, his/her feedback, incentives, and communication.

Correlation with perceived autonomy (r = 0.33) is also expected, which shows a relationship between active student participation and control, his or her learning, and the development of intrinsic motivation. Lastly, intrinsic goals are also moderately correlated with enjoyment that students feel in class (r = 0.45). The course satisfaction scale is positively correlated with almost all learning environment scales. The highest are correlations with authentic learning and teacher support scales (both r = 0.57). This shows us that students are mostly enjoying classes where they can apply new knowledge to real-life situations and where their progress in learning is supported by teachers. Also important for their satisfaction with the course is the possibility of collaborative learning in which they can discuss study topics in groups (r = 0.31). Student interaction is also highly correlated with both authentic learning (r = 0.62) and Teacher support (r = 0.53).

Characteristics of the learning environment which predict students' motivation and course satisfaction

The theory and empirical findings show that perceptions of learning environment positively influence motivation and course satisfaction. Since correlation only tests for interdependence of the variables, we were also interested in describing the predictive value of learning environment. Correlation analysis (presented in Table 3) showed many moderate to high connections between motivation and evaluation of learning environment. Since learning environment variables were mostly correlated to intrinsic goal-orientation, we were interested to determine which of these variables is the most important in predicting intrinsic motivation. Linear regression results are presented in Table 4.

Table 4. *Regression Analysis Summary for Learning Environment Scales Predicting Intrinsic Goal-orientation*

Variable	B	SEB	β
Student interaction	.13	.09	.15
Authentic learning	.46	.11	.43***
Teacher support	.07	.09	.07
Autonomy	.19	.07	.20***

Note: R^2 = .43 (N = 118, p < .001).

***p < .001.

The regression model is highly statistically significant and explains no less than 43% of the prediction of the dimensions of the learning environment of setting of intrinsic goals during learning ($F = 21.34$; $p < 0.001$). As can be seen in Table 4, two characteristics of the learning environment statistically significant affect the Intrinsic goal-orientation: perception of learning as authentic, connected to practical problems (β = 0.43) and perceived autonomy during their study (β = 0.20). These results show that the more that students see their learning as relevant and valuable for their practical experiences, the more intrinsically motivated they feel. Intrinsic orientation was also emphasized with the possibilities of taking control over learning. This means that the more a teacher (according to the opinion of students) encourages and allows the autonomous decisions of students and provides them with opportunities to make co-decisions, the more the students perceive the studied topics as useful and the greater the probability they will be intrinsically motivated during their study.

Table 5 shows the importance of the factors that could predict student satisfaction. The regression model results have shown that all of the used variables explain in total 46% of the variance in predicting student course satisfaction ($F = 11.91$; $p < 0.001$).

Table 5. *Regression Analysis Summary for Motivation and Learning Environment Scales Predicting Course Satisfaction*

Variable	B	SEB	β
Self-efficacy	.03	.09	.03
Intrinsic goal-orientation	.17	.10	.16
Control beliefs	.10	.09	.10
Extrinsic goal-orientation	-.07	.07	-.08
Student interaction	-.15	.09	-.15
Authentic learning	.41	.12	.36***
Teacher support	.37	.09	.36***
Autonomy	-.09	.08	-.08

Note: $R^2 = .46$ ($N = 118$, $p < .001$).

***$p < .001$.

Despite the numerous high correlations related to student satisfaction (shown in Table 3), we have established that greater satisfaction is significantly predicted by teacher support in the study process (β = 0.36), and the authenticity of learning (β = 0.36). No other predictive variable has proved to be

statistically significant, although intrinsic goal-orientation is close to statistical significance (Sig. = 0.08). We can establish that the attention a teacher devotes to providing feedback to students' work, their encouragement and appropriate communication contribute to student enjoyment; the more a student perceives a teacher as doing so, the more the student is enjoying studying in a course.

Discussion

It the present study, we have examined the relationships among motivational and contextual aspects of studying in higher education. In sum, our results showed that perceived contextual dimensions mainly predict intrinsic goal-orientation, and they are the only statistically significant determinants of students' course satisfaction. Although intrinsic goal-orientation bivariate correlations were numerous, linear regression analysis revealed that is mainly correlated to authentic learning, teacher support, and perception of autonomy during learning.

Learning environment's effect on motivation

The results have shown that students who set themselves intrinsic goals have a greater sense of control of their learning and a feeling of self-efficacy. Furthermore, our study revealed that students who perceive their learning environment as a place that fosters autonomy and self-direction and find their education to be useful and relevant are more intrinsically motivated. The importance of collaborative learning and teacher support is also underscored. The results of the regression analysis reflect the findings from the correlation analysis and give even more significance to the real-life problems of the studied topics, and support in developing autonomy. The importance of the perceived authenticity of learning have also been proven in the correlation analysis. In this study, the interconnectedness of theoretical knowledge and practical application seems to be among the most important determinants of students' motivation for studying in higher education. These findings are also supported by the research that has been done on goal-orientations. Ames and Archer (1988) found that goals set on the classroom level also affect the goals set by individual students. Students who believed that their learning environment was performance-oriented and encouraging with regards to good grades and competition set themselves extrinsic goals also with learning. These results were later reinforced with further particularization of extrinsic goals in other studies (Church, Elliot, & Gable, 2001; Gibbs & Simpson, 2004; Gijbels & Dochy, 2006;

Roeser, Midgley, & Urdan, 1996). On the one hand, researchers established that with stricter evaluation and reduced emphasis on the learning content, the possibility to follow extrinsic goals increased. On the other hand, those students who perceived the learning environment as oriented towards relevance and understanding set themselves intrinsic goals and reported a higher level of self-efficacy (Roeser, Midgley, & Urdan, 1996). Our results also confirm a positive correlation of encouraging teacher support and cooperation between students on the development of intrinsic motivation and course satisfaction. Furthermore, our findings in relation to the importance of teacher support in the development of autonomy are supported by the study conducted by Green and colleagues (2004). They have established a positive relationship of the feeling of autonomy on the setting of intrinsic goals, higher self-efficacy, the use of strategies and better grades. Important factors also include encouraging cooperation among students. Students more frequently set themselves intrinsic goals in a learning environment that encourages cooperation and communication.

Determinants of students' course satisfaction

Our second research question was connected to the correlation and prediction of motivational and learning environment factors with students' satisfaction with education. Bivariate analysis showed several significant connections, especially with intrinsic goal-orientation, student interaction, authentic learning, and teacher support. However, regression analysis has proved that only authentic learning and (surprisingly) support for autonomy were statistically significant predictive variables. Both the time a teacher devotes to providing real-life examples to students and connecting theory to practice as well as enabling their autonomy in learning positively contributes to student enjoyment and satisfaction in the study program. This was confirmed by the research on the factors of enjoyment of education conducted by other authors (e.g. Lizzio, Wilson, & Simons, 2002). Lizzio, Wilson, and Simons (2002) found that university students' perceptions of learning environment affect the learning performance, enjoyment of education, as well as development of key competences in learning outcomes, which directly and indirectly predict their attitude towards study.

In our opinion, the results of this study have practical implications for teachers because they provide a greater understanding about the different aspects of the learning environment and how those aspects predict student motivation and satisfaction. Our findings are consistent with other authors who have explored "authentic learning environments" (Herrington, Reeves, &

Oliver, 2014), and we can conclude that students will more likely develop intrinsic goal-orientation and enjoy studying when they view their course as relevant, interesting, and supportive of autonomy. Of course, these goals are difficult to achieve with the use of the top-down approach to teaching that is mostly controlled by the teacher. While some level of teacher-controlled didactic strategies are necessary for achieving his or her instructional goals, the results of our study suggest that a bottom-up approach that involves teaching strategies that increase student engagement and take into account their needs and interests could be more appropriate. We are well aware that increased intrinsic motivation is only one of the possible learning outcomes in higher education and that this is not always congruent with other, more cognitive outcomes. As some authors have suggested, this approach is not always effective (e.g., Segers, 1996). In the future, research studies should identify the learning outcomes that are important for evaluating the effectiveness of education (not only cognitive outcomes but also affective, social outcomes, etc.), and they should also recognize the strengths and weaknesses of the didactic strategies that arise from the constructivist learning environments.

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The (Co-)Construction of Knowledge within Initial Teacher Training: Experiences from Croatia[1]

Lidija Vujičić*[2], Željko Boneta[3], and Željka Ivković[4]

"Learning by doing" within and together with a "community that learns" ought to become the fundamental method of learning – not only for children, but also for their teachers and other participants in the educational process. To what extent are students of early and preschool education involved in such work methods, and what have their experiences been like? An example of a research-based, reflective approach to practice grounded in action research and the co-construction of knowledge with students shall be presented as an example of quality practice at the Faculty of Teacher Education in Rijeka. Such a form of practice creates knowledge through the action itself and through contemplation of one's actions and the actions of others, all with the purpose of strengthening the practical competencies of future teachers. Our conclusion is that mutual learning, as propounded by the social constructivist approach to education, within the context of the mutual discussions between students and teachers that we organized directly contributed to the development of (self-)reflection competencies among future teachers, while also immersing all participants in an environment conducive to deliberation and the (re)definition of oneself and one's own pedagogical work.

Keywords: initial teacher training, professional development, reflective practitioners, (self-) reflection, the (co-)construction of knowledge

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(So)ustvarjanje znanja v začetnem izobraževanju učiteljev: izkušnje iz Hrvaške[5]

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»Učenje z delom« znotraj in skupaj z »učečo se skupnostjo« bi morala postati temeljna metoda učenja – ne samo za otroke, ampak tudi za njihove učitelje in druge udeležence v izobraževalnem procesu. V kolikšni meri so študentje zgodnjega in predšolskega izobraževanja vključeni v tovrstno metodo dela in kakšne so njihove izkušnje? Predstavili bomo primer raziskovalno zasnovanega, reflektivnega pristopa k praksi, temelječega na akcijski raziskavi, in soustvarjanje znanja s študenti kot primer kakovostne prakse na Pedagoški fakulteti na Reki. Tak način dela ustvarja znanje že prek same aktivnosti pa tudi prek razmisleka o lastni aktivnosti ter aktivnosti drugih z namenom krepitve praktičnih kompetenc bodočih učiteljev. Naša temeljna ugotovitev je, da je vzajemno učenje, kot je opredeljeno v socialno konstruktivističnem pristopu k izobraževanju, ki smo ga organizirali v obliki skupnih diskusij med študenti in učitelji, neposredno prispevalo k razvoju (samo)refleksivnih kompetenc bodočih učiteljev. Poleg tega je bilo ustvarjeno okolje, ki je vodilo in spodbujalo vse udeležence k razpravljanju ter (re)definiranju samih sebe in svojega pedagoškega dela.

Ključne besede: začetno izobraževanje učiteljev, profesionalni razvoj, razmišljajoči praktiki, (samo)refleksija, (so)ustvarjanje znanja

5 Delo je v celoti podprla Univerza na Reki v projektu številka 13.10.2.2.01.

Starting points

The central thesis of our work rests on our view of teacher training as a strategy within which initial training is understood as a fundamental part of future professional development. Such a strategy implies the necessity of a paradigm shift in the institutional cultures of teacher-training colleges, as well as within the education system in general. We wish to emphasize that, in addition to planning and developing curricula for initial teacher training, these changes are all-encompassing in nature and also imply a different form of relationship between teachers and students: cooperative relationships based on two-way communication and reciprocity and grounded in the mutual learning of all participants. Therefore, all social actors within the community at large are involved in an established, research-oriented, developmental and mutual learning process that aims to develop one of the key competencies in modern education: the competency for lifelong learning. In other words, initial teacher training is but a part of one comprehensive system of professional development. Its task is to qualify and prepare teachers for the vocation they have selected, but also to prepare them for further professionalization and the process of continued personal growth that begins with initial training and ends with the final cessation of employment. In this manner, a vision of professional development is created that aims to train educators skilled in reflection and evaluation of the educational process, who are able to think critically and ensure the prerequisites for the development of each child (Vujičić & Miketek, 2014). In order to successfully adopt this new role, the modern educator is expected to be open to change, motivated for lifelong learning and researching their own practice, and to be able to develop a culture of dialogue and cooperation in order to achieve the best and most efficient professional development possible. Consequently, we hold that an education grounded in a social constructivist approach represents a significant step forward in preparing students for the complexity and unpredictability of practice (i.e. their future roles as teachers and self-reflective practitioners), as it involves processes of active learning, direct research and understanding through reflective practice (Rinaldi, 2006; Dalhberg & Moss, 2006).

We wish to emphasize that, apart from a different view of children, childhood and early education institutions, the social constructivist approach also assigns teachers a role that is significantly more complex and requires greater responsibility, while also presupposing a new mode of initial training, learning and professional development. We advocate a teacher-training model based on reflective practice (Schoen, 1990; Elliot, 1998, et al.), in which central importance is given to students as future teachers and professionals whose education is

grounded in research. This model is rooted in a holistic paradigm and views educational as a social and dialogic process that unfolds through interaction, discussion and exchange (Bruner, 2000). Learning by doing and exploring together with other participants in the education process (other students, professors, teachers and practitioners) is in accordance with a social constructivist approach that, according to Beck and Kosnik (2006), implies a form of learning in which students are fully active and free to discover the purpose of the process themselves, thus participating in the construction of their knowledge and forming habits that mould them into lifelong learners. Zaclona (2007) holds that universities that train future teachers have the necessary role of creating situations and strengthening experiences that give students the chance to reflect upon themselves and their educational reality. In this sense, university programmes rooted in a social constructivist approach imply the training of students through action research, i.e. their participation in research as part of their practice (Vujičić & Đapić, 2009; Lepičnik-Vodopivec & Vujičić, 2010). Such an approach motivates participants in action research (Mac Naughton & Hughes, 2009) to modify their roles and take responsibility, thus creating a teacher-researcher that will have a profound influence on changing educational practice.

According to Miljak, social constructivism is manifested in a transactional-transformational approach, according to which knowledge is viewed as:

> "[…] something that is constructed and reconstructed by those participating in the education process. The education process is viewed as a dialogue, as the interaction between teachers, students and the environment. The students play an active role in this process by constructing and reconstructing their knowledge, by which they change both themselves and their environment" (Miljak, 1996, p.18).

Through dialogue and discussion as the fundamental modes of learning within action research, students gain an awareness of the responsibility of the role of an educator of young children and achieve a level of confidence and self-awareness that allows them to explore new possibilities with children, thus attaining a meta-level of teaching, i.e. a feature of the most skilled practitioners and researchers (Vujičić, Tatalović Vorkapić, & Boneta, 2012). As a result, the role of a teacher within a social constructivist approach to education based on action research is to organize discussions that students will perceive as pleasant and useful while respecting the individual differences that exist among students concerning their cooperation and communication skills. This ought to be a collegial discourse in which students are allowed to assume, ascertain, make mistakes and correct them: to put it briefly, to construct their pedagogical knowledge independently and in a group.

In their research of study programmes in the USA and Australia, Beck and Kosnik (2006) stress the importance of action research, i.e. connecting theory and practice in order to create mutual knowledge, understanding and sense. In order to execute such a programme in a quality fashion, students need to be divided into smaller groups that are headed by a team of university teachers. Work in such learning teams allows for constant dialogue and cooperative learning, which gives students the opportunity for continued reflection and the development of their own ideas. The result of the operation of such "learning communities" grounded in social constructivism is a powerful feeling of camaraderie and a holistic learning experience that, in addition to social aspects, also encompasses emotional, aesthetic, physical and other forms of expression. Such an approach "not only allows for broad personal development, but ensures the depth of understanding and experience needed for knowledge construction" (Beck & Kosnik, 2006, p. 13). In other words, knowledge is constructed through the negotiation of meaning, in which the differing perspectives of teachers and students do not exclude each other but, in contrast, supplement each other. This interaction between teachers and students/future teachers ought to be the central point of the education process. Students/future teachers are expected to step out of their roles of passive recipients of knowledge, those that accept and practice the skills necessary for working in education, and take an active role in their own learning. Within this context, the role of the teacher is to create the conditions necessary for developing the students' sense of responsibility and independence, and to satisfy the needs of the students with regards to the selection of content and learning styles (Besson, Huber, Mompoint-Gaillard, & Rohmann, 2014). Creating an environment for learning and research also implies research on the part of the teachers, i.e. exploration of the learning and teaching of their students. As students often imitate the behaviour of their teachers in their own practice, the comportment of teachers and their relationship towards their students is of exceptional importance, for their actions will be mirrored in the personal, professional development of future teachers, their implicit and explicit approaches to teaching and learning and their relationships with children. This is precisely why "profound changes" are of such crucial importance (Senge et al., 2003) regarding mental models: the personal values of teachers are a prerequisite for examining and changing the values of students. Many other authors (Bruner, 2000; Stoll & Fink, 2000; Fullan, 2007) hold the same stance regarding values and the necessity of bringing them to awareness and changing them, while stressing that a quality education always ought to consider the fundamental views of the teachers. Thus, the teachers of future educators today face new challenges, together with new standards, roles, demands and professional competencies.

Towards a reflective model of initial teacher training

In contrast to the traditional practice of teacher training grounded in a transmission paradigm, the transformative process of professionalization (Miljak, 1996) presupposes educating teachers to conduct reflective practice, and thus transforming teachers into reflective practitioners. Such a conceptual and methodological approach to practice is rooted in action research as a method of teaching and learning. Many authors that have dealt with reflective practice consider it an approach that is opposed to the traditional model and the positivist education of practitioners (Bruner, 2000; Pešić, 2004; Radulović 2011). The reflective practitioner is an active individual that explores various possibilities for solving practical problems.

> The reflective practitioner creates, that is, constructs a reflective practice based on his/her own deliberation upon it – both before and after activities and during action, which is the feature of a highly skilled (reflective) practitioner. The growth process of a reflective practitioner implies a process of elevating oneself to a meta-level of one's own educational actions, teaching and learning (Šagud, 2006, p.14).

The training of a reflective practitioner is most often linked to action research and a social constructivist approach to learning. Such a connection (in contrast to tradition) implies a great paradigm shift in the education of future teachers, i.e. from a traditional to a social constructivist mode. As an important feature among the key competencies, reflectiveness presupposes the use of metacognitive skills and creative and critical thinking. Reflective competencies are a product of development and growth, just like any other competency, while also demanding a proclivity for introspection, independence in scheduling activities, responsibility for one's own decisions and actions, and self-critique. One of the key elements in educating for reflective practice is practice itself, as only through practice can students discover the problems that are to become objects of reflection, develop reflection in action (attain empirical knowledge and experiences), test theoretical and empirical hypotheses, and seek new ways of understanding reality and constructing knowledge (Radulović, 2011).

The teacher as a reflective practitioner is viewed as an initiator of change, an impetus for learning that also takes care of his/her own personal and professional development. Elevating the level of knowledge and total competencies of future teachers requires the development of reflective abilities through a reflective education process. The commencement of a reflective process during initial

training, which appears as a result of awareness and a responsibility for change, is a prerequisite for its continuation through further professional development and the establishment of "permanent learning strategies". The process of developing abilities through reflection presupposes opposition to routine, leadership, uniformity and rigidity and a predilection for independence, freedom, creativity and openness. It is precisely with this kind of approach to the education of future teachers (one that implies personal self-discovery and awareness instead of the mere accumulation of facts in order to improve knowledge) that it is possible to stimulate the re-examination of values and views and the "deconstruction of folk beliefs" (Bruner, 2000).

Experiences from the Faculty of Teacher Education in Rijeka

As part of its work in various courses (such as Reflective Practice, Documenting the Education Process, the Research and Knowledge-Based Integrated Curriculum, the Integrated Curriculum in Early and Preschool Education, Co-Construction of the Curriculum and others), the Faculty of Teacher Education in Rijeka has demonstrated a quality practice that advocates a social constructivist approach to the education of students while adhering to the characteristics of the "new" professional development of teachers. Emphasis is placed upon the participation of students in researching the realities of education, their active role in the processes of acquiring knowledge, building educational theories through mutual deliberation upon practice, and self-reflection and mutual reflection upon practice by working in small learning teams in cooperation with a teacher and education practitioners (Jančić-Komljen, 2013). We hold that such an approach to the education of students helps in preparing them for the demanding role of a (self-)reflective practitioner within the variable, complex and unpredictable context of educational practice.

In accordance with the aforementioned deliberations, we arrived at the following research question: to what extent does the manner in which future teachers are educated during their undergraduate university study (and, particularly, within the course the Research and Knowledge-Based Curriculum II) develop the competencies of a reflective practitioner among students? Likewise, we were interested in the extent to which the mutual group reflections conducted between students, education practitioners and teachers after the completion of individual practical activities that are part of the course assisted in the development of these competencies. The aims of the aforementioned course are focused on training students to gather and analyse data on the key factors, conditions

and methodological procedures that are part of the education process in institutions for early and preschool education, while also stimulating them to conduct and deliberate upon the education process in a manner conducive to the holistic development of children and the satisfaction of their needs, their urge to explore and their desire to form theories derived from their natural curiosity.

The expected learning outcomes naturally emanated from these course aims and are as follows: self-evaluating and evaluating activities with children; developing a predilection for teamwork, cooperative learning, planning and executing various activities within an institutional context; critically evaluating diversity, i.e. social, physical and cognitive differences while planning, monitoring and interpreting children's activities; analysing the cognitive specificities of children with regard to observation, introducing changes, recognising and describing phenomena, analysing experiences and arriving to conclusions and implementing this knowledge in their leadership of the education process; comparing the selection of materials and activities to the abilities, skills and needs of the children; independently creating a written plan and preparing the appropriate didactical tools for conducting an education process that is in harmony with the nature of children; creating and conducting educational activities with children; analysing and evaluating educational activities.

Methodology

Object and aim of research

Our selection of an appropriate methodological approach was largely determined by the research matter itself, and we thus opted for a qualitative approach to research that possesses both a developmental and a research dimension and combines approaches that focus on the examination of its results, thus analysing both the students' achievements and growth (the development of competencies among students, with particular emphasis on reflection) while also monitoring the education process itself (the search for new paths, methods and approaches) and its future development. In this sense, our research project seeks answers to the following question that has posed by teachers: does the course the Research and Knowledge-Based Curriculum II, conceived in accordance with the aforementioned principles, possess the potential to stimulate reflection among students? Therefore, the aim of this study is to determine the contributions of this course to the development and training of students/future practitioners as reflective practitioners. Such learning not only occurs within a "practice-oriented community", but also involves other actors through mutual

action, dialogue and the exchange of knowledge and values (both explicit and implicit ones). In this manner, the roles of the participants in the education process (teachers, students and the group) are constantly reconstructed and redefined during the process of teaching and learning.

During our research, particular attention has been paid to the effects of teamwork and its contribution to developing reflective skills among students, for the juxtaposition of old and new ideas, and the views of the individual and the others was a frequent occurrence in the social interaction within the teams. Teamwork is an essential part of the course strategy of the Research and Knowledge-Based Curriculum II as it stimulates cooperative learning, which is considered a prerequisite for the attainment of reflective practice.

The research object, together with the theoretical foundation upon which the course the Research and Knowledge-Based Curriculum II is based and our vision of the educator of the future (a reflective practitioner rooted in the social constructivist paradigm), determined our methodological approach. The training of reflective practitioners and the development of reflective practice is a relatively new methodological approach to practice that lies in stark contrast to the traditional model of teacher training, and is most commonly grounded in action research and an emancipatory approach to pedagogical research. Although it cannot be described as action research in the truest sense of the term, this study possesses elements typical of reflective practice: the direct empirical examination of different solutions and the mutual construction of knowledge, changes and improvements to practice, which indicates that it can definitely be described as "research *in* education" instead of "research *on* education" (Pešić, 2004). With the intent of supporting and developing reflective dialogue, our discussions with students strived to discover their personal knowledge and theories on active learning, bring the tenets that support their thinking and teaching to light, develop a model for reflective practice, teach them how to develop professional knowledge and use it to support reflection within the education process and upon it, encourage them to reflect upon active learning; and generate a model of efficient pedagogical practices pertaining to active learning (adapted from Powell, 2005) .

Course of the research

As part of the course, the students were given the task to independently conduct activities with children of an early and preschool age, for which they had previously prepared with a written plan. After conducting their activities, the students gathered in learning teams together with a teacher and an education

practitioner to hold a discussion, i.e. mutual reflection upon the activities they had just conducted. It is important to note that each team comprised eight students, of which four conducted independent activities, while the other four actively observed their work through the use of photographs and videos. The instruments used to gather data were recordings of the mutual reflections and discussions, i.e. transcripts of the recordings (the use of reflective video methodology).

The questions posed to the students were open-ended and required elaborations and descriptions, thus the students' skilfulness at self-critique and reflection can be deduced from their answers. Two questions ("What did I learn about the children's knowledge, interests, abilities and preferences?", "Did I respect the children's initiatives and proposals?") were focused on the students' satisfaction of the children's needs and interests and their acknowledgement of their ideas, the responses to which indicate the students' opinions of children, what their image of them is like and whether this image was created on the basis of a reflective discussion and is subject to change. Another segment of the questions was devised in a manner that aimed to bring to light the students' (lack of) flexibility and readiness for changing their own ideas (Did I manage to achieve the aim of the activity? Was I flexible in conducting the activities – did I deviate from my plan in order to follow the natural course of activities? Were there any spontaneous activities?). Several questions pertained to the creation and preparation of didactical materials (Were the materials well-suited to the children and sufficiently stimulating?), observation and analysis of the children's activities (What were the children able to learn?) and the students' views about what they felt they were successful at, and what still needs to be worked on. The students' proclivity for critical, reflective dialogue can be deduced from their answers to the questions posed as part of the discussion.

The discussions lasted, on average, from 45 to 60 minutes. The teacher would initiate discussion with the question "What were you most successful at?" to which the students that conducted the activities responded one by one. Then the teacher would involve the student observers with the following questions: "Was there, according to your opinion, a sufficient amount of materials?", "Would you change anything?", "What would your role be? In which situations would you involve yourself the most?", "What did you like about your colleagues' activities?" "At what point would you join a certain activity?", "What would you change about the activities and actions of your colleagues?"

In the initial part of the research, the video recordings of the group meetings were reviewed, after which the recordings were transcribed. It is important to note that all of the mutual reflections were conducted by a smaller group (team), while the total number of students that participated in the research was 28.

Some of the questions that the teachers posed to the students repeated themselves in most of the discussions, so we grouped them into three categories according to their focus: 1) focus on the self-evaluation of one's own success ("How did the students feel before the activity?", "Which situations do you think you handled the best?", "Which moments made you feel insecure?", "What would you change?", etc.), 2) focus on the evaluation of the activity and the materials offered ("Were you able to realize what you had previously envisioned?", "Were there any spontaneous activities?", "Was there a sufficient amount of materials and were they diverse enough?", "Were the materials appropriate for the children?", etc.); (3) focus on the evaluation of success as pertaining to the children ("What did you discover about the children?", "What were the children able to learn from these activities?", "Which competencies were they able to acquire?").

For the needs of this work, we shall analyse the students' most frequent responses in the areas of self-evaluation and evaluation of the children.

Results and discussion

Almost all of the students that described how they felt before the activities began stated that their fear was largely connected to doubts about whether the children would be interested in the activities they had planned. Apart from their concern for the children's interest levels, one student also expressed her anxiety about not being able to cope with the possibility of children pushing and shoving: "At the beginning, I felt scared – will all of this work, what will it be like? Will the children push and shove asking to go first? I was wondering how I would deal with that…" The unpredictability of practice is a segment that all students ought to seriously consider as something they should prepare themselves for during their education. We hold that reflective practice and "returning to action" represents the best method of preparing for the complexity and unpredictability of educational practice.

One student expressed fear about his overwhelming focus on preparation: "I was quite focused on doing all of it 'by the book'. Actually, I was very afraid of preparation because I thought I had to stick to what I had written as much as possible". This example indicates the necessity and desirability of reflective discussions with students that aim to examine their theories on success at the activities, i.e. to determines whether the students view success as adhering to their plan, or whether success can be viewed through flexibility and adapting to the current interests and needs of children, as opposed to following a predetermined plan.

One student linked her fear prior to the activities with the recording of the process: "Actually, I felt the worst when, in the corner of my eye, I noticed I was being filmed. Then I was like…oh my!" However, as only this one student expressed such fear in all the seven discussions, it seems reasonable to conclude that the majority of the students accepted the transparency of their actions, i.e. the recording of their professional growth and development.

It is important to emphasize that, after conducting their activities, the students linked their success precisely to their flexibility and their focus on the child. The following segments of conversation with the teacher that indicate this:

S2: I compared the pictures of the cows and then told them that story. Then one girl started talking, then I pretended to be the girl and she pretended to be the cow, while another girl was the mum…

T: That is good…all that ended up very well. It was evident that there was a lot of interest. The activity lasted for a long time. You adapted well; you listened to them. Do you think that you listened to them?

S2: Well, I think so. Whenever they had an idea, I immediately went with it. I didn't stick to what I had written in my plans but adapted to them…

T: How did you stop the game?

S2: It was time for breakfast, so I told the children that the cow was hungry and asked them whether they were hungry, too. The children said that they were, but first they played at feeding the cow grass and then went off to eat.

T: Excellent

We consider it an important and positive thing that the students were able to recognize the interests of children while the "action" was unfolding, to apply their theoretical knowledge and to share their experiences with the group. Experiences that differ from the one given above also exist, and they will be presented in our analysis of the answer to the question "What was I not successful at?"

The teacher asked the question "What were you not successful at?" or "Where did you perceive difficulties?" during three out of seven discussions. Despite this question not being consistently asked during all the discussions, from the transcriptions it is evident that the students were able to openly discuss those situations that they considered unsuccessful and those that they were not able to handle while conducting their independent practical activities:

T: Where did you perceive difficulties?

S3: When I took out the clay…in the beginning, the table was full, and then suddenly everybody went their own way and I was left alone. At

that moment, I felt a bit panicky for being abandoned like that, but then after a few minutes somebody came again.

T: What were you supposed to do if nobody came?

S3: Go to the centre where milk was being offered to have a look, and then come back…

T: Then they came back, and you continued. So, you think you weren't very good at that part.

S3: They didn't consider it a failure. But from my point of view, it looks different.

T: That's right. Every such game is a success for them if we see it as a success, if we perceive everything they do as a process of learning and getting to know the world around them – in this case, the process of counting, recognising shapes and colours ...

Everything they do in this sense is a success, another rung on the ladder of their development. That's how we see it. If we view it as a failure when they don't do a task the way we have planned it, then we are sending them the message that they are unsuccessful…and only then will they really be unsuccessful. So, what we have is a vision of what they could do, but whether they're actually going to do it is beyond our influence. The activities were good and stimulating, and the children were interested.

In one situation, a student stated how the only thing she would change would be the preparation of stimuli ("I would make them stronger"), while the teacher used follow-up questions to indirectly indicate to the student some other elements of her work she ought to think about:

T: ... Communication?

S2: I wasn't even aware I used diminutives until you told me. Good you noticed that. I don't usually have the habit of using babytalk or stuff like that. And then I asked myself – when? I wasn't even aware I said that at that moment.

T: Yes. I like to say these things at a certain moment, because they represent a chance to bring it to awareness and change your behaviour like that. Your colleagues have previously said that they find this useful.

This example highlights both the importance of the role of the teacher and the importance of discussion for the students. Only after several follow-up questions and some deliberation did the student become aware of her mistake, which is something she should keep in mind in the future.

The communication between the students and the children was the

topic of conversation in five discussion groups, and the following questions were asked: "Did you ask the children enough questions?", "Are you satisfied with your communication with the children?", "How did you talk to them?", "Apart from asking questions, did you communicate with the children in any other way?"

Out of the total of seven mutual discussions, there were three in which the student observers were not involved at all, either by their own initiative or by the initiative of the teacher. In these cases, the bulk of the discussion unfolded between the teacher and the students that had conducted independent activities that same day. Our analyses ascertained that, in addition to the lack of involvement of the student observers, the interaction between all participants was also missing, particularly with regards to brainstorming solutions to problems. In order to transform reflective post-activity discussions into debates in the true sense of the word, we state that all the present students ought to be more involved so that new knowledge and new theories can be discovered through mutual deliberation.

We held that certain situations had the potential for stimulating quality discussion; however, this did not happen in the end. Instead of offering ready-made solutions, we determined that it is precisely in those situations that the students need to be stimulated by the teachers to express their thoughts on the given problem.

The following example illustrates one of only two examples that occurred in all the seven discussions pertaining to the self-initiated involvement of a student observer in the discussion:

> S2 (student observer): Now the question is whether to stop the activity and the children's interest and give them some other activity? Even if we don't carry out what we have planned, I think it doesn't really matter.
> T: Well observed.
> S2: It makes no sense to stop something if it interests them.
> T: Yes, what our colleague here says makes sense…on the other hand, it's also understandable that you wanted to see the children's reaction to this picture book, since a lot of effort was put into it. And into that doll, which was very good and motivating.

Our analysis of the transcripts determined that the students demonstrated self-critique while deliberating upon their own actions, along with a readiness to openly debate their thoughts and actions and to change their theories. However, regarding the part in which the student observers were supposed to give a critical review of the work of their colleagues, in all examples but one

the students were very satisfied and had no remarks. We wonder whether the true reason for their compliments was indeed the fact that they did not notice anything that could be improved or perhaps whether their praise was motivated by student solidarity.

In any case, we hold that it is necessary to work more intensely on the development of students' reflective competencies in their further education, especially in regard to being critical towards others and not being afraid to openly address issues, as this is solely for the benefit of all participants and their professional development. From this segment of the analysis, it is evident that the discussions were dominated by the teacher and the students that had conducted the activity. The student observers were insufficiently involved even though their involvement is very feasible, particularly in small groups of eight students. We believe that these are valuable situations in which more work should be invested in order to develop optimal methods for monitoring and stimulating students to openly debate issues with their colleagues.

We wish to present an example that illustrates how the teacher stressed the importance of adapting to the children's interests instead of strictly following one's ideas and written plan. In this manner, the teacher motivated the student to think about her actions in a critical and reflective manner.

> S: [...] Mara came to my table and just began with the activities…then she began looking at me and I looked at her and asked her if she wanted to put on some glue together or by herself, whether she wanted us to stick some fruit that she liked…but she only quietly answered "uh-huh" to everything. Then she took the fruit and put it there, and when I asked her if she wanted some glue she again quietly said – no. This girl really needed stimulation, so I took the brush…and only when I took it did she take one too, and we began to glue together
>
> T: What could you have done? You stimulated her to do what you had planned? This opens the question – was it necessary? Did you need to insist on the activity of gluing?
>
> S: No. I didn't need to at all. I saw that she really liked the shape of the apple. She would always glue the apple. I could have asked her what the shape of the apple was like, what the colour was like…she told me herself it felt soft in her hands…when I pointed at the peel of the apple and asked her what it was, whether it was apple peel, she said that it was… Maybe I should have talked to her more in this way. Like, focusing more on the fruit itself, not just the gluing.
>
> T: For children, learning means holding something in their hand, touching, seeing, smelling and positioning it wherever they want in space.

> They can take everything out, put it all back one by one. They can also arrange it all on paper, which means that what is important for you to realize is that you can offer glue and everything else that you planned, but if the children show no interest in gluing things to cardboard, this does not mean you have failed, but that you have succeeded – because you are going along with the children's interests.

Our analysis of the transcripts indicate that, during the discussions conducted, effort was made to prepare students for the evaluation of their own actions and achievements, i.e. to train them to perform the process of (self-) reflection. The students' statements demonstrated a high level of self-critique: they openly discussed the less successful segments of their work and what they would change in their own actions. Most of them were already aware of their difficulties when conducting their activities, while most perceived them as an inability to cope with the given situation. For example: "I didn't know how to answer a specific question that the children asked.", "How should I act when the children begin to push and shove?", "How to stop an activity", etc. The aforementioned suggests the conclusion that mutual learning, as promoted by the social constructivist approach to education, directly contributes to the development of (self-)reflection, i.e. self-reflective competencies among future teachers through the organization of discussions between students and teachers. Senge et al. (2003) defines dialogue as the free flow of thought between individuals by which new knowledge and mutual meaning are developed, and in which individuals are not opposed to each other but constantly and actively participate in an exchange of thoughts that aims to achieve the best possible educational practice.

Concluding thoughts

The post-activity discussions between the teachers and students were organized in order to prepare the students for their roles as reflective practitioners. With the acquisition of reflective competencies, the students prepare for the complexity and unpredictability of educational practice and how to understand it, while participation in mutual discussions brings to their awareness the importance of brainstorming in a group in order to better understand the problems that exist in practice and achieve better results at work.

We believe that the timely recognition and satisfaction of children's needs are of crucial importance to the education process. In order for students to be as competent in this area as possible, it is necessary to ensure that they

complete a period of practice that will allow them to get involved "where the action is", and thus develop a greater sensitivity to the needs and interests of children. Likewise, we think that reflective practice, i.e. discussions with teachers and education practitioners after the completion of activities, can be of great assistance in helping students acquire the observation skills that will allow them to adapt to the children's needs instead of following a predetermined plan.

The next step that needs to be taken is to raise the students' awareness of the fact that an illusory consensus and the uncritical acceptance of others' opinions are not desirable forms of behaviour on the path to mutual learning. Likewise, it is necessary to encourage students to express differing perspectives on the problem being discussed, and to present this difference as an advantage instead of a flaw or threat. In order for discussion to truly lead to a better understanding of the educational reality and to develop the competencies of a (self-) reflective practitioner among students, it is vital to create an environment of mutual trust in which the students can, both between themselves and together with teachers and practitioners, openly question and discuss their views, values and convictions and the many ways in which they influence their educational practice. Finally, we wish to underscore that the professionalism of the teachers involved in initial teacher training within a modern education system also presupposes the constant re-examination of one's practice in order to improve it.

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L1 Use in EFL Classes with English-only Policy: Insights from Triangulated Data

Seyyed Hatam Tamimi Sa'd*[1] and Zohre Qadermazi[2]

This study examines the role of the use of the L1 in EFL classes from the perspective of EFL learners. The triangulated data were collected using class observations, focus group semi-structured interviews and the learners' written reports of their perceptions and attitudes in a purpose-designed questionnaire. The participants consisted of sixty male Iranian EFL learners who constituted three classes. The results indicated a strong tendency among the participants toward L1 and its positive effects on language learning; while only a minority of the learners favoured an English-only policy, the majority supported the judicious, limited and occasional use of the L1, particularly on the part of the teacher. The participants mentioned the advantages as well as the disadvantages of the use/non-use of the L1. While the major advantage and the main purpose of L1 use was said to be the clarification and intelligibility of instructions, grammatical and lexical items, the main advantages of avoiding it were stated as being the improvement of speaking and listening skills, maximizing learners' exposure to English and their becoming accustomed to it. The study concludes that, overall and in line with the majority of the previous research studies, a judicious, occasional and limited use of the L1 is a better approach to take in EFL classes than to include or exclude it totally. In conclusion, a re-examination of the English-only policy and a reconsideration of the role of the L1 are recommended. Finally, the commonly held assumption that L1 is a hindrance and an impediment to the learners' language learning is challenged.

Keywords: EFL Classes, EFL Learners, Interview, L1 use, Observation, Perceptions

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Uporaba prvega jezika pri pouku angleščine kot tujega jezika, temelječem na pristopu jezikovne imerzije: vpogled s pomočjo triangulacije podatkov

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Predstavljena raziskava preučuje vlogo uporabe prvega jezika pri pouku angleščine kot tujega jezika z vidika učencev (stari od 14 do 22 let). Triangulacija podatkov je zajemala opazovanje pouka, polstrukturirane intervjuje fokusnih skupin ter pisna poročila študentov o njihovih zaznavah in odnosu, pridobljenih z namensko sestavljenim vprašalnikom. V raziskavo je bilo vključenih šestdeset iranskih učencev moškega spola, kar predstavlja tri razrede. Rezultati kažejo, da so med udeleženci prisotni močna nagnjenost k uporabi prvega jezika in njegovi pozitivni učinki pri učenju jezika. Le manjšina učencev je imela raje pouk, ki je temeljil samo na uporabi angleščine, večina pa je podprla smiselno, omejeno in občasno uporabo prvega jezika s strani učitelja. Obe skupini sta omenjali prednosti in tudi slabosti uporabe/neuporabe prvega jezika. Največja prednost in glavni namen uporabe prvega jezika naj bi bila v primerih pojasnjevanja in razumevanja navodil, pri poučevanju slovnice in besedišča. Glavne prednosti neuporabe prvega jezika naj bi se izražale v obliki izboljšanja govornih in slušnih zmožnosti, povečanja izpostavljenosti študentov angleščini in privajanja nanjo. Na podlagi rezultatov te raziskave, ki so tudi skladni z večino predhodno opravljenih raziskav, lahko sklenemo, da je smiselna, občasna in omejena uporaba prvega jezika boljši pristop pri poučevanju angleščine kot tujega jezika kot pa popolna izključenost oziroma izključenost prvega jezika. V sklepu je podan predlog za ponovno presojo pristopa, ki temelji na izključni rabi tujega jezika pri pouku angleščine, in ponovni premislek o vlogi prvega jezika. Na koncu se postavi pod vprašaj splošna domneva, da prvi jezik predstavlja oviro in zavira učenje jezikov.

Ključne besede: pouk angleščine kot tujega jezika, učenci angleščine kot tujega jezika, intervju, uporaba prvega jezika, opazovanje, zaznave

Introduction

The debate over the use of L1, i.e. the students' mother tongue, in English as a Foreign Language (EFL) classes remain a topic of heated debate. Historically, in effect, the issue of L1 might be said to be as old as the history of English language teaching, dating back to the introduction of the Grammar-Translation Method (GMT) as a language teaching method in which the recourse to the learners' mother tongue was one of the major tools for language teaching (Richards & Rodgers, 2003). As a result, reminiscent of the old GMT, L1 use is viewed to be counterproductive, especially in settings where communicative language teaching is practiced (McMillan & Rivers, 2011). While some researchers have called for the abandonment of L1 use in EFL classes, others have stressed the facilitative role that L1 can play in such classes (e.g., Afzal, 2013; Auerbach, 1993; Brooks-Lewis, 2009; Jafari & Shokrpour, 2013; Khresheh, 2012; Mart, 2013). Despite these contrasting views concerning the effect of L1 in EFL classes, the widely held assumption has been that the presence of the L1 is "worrying" and more detrimental than beneficial (Brooks-Lewis, 2009; Mart, 2013). As such, attempts have been made to avoid using the L1 in language classes at any costs through using mime, gesticulation, pictures, etc., as witnessed in such language teaching methods as the Direct Method (Richards & Rodgers, 2003). Some researchers (e.g., Forman, 2005) have argued for a middle policy, one in which both the L1 and the L2 can contribute to the learning context; therefore, using both should be a priority, particularly when the learning setting is an EFL context. According to Brooks-Lewis, (2009), incorporating the person's L1 is one way of recognizing the students' prior knowledge, which (according to some scholars such as Dewey (1939)) can be a means of recognizing the person him/herself.

Theoretical Background

The inclusion or exclusion of L1 from EFL classes has attracted the attention of a myriad of researchers (Alshammari, 2011; Auerbach, 1993; Jarvis, 2000; Kafes, 2011; Kavaliauskienë & Kaminskienë, 2007; Khresheh, 2012; Levine, 2003; Rayati, Yaqubi, & Harsejsani, 2012; Spada & Lightbown, 1999; Storch & Wigglesworth, 2003; Wells, 1999). The majority of these researchers have argued that using the students' L1, whether by the students or the teacher, can facilitate language learning (e.g., Jafari & Shokrpour, 2013; Kafes, 2011; Mart, 2013) although a small number of studies suggest that language learners may also be reluctant to use their L1 (Nazary, 2008). The assumption has long been that the

learners' mother tongue should be abandoned, and its use discouraged. Over two decades ago, Auerbach (1993), contrary to the common assumption, took a different approach and cast doubt on the widespread English-only policy, relating it to an ideological perspective rather than a scientific basis. In this regard, Auerbach (1993) stated, "we need to recognize that respect for learners' languages has powerful social implications" (p. 30). Other studies have examined the L1 influence on L2 learners' interlanguage lexical reference (Jarvis, 2000), the relationship and interaction between L1 influence and developmental sequences in francophone children (Spada & Lightbown, 1999), the effect of previous exposure to theories and research on student teachers' code-switching in secondary schools (Macaro, 2001), the relationship between target language and first language use and anxiety (Levine, 2003), and the use of L1 in communicative approach settings (Storch & Wigglesworth, 2003), among others.

More recently, research has focused on the support gained from L1 use. In a discussion of the facilitative role of L1, Sipra (2007), for instance, undertook a study of bilingualism as a factor conducive to the learning process of English as a foreign language in Pakistan, on the assumption, as a starting point, that the use of the mother tongue will not only hinder the communicative ability of the learners but will also foster it. Using a number of qualitative data-gathering tools, such as questionnaires and interviews and based on a historical analysis, Sipra (2007) concluded that bilingual teachers are better equipped with teaching aids compared with monolingual teachers.

The issue of the mother tongue has been examined in Arabic contexts as well. Khresheh (2012), for instance, inspected Saudi Arabian EFL teachers' and learners' use of Arabic in English classes from various levels, and found that although such use stems from the learners' low proficiency at beginner levels, at advanced levels it might be related to the learners' cultural norms. In addition to the learners' attitudes, teachers' perceptions of L1 use have also been the subject of some research. McMillan and Rivers (2011), for example, investigated the attitudes of native-English-speaker teachers in Japan toward L1 use in a Japanese university where the official policy was "English-only". They showed that teachers viewed L1 use positively. McMillan and Rivers (2011) further argued that selective use of the L1 can "play important cognitive, communicative, and social functions in L2 learning" (p. 252). Linking L1 to motivation, Spahiu (2013) speculated that disregard for the students' mother tongue might be de-motivating. Rayati et al. (2012) examined the role that L1 can play in the collaborative interaction of the learners and its effect on the construct of Language-Related Episodes (LREs) in pair and group work. Their study revealed that, contrary to the widely held assumption that pair and group work

causes learners to use more L1, which is detrimental to their learning, the L1 has potential socio-cognitive positive effects on language acquisition. Kafes (2011) investigated the effect of using L1 on the university students' speaking skills in an English intensive course. The study concluded with an emphasis on "judicious and systematic, careful as well as minimal use of L1" as being facilitative and conducive to the EFL classes. Lasagabaster (2013) considered the beliefs of 35 in-service teachers about the use of L1 in CLIL (Content and Language Integrated Learning) classes in Colombia. The results demonstrated the teachers' positive attitudes in this regard and their tendency to view L1 use as supportive in building up learners' lexicon and fostering their metalinguistic awareness. In another recent study, Jamshidi and Navehebrahim (2013) also confirmed the facilitative role of L1 in an Iranian context. They observed that the use of Persian as an L1 in the language class increased the enjoyment and confidence of the learners, explicating that "using L1 in an L2 context plays a crucial role for learners to organize, enhance and enrich their speech" (p. 190).

This study aimed at exploring Iranian EFL learners' attitudes toward L1 (Persian) use, by means of gathering triangulated data, in EFL classes in which an official, strict English-policy is practiced and maintained.

Research questions

This study aimed at finding answers to the following research questions:

- RQ1: Do Iranian EFL learners hold positive attitudes toward L1 use in EFL classes?
- RQ2: What are the reasons that Iranian EFL learners give for favouring the use of L1 in EFL classes?
- RQ3: What are the reasons that Iranian EFL learners give for avoiding the use of L1 in EFL classes?

Methodology

Participants

The participants consisted of 60 elementary EFL learners, only males, aged between 14 and 22. The majority of the participants had passed at least three semesters of English classes, with every semester lasting, on average, from 18 to 20 sessions and each session at least one hour and at most one hour and a half. In the institute where the data were gathered, the participants studied two sessions a week with each session lasting one hour and forty-five minutes.

The participants also stated that they had started learning English at the ages between 12 and 15. They studied in three different classes with each class consisting almost of an equal number of students, i.e. 20. As regards their L1, they spoke Persian and had similar educational and ethnic backgrounds. They studied in a well-known Iranian language institute, which promoted an English-only policy.

Instruments

The data were gathered through triangulation; i.e. by means of three distinct data-gathering tools: class observations, questionnaire, and semi-structured interview. The content validity of the last two tools was verified by two experts in applied linguistics; based on their comments, the necessary modifications were applied to the instruments. It is noteworthy that, considering the low proficiency of the participants, the researcher had to conduct the interview and administer the questionnaire in Persian. The instruments used in this study are described in more detail below.

Class observation

Three classes were observed once a week for one semester. The semester lasted for 20 sessions, and each session was one hour and forty-five minutes. During these observations, the students' reactions towards their peers' or the teacher's L1 use in the classroom were assessed according to a checklist devised to this end.

Open-ended Questionnaire

Another instrument employed to tap into the participants' attitudes toward L1 use was their responses to two open-ended questions asking them to express views in general terms, declaring whether and why they agreed or disagreed with the use of L1. They were required to provide at least one major reason for their (dis)agreement.

Focus group semi-structured interviews

The researcher carried out semi-structured interviews with the students at the end of the semester to tap more deeply into their attitudes. The focus group interviews were conducted at the end of the semester with 40 participants constituting two groups. Each group was then divided into two further groups: those who agreed to and favoured the use of L1 and those who were against using it. Therefore, four interviews were carried out in total. Each interview was

10–15 minutes in duration. The participants each expressed their views regarding the advantage as well as the disadvantages of using the L1 in EFL classes.

Procedure and data analysis

The setting of the study was a language institute in which the policy was English-only; neither the students nor the teacher were allowed to use the L1 when they were in the class. Some learners, however, occasionally deviated from this policy and used their L1, Persian. This study is qualitative with frequencies offered at times for more elaboration of the data gathered. The reasons given by the participants are gathered and analysed according to the recurrent themes found in their responses to the questionnaire and the interviews.

Results and discussion

The current study aimed at investigating the attitudes of Iranian EFL learners toward the use of L1 (i.e., Persian) in EFL classes through data gathered by means of a variety of ways: class observations, written reports of their attitudes and semi-structured focus group interviews. The results of each of these data collections are presented below.

Insights from class observation

The observations of three classes in a period of one semester revealed some interesting points concerning the students' reactions to the use of L1 in the class in which an English-only policy was implemented by the language institute. The first point is the objection of some students to the use of L1 either by the teacher or the other students. This objection was voiced mainly by the frequently repeated phrase, "No Persian". This objection was, however, raised more frequently when the students used the L1 than when the teacher employed it. This might be indicative of the fact that the students viewed the teacher's use of L1 to be for the sake of the benefit of the class and not because of his frustration or limited English proficiency, while the students' use of L1 might have been viewed to reflect their lack of perseverance in using English. In other words, they probably viewed their teacher's use of L1 as beneficial for the class to proceed and their classmates' use of L1 as detrimental to the atmosphere of the class. This assertion is further corroborated by the findings of the interviews (see below) in which the interviewees emphasized that if Persian was to be used in the class, then the teacher's share of such use must be more significant compared to that of the students.

Questionnaire: Students' responses and emerging recurrent themes

The present study aimed at investigating the role that language learners' L1 can play in EFL classes. In other words, it examined the advantages and the disadvantages that using L1 in EFL classes can have with regard to the learners' language learning enterprise. The transcripts of the participants' views given below have been taken from the participants' verbal reports, which they offered prior to the interviews. The first research question addressed the attitudes of Iranian EFL learners toward L1 use. Figure 1 displays the results of the frequencies of these positive and negative attitudes.

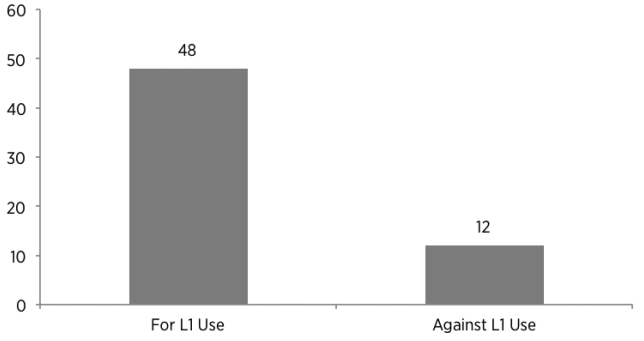

Figure 1. Participants' views of L1 use

As can be seen, while 48 participants (80%) agreed to the use of L1, only 12 of them (20%) did not agree. Therefore, in general, there is a positive attitude among the participants toward L1 use in EFL classes. The results support Brooks-Lewis (2009), who described the learners' attitudes toward L1 use as "overwhelmingly positive" and in favour of the incorporation rather than the exclusion of its use. Furthermore, the findings are in line with Yao (2011), whose study demonstrated Chinese EFL learners' and teachers' positive attitudes toward their teachers' code-switching in EFL classes. The results are, nevertheless, contradictory to those of Nazary (2008), who reported on the Iranian learners' reluctance in the use of L1. The results are also in keeping with Pablo, Lengeling, Zenil, Crawford, and Goodwin (2011), who reported that only a small number of their participants were against using their L1.

Figure 2 displays the reasons given for using L1 in EFL classes. This issue was addressed in the second research question. It is noteworthy that some participants mentioned more than one reason for favouring or discouraging the use of L1, which is why the sum of the individuals who have expressed these reasons (i.e. 66) is greater than the total number of the participants (i.e., 60) as shown in Figures 2 and 3.

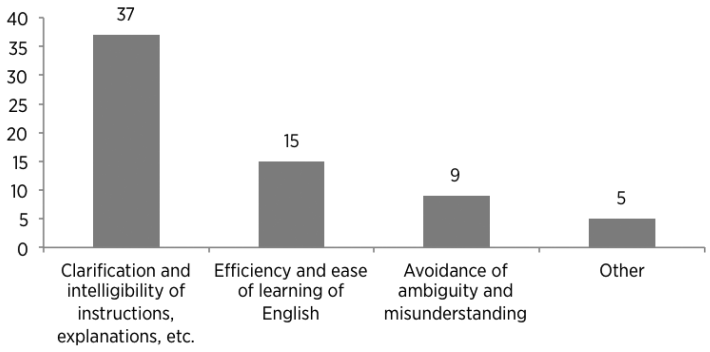

Figure 2. Participants' reasons for favouring L1 use

Figure 2 indicates that L1 use revolves mainly around the issue of clarifying linguistic points (grammatical, lexical, etc.) and for the sake of intelligibility and comprehensibility of those points to the learners. Research on conducted in various contexts, whether Arabic (Alshammari, 2011), Iranian (Jafari & Shokrpour, 2013) or Chinese (Yao, 2011), has supported the points raised above. In the Arabic context, Alshammari (2011) undertook a study of Saudi Arabian university teachers' use of native Arabic and found that Arabic was used mainly to make language comprehensible, including vocabulary and grammar. In the same vein, the fact that the mother tongue use should be for the purpose of making language clear was also found to be true of Saudi Arabian teachers in Al-Nofaie (2010). The above results support those findings obtained by Jafari and Shokrpour (2013), whose study demonstrated the participants' positive attitudes toward the teacher's use of L1 in explaining grammar, vocabulary, giving instructions, among others.

L1 use seems to be more related to learners' proficiency levels. It seems that there is a common opinion among learners in various EFL contexts that learners should be allowed to use their mother tongue, particularly when they are still at the beginning stages of language learning while learners should be discouraged or even banned from using their L1 at advanced levels. In this connection, discussing the use of L1 in an Arabic context, Khresheh (2012), for example, found that this point is valid with Saudi Arabian language learners. This finding is in line with some of the views of the present study such as the following:

> Daniel: *I believe that teachers should not be strict on beginner learners when they use Persian, because their proficiency has not developed yet, but when it comes to advanced learners, I think teachers should be stricter on them.*

It has been said that the learners' mother tongue can be used more efficiently when teaching and explaining grammatical points and vocabulary items (Yao, 2011). Figure 2 shows that the participants viewed L1 as a facilitating means of clarifying instructions, for instance. Unexpectedly, this finding, however, is not in keeping with Yao (2011) in that Yao's study demonstrated that Chinese teachers did not hold positive views of the beneficial role of code-switching in explaining grammatical points or vocabulary items. However, the results are in line with the views of the Chinese learners in Yao's (2011) study of code-switching.

> Mahan: *This semester you and some of my classmates sometimes used Persian. Unlike the previous semesters when the students and the teacher used only English in the class, this semester I felt so comfortable in the class because I could easily understand what the teacher and my classmates said.*

One of the major reasons for favouring the use of L1 in EFL classes was said to be the fact that it made learning English easier and more efficient, as the following transcription indicates:

> Ali: *I do learn better when the teacher uses Persian sometimes when I don't get what he says. But when only English is used in the classroom, I sometimes get confused.*

This might be related to the fact that the participants had viewed the use of L1 as a means of comparing and contrasting the two languages (i.e. L1 and the target language) and consequently as a way of better learning English. Brooks-Lewis (2009), in further explicating this point, stated:

> The incorporation of the L1 allows for its comparison and contrast with the target language and thereby the incorporation of the learner's prior knowledge and experience in the relation of what is being learned to a known reality, offering a starting point for language learning. (p. 228)

The next most frequently cited reason was that using L1 can result in better understanding and thus aid in the avoidance of ambiguity and misunderstanding. This finding supports Yao's (2011) results, which revealed that Chinese teachers and learners considered the role of the L1 to be contributing to more understanding and clarity than misunderstanding.

One further point raised in the literature about the beneficial role of the use of L1 is that it can be utilized as a means of enforcing discipline in the classroom (e.g., Yao, 2011). This point, however, was not of much significance to the participants of the current study. Perhaps it can be said that the participants were more interested in the pedagogical benefits of the L1 rather than its disciplinary or emotional effects. Another issue explored here was the reasons offered against using L1 in EFL classes. This was the focus of the third research question. The results are seen in Figure 3.

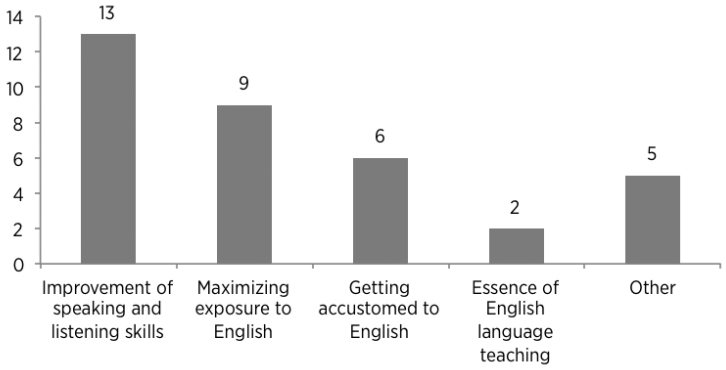

Figure 3. Advantages of avoiding L1 use in EFL classes

Figure 3 indicates that the participants deemed the improvement of the speaking and listening skills as a result of avoiding the use of L1 to be the major contribution in this regard. Such a view concerning the positive effects on language skills might not be unexpected, as research has been positive in this regard (e.g., Nurul Hidayati, 2012). The participants' views are, however, not fully in line with Kafes (2011) in that while Kafes' study found that the use of L1 facilitated and improved the students' speaking skills, some participants of the present study viewed the abandonment of L1 as helpful in improving their language skills. The participants' perception that using Persian in EFL classes is self-contradictory is also remarkably similar to the attitudes of the Arabic participants in Alshammari's (2011) study. Furthermore, the results support the arguments raised by native-English-speaker teachers in Japan against the use of Japanese in McMillan and Rivers (2011). One argument, for example, stated that the potential for more negotiation of meaning increased if an English-only policy was followed, while another was that learners would overuse L1 as a result of a teacher's L1 use.

Interviews: Learners' views

The interviews conducted showed that there was a high level of unanimous consensus among the interviewees on the advantages as well as the disadvantages of using the L1 in EFL classes. That is, both the proponents and the opponents of L1 use each mentioned similar views in this regard. The major disadvantage of using L1 was said to be the fact that using the L1 in an EFL class was simply "contradictory" in that, the participants asserted, as the name EFL suggests, such a class is a setting where English is the object and focus of study. This finding is similar to the reason offered by the subjects in McMillan and

Rivers (2011) who did not construe the use of the mother tongue as suitable for the university setting. In addition, they stated that using English exposes them to it more and more while using the L1 will most probably deprive them of such exposure. The following views were outstanding in this regard:

> Daniel: *We've come to an English class not a Persian class. Using Persian contradicts the very essence and purpose of English language teaching and learning. In the way, an English class is the only place where we can get an opportunity to use English, and if we use Persian that will simply deprive us of this opportunity.*

This indicates that the students had developed a "feeling", an "intuition" or simply an "attitude" as to what it means to them to be in an EFL class. This, in general, might be indicative of the effect that the regulations and policies of an institute can have on language learners' perceptions. Another advantage was said to be the fact that using the L1 will in all probability lead to the students' getting used to it. One view in this regard is as follows:

> Armin: *The moment that the teacher gives the students the green light to use Persian in the class they won't let it go. They'll use it more and more as they feel it's easier to speak Persian than to use English. Then, the teacher won't be able to control the class, and everyone will speak Persian.*

The interesting point concerning the interviewees' responses was that even those participants that had, at the outset of the study when reporting their beliefs regarding L1 use, declared their reluctance to grant the teacher or the learners the permission to use Persian, now acknowledged the usefulness of the L1. This finding is similar to the results obtained by Storch and Wigglesworth (2003) who stated that "even the learners who did not use their L1s reported in the interviews that the L1 could be a useful tool" (p. 767).

There was a unanimous consensus among the majority of the interviewees, however, that the use of the L1, whether on the part of the learners or the teacher, should be limited and kept to a minimum and only when highly needed should the learners/teacher use the L1 as a last recourse. As regards the areas of language in which L1 should be used, if it is to be used at all, almost all the participants agreed that these areas had better be grammar and vocabulary. They also stated that mostly low-proficiency learners must be allowed to use their L1 by their teachers. These findings are in agreement with the views of the teachers in McMillan and Rivers' (2011) study, in which interviewees were asked about the amount of time that can be allowed for mother tongue use and that for target language use. Again, almost all the interviewees agreed to a 10% for the former and 90% for the latter. The interesting point was that the participants declared that the reverse was most often followed in all the other

language institutes in which they had studied English before. This shows that language learners are generally (and fortunately) in favour of the maximal use of the target language in EFL classes and that, consequently, language teachers will not be faced with resistance on the part of the learners if they wish to establish and maintain a policy promoting language learners' maximal use of the target language.

Conclusion

The findings of this study further corroborate the claims made by second language theories as regards the facilitative role that using L1 can have in EFL classes. For instance, Auerbach (1993, p. 20) stated that "its use reduces anxiety, enhances the affective environment for learning, takes into account sociocultural factors, facilitates incorporation of learners' life experiences, and allows for learner-centered curriculum development". The incorporation of L1 has been also been deemed valid as a means of recognizing and respecting the learner as well (Brooks-Lewis, 2009). This results in more engagement of the learners in the decision-making process, which is beneficial to them, according to Mouhanna (2009). Mart (2013) concludes that "L1 remains a natural resource in L2 learning" (p. 13) and asserts that using the L1 is inevitable. Despite this argument, language teachers should bear in mind the prerequisites cited in the literature about the use of the learners' L1 and apply them with caution since what seems to be a facilitative tool for language learning can, when applied inaccurately and inappropriately, become a counterproductive factor, leading to the learners' over-reliance on it. Rather sharply, Spahiu (2013) stated that "there is neither a scientific nor a pedagogic reason to exclude L1 from the teaching process" (p. 247). In practical terms, an awareness of the reasons students have for using their L1 can help their teachers manage the classroom better, improve discipline, respect their students' attitudes and acknowledge their ways of thinking. Teachers are also recommended to take notice of the fact that learners' use of L1 can have roots in, among a variety of other factors, their cultural norms, as some studies have testified to this fact (e.g., Al Sharaeai, 2012; Khresheh, 2012).

In conclusion, based on the findings of the current study, the judicious, systematic and limited use of the L1 where needed is advocated, as has been demonstrated by a large number of other research studies (Alshammari, 2011; Elmetwally, 2012; Sipra, 2007; Spahiu, 2013). The findings suggest that this use must be limited to the clarification of explanations, linguistic points (e.g., grammatical, lexical, etc.), activities, instructions, and so on. Furthermore, a word of caution is in order here, particularly for teachers. Apart from the highly

acknowledged positive outcomes of the L1 use mentioned in the literature, based on the cautionary statements of the participants, it is argued that the use of L1 can have its negative outcomes such as the learners' becoming accustomed to it early on in language learning. Finally, it is argued that what is needed is a reconsideration of the English-only policy as this notion may have not developed out of scientific research but based on ideological perspectives, as noted by Auerbach (1993).

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Appendix A: Observation Checklist

No.	Item	Yes	No
1	The teacher reacts negatively to the students' use of the L1.		
2	The students react negatively to their classmates' use of L1.		
3	The teacher reacts positively to the students' use of the L1.		
4	The students react positively to their classmates' use of L1.		
5	The teacher uses the L1 for explaining grammatical points.		
6	The teacher uses the L1 for explaining vocabulary items.		
7	The teacher uses the L1 when asking for clarification in grammar, vocabulary, etc.		
8	The students ask their teacher about a disciplinary problem in class.		
9	The teacher uses the L1 to exercise discipline in the class.		
10	The teacher uses the students' L1 to create fun, e.g. to tell funny jokes.		

Appendix B: Learner Questionnaire (Translation)

1. Do you agree that Persian is allowed to be used by the teacher/learners in English classes?
   a) Yes, I do.
   b) No, I don't
2. If your response to the previous question was "Yes", then provide a reason for your agreement, please.
3. If your response to the previous question was "No", then provide a reason for your disagreement, please.

Appendix C: Focus Group Interview (Translation)

1. How do you think that your classmates/teachers will evaluate you if you speak your mother tongue in the class?
2. Where do you think the teacher is allowed or should use Persian?
3. Where do you think the students are allowed or should use Persian?
4. Do you think it is useful or harmful to use Persian in the class?
5. How much of the class time should be spent speaking Persian and English? Give a percentage, please.
6. If you agree that Persian can be used in the class, then what is the share of the teacher and the students in speaking Persian? Give a percentage to each, please.
7. In which areas (grammar, vocabulary, etc.) can the teacher/students use Persian?

8. Based on your experience as language learners, where do you think the students/teacher use Persian in the class?
9. Do you think students should be allowed to use Persian wherever they like to do so? Why or why not?

Biographical note

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The Social Acceptance of Secondary School Students with Learning Disabilities (LD)

Teja Lorger*[1], Majda Schmidt[2], and Karin Bakračevič Vukman[3]

This paper aims to shed light on the level of social acceptance among students with learning disabilities (LD[4]) in various secondary school vocational programs in comparison with their peers without disabilities. Our findings are based on an empirical study that comprised 417 students,[5] of whom 85 were students with LD. Based on sociometric analyses of all participating classes, we determined that students with LD were less integrated into the classroom in comparison to their peers without LD. The results of the sociometric analysis show statistically significant differences in the sociometric position between students with LD and students without LD. While students with LD were most frequently perceived as rejected, students without LD were seen as popular or average. In addition, students with LD see themselves as less socially self-efficient compared to their peers. The results of our study mostly refer to boys, because the sample comprised 359 boys and 58 girls. We believe that pro-inclusion teachers with appropriately developed strategies for strengthening students' social skills, as well as positive attitudes and sufficient knowledge about the special needs of students can have a significant impact on the social acceptance of students with special needs in the classroom community.

Keywords: students with LD, social integration, social self-efficacy, social acceptance, sociometric status, secondary school vocational education

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4 With the term "learning disabilities (LD)" a subgroup within the LD group is considered. This is a group of 3–5% of students with the most prominent specific learning difficulties.
5 The word "students" is used as a result of the rational notation and refers to students in secondary education.

Socialna sprejetost dijakov s primanjkljaji na posameznih področjih učenja (PPPU)

Teja Lorger*, Majda Schmidt, and Karin Bakračevič Vukman

V prispevku želimo osvetliti socialno sprejetost dijakov s primanjkljaji na posameznih področjih učenja (v nadaljevanju: PPPU) v različnih programih srednjega poklicnega izobraževanja v primerjavi z njihovimi sošolci brez posebnih potreb. Naše ugotovitve izvirajo iz empirične raziskave, v katero smo vključili 417 dijakov, od tega 85 s PPPU. Ugotavljamo, da so dijaki s PPPU slabše integrirani v oddelčne skupnosti kot njihovi sošolci brez posebnih potreb, kar smo izmerili prek sociometričnih analiz vseh sodelujočih oddelkov. Rezultati sociometrične analize namreč kažejo na statistično značilne razlike v sociometričnih položajih dijakov s PPPU in njihovih sošolcev. Medtem ko so dijaki s PPPU največkrat opredeljeni kot zavrnjeni, so dijaki brez posebnih potreb največkrat opredeljeni kot priljubljeni ali povprečni. Ob tem pa dijaki s PPPU sebi pripisujejo tudi slabšo oceno socialne samoučinkovitosti v primerjavi s sošolci. Rezultati naše raziskave se nanašajo predvsem na fante, saj je v raziskavi sodelovalo 359 fantov in 58 deklet. Menimo, da lahko učitelji, ki so naklonjeni inkluziji in imajo ustrezno razvite strategije za krepitev socialnih veščin dijakov, pozitivna stališča ter dovolj znanj, povezanih s posebnimi potrebami učencev, pomembno vplivajo na socialno sprejetost mladostnikov s posebnimi potrebami v oddelčni skupnosti.

Ključne besede: dijaki s PPPU, socialna integracija, socialna samoučinkovitost, socialna sprejetost, sociometrični položaj, srednje poklicno izobraževanje

Introduction

The social integration of students with special needs (SN) refers both to the cognitive aspects connected to efficacy and school performance as reflected by learning outcomes, and to the conative aspects related to the integration of these students into social relationships and social inclusion (Lebarič, Kobal Grum, & Kolenc, 2006). The social integration of students with SN thus means more than merely designing individualized education programs (IEP) and implementing adaptations that have a more or less positive impact on the learning outcome; students are entitled to such adaptations after having been officially recognized as students with SN by the Slovenian National Education Institute. It means much more: it means creating an optimal environment in which students with SN can strengthen existing knowledge and acquire new knowledge, develop and strengthen social relations with peers and, in turn, build and strengthen their social competences. It means an environment in which students with SN is accepted, desired and equal. Peers represent an important socialization group for the student with SN, one in which he wants to be accepted and to which he desires to belong. Exclusion from the classroom community can cause serious distress in students because the class is a formal social group in which the social interaction takes place that leads to social relationships, and that has clearly defined goals. Marentič Požarnik (1980) points out that by creating a classroom community, a class gradually turns into a group of connected individuals in which students actively engage in reaching goals and to which they develop a sense of belonging. Students gradually start to identify themselves with their peers because, during secondary socialization, peer groups become an important factor that plays a vital role in the development of students' personalities. As a relatively adaptable person, each individual is expected to be able to function in and adapt to desirable or undesirable interpersonal relationships; a certain level of social efficacy is thus expected from them. Satow and Schwarzer (2003) define the notion of social self-efficacy as an individual's faith in his own social competence even in difficult social situations. Studies that have investigated socially competent behaviour among pupils (Hubbard & Coie, 1994; LaFreniere & Sroufe, 1985; as cited in Zupančič, Gril, & Kavčič, 2000) have found that social skills manifest themselves as a socially adapted, emotionally mature and pro-social behaviour that leads to positive social results in the form of popularity and acceptance in peer groups.

This study aims to investigate the social position of students with LD in a classroom community with the help of sociometric measurement, a popular and established method of researching relationships in a group (Lewis &

Doorlag, 1999; Rogelj, Ule, & Hlebec, 2004). We are also interested whether the self-assessment of social self-efficacy of students with LD is similar to self-assessment of their peers.

Students with SN in secondary school vocational programs

The Placement of Children with Special Needs Act (ZUOPP-1) (2011, Article 2), which entered into force on 1 September 2013, recognizes the following as children with SN: children with intellectual disabilities; children with hearing and visual impairments; children with speech and language impairments; children with physical disabilities; children with long-term illnesses; children with LD; children with autistic disorders, and children with emotional and behavioural disorders who require adapted implementation of education and training programs, with additional professional support, or adapted education and training programs or special education and training programs.

After The Placement of Children with Special Needs Act (2000) came into force, the number of students with SN who were streamed into regular secondary school programs increased significantly. Over the previous decade, the number of such students has increased more than 15 fold (2002/2003 – 201 students; 2011/2012 – 3184 students) (Statistical Office of the Republic of Slovenia, 2012).

From the point of view of the students in programs included in our study, it is necessary to emphasize that between 2002/2003 and 2011/2012, the number of streamed students with SN in secondary school vocational programs increased more than 31 fold (Opara et al., 2010; Statistical Office of RS, 2012). While 43 students with SN were included in secondary school vocational programs in the 2002/2003 school year, 1341 students with SN took part in them in 2011/2012. In particular, it is secondary school vocational programs into which the majority of adolescents with SN are integrated, and students with LD prevail among them (Statistical Office of RS, 2012).

It is typical of the group of students with LD that, owing to recognized or unrecognized disturbances in the functioning of the central nervous system, developmental delays occur with respect to attention, memorization, thinking, coordination, communication, social skills development and emotional growth, as well as distinct problems with regard to reading, writing, orthography and calculation (Rules on the organisation and methods of work of commissions for the placement of children with special needs and on criteria for determining the type and degree of disadvantages, impairments and

disabilities of children with special needs, 2003). LD are internal in character; they are believed to be the consequence of a dysfunction in the central nervous system (Magajna, 2002) and have an influence on the individual's ability to interpret and/or connect information; and consequently, they impede the acquisition of learning skills (Kavkler & Magajna, 2003). Students with LD thus do not process information in the same way as their peers, which disrupts certain ways of learning; in addition, they experience difficulties in the field of metacognition.

Grmek et al. (2009) emphasize that students with LD are precisely those students with SN who have the weakest learning-motivational and social position, which is why they require the most assistance.

Sociometric position of students with SN

Lebarič et al. (2006) point out that the social integration of pupils with SN is the primary objective of inclusive teaching that leads towards positive self-esteem and positive self-image and contributes to inclusion in a social group and a sense of belonging to a social group. Fostering social relationships among all parties in training and education is vital to social integration. It is necessary to strengthen ties, feelings of security, acceptance and equality and equal abilities in students with SN. This makes it possible to compare and obtain positive feedback; it also contributes to balance and stability among students with SN.

The factors necessary for successful social integration include school professionals as well as peers and fellow students. Christensen (1996) and Martin, Jorgensen and Klein (1998) point out that a negative attitude by peers towards pupils and students with SN represents a significant barrier on the way to complete social integration (as cited in McDougall, DeWit, King, Miller, & Killip, 2004).

Studies in which inter-peer relationships were examined via a sociometric test among students with SN and their peers have mostly yielded similar results. They established that students with SN had a lower sociometric status were rejected more frequently and were less accepted that their peers (AkCamete & Ceber, 1999; Larrivee & Horne, 1991; Roberts & Zubrick, 1992; Sater & French, 1989; Smoot, 2004; Stone & La Greca, 1990; Sahbaz, 2004; Vuran, 2005, as cited in Baydik & Bakkaloglu, 2009; Pijl, Frostad, & Mjaavant, 2008; Haager & Vaughn, 1995) and struggled more to establish contacts with their school friends (Garrison-Harrell & Kamps, 1997; Monchy, Pijl, & Zandberg, 2004; Scheepstra et al., 1999; Soresi & Nota, 2000; Ytterhus & Třssebro, 1999, as cited in Pijl et al., 2008).

From these studies, three factors have been extracted that have an important impact on the acceptance and popularity of students among their peers: They are as follows:

- Learning competences that, according to many researchers, have a significant influence on the sociometric status of individuals in the classroom. Students with lower learning competences and poorer learning results have a worse sociometric status than their school friends with average or above-average learning competences (Larrieve & Horne, 1991; Roberts & Zubrick, 1992; Sater & French, 1989, as cited in Baydik et al., 2009).
- Behavioural problems proved to be an important indicator of low sociometric status. For students behaving less appropriately, a lower level of social acceptance was registered (Roberts & Zubrick, 1992; Ummanel, 2007, as cited in Baydik et al., 2009) as was a higher level of rejection (Cantrell & Prinz, 1985; Carlson, Lahey, & Neeper, 1984; Coie et al., 1982; French & Waas, 1985; Roberts & Zubrick, 1992; Warden & Mackinnon, 2003, as cited in Baydik et al., 2009). The studies indicate that pupils and students with LD are more frequently dealt with for having behavioural problems than their peers without LD (Cortiella, 2009, as cited in Kavkler et al., 2010).
- Social competences are competences that have a significant impact on acceptance and popularity among peers in the classroom community. Haager and Vaughn (1995) define social competences and competences that comprise social behaviour, understanding and application of social skills and social acceptance. Studies have shown that students previously rejected by their peers had less developed social competences (Sater & French, 1989, as cited in Baydik et al., 2009), while students with well-developed social competences enjoyed better sociometric status (Coie et al., 1982; Frederickson & Furnham, 2004; Ummanel, 2007; Warden & Mackinnon, 2003, as cited in Baydik et al., 2009).

Sociometric analysis is often used to measure the sociometric status. Based on data obtained by a sociometric analysis of many positive and negative choices, the participants are divided into the following five groups: popular and controversial (positive), rejected and overlooked (negative) and the average (Rubin, 2000, as cited in Zupančič, Gril, & Kavčič, 2001; Bakker, Denessen, Bosman, Krijger, & Bouts, 2007; Vyšniauskytė-Rimkienė & Kardelis, 2005). This division is based on a two-dimensional classification system with the following dimensions: social preferences (social popularity) and social impact (social prominence), which are defined on the basis of positive and negative choices and make possible placement into one of the sociometric groups that are defined in greater detail below (Hughes, 1988, as cited in Pečjak & Košir, 2002).

First, students with positive sociometric status will be defined. Popular students are those whom many peers choose as the desirable ones and only a few as the undesirable ones. They are characterized by a high social preference rate (> 1.0). These students are the most popular and the best accepted ones (Vyšniauskytė-Rimkienė et al., 2005). They are described as sociable, friendly, cooperative, and more successful at resolving social conflicts; they support their peers and are not hesitant to approach them; they frequently engage in discussions with others and are aggressive only in situations that frustrate them (Erwin, 1993; Putallaz & Gottman, 1981; as cited in Durkin, 1995; Rubin, 2000, as cited in Zupančič et al., 2001). Controversial students are those that are distinctly desirable among some peers, but distinctly undesirable among others. These students exhibit a combination of the behaviour of popular (sociable) and of rejected (aggressive) students. This group of students typically has a strong social impact (> 1.0) and good leadership skills (Vyšniauskytė-Rimkienė et al., 2005). In contrast, there are the students with a negative sociometric position, who are either rejected or overlooked. It is typical of rejected students that they are not liked by many of their peers, who view them as undesirable; in addition, this group of students shows the highest level of aggressive types of behaviour (Vyšniauskytė-Rimkienė et al., 2005). They typically have a low social preference rate (< -1.0). Studies have also shown that they are often antagonistic towards and critical of their peers; they often attribute hostile intentions to peers; they are more often hyperactive; they are spend significant amounts of time alone and feel more lonely than students of other groups (Asher & Coie, 1990; Ladd & Price, 1987; Shantz, 1986 as cited in Zupančič et al., 2001). It is typical of overlooked students that they are rarely chosen by their peers and that their social impact is low (< –1.0). Vyšniauskytė-Rimkienė and Kardelis (2005) point out that, in comparison with other sociometric groups, overlooked students have lower leadership skills and very few friends; however, they are not entirely isolated in the classroom. These students are characterized by higher levels of egocentric speech; they are socially inhibited and shy, careful and withdrawn and have a negative opinion of their own social competence (Rubin, 2000, as cited in Zupančič et al., 2001). It is typical of students with an average sociometric status that they do not stand out and are neither particularly popular nor rejected. In studies that investigate behavioural correlations between sociometric status, they usually represent a comparison standard; the relatively intangible samples of behaviour of average students thus serve as a basis for comparing members of more extreme sociometric groups (Košir & Pečjak, 2007).

The procedure defined by Coie and Dodge (1988) is used in the research. This procedure is based on standardization of the obtained positive and

negative choices and calculation of the measures of social preference and social impact; next, students were placed in sociometric groups in terms of the criteria listed in Table 1.

Table 1. *Criteria for placement of students into individual sociometric groups (Coie & Dodge, 1988; as cited in Pečjak et al., 2002)*

Sociometric group	Social preference	Social impact
Popular (most peers choose them as desirable ones)	> 1.0	Zp > 0; Zn < 0
Rejected (most peers do not like them, peers choose them as undesirable ones)	< – 1.0	Zp < 0; Zn > 0
Overlooked (chosen only rarely)	Zp < 0; Zn < 0	< –1.0
Controversial (desirable among some peers, undesirable among others)	Zp > 0; Zn > 0	> 1.0
Average (mostly accepted but do not score higher in terms of acceptance)	1.0 ≥ (Zp – Zn) ≥ –1.0	1.0 ≥ (Zp + Zn) ≥ –1.0

Note:
Zp – Standardized positive choices,
Zn – standardized negative choices,
Social preference = Zp – Zn,
Social impact = Zp + Zn.

Methodology

Our study is based on a descriptive and causal-non-experimental method of empirical pedagogical research.

Participants

The empirical research is based on a non-random *ad hoc* sample of first-year students from various vocational secondary school programs in north-eastern Slovenia. The invitation to take part in the study was sent to secondary schools with vocational programs in Podravje (13 schools); 10 schools agreed to participate. The study comprised 17 classes of first-year students who are studying for a vocational secondary school degree in various fields. Only those classes in which all students were present during the sociometric test were selected.

Respondents were classified in terms of gender (male/female), age (15, 16, 17, 18 years) and status (student with LD, student without SN).

The sample comprised 417 students, of whom 359 (86.1%) were boys and 58 (19.9%) were girls. The gender structure is a reflection of the fact that the majority of secondary school vocational programs included were typically male-dominated (car mechanics, machinists, electricians, carpenters and builders).

The majority of students (46%) included in the study were 15 years old, followed by 16-year-olds (39.6%), while significantly fewer were 17 (9.4%) or 18 years old (5%). This age distribution was logical because the latter two groups represent students who either were repeating the class or had, for various reasons (illness, social reasons, parenthood, etc.), enrolled in the program later than their peers.

Our sample comprised 20.4% or 85 students with LD, while 79.6% or 332 did not have SN. Students with LD are officially recognized as students with SN by a Special Education Needs Guidance Order, which is a legal document stating that the students may benefit from special education, indicating the most suitable programme and institution, the type and extent of special educational support, the provision of additional human or material resources and (if needed) the reduction of class size. The document is issued by the Ministry of Education, Science and Sport of the Republic of Slovenia.

Data collection procedure

Data were collected at the end of the 2011/2012 school year in professional and vocational secondary schools in Podravje with sociometric questionnaires and social self-efficacy questionnaires. Students filled out the questionnaires during classroom meetings in agreement with the school administrations and after having obtained permission for participation in the survey from the students' parents. Surveying took place under the supervision of a professional at each school. The school counselling service at each school provided us with data on the students' status (status of a student with SN) and the type of special needs.

Instruments

A sociometric test with a positive and a negative sociometric criterion was used in the study. All students in class answered the following two questions: "Whom do you get along with best in the classroom?" and "Whom do you get along with the least in the classroom?" The students answered each question by listing three school friends with whom they got along the best and the least in the classroom. Based on the data obtained with sociometric analysis via the number

of positive and negative choices, the participants were divided into the following five groups: the popular, the rejected, the controversial, the overlooked and the average, using the procedure defined by Coie and Dodge (1988).

In addition, the students also filled out a social self-efficacy questionnaire: the Social Self-efficacy Scale by Satow and Mittag (1999). This scale measures the sense of social competence for efficient responses in various social situations, such as making friends, expressing opinion, ability to apologize for one's faults, ability to talk about one's feelings or to resolve conflicts without violence. The scale comprises eight items in which individuals express their level of agreement on a four-point scale (1 = It is not true at all; 2 = It is barely true; 3 = It is mostly true; 4 = It is absolutely true).

Findings

The following is a presentation of findings obtained with the sociometric analysis of 17 secondary school vocational classes of various streams.

Table 2. *Result of χ^2-test of differences in sociometric status with respect to the presence of LD*

		SOCIOMETRIC STATUS					
LD		**Popular**	**Rejected**	**Overlooked**	**Controversial**	**Average**	**TOTAL**
YES	f	11	27	17	11	19	85
	f %	12.9	31,8	20	12,9	22,4	100
NO	f	109	46	43	33	101	332
	f %	32.8	13,9	13	9,9	30,4	100
TOTAL	f	120	73	60	44	120	417
	f %	28.8	17,5	14,4	10,5	28,8	100
χ^2-test		χ^2 = 24,337 P = 0,000					

Based on the data obtained with a sociometric analysis of secondary school vocational students of various programs via the number of positive and negative choices, the participants were divided into the following five groups: the popular, the rejected, the controversial, the overlooked and the average.

Table 2 shows that there are statistically significant differences in sociometric status with respect to the presence of LD (χ^2 = 24.337, P = 0.000). In students with LD, the most common group were the rejected students (31.8%), while students without any SN were mostly identified as popular (32.8%) and average (30.4%). In addition, regardless of the presence or absence of SN,

students were most represented in the same categories as students without SN, i.e., in the group of average (28.8%) and popular students (28.8%).

The findings of our study are not surprising because they are in line with the results of other studies regarding the sociometric position of students with LD. Prah (2011) examined the social interaction of pupils with LD in regular primary schools in Slovenia. She established that there are statistically significant structural differences between the group of students with LD and the group of their peers considering the difficulties in social interaction (students with LD had more difficulties in social interaction). Empirical studies in the US, Switzerland, Great Britain and Germany have yielded similar results and showed that students with LD who attend regular study programs on average have a worse sociometric position than their peers (Haeberlin, Bless, Moser, & Klaghofer, 1991). Kavkler (2005) established that peers reject 50% of pupils with LD, owing to problems in establishing and maintaining contacts, which no doubt poses a major problem. Stone and La Greca (1990) examined the sociometric position of pupils with LD in regular primary schools and determined that students with LD had a distinctly lower sociometric status than their peers and that they were overrepresented in the rejected and overlooked categories of students, but underrepresented in the group of popular and average students. Kavale and Forness (1996) likewise found in a meta-analysis that included 152 studies and 6353 students (the majority of whom were male (72%) that 8 out of 10 students with LD were rejected by their peers and that students with LD had inferior social skills than their peers without them. A study from 2007 by Bakker and colleagues that analysed the sociometric position of students with both specific and general LD in regular primary schools showed that it is students with general LD who have an inferior sociometric position in regular primary schools. Wong (1991, as cited in Nowicki, 2003) also found that social problems are frequently connected with LD and that people with LD are at greater risk of social rejection. In addition, many other studies have yielded similar results and showed that primary school students who are rejected by their peers often develop social, behavioural and learning disabilities during adolescence (Bierman & Wargo, 1995; Buhs, 2005; Coie, Lockman, Terry, & Hyman, 1992; French & Conrad, 2001; Parker & Asher, 1987, as cited in Crosby, Fireman, & Clopton, 2011).

The following is a presentation of findings the differences in the score of social self-efficacy between adolescents with LD and their peers.

Table 3. *Result of t-test of differences in the score of social self-efficacy with respect to the presence of LD*

					Test of homogeneity of variances		Test of differences in arithmetic means	
	LD	**n**	$\bar{x}$	**s**	**F**	**P**	**t**	**P**
SOCIAL SELF-EFFICACY	YES	85	23.83	3.44	1.061	0.304	−3.974	0.000
	NO	332	25.26	3.09				

The t-test result is based on a justified assumption about homogeneity of variances (Levene F-test: F = 1.061, P = 0.304). With respect to the presence of special needs, a statistically significant difference exists in the attitude of students towards their own social self-efficacy (t-test: t = −3.974, P = 0.000). As can be seen in Table 3, the examined sample shows a statistically significant difference in the evaluation of self-efficacy between students with LD and their peers. Our findings can be corroborated with the findings of studies about their own perception of social self-efficacy between adolescents with LD and their peers. Adolescents with LD assessed themselves as less successful in the social area; in addition, they are more pessimistic about developing and satisfying social relations (Lackaye, Margalit, Ziv, & Ziman, 2006).

Bandura (1997) points out that children with low social self-efficacy experience problems in interpersonal relations, are socially reserved, perceive a low level of acceptance from their peers and have low self-esteem. In an extensive longitudinal study that comprised 1361 students (of whom 55 had LD), Estell et al. (2008) found that students with LD had lower social status (social acceptance on the part of their peers, social functioning in class, underdeveloped social skills) than their peers without LD and that even inclusion does not necessarily ensure better social acceptance and better social functioning for those students with LD in a class. Our study yielded similar results. We think that problems in establishing and maintaining social skills and deficiencies in social functioning are reflected in the sociometric status of students with LD and, consequently, in their poorer social integration.

Isolation from and rejection by peers impedes access to social experiences, which has a negative impact on the sense of belonging in school and is detrimental to motivation (Asher & Coie, 1990). A feeling of not being accepted in a classroom community develops the most strongly in adolescence when it is necessary and important for adolescents to be accepted by peers. A lack of social interaction in class during adolescence can cause a feeling of loneliness in students with LD, a sense of a lack of social skills and, in turn, can make them avoid social risks (Hendrickson et al., 1996, as cited in Baydik et al., 2009) and

develop a poorer self-concept (Crosby, Fireman, & Clopton, 2011).

It is therefore necessary to foster the development of social competences in response to the connection between low social self-efficacy and the sense of being unaccepted by and isolated from peers (Soresi & Nota, 2000; Frostad & Pijl, 2007; as cited in Pijl, Frostad, & Mjaavant, 2011) because Pijl et al. (2011) and Crosby et al. (2011) found that it is precisely social competences that help pupils and students integrate into a group, which is why these should be developed and strengthened.

Conclusion

On the basis of the existing studies and our study, we found that in sociometric measurements, students assess their peers with LD most frequently as rejected students; simultaneously, students with LD consider themselves to be less socially efficient, which leads to the conclusion that they are less well integrated into classroom communities than their peers without SN. This happens because, in addition to LD, these students also have deficiencies in the area of social skills, which can also lead to a poorer social position. Students who are categorized as rejected often experience problems in peer-to-peer relations and are distressed because of that. The most common type of assistance to such students is social skills training (Košir, 2013). In addition to such training, which is most frequently planned and provided by a school counsellor and class teacher, students with LD who have deficiencies in the social area must also focus on the work of each teacher whose classes they attend. We believe that the teacher who assists a student with LD indirectly or directly in the development of the social skills and competences that student's needs for successful functioning at school and in society and helps him become accepted in the classroom community is the agent in the education and training system who plays a decisive role in the inclusion of all students. Qualification for implementing inclusion and a positive attitude towards pupils and students with LD are two prerequisites for quality work for professionals in Slovenian schools. The Green Paper on Teacher Training in Europe (2001) states clearly that very good teachers and their training are essential ingredients of various and numerous measures for the implementation of quality education and training (Buchberger, 2001).

In the course of their studies, teachers in Slovenia must learn how to recognize possible deficiencies, provide adaptations depending on the various special needs of pupils and students, become aware of the importance of individualized work with individuals with LD and internalize inclusive culture. Schmidt and Čagran (2011) point out that teacher training programs should

focus more intensively and for longer on achieving teacher's self-efficacy, with possible concrete intervention strategies that promote both the learning and social development of students with all SN (Van Acker, 1993; Woolfston & Bradey, 2009, in Schmidt & Čagran, 2011). Galeša (1995) warns that, in order to achieve successful integration of pupils and students with all SN, in addition to knowledge and its application in practice, it is also necessary to build on the relationship and the attitude of teachers towards them. Both professional qualifications and a positive attitude on the part of the teacher are the cornerstones on which successful inclusion can be built (Avramidis, Bayliss, & Burden, 2000; Schmidt, 1999). The TE4i project, in which teacher training and preparedness for inclusiveness were examined in 25 European countries, found that both initial training and on-going professional development were vital to the development of teacher competences and the encouragement of professional values and attitudes for work with various students in the classroom (Training Teachers for Inclusion, 2011).

A qualified teacher with an appropriate and encouraging attitude towards adolescents with LD and professional expertise can contribute significantly to the classroom climate and influence the acceptability of these students by their peers in the class. Acceptance by peers and a sense of belonging to the classroom community as well as professional treatment, assistance and adaptations from professionals can all help shape an inclusive school culture and thus strengthen the social acceptance of pupils and students LD in classroom communities.

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Craig, C. J., Meijer, P. C. and Broeckmans, J. (Eds.) (2013). From Teacher Thinking to Teachers and Teaching: The Evolution of a Research Community. Advances in research on teaching, 19. Bingley: Emerald. 734 pp., ISSN 1479-3687 (Series), ISBN 978-1-78190-850-1.

Reviewed by Barbara Šteh

On their 30th anniversary, the International Study Association on Teachers and Teaching (ISATT) published a book written by their members, entitled "From Teacher Thinking to Teachers and Teaching: The Evolution of a Research Community". This expansive volume represents a valuable resource for all teachers, teacher educators and other experts involved with teachers' professional development in research, theory and practice. The title itself indicates that between the 1983 and 2013, a paradigmatic shift in the association came about, from studying teachers' thinking to the study of teachers and teaching in all its complexities. During this period, the membership also expanded considerably; members now come from 45 countries. In 32 chapters of the book, there are contributions of "founding fathers/mothers" as well as of those that joined the organisation later on, from all parts of the globe. This broad authorship was in line with the intentions of the three main editors, Cheryl C. Craig from the University of Houston, Paulien C. Meijer from Nijmegen University and Jan Broeckmans from Hasselt University. They were supported by 16 regional editors from different European regions, Middle East, North America, Asia, and Australia.

The first look at the key words in some titles tells us much about the main paradigmatic (interpretative, qualitative, humanistic) orientation of the authors: teacher knowledge, teacher as story teller, narrative research, holistic approach, reflective practice, moral matters, professional identity, self-understanding, vulnerability and so on.

The volume comprises five parts:

I The Origins of the International Study Association on Teachers and Teaching
II Research Strands
III Contemporary International Scholarship

IV Advances in Teacher Education
V Growth in Community

In the first part, the origins, history and development of ISATT and the already mentioned paradigmatic shift are presented, as well as the evolution of ISATT's research interests, expressed through publication titles. We also find a personal perspective on ISATT by Joost Lowyck, the first elected chair of the organisation, and by Barica Marentič Požarnik, who described the impact of her participation in ISATT together with other influences (organisations, projects, etc.) on her professional activities and beliefs, in the specific Slovenian context. She concludes that we should "not 'forget' basic lessons we already learned about vital sources of teacher's professional development – deeper reflection, positive emotions and motivation, 'core identity' (Korthagen, 2005) and that we should concentrate on attempts to foster real growth, not only superficial changes in formal frames or bureaucratic control of new programmes" (p. 62).

Part II consists of 15 chapters and features research strands that ISATT members have pursued over time, comprising following key research themes:

- *Teacher Knowledge*, with the historical contribution from 1985 by D. Jean Clandinin "Personal Practical Knowledge: A Study of Teachers' Classroom Images" that was at the forefront of the paradigm shift in education. Freema Elbaz-Luwisch and Lily Orland-Barak show the transition of teacher knowledge into inquiries into teacher learning in communities.
- Historical work on *Narrative Research* "Story-Maker, Story teller: Narrative Structures in Curriculum" by Sigrun Gudmundsdottir, a deceased ISATT member, pushed "Lee Shulman's pedagogical content knowledge conceptualization into the realm of narrative" (p. 65). This contribution is complemented by Leena Syrjälä and Eila Estola, two Finnish authors ("Narrative Research: From the Margins to Being Heard").
- The strands on *Teacher Professional Development, Teacher Professional Identity and The Moral Matters of Teaching* include Beatrice Avalos' contribution on "Teacher Professional Development in Teaching and Teacher Education from 2000-2010"; Douwe Beijaard's, Paulin C. Meijer's and Nico Verloop's review of literature from 1988 to 2000 on teacher identity and the valuable contribution "The Moral Matters of Teaching: A Finnish Perspective" by Kirsi Tirri, Auli Toom and Jukka Husu.
- In the strand on *Teacher Reflection and Reflective Practice*, the contribution of Fred A. J. Korthagen, an author also well-known (and translated) in Slovenia, "In Search of the Essence of a Good Teacher: Toward a More

Holistic Approach in Teacher", followed by articles from different parts of the globe about deepening reflection, reflective classroom practice in Hong Kong, teacher education in Brazil and reflective practice in the teaching profession in the French community in Belgium.

- In the strand on *Educational Leadership*, Michael Schratz presents paradigmatic changes in the conception of leadership in the sense that school leaders are regarded as agents of change that facilitate student and teacher's growth.
- The subtheme on *Lives of Teachers* consists of reprinted articles of two established authors: Christopher Day's "The New Lives of Teachers" and Geert Kelchterman's "Who I Am in How I Teach is the Message: Self-Understanding, Vulnerability, and Reflection".

Part III – *Contemporary International Scholarship* builds on Part II and consists of eight chapters on teacher development, teacher identity, teachers' lives, moral decision making and the influence of leadership from different countries. Most contributions originate from ISATT's new regions (South Africa, Kyrgyzstan, Kenya, China, and India) and new members, but some are written by long-term members who present challenges that teaching and teacher education are facing in their countries. In this last group, I recommended reading the contribution by Maria A. Flores "Be(com)ing a Teacher in Challenging Circumstances: Sustaining Commitment or Giving Up in Portugal?" Stories of two beginning teachers vividly illustrate the key influences on the development of their professional identities.

In Part IV – *Advancement in teacher education* – we find three significant contributions. Anneli Lauriala writes about "Changes in Research Paradigms and Their Impact on Teachers and Teacher Education: A Finnish Case". The second contribution is a reprint of an Association of Teacher Education (ATE) Yearbook titled "Teacher Education that Makes a Difference: Developing Foundational Principles of Practice". Here, key experts John Loughran (Australia), Fred Korthagen (The Netherlands) and Tom Russell (Canada) develop a set of foundational principles based on critical self-study of teacher education programs by teacher educators in their home countries "in order to initiate a renaissance of teacher education based on fundamental principles to guide the development of responsive teacher education programs that genuinely make a difference" (p. 598). In the third contribution, Michal Zellermayer and Edith Taback focus on "The Sustainability and Nonsustainability of a Decade of Change and Continuity in Teacher Education".

Part V – *growth in community* – also consists of three chapters. Barbara Šteh and Marjeta Šarić present on the basis of their experience "Two European Reflections on Professional Development in the ISATT Community: Looking Backward, Moving Forward." In a similarly personal way, Issa Danjun Ying, Amanda McGraw and Amanda Berry address the relationship between self and community through inquiring into the impact of ISATT on the professional learning, teaching, and research of members specifically in the Asia-Pacific region. The final Chapter "Back to the Future from a Chinese Perspective: A Philosophical Reconstruction of Ideas Gleaned from the Fifteenth ISATT Conference" was contributed by the new ISATT member Xiaohong Yang.

The volume can be regarded as an authoritative resource book, a recommended reading for researchers and practitioners in the fields of teaching and teacher education because of its many valuable contributions. At the same time, it as a witness of a professional community that succeeded to grow and develop and at the same time remained faithful to its original mission, goals, and methodological approaches.

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