

PROFESSIONAL COMPETENCES FOR TEACHING IN THE 21ST CENTURY

Proceedings of the International Conference
Organised by the Faculty of Education in Jagodina on May 23–25, 2019

Edited by
Vera Savić and Olivera Cekić-Jovanović



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Editors' introduction

Life in the 21st century is constantly being challenged by advances and changes in living and working that mainly result from fast technological growth and demands of information-rich work environments. To respond successfully to the transformed nature of work and social relationships, education systems worldwide have highlighted the key role of teachers for developing the crucial learner competences at all levels of education, from kindergarten to higher education, in the following areas: ways of thinking (creativity and innovation, critical thinking, problem solving, decision making, learning to learn, metacognition), ways of working (communication, collaboration, teamwork), tools for working (information literacy, ICT literacy), and living in the world (citizenship, life and career, personal and social responsibility and cultural awareness) (Binkley et al., 2012). Since the greatest responsibility for providing conditions for deeper learning and competence development in the classroom lies with the teachers, teacher education and professional development programmes need to help student teachers and practicing teachers develop the pedagogical strategies that promote learner competence development. To empower learners for life in the 21st century, teachers need not only to update their existing teaching strategies, but to develop new competences critical for uncovering and boosting learners' capacities. Teachers' roles in the classroom have increased to include "[being] activators of meaningful learning, not just facilitators, being creative in choosing from a wide palette of strategies to be mixed and adjusted to context and learner", and becoming "mentors who build relationships of trust with pupils; orchestrators of individual and group learning; alchemists who compound strategies, techniques and resources to spark pupils' creativity; welders who connect bits and pieces of knowledge and activities into a meaningful whole; team players, understanding and deploying their own and others' potential to the full" (Caena & Redecker, 2019).

This book is the result of research in the area of the key 21st century professional competences of teachers, presented at the international conference titled *Professional Competences for Teaching in the 21st Century* that was held at the University of Kragujevac, Faculty of Education in Jagodina, Serbia, on 23–25 May 2019. The aim of the thematic conference was to study from the national and international perspectives how teacher education can best respond to the new demands for developing preservice and inservice teacher pedagogical strategies that promote effective learner development. Teacher educators and experts in the field of preschool teacher education, primary and secondary

school teacher education, teacher professional development, and curriculum development, have contributed their chapters that cover the following topics:

- quality and development of preschool teacher 21st century professional competences
- quality and development of class teacher 21st century professional competences
- quality and development of primary school teacher 21st century professional competences
- quality and development of secondary school teacher 21st century professional competences
- quality and development of university teacher 21st century professional competences
- teacher education study programmes and 21st century professional competences
- teacher professional development programmes and 21st century professional competences.

The book contains 33 chapters written by national and foreign experts in the field of teacher education and development. The chapters mainly present original experimental research reports and are organized thematically into the following six sections: 1. Teaching Competences in Higher Education; 2. Teaching Competences in Preschool Education; 3. Teaching Competences in Primary Teacher Education; 4. Teaching Competences in Language Education; 5. Teaching Competences in ICT Education; and 6. Teaching Competences in Inclusive Education.

Section 1: Teaching Competences in Higher Education

In this section, the authors Radovan Grandić, Veljko Bandur, Maja Bosanac, Sanja Blagdanić, Aleksandar Stojanović, Irena Golubović-Ilić, and Slađana Stanković, address issues of lifelong learning and development of professional competences of teacher educators at Serbian state universities.

Section 2: Teaching Competences in Preschool Education

The authors Sanja Filipović, Mirjana Marković, Mirjana Nikolić, Slađana Milenković, Isidora Korać, Ljiljana Stankov, Sanja Vuletić, Mira Jovanović, Jelena Spasić, Ivana Milić, Jelena Mladenović, and Jovana Đorđević, discuss in this section how preschool teacher education contributes to developing the competences needed for fostering giftedness and applying an integrative approach in catering to preschool child's development.

Section 3: Teaching Competences in Primary Teacher Education

In this section, the authors Sandra Kadum, Mirjana Radetić Paić, Katari-na Putica, Aleksandra Anđelković, Milena Stojanović Stošić, Dragana Stanković, Ana Stanisavljević, Emina Kopas-Vukašinović, Aleksandra Mihajlović, Nataša Vukićević, Dušan Ristanović, Jelena Grkić Ginić, Biljana Stojanović, Predrag Živković, Miloš Djordjević, and Katarina Stanojević, argue that in order to successfully support the crucial learner competences, prospective class teachers need to develop competences for project-based teaching, problem-based teaching, integrative approach, and for developing learners' creativity.

Section 4: Teaching Competences in Language Education

The authors of chapters in this section, Ana Jovanović, Katarina Zavišin, Branislav Randjelović, Joan Kang Shin, Toshiko Sugino, Maria Bajner, Alema Fazlić, Elma Marić, Olja Milosevic, María Rossana Ramírez-Ávila, Vera Savić, Olivera Cekić-Jovanović, Ivana Ćirković Miladinović, and Marija Stanojević-Veselinović, explore language teachers' perspectives, plurilingual competences and professional development opportunities that may empower them as 21st century educators.

Section 5: Teaching Competences in ICT Education

This section deals with a range of ICT literacies needed by all the participants in current educational processes. The authors Ljiljana Jelić, Marija Popović, Svetlana Prtenjak Milenković, Zoran Stanković, Jelena Osmanović, Nebojša Denić, Jelena Rajović, Jelena Stojanović, Verica Milutinović, and Suzana Đorđević, examine the factors affecting the development of ICT competences in preschool teacher and class teacher education.

Section 6: Teaching Competences in Inclusive Education

The authors Ivan Čuk, Mojca Peček, Daliborka Popović, Jelena Đurđević Nikolić, Vera Divac, Jelena Maksimović, Sanja Srećić, Sunčica Macura, and Jelena Starčević, explore the development of a range of student teacher competences critical for inclusive education.

Overall, this book offers a comprehensive study of theory, research, and pedagogy for shedding light on professional competences for teaching in the 21st century. It explores a multitude of themes and can serve as a useful resource for teachers and teacher educators in diverse contexts. Given that education improvement depends to a great extent on teacher quality, i.e. the quality of initial teacher education and the continuous professional development and lifelong learning of teachers, the book may further inspire future research focused on teacher competence development as a permanent process.

Acknowledgements

We gratefully acknowledge the funding support of the Ministry of Education, Science and Technological Development of Serbia. We thank all the authors of the chapters for their valuable contributions, hoping that their studies may be the incentive for new research in the field of teacher education and development. We would especially like to thank the reviewers of the chapters and the book as a whole who have made an enormous contribution to the quality of the chapters. Most importantly, we acknowledge the commitment and hard work of the Conference Scientific Committee and Conference Organisation Committee.

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Section I

Teaching Competences in Higher Education

Chapter I

LIFELONG LEARNING – CONTEMPORARY SOCIAL CONTEXT WITH MANY CHALLENGES, POSSIBILITIES AND IMPLICATIONS FOR UNIVERSITY TEACHERS¹

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Abstract: Lifelong learning represents a multifaced concept. For the purposes of this paper we analyze the implications of lifelong learning on higher education, first of all, on university teachers. The aim of this paper is to examine the complexity of the process of lifelong learning which, in the contemporary social context is facing numerous challenges, and also and possibilities to which we approach critically and analitically. As a starting point for the analysis of the concept of lifelong learning we take a division that encompasses three levels of its development: (1) personal and cultural, (2) social, and (3) professional development. Our starting point is that it is necessary for each of these, above mentioned levels, to have a similar significance, and that university teachers play an important role in this process. Furthermore, we also pay attention to the critical approach which lifelong learning process sees as a purely market-oriented concept, often mentioned and as academic capitalism. Due to numerous life challenges in the modern world, as important life skills for the 21st century, we emphasize reasons for integrating and encouraging civic engagement, in order to prevent that competence and profit become the primary dimension of lifelong learning. As a consequence of the interaction of the university and its external communities and the internal environment we consider as relevant to present Macfarlan's model of components of the academic profession which includes: (a) political literacy, (b) social and moral responsibility, (c) community engagement (academic and non-academic). As a conclusion of this paper we state that, although market practice has a huge impact on education, its impact should not be dominant, but in harmonization with personal and social development, and representatives of social and human sciences play the most important role in its preservation.

Keywords: *lifelong learning, personal development, social development, civic engagement, university teachers*

¹ The paper originated from the project *Pedagogical Pluralism as the basis of the education strategy* (179036) funded by the Ministry of Education, Science and Technological Development (Serbia)

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Introduction

The concept of *lifelong learning* is gaining importance within the framework of the syntagm the *knowledge society*. As a consequence, there are more expectations from the education process from various segments of society and from different stakeholder groups. Additionally, numerous requirements placed toward the education process can be analyzed at different levels: makro, mezo and mikro. As a result of the process of globalization each of these levels is particularly important. In addition, often, these levels are mutually conditioned. For the purpose of this work, we focus our attention on higher education, with particular reference to some of the implications of lifelong learning on the work of university teachers. Due to the lack of addressing of this issue in our academic community in Serbia, we put emphasis on the importance of fostering personal and social responsibility, as well as the role that university teachers have in promoting citizenship. Its significance is emphasized within a number of international reports as well as within the skills and competences that are considered as relevant to the 21st century. However, one controversial question can be posed here: is it, and to what extent is the role of university teachers, in addition to their basic roles, to promote social responsibility and civic engagement? Are additional roles and expectations justified by modern social changes or additional roles and expectations can lead to an unnecessary burden on university teachers? For the purpose of a more comprehensive approach to clarifying the significance of the posed question, we present the concept of lifelong learning with the many controversies it implies. After that, we present the key competences for the 21st century with a special emphasis on the skills that are stated in the context of life in the modern world. Due to the growing opening of the universities toward the environment in which it operates, we present Macfarlane's model of components of the academic profession together with the implications for university teachers. Finally, based on the presented and analyzed phenomena and the circumstances in which higher education is located, we also formulate our final considerations.

Lifelong learning

Lifelong learning is a multifaceted concept, it is a prerequisite for development understood in terms of adaptability and autonomy, as well as a means of ensuring sharing and knowledge flow across the globe (Milutinović, 2008). The classification of lifelong learning that is often referred to is the one that implies three forms of education: (a) formal education which represents an institutionalized, chronologically-graded and hierarchically structured education system covering primary, secondary and higher education; (b) non-formal education representing an organized and systematic activity of learning that goes beyond

the formal system and which provides a variety of learning activities to specific subgroups of the population of adults and children; (c) informal education that represents a lifelong process by which everyone acquires knowledge, skills and attitudes through the experience and contact with others. It takes place in social institutions such as family, marriage, peer groups, working groups, etc. All these forms are interlinked in reality, so it is important to develop a strong connection between them in order to develop a system of lifelong learning (Milutinović, 2008). Lifelong learning is a process that should ideally be meaningful at three levels which, though closely linked, can be ranked differently according to the individual and the period in life. In short, there are three levels of development (*UNESCO World Report*, 2005): (1) personal and cultural development – the meaning a person gives to his or her life; (2) social development – one's place in a community, citizenship, political participation and living together in society; and, lastly, (3) professional development – stable quality employment and its links with production, job satisfaction and material well-being. Lifelong education thus entails transforming, redistributing and re-harmonizing individual and social periods of learning. These levels of development can be linked to the goals of education. In that sense personal development which refers to the importance attached by an individual to one's own life, can be linked to the pedagogy of personality formation, that is, the pedagogy of the essence of Bogdan Suchodolski (1974), in contrast to social development, which relates to the role of an individual in the community, citizenship and political participation in a common life, namely, the pedagogy of existence, or preparing for life. In pedagogy, these two antinomian contradictions have often been the subject of numerous academic discussions, which of these two pedagogies is more significant. In this context, it is also important to draw attention to the additional complexity of the concept of lifelong learning, which represents the realization of the third level which implies professional development, that is, the constant quality of employability and connection with production, job satisfaction and material profit. According to Milutinović (2008: 234), one should be careful that the emphasis on the economic and professional dimension of lifelong learning would not marginalize the interests of individuals and their efforts to learn for personal development purposes. This dimension is usually the target of critics. Some critical theoreticians (Gouthro, 2002 according to Milutinović, 2008: 235) are particularly opposed to the market-oriented concept of "lifelong learning", which, they claim is dominant in political and economic discourse and they state that such a concept serves to capitalist interests in industry encouraging people to compete with one another as educational consumers and producers. An environment that is changing rapidly, as well as the growing demands of many participants in the external environment, strongly affect universities and require significant and ever-faster changes. Market orientation and entrepreneurial spirit that is increasingly encouraging becomes the main model that

describes the orientation of contemporary universities (according to Ćulum & Ledić, 2011). Altbach (2008) warns that the market-oriented academic tendencies of the 21st century are the reasons for concern because universities lose the character of social institutions of the public good, and they should also serve the humanistic and cultural goals of society and individuals. Contrary to the above-mentioned criticisms of the market orientation of lifelong learning, the following chapter focuses on the integration of civic engagement as a social development, but this approach does not lack criticism as well.

Integration of civic engagement

Considering the analytically oriented approach, we have to pay attention to the different terms some authors in Serbian language use for word *civic*. There are certain differences that are historically conditioned. The term *civilno društvo* draws the roots from Anglo-American terminology and *građansko društvo* is a traditional domestic translation of the classical German term (*burgeliche Gesellschaft*) (Pavlović, 2006). Older translations in Serbian-Croatian gave preference to the term *građansko društvo*, while the recently almost forgotten term *civilno društvo*, has entered into intensive use in the last two decades. In that sense Pavlović (2006) asks whether we are talking about theoretical fashion change or the cyclical revival of old concepts? For the purposes of this paper the terms *civilno* and *građansko* are perceived as synonyms under the term *civic*. Due to the challenges of terminological indeterminacy, Jacoby moves the boundaries of terminological ambiguity even further and asks whether advocacy for civic engagement is ideology, philosophy, pedagogical approach or program of political action, can there be anything, or even all of the above mentioned (according to Ćulum and Ledić, 2010). The problem of the relationship between the state and the civil society towards education is studied by Avramović (2003) who states that the idea of civil society is a Western European and American product, with the “leading role” being taken over by American pragmatism and globalism. The other part of mankind is in a position to undertake this idea under various pressures. Education is seen as a “factor of transformation and change” of society proclaims political and social goals, not educational (2003: 217). On the other hand, having in mind social context in which universities operate, some authors are pointing to several reasons for fostering civic engagement. By the synthesis of the discussion in the international academic community, Ćulum & Ledić (2010) conclude that the integration of civic engagement is encouraged by the following reasons: (1) the current problems of the society; (2) the market orientation of modern universities; (3) criticism of academic knowledge; (4) poor incentives for high school education programs for active citizenship; (5) low level of civic engagement of citizens. Rulebook on the procedure and conditions for the election

of academic staff at the university of Novi Sad *Pravilnik o bližim minimalnim uslovima za izbor u zvanja nastavnika na univerzitetu u Novom Sadu* (available at: https://www.uns.ac.rs/images/novosti/2016/UNS_Pravilnik_bliži_minimalni_uslovi_za_izbor_u_zvanja.pdf), precisely cites the contribution to the academic and wider community as one condition for the election. However, civic engagement is recognized and valued but still it is an optimal, not obligatory condition. Since civic engagement is increasingly mentioned within the development of democracy, Table 1 presents the elements of the political and civic strategy of new democracies. The relationship between democracy and education is closely linked to the issues of globalization and education, as well as the movement towards a knowledge society and the philosophy of lifelong learning that emerged under conditions of contemporary social change. When it comes to the efforts of social, and above all political science, to find the answer to the question of what makes democracy in a long period of time strong and successful, Sheri Berman points out that while the earlier generations of scientists were emphasizing economic, political or institutional factors in dealing with these issues, for today's scientists social and cultural variables are fashionable. The most common syntagm for this kind of variable is the concept of civic society (according to: Pavlović, 2006). In this context, the influence of civic society, especially the segment that implies civic commitment in the development of a democratic society and its impact on the educational process, includes the emphasis on opposing elements of political and civic strategy, although autonomously formulated, they should be complementary (Pavlović, 2006).

Table 1: Elements of the political and civic strategy of new democracies

Political	character/criterion	Civic
top-down	direction	bottom-up
political elite	participatnts	citizens
political parties	channel the action	association of citizens
Institutions	field of action	values
Laws	implementation	civic action
Administration	capacity	networking
free market	economy	private property
money/capital	resource	social and human capital
political power	integration	solidarity

Adapted and translated: Pavlović, V. (2006). *Civilno društvo i demokratija*. Beograd: Službeni glasnik

The reform of education, in this case, refers to the reform of higher education, which largely implies changes that have been implemented as a top-down political process, which relates primarily to the Bologna process, with no dialogue with a wider academic community (Rončević & Rafajac, 2010). On the contrary, civic strategy implies a bottom-up approach. A comprehensive approach is possible only if both directions are taken into account. When it comes to different fields of action, achieving a complementary relationship needs to be accomplished. In this context, institutions are important – when it comes to political as well as values as the field of action of the civic strategy. Another important criterion that offers the civic dimension is social and human capital, contrary to a political strategy focused on money / capital. Thus, although market practice has a significant impact on education, its impact must not be dominant, but in harmony with personal and social development, and representatives of social and humanistic sciences have the most important role in the process of their development and preservation.

Key Competencies for the 21st Century

Due to the increased need for higher education, there is an increasing number of international initiatives dealing with the new philosophy of education. In order to fully respond to the needs of a modern society, education organized by the UNESCO the International Commission for the Development of Education for the 21st Century is organized by four basic areas that will represent pillars of knowledge for each individual (Delor, 2006): (1) learning for knowledge, which means to master the means of communication; (2) learning to work, or to act in their surroundings; (3) learning for a common life, that is, to participate and cooperate with others in all human activities, and (4) learning for existence. Similarly, key competences for living and working in the 21st century are on the list reported by Binkley et al. (2012: 18–19) which is organized in a way that represents ten skills within four separate groups. The first group includes *a way of thinking* and consists of the following three skills: (1) creativity and innovation, (2) critical thinking, problem solving, decision making, (3) learning to learn, metacognition; the second group includes the *ways of working* and consists of the following two skills: (4) communication, (5) collaboration; the third group includes *tools for working* and consists of two skills: (6) information literacy, (7) ITC literacy. The last group of skills which Binkley et al. (2012) list as important skills of the 21st century, are in the main focus of our paper. They are under the group *living in the world* with following skills; (8) *citizenship* that includes: community participation/neighborhood activities, as well as decision-making at national and international levels; voting in elections: The ability to display solidarity by showing an interest in and helping to solve problems affecting the local or wider community; the ability to interact

effectively with institutions in the public domain; the ability to profit from the opportunities given by the home country and international programs (Binkley et al., 2012), (9) *life and careers*, in the context of which the significance is emphasized: adapting to changes: functioning in different roles, jobs, responsibilities, schedules and contexts; flexibility; incorporate effective feedback; negotiate and balance diverse perspectives and beliefs to reach workable solutions: manage goals and time: set goals with tangible and intangible success criteria: balance tactical (short-term) and strategic (long-term) goals: utilize time and manage workload efficiently; work independently: monitor, define, prioritize and complete tasks without direct oversight: interact effectively with others: know when it's appropriate to listen and when to speak: work effectively in different teams: leverage social and cultural differences to create new ideas and increase innovation and quality of work: manage projects: set and meet goals, prioritize, plan and manage the work to achieve the intended result even in the face of obstacles and competing pressures: guide and lead others: use interpersonal and problem solving skills to influence and guide others toward a goal: leverage strengths of others to accomplish a common goal: inspire others to reach their best via example and selflessness: demonstrate integrity and ethical behavior in using power and influence (Binkley et al., 2012), (10) *personal and social responsibility* that capture the following abilities: ability to communicate constructively in different social situations (tolerating the views and behaviour of others; awareness of individual and collective responsibility): ability to create confidence and empathy in other individuals: ability to express one's frustration in a constructive way (control of aggression and violence or self-destructive behavior patterns): ability to maintain a degree of separation between the professional and personal spheres of life and to resist the transfer of professional conflict into personal domains; awareness and understanding of national cultural identity in interaction with the cultural identity of the rest of the world; ability to see and understand the different viewpoints caused by diversity and contribute one's own views constructively; ability to negotiate.

Thus, as the UNESCO International Commission for the Development of Education for the 21st Century (Delor, 2006) points out, it is no longer sufficient for each individual to accumulate a certain amount of knowledge at the beginning of his life, which he will use later on. It is necessary to be able to master and use all the situations throughout life in order to deepen and enrich knowledge, adapting to the changing world (Grandić, 2006: 171). All in all, it is possible to perceive the growing importance of social factors influencing the educational process that shape it, affecting the redefinition of goals as well as the acquisition of competences that are much wider than professional development in a particular disciplines. Here one controversial question can be raised: does the concept of civic engagement offer new possibilities or hidden proclamation of political and social goals, instead of educational? What are the

chances that in future, as inevitability in the context of new social realities educational goals are going to be subordinated to social goals?

Implications of the relationship between the university and the external environment to the academic profession

The development of education, in its broadest sense, is not so much stimulated by its internal dynamics as it was in the past, but has become far more sensitive to external pressures (Milutinović, 2008: 212). In that sense, the constant demands for the advancement of universities, coming from different sectors of society, make the current research of the relationship between the university and its external environment. Considering the significant role that university teachers have in this process, it is necessary to direct the analysis of the implications of these changes in the work with university teachers. One of the comprehensive models of university interaction and its external and internal environment is Macfarlane's model (Macfarlane 2007, according to Ćulum & Ledić, 2011).

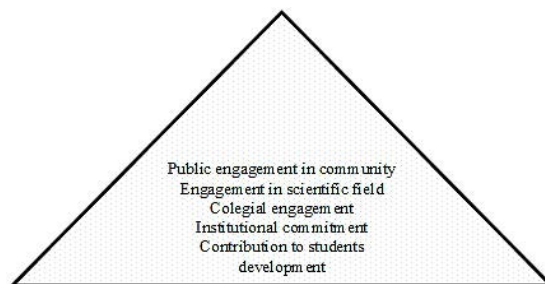
Table 2: Components of the academic profession

Components of the academic profession	Implications for university teachers
Political literacy	Understanding the process of governance and decision-making at all levels of the university: monitoring of new policies and participation in the discussions: as appropriate, active participation in the management functions
Social and moral responsibility	Understanding and accepting responsibility for the development of students, colleagues, universities, academic and professional bodies, interest groups in the local community and society in a broader sense
Community engagement (academic and non-academic)	Community participation/engagement (academic and non-academic) Knowledge and skills for mentoring students, support for colleagues at the university and profession, applied research based on community needs and development of new knowledge, solutions for perceived needs and problems: communication and public

Translated: Macfarlane 2007 (according to: Ćulum & Ledić, 2011)

The components of academic citizen set up on this way (Table 2) imply that a university teachers possesses appropriate knowledge (political literacy), key values (related to social and moral responsibility), and academic advancement skills in the academic community and beyond. According to Macfarlane, an academic citizen should regard higher education as much more than providing and adopting useful knowledge and skills for the labor market. Researching is a tool for solving local community and society problems, not just for publishing individual promotion and advancement (according to Ćulum & Ledić, 2011). Macfarlane points out that university teachers in their everyday work are in constant interaction with five different communities, whose intersections are different and intertwined with each other: students, colleagues, their institution, academic community, their profession and the public. Differences in importance can be measured in relation to a number of interrelated factors that are valued in the academic community: in which measure of activity is recognized as academic, whether it is linked to an academic or non-academic community, how much is visible to colleagues and is it recognized as a criterion of scientific-educational progression? (Ćulum & Ledić, 2011). In order to better understand the various interest groups in the academic and non-academic community that shape the daily work of university teachers and under which university teachers have responsibility, Macfarlane (Macfarlane, 2007, according to Ćulum & Ledić, 2011: 47–48) develops a pyramid of five communities (Figure 1) and associated activities of the public dimension of functioning.

Figure 1: Pyramid of Communities and Related Activities of Public action



Translated: Macfarlane 2007 (according to: Ćulum & Ledić, 2011)

Without going into more detail in the analysis of each community (more in Ćulum & Ledić, 2011), what we consider to be significant is highlighting the public engagement in the community that makes the top of the pyramid and signifies interaction with the non-academic community: representatives of local self-government, business sector and professional associations, the

non-profit sector, civil society organizations and civil initiatives in the community, as well as the media. Examples of activities include public lectures, professional co-operation with media on important and current issues, advocacy activities for local government and local government units, cooperation and assistance in strengthening the capacities of local civil society organizations, development of cooperative relations with community representatives and opening educational opportunities for students to acquire experiencing business opportunities, as well as encouraging learning through their community commitment (Ćulum & Ledić, 2011).

Finally, after we have put forward the theoretical considerations, we may ask some important questions: First of all, are the theoretical principles of the above-mentioned education policy in accordance with the educational practice? How university teachers as the main holders of these requirements perceive them, as a new opportunity or as a burden added to existing obligations?

Concluding remarks

The implications of the lifelong learning process arising from the interaction of formal, non-formal and informal education imply greater recognition of different forms of learning arising from different contexts, leading to the opening of the university to the environment they work in, as well as cooperation with non-academic institutions. On the one hand, this implies numerous opportunities for cooperation, including mobility, above all at the international level, but also adds even more challenges. As one of the criticisms, the emphasis is on economic benefits, market orientation, which makes the social and humanist sciences as well as the values they propagate in an undesirable position. Without negating the influence that the market mechanisms have on the process of education, the paper highlights the importance of personal and social development, which should be encouraged and harmonized together with professional development, product development and material gain. In this framework, we also analyze academic profession by presenting roles that include the public dimension of university teachers as well as cooperation with various representatives of the non-academic community. Nevertheless, it is important to note that if it is perceived as a new possibility for university teachers, cooperation must be carried out carefully and organized in a such a way that academic integrity is not endangered. There are also a number of questions that need to be answered: are the universities a place of democratic rights, social enlightenment, production of knowledge for a technology-based society, introduction of skills for workplace, place of personal transformation, or critical analysis (Barnett, 2004)? What is the role of university teachers in this process? How do academic staff conceptualize community engagement and related concepts in higher education institutions? What are the current models for community

engagement in higher education institutions and what does a university that is socially engaged mean? National councils and committees require political, direct and bureaucratic responsibility, but what about institutional culture? Do institutions still have their inherited patterns in terms of dominant traditions, symbols, and patterns of behavior that remain inherent in spite of wider changes that change the higher education environment? (Jansen, 2004, according to Bender, 2008). In this context, it is necessary to further actualize the question of if there is a need to encourage civic dimension in the context of higher education. If the answer is positive, which is the best way to do so, but if it is negative, is it possible to avoid it under the contemporary conditions?

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Chapter II

COMPLEXITY OF THE PRIMARY SCHOOL TEACHERS' PROFESSIONAL TRAINING FOR CONTEMPORARY TEACHING¹

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Abstract: Given that being a primary school teacher implies a very complex area of activity, the competences needed for this profession are multi-dimensional – subject-specific, pedagogical, organisational, and communication-reflective. These competences are developed primarily through initial education at teacher education/pedagogical faculties and later on, throughout primary school teachers' careers. Gaining insight into the quality of their own educational impact on pupils is of particular importance for primary school teachers because such insights increase the level of their self-criticism and self-expectations (reflective competences).

The aim of the current research presented in this paper was to examine both reflective and research competences of primary school teachers, i.e., to determine whether and to what extent primary school teachers view research and reflection as important elements of teaching competences and teaching itself. The current research was conducted on a sample of 87 primary school teachers. The obtained data indicate that the respondents have not fully developed their research competences and the competences needed for reflective evaluation of their own practice, neither during their preparation for the calling of a teacher, nor in the course of their professional career. Such results call for a substantial change of the modes of work at our institutions of higher education in terms of more intensive interactions, research work, mentoring, teamwork, student cooperation, and project work. The knowledge acquired at core academic courses should enable pre-service primary school teachers to create their own theoretical foundation from an array of theories offered at university (provided that

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their attitude towards knowledge and information is pro-active and critical) and turn scientific findings into practice.

Keywords: *primary school teachers' competences, contemporary teaching, constructivist didactics, teacher education.*

Introduction

The "learning society" is aimed at training young people to solve problems successfully at times marked by uncertainty and unpredictability. The emergence and development of theoretical pluralism, especially the constructivist metatheory and developmental-humanistic orientation in pedagogy, led to a changed concept of man, a different approach to development and education of human potential, in other words, to the consideration of the concept and scope of lifelong learning. The key competence of modern education, expressed in the phrase "lifelong learning competences" is no longer considered as merely caring for professional competences, but also as a desirable level of general culture of all employees, teachers included (Fichten, 2010). Teacher competences are defined in the European Framework of Competences within a wider framework – subject-specific, pedagogical, organisational, and communication-reflective competences (Klaassen, 1994). They include a set of necessary knowledge, skills, and values of all stakeholders in schools. They are determined relative to the goals and outcomes of learning and are meant to provide professional standards of what is considered successful in the pedagogical process (Andevski & Arsenijević, 2012: 31).

A successful educational practice in contemporary schools requires committed and entrepreneurial, reflective teachers – practitioners with an in-depth and broad knowledge, skills, and clearly set views and competences, as well as an understanding of the practice they are an integral part of. In order to understand and improve their work at school, teachers must first understand themselves, their own motivations, attitudes, and behaviour and take an active role in constructing their knowledge. The relevant documents, both those created by the European Commission and those created in Serbia, direct teachers towards self-assessment and personal orientation in terms of planning their own professional development in the process of lifelong learning, research approach, problem-solving orientation, monitoring and evaluation of their work (ZUOV, 2011; Jevtić, 2011).

Apart from its other effects, the constructivist-didactic paradigm influenced changes in the concept of tertiary-level didactics and methodology, even more so as there were numerous reasons indicating the need for a better quality of the pre-service primary school teachers' education and a broader spectrum of their competences (Gojko, Stojanović, 2015). Teacher competences are multi-dimensional because they refer to a broader field and a complex area

(Radović & Maričić, 2013). The basic dimensions of these competences relate to pedagogical and professional aspects that are unified, allowing primary school teachers to respond to the demands of the contemporary trends in education and teaching. The communicative competence is a predominating one in the pedagogical aspect, with a clearly expressed content and relational competence (Spitzberg & Cupach, 1984). The pedagogical dimension of the primary school teachers' competences becomes clearer only in the light of interaction in the learning process, which implies a two-way communication and dialogue, intensive interaction, and cooperation. Mastering the profession, scientific disciplines, and pedagogical methodology is the necessary prerequisite of the primary school teachers' competences, but it is not the only one. Human qualities, knowledge, abilities and skills related to processes and interpersonal relationships in teaching and education are also crucial. Good quality processes and relationships in teaching help pupils to grow into creative and accomplished people, while giving teachers an opportunity to be authentic and integrated personalities who, through joint work, teaching and other activities, stimulate and prepare pupils for creative work that will help them enrich not only their knowledge, but also their overall personality, giving learning and life a higher meaning (Spitzberg & Cupach, op.cit.).

In addition to the well-known factors of a successful communication (motivation, praise, rewards...), the personality of a primary school teacher is a factor which encourages pupils to be creative and to realise their full potential, it alleviates anxiety and creates a motivating and intellectual atmosphere in the classroom (Gojkov, 2006). Primary school teachers must be professionally qualified and moral persons who will by means of personal example and their competences influence the moral development of their pupils. The repertoire of teachers' social competences also includes interpersonal skills (positive attitude towards others, empathy, participation, social skills, offering support), socially responsible behaviour (observing rules, awareness of the effects of one's own behaviour on other people), social independence, behaviour control (frustration tolerance, compromising in conflict situations), social cooperation, assertive social skills (initiating communication, undertaking leadership in activities) (Jevtić, 2011). Many authors single out empathy as the key factor of the pedagogical dimension of the primary school teachers' competence (Goleman, 1997). Nowadays, even the educational style is explained by the ways of intellectual and emotional communication, or as an *interaction of didactic and educational competences* by which teachers create a social-emotional climate in the classroom (Kostović, 2005). Using Allport's terminology for behavioural styles, the "adaptive aspect" of the educational style (what a teacher does) is manifested by means of *didactic competences* (managing, organisation of activities, communication, and affective atmosphere), whereas the "expressive aspect" (how a teacher does something) is manifested by means of *educational*

competences: authoritarian or democratic (managerial style), direct or indirect (communication style), normative or problem-solving oriented (teaching style), positive or negative emotional tone (affective style) (Kostović, 2005). The intercultural competence of primary school teachers is manifested in specific emotional and cognitive abilities – flexible behaviour and communication, empathy and motivation for adaptation, and acceptance of different points of view (Hrvatić, 2007).

The question of the contribution of research learning to pre-service primary school teachers' competences in the course of their university studies entails an examination of the relationship between the research-oriented teaching and learning and the systematic, disciplined learning oriented towards the acquisition of knowledge that university studies should also support. The didactic concept of research learning in higher education, aimed at combining students' research activities with university lectures, was developed at German and European universities and it was based on Humbolt's idea that research learning results in valuable and fruitful communication and critical thinking, while the transfer of new scientific findings adds quality to university lectures (Huber, 1998). The combination of students' research activities and lectures, science and learning, and the concept arising from it – scientific learning – can be explained by this idea. The postulate "education through science" implies that the basis of the transferred knowledge that students should acquire does not constitute education in science, but that an educational moment is manifested in scientific features, supported by search and discovery, problematisation and wonder (Huber, 2003).

The conceptions of reflective education of teachers (Dick, 1994), in which reflection and professional practice research are integrated in academic education, are based on the following requirements: (1) The education of the pre-service primary school teachers should allow them to identify and articulate their goals, to choose acceptable means of reaching these goals and to comprehend the contextual criteria in teaching. Pedagogical action implies that there is more than one correct course of action. Primary school teachers' professional activities and research demonstrate mutually corresponding structures, based on which the competences for the later professional work may be formed through "didactic formation of learning" (Wildt, 2005). (2) The quality and efficiency of teachers' education depend, among other things, on "the balance struck between professional practice and science" (Fried, 1998). Therefore, teachers' education should mediate theory and practice, and spur the integration of scientific knowledge and practice. Transferred theoretical knowledge should result in action where knowledge, serving as a guide in practice, is formed during reflection on the previous experience (Fichten, 2010). (3) Professional discussions have resulted in a teacher being seen as a professional, the one who builds a research-oriented attitude throughout his/her studies, and who generalises

knowledge through practice (Schneider & Wildt, 2003). Reflective competence is an important aspect of this interpretation of professionalism (Dirks, 2002; Feindt & Meyer, 2000b; Horstkemper, 2003; in: Fichten, 2010). Students should learn to view teaching as an experiment and an act of research.

Learning through research is therefore a contemporary concept which aids the formation of a research-focused attitude and improves it, while also including reflection, a necessity in overcoming schooling and teaching reality and enabling further professional advancement. Reflection must be scientifically based if it is to be self-critical (Zutavern, 2001; in: Fichten, 2010). The consideration of the research-based approach during one's studies fits in with contemporary discourse on teacher competence, which views primary school teachers as reflective practitioners. The competences of a present-day, efficient primary school teacher require a professional who conducts research, rather than a professional technician (Fichten, 2010).

Methodology

The reflective and research abilities of primary school teachers were the *topics* of the research. The *research goal* was to establish how capable teachers are for reflection with regard to their practice. The starting point was to determine the representation of learning through research in the education of the pre-service primary school teachers, given that it is an innovative approach to higher education learning which greatly influences the development of professional competences.

With that in mind, the *research tasks* focused on the following questions: how important for teachers is the role of research and reflection in the complex teacher competences and their own practice? In the wider research, the results of which are presented in this paper, the current researchers observed how much the competences required for reflection on one's own practice are developed during teacher education (reflective competence, the competence for teamwork, problem solving, research-methodological competence, advice-giving competence and interpretation competence).

The key hypothesis was that teachers do not consider reflection to be a key competence vital to their practice. *The narrow assumptions* were that during their studies, they do not acquire enough knowledge in a way which would develop reflection, ensure critical thinking and the need to reflect on one's own practice, as well as that higher education institutions devote little time to learning through research, where special attention should be given to critical thinking.

The research was *exploratory* in nature, using a *systematic non-experimental observation method*. A *questionnaire* was used, designed for the research,

which aimed to gauge the following: teachers' opinions on the importance of theoretical approaches for their practice; their opinion on theory as support and an opportunity for critical thinking about their own practice; in what ways teachers acquire methodological knowledge and what importance they give to it compared to other competences, especially in regard to the improvement of their own work. The intent of the researchers was to gain insight into the use of critical thinking as a way of acquiring knowledge during university studies, as an act of learning included in explorative tasks and methodological actions during the learning process.

The sample comprised 87 primary school teachers who graduated from a teacher education/pedagogical faculty. Out of this number, 43.6% were teachers with 10 to 20 years of work experience, representing the largest group in the sample. Experimental checks were not conducted, and statistical analyses were conducted using the SPSS statistical package: descriptive analyses, linear regression analyses, the stepwise method, non-linear and linear canonical correlation analyses, factor analysis conducted using the categorical principal components analysis method, hierarchical clustering and between-groups linkage. This paper will present the findings of the descriptive and cluster analyses. The research was conducted in 2016.

Results and Discussion

Teachers' Opinions on Research Competence and Researching One's Own Practice

Based on the answers provided, it is clear that a majority of the teachers (67.7%) sees *organising educational activities, knowledge transfer and monitoring children's development* as the most important competence in their profession, followed by: *creativity, coping, flexibility* (59.4%); *professional development* (44.6%), *all competences* (38.8%); *attitude towards educational goals* (35.7%). *Research competence* is considered important by a mere 27.2% of respondents. Although this points to a lack of recognition of the importance of teachers' research competence, it is encouraging to note that nearly four-fifths of respondents (78.2%) feel the need to acquire more knowledge regarding the methodology of pedagogical research.

The opinion of respondents regarding conducting research independently in their own practice is distributed in the following way: *good idea* (32.4%); *this is for younger colleagues* (21.3%); *not possible – too busy* (18.1%); *not possible – too many pupils in groups* (14.6%); *yes, with an expert aid* (10.5%); *I attend seminars and read professional journals, which is enough* (9.7%); *I do research when working with children* (8.8%); *there were no opportunities for research* (6.5%); *work through self-evaluation* (6.1%). The data shows that the largest group of respondents (32.4%) considers independent research to be a *good*

idea. The analysis of the inclusion of respondents in research demonstrates that a majority (54.6%) has not been involved in any research up to now. Given this, it is not surprising that teachers do not use in-class research for reflecting on their own practice. In other words, they evaluate their work using one of the following criteria: *feedback on pupils' further education, self-evaluation, information provided by parents and childrens' success, analysis based on principles and curricular tasks, competition results, pupils' plays, experimental activities, or evaluation from others (associates, or external evaluation).*

The data show beyond doubt that respondents do not recognize the importance of knowledge of pedagogical methodology, but that they are somewhat aware of the importance of developing research competences, even though these are not on their priority list. They believe that their practice leads to the development of teachers' competences. However, this practice clearly lacks methodological activities, leading to the conclusion that their practice is not oriented towards them. Only a small percentage of teachers have experience with research, they believe that they have inadequate conditions for conducting research, and that they did not have opportunities for research.

Primary School Teachers' Opinions on the Importance of Reflective Competence

To test the primary hypothesis, a hierarchical cluster analysis of all variables was conducted using the between-group linkage. As a unit of distance between clusters, a quadric sum of Euclidian distance was used. The analysis was conducted in 67 stages. For example, in the first stage, the variables of the *subject-specific competence* and *communication skills* were joined into one cluster². Furthermore, the category of the most important teachers' competences

² List of cluster analysis variables: 1.Years of work experience in education.

Importance of pedagogical theoretical approaches for formation of pedagogical views: 2.Pedagogical theoretical approaches are important for practice; 3. Pedagogical theoretical approaches are important, but experience is more important; 4. Pedagogical theoretical approaches are an important segment of knowledge acquisition; 5. Pedagogical theoretical approaches are not important, practice is what matters.

How much does pedagogical practice prepare you for work: 6. Pedagogical practice does not prepare you for work; 7. Pedagogical practice should last longer; 8.A good mentor is important, 9.Practice does prepare one for work; 10. Practice helps in gaining experience; 11.Practice helps in forming one's personal pedagogical views; 12.Practice enables the formation of a life-long attitude towards children; 13.Practice is important for the application of theoretical knowledge; 14. The practice is too short to enable full preparedness for work; 15.Students do not take practice seriously; 16. The number of students interested in practice is low; 17.The value of practice is finding meaning in theory; 18.Practice does not prepare one fully, because students do not work alone; 19.The value of theory or practice in training employees in education 20. The evaluation of the representation of research tasks during studies; 21. The evaluation of the opportunities for the development of research concepts during studies.

The need to provide students with more opportunities to acquire knowledge of the methodology of pedagogical research: 22. Good idea; 23. Future teachers should have more opportunities to acquire methodological knowledge through research; 24. Extremely useful for developing a critical stance towards work; 25. Unnecessary; 26. More knowledge on the methodology of pedagogical research is needed; 27. Ideas are reconsidered.

Methods used for acquiring knowledge of the methodology of pedagogical research during their undergraduate

does not include those which would encompass reflective competence, which confirms the hypothesis on an inadequate methodological competence of practitioners, as well as that reflection is not considered to be a part of practice. Our observation of the remaining clusters only further confirms this.

Distance between clusters rescaled

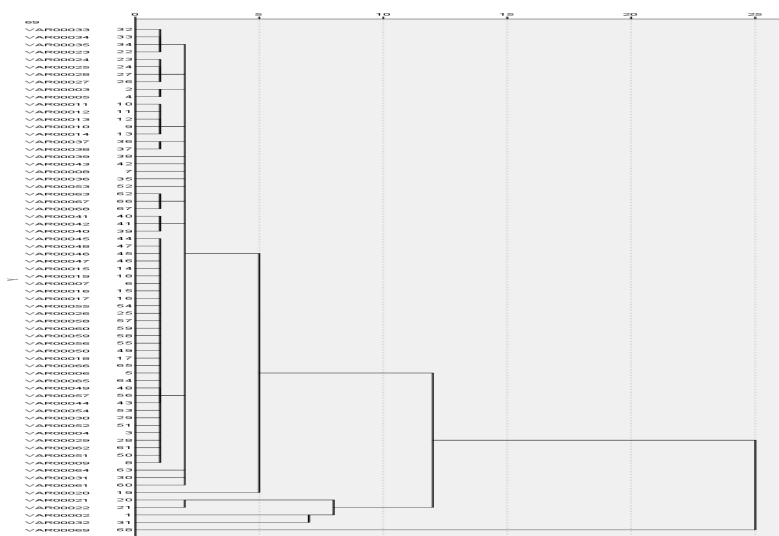


Figure 1: Dendrogram

studies: 28. Participation in professors' research with minimal accountability or activity; 29. Active inclusion in school projects with a partial responsibility; 30. Doing independent research with consultations with teachers; 31. The methods used to acquire the knowledge of the methodology of pedagogical research are important for one's practice.

Competences developed through pedagogical practice while in training: 32. Acquisition of subject-specific competences; 33. Acquisition of communication skills; 34. Organisational and pedagogical-didactic competences; 35. A different view on self development.

The most important competences of a primary school teacher: 36. All competences; 37. Creativity, resourcefulness, flexibility; 38. Leading activities, knowledge transfer, tracking children's development; 39. Professional development; 40. Attitudes towards educational goals, 41. Research.

Ways in which pedagogical practice improves teachers' competences: 42. Longer practice, more inclusion in educational activities; 43. Self-evaluation; 44. Observation of a teacher's work; 45. Monitoring children's development; 46. Comparing theory and practice; 47. Students motivated by more experienced and highly-motivated primary school teachers during professional training; 48. Better selection of students; 49. Researching competences on one's own; 50. Better organisation.

Opinions on independently conducted research: 51. It is meant for younger colleagues; 52. Good idea; 53. Not possible due to oversized groups; 54. Conducted through self-evaluation at school; 55. Good, with an expert aid; 56. Not possible – too busy; 57. There were no opportunities for doing research; 58. I attend seminars and read professional journals; 59. Every researcher researches when working with children; 60. Included in research since the start of practice.

Methods of evaluating one's own work: 61. Analysis based on teaching principles and curricular objectives; 62. Information provided by parents and children's success; 63. Self-evaluation; 64. Others evaluate me, 64. Questionnaire for parents; 66. Feedback on pupils' further education; 67. Through competitions, plays, experimental activities; 68. University/college degree.

The findings indicate that teachers who participated in the research do not attribute special importance to reflection, which confirms the key hypothesis. Another possible interpretation is that reflection is not taken into account enough when evaluating the quality of work. Furthermore, the findings give room for speculations about the extent of developing the pre-service teachers' competences that should enable them to reflect on their own work (reflexivity, team work competence, problem-solving competence, research-methodological competence). The research results also question the level of efficacy of tertiary education didactics in overcoming the dominant receptive forms of teaching and learning, as well as the level of the pre-service teachers' preparedness through research learning for using theoretical knowledge in analysing and creating their future professional environment as reflective practitioners. According to the results, the methodological-didactic academic courses do not focus enough on the development of the competences related to the reflexivity of the professional knowledge, i.e., the adoption of the research-oriented attitudes as an element of professional work. Given that the respondents rarely learnt through research in the course of their university studies, that they were not included in research projects, nor did they conduct any small-scale research, it is not surprising that they favour experience over other competences. Generally speaking, they acquired methodological knowledge by means of experiential learning. In their opinion, reflecting upon their practice is good for planning everyday work, but it is more useful for younger colleagues and the colleagues who have more time available, who work with smaller groups, and so on. The conclusion is that the primary school teachers who participated in this research are not fully trained to be able to reflect on their work, and they had few opportunities to use research learning in the course of their studies. They believe that learning through research should be included in the compulsory course content and that research should be a necessary element of complex competences.

Critical learning, as a part of the European Qualifications Framework, should be given more space and attention in the current system of university training of pre-service primary school teachers. It seems that university courses organised in line with Bologna process should focus more on the concept of competences in terms of taking into account not only the knowledge, but also the complex abilities that students expect to develop and the work market requires, but that cannot be developed solely through training. This observation is not a new one, as Humbolt's tradition of university studies implies competence-oriented learning that requires, apart from professional training, the development of intellectual and methodological abilities. The only novelty is the term "competence" which calls for a more intense didactical approach to academic learning.

According to the research findings, primary school teachers are not fully-developed reflective practitioners and they generally hold that university studies should provide them with practical skills which they can apply later on in their career. University courses should be more oriented towards science because it is focused on competences that students develop by doing research and analysing the findings. If education is to be a significant factor in the development of the society, students as its main actors are expected to possess the competences related to critical thinking, original ideas, ability to make decisions based on incomplete or limited information. Therefore, primary school teachers must possess scientific competence which, apart from abilities and methods needed for pedagogical research, requires the ability to conduct a critical analysis, as well as to evaluate and synthesise new and complex ideas and theories. Students, particularly the ones who already work as teachers, should have a wide, detailed, and critical understanding of the latest trends in pedagogy and didactics, they should be included in the research of theoretical concepts and approaches in educational practice, and they should be able to make conclusions and give feedback to educational policy by using their own reasoning and critical understanding.

Conclusion

Professional competences of the pre-service primary school teachers are complex and their development should be approached holistically. These competences encompass different areas of knowledge and skills used in the teachers' work. For this reason, primary school teachers have to develop their competences by researching, testing, evaluating and constantly innovating their own practice. The changes in didactical orientations, trends and models of contemporary teaching require appropriate innovations in the domain of teacher training. Apart from *general education academic courses* related to the teachers' profession, primary teacher training curricula should predominantly contain *pedagogical-psychological* and *methodological* courses, as well as *professional practice* programmes.

Reflective primary school teachers as professionals must be confident of their research skills and be able to conduct small-scale research in order to test and evaluate the efficacy of new ideas in the classroom. Such teachers will not simply adopt didactic models offered in the relevant literature, but will continue searching for answers and then they will decide if the ideas are worth testing in the classroom with necessary adaptations and, eventually, if they should be adopted. In order to do all this, teachers must be familiar with research work and critical thinking strategies. The proactive feature of a reflective teacher is the basis of professional competences that help teachers to realise that problems encountered in their work are a part of a complex process of teaching and learning.

Accordingly, higher-education didactics should overcome the dominant receptive forms of teaching and learning. The Committees of the European Union engaged in discussion regarding these issues have reached the conclusion (Terhart, 2000) that it is necessary for teachers to be trained via research learning (Hamburg Committee, Keuffer & Oelkers, 2001) and critical learning to be able to act as reflective practitioners who test theoretical assumptions and adapt them to their own environment.

This surely implies the ability of reflective professional knowledge (the adoption of a research-oriented attitude) as a part of one's professional activities acquired at methodological-didactic academic courses. Research learning should therefore be incorporated in the compulsory curricula, becoming a necessary element of the complex competences required for modern teaching.

Habituating pre-service primary school teachers to think critically and discuss is important because pedagogical action implies that any given situation does not have only one correct course of action, but at least several, which can all be differently theoretically verified. An important reason for using heuristic didactic strategies in higher education teaching is the fact that critical thinking today is considered to be a meta-competence giving meaning and direction to specific competences.

Training pre-service primary school teachers at teacher education/pedagogical faculties implies the development of their meta-competences, so that they may choose appropriate didactic-methodological solutions when working with pupils. It is important for professors – mentors to teach their students to view their classes as experiments and research actions.

The main reason for the use of heuristic-didactic strategies at teacher education faculties is to encourage pre-service primary school teachers to learn through research and discovery, and they will in turn understand the need to influence their future pupils in the same way.

Through discussions, workshops and research papers, pre-service primary school teachers can successfully be trained in the following: self-responsible learning, systematic, independent and critical work, creative thinking, the practical application of knowledge, innovation, flexibility, controlling change, accepting the plurality of ideas, tolerating independence in a cognitive sense and developing initiative in a conative sense, readiness to take risks, and self-reflection.

The development of teachers' multidimensional competences (pedagogical, social, emotional, cognitive, work-action, etc.) is a prerequisite for an effective contemporary teaching in which pupils will develop the skills of analytical thinking, knowledge acquisition, problem and conflict solving, teamwork and participation, fast identification and use of information, decision-making, evaluation, reflection, self-initiative, tolerance, and life-long learning.

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Chapter III

**DISCREPANCY OR COHESION BETWEEN EXPECTED
AND ACHIEVED RESULTS**

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Abstract: The basic idea behind all educational reforms in Serbia in the past was based on a tendency to be compatible with the European educational system or to somehow come closer to it. These reforms were mostly only partial, focused on corrections and changes in the direction of improving certain segments of the educational system (plans, programs, textbooks, and extension of education) so that the expected results were not in fact achieved. Taking into account that the teacher is a key player in an educational reform process (because he/she educates those who will educate future generations), the education policy makers in 2012 formed a *Strategy for the Development of Education in Serbia until 2020*, which included, besides other things, measures, proposals and solutions to improve teacher education. The aim of the paper was to use the comparative and theoretical analysis method in order to determine whether there is discrepancy or cohesion between the competences expected of teachers in the 21st century and those that future teachers acquire at the Faculty of Education in Jagodina, University of Kragujevac. By comparing the study programs of the final years of basic academic studies of students – future class teachers and the *Regulations and standards of competencies for the teacher profession* (primarily class teachers), we have come to the conclusion that the elements that were the subject of our analysis are not sufficiently coherent, mutually unrelated and incompatible. On the basis of the results of our research, we propose that a reform of the study programs of compulsory subjects (primarily the teaching methodologies) should be carried out during the next accreditation period. The research will outline some amendments that could be introduced and will enable future teachers to attain the highest standards of competencies and, in all teaching areas, better qualify for their profession.

Keywords: *competencies for the profession of teachers, students – future teachers, study programs.*

Introduction

Educational reform in our country started in 2003, when Serbia joined the Bologna Process. Within this context, two documents are important for our paper – *Regulations and Standards of Competencies for the Teaching Profession* (hereinafter *Regulations*) and *Strategy for the Development of Education in Serbia until 2020* (hereinafter *Strategy*) – and for the reform changes relating to higher (university) education, primarily of a teacher. Elaboration of competency standards for the teaching profession was the result of a wish to improve the quality of education i.e. “to provide more competitive, high-quality and more efficient education for everyone” (Jevremov et al., 2016: 492); thus the first strategic premise of the *the Strategy* is that “no aim should be achieved to the detriment of quality” (*Strategy*, 2012: 18). Other specific aims of the reform refer to the change in the position of students and their participation in the educational process and learning. The emphasis has been put on students’ subjective position in relation to their independent decision-making, creation of curriculum through choice of courses and orientation, taking responsibility for their own education and active participation in the teaching process. Students – their needs, interests, knowledge and skills – have a central position in the reform process, since they are expected to acquire functional knowledge in this way, develop key competencies, and ensure their place in the employment market (Lugulov, 2011; Kopas Vukašinović & Golubović Ilić, 2016; Abykanova et al., 2016).

The word *competency* has been frequently used in the past several years “in different contexts and situations” (Nessipbayeva, 2012: 148), and it comprises a wide range of meanings. Taking this into account, we tried, from the aspect of competencies, to determine the place and position of students – future teachers, between *I know*, *I can* and *I should*. Development of teacher competencies is not the aim achieved once and for all, but a continuous process that only begins with initial, formal education. In this process, competencies represent a complex system – integration of declarative (*know about*), procedural (*know how*) and conditional (*know when*) knowledge. Having knowledge of a certain scientific area (*know about*), does not implicit or imply compulsory understanding of the methods and skills necessary for “passing on” this knowledge to others (*know how to teach*). Also, having knowledge of successful teaching methods, skills, and strategies (*know how*) does not mean or imply competency for successful teaching (the difference between *know* and *can*). A teacher can have an efficient strategy for delivery of certain contents, but instead of implementing it, he/she reaches out for usual, traditional methods.

The above outlined differences in teacher education have special significance, since they are the consequences of a discrepancy between: (1) knowledge and abilities acquired at the faculty, (2) skills necessary for implementation of

acquired knowledge and abilities in practice (teaching at schools), and (3) expectations and requirements prescribed by the education policy documents, directly reflecting upon the educational practice, as well as the quality of the educational process (Golubović Ilić & Stanković, 2018). Considering the fact that teachers “have a central role” (*Regulations*, 5/2011) and that the improvement of the educational system is conditioned by the improvement of teacher competencies, in this paper we focused on the education of future teachers, i.e. cohesion between their study programs and competencies which are expected of teachers in 21st century.

Higher Education Reform and Teacher Competencies

Aspirations and efforts to identify the efficient and successful organization of studies, to ascertain the knowledge and skills a teacher needs, have lasted for decades and resulted in numerous reforms and changes in the level, structure and length (duration) of teacher education. The initial [undergraduate] education, professional development and teacher competencies are a present-day research problem of contemporary education policies, not only in our country but in other countries as well. However, in our country, the teaching profession is one of the first professions strongly and directly affected by the competency-based approach, which puts the whole educational system under additional pressure, because it is expected to solve the majority of social issues. For these reasons, for the past several years educational reforms in our country have been focusing on the development of competencies in compliance with the example given by developed countries and countries with efficient educational systems (*competency based education*) and educational outcomes (Gajić et al., 2009; Bodroški Spariosu, 2015; Kopas Vukašinović, 2017). Educational outcomes are, in a broad sense, understood as “a definition of competencies students should develop during their studies”, with outcomes formulated and designed in a way that makes it possible “to gain an insight into the learning process from students’ perspective, and not from the perspective of the teaching process needs” (Lungulov, 2015: 37). Thus, students are required to think and be active and university teaching needs to change from reproductive, “memorizing” into developing, “thinking” teaching, focused on the student (Stanković & Golubović Ilić, 2018).

The following key changes were made in the latest reform of higher education: “a) three cycles of studying were introduced in compliance with the Bologna Declaration, b) the *European Credit Transfer System* – ECTS was implemented, c) accreditation and exactly defined quality standards of study programs and institutions of higher education were introduced and d) Colleges have been transformed into Colleges of Applied Studies” (Mojić, 2015: 664). That process implied promotion of the paradigm “student focused education”

and “life long learning”, while concepts with a direct and dominant impact on the reform changes were “theory of teacher-researcher education, the concept of the reflexive practitioner, and the theory of professional identity development” (Radulović et al., 2010: 165).

According to the functional approach, which puts emphasis on the results of actions (Delamare Le Deist & Winterton, 2005: 39), elements which define competencies can be found in the selection of study program contents which lead to certain models of behaviour in specific practical situations in the classroom, with children, their parents, etc. Therefore, the curricula at Faculties of Education need to contain programs that will prepare future teachers for the functions of programmers, diagnosticians, evaluators and therapists. A functional teacher is creative, “always searching for new skills, ideas, interesting experiments, research projects [...] changing conditions, adapting and analysing them, creating new ones and thus giving contribution to students’ creative work” (Golubović & Stanković, 2016: 21). Being highly collaborative, helpful, willing to make compromises, benevolent, neat, “self-disciplined, with good control of impulses and dedicated to the profession” are the desired qualities (Genc et al., 2014: 52). Therefore, the modernization of study programs has great importance for development of university education and represents “a compulsory continuous process which will ensure cohesion between the expected learning outcomes and required competencies of graduate students” (*Strategy*, 2012: 121). In the 21st century, teachers are expected to possess contemporary knowledge, to be able to implement it, to be ready to learn continuously and search for creative solutions to the problems, to be resourceful and flexible in emerging situations, adaptable to new requirements, skilful in overcoming obstacles by using modern means, techniques and approaches (Naumescu, 2008; Gajić et al., 2009). However, results of considerable research (Snoek et al., 2010; Akiri & Ugborugbo, 2009; Muzenda, 2013; Mojić, 2015; Jevremov et al., 2016) which show that students’ educational achievements and efficiency of studying depend on the quality of work of university teachers and their competencies, leading to “closing the circle” of the education of those who educate the ones who will educate is the foundation of the quality of the entire educational system.

Importance and Weaknesses of the Initial [Undergraduate] Education of Teachers

It is not untrue to say that the teaching profession is extremely complex and difficult, that it requires a lot of effort, renunciation and dedication and, due to continuous progressive changes in the educational system, as well as in other areas (technical and technological, information technology, etc.) imposes new expectations and requirements on a daily basis. Nowadays, initial

[undergraduate] education is not a sufficient prerequisite for a successful teaching profession, since the “learning society” requires revitalizing and updating of previous knowledge and skills, with an adequate reaction to and acceptance of new standards of quality. For students of today keeping up with the times is not enough; it is also necessary to have the ability for self-education, i.e. professional and personal self-development (Abykanova et al., 2016). This means that, besides competencies for the learning area, subject, methodology of teaching, teaching, and learning (according to the *Regulations 5/2011*), it is necessary for teachers to master the skills which enable professional development, changes in the usual behaviour, professional actions and habits, objectivity and certainty in the decision making process. In the process of modernization, a modern class teacher or a teacher in a higher education institution, has to be prepared for and aware of the necessity to make changes in stereotypes in his/her behaviour and professional activities.

Future teachers should be open to innovations and critical in respect of their own experience in order to, through transformation of initial [undergraduate] education, interlace it with practical experience and professional development, continually developing , extending and upgrading their competencies. In this process, a teacher has to assess his/her achievements objectively, to question his/her work and try to improve his/her weaknesses through various forms of personal development.

One of the conditions necessary for a successful teaching profession is personality structure and characteristics, since teachers are role models to most of their students; the existing standards of competencies in our country lack *Competence Personality / Personal Competence*. A teaching profession should be chosen by stable, independent persons with a “consistent, generous, wise and reasonable, dignified, mature and just personality” (Hakim, 2015), therefore the selection of candidates for teaching profession requires special attention. According to Tolstoy, the teaching profession is sublime and noble, yet a teacher is not the one who has been raised and educated to be a teacher, but one who deeply believes that he/she is a teacher and that there is nothing else he/she can be. Recruitment of students – future teachers should be the response of a responsible society and educational system to the needs of the employment market and society as a whole; however, in our country, unfortunately there is no such a thing as standards stating who can teach in schools and be a teacher.

Method

Crucial factors for the successful functioning of an educational system are: selection of candidates, their professional identity (personality structure) and

the professional competencies of teachers, while teachers are at a tri-point of expectations: a) immediate surroundings – students¹, parents and colleagues; b) wider surroundings – representatives of other professions and the community, and c) the state – educational system and society as a whole. Each of them attributes more importance to certain segments of their profession, depending on what they consider to be important, thus “some put the emphasis on expertise in the relevant scientific area (knowledge of the science ‘subject matter’), some on the didactical and methodical knowledge (successfully passing on knowledge), and some on supporting students development” (Beijaard, Verloop & Vermunt, 2000, according to Genc et al., 2014: 51). In this respect, the subject of our research were competencies of a teacher in the 21st century seen from two aspects: the official national document with the list of teachers competencies, and the outcomes of a study program for future teachers at the Faculty of Education, University of Kragujevac.²

The aim of the paper was, by means of comparative and theoretical analysis, to find out if there is discrepancy or cohesion between competencies for teaching profession which are prescribed by *the Regulations* and those anticipated by study programs for future teachers at the Faculty of Education in Jagodina. We compared the educational outcomes outlined in the study programs³ of compulsory courses – the course Methodology of Teaching⁴ in academic years III and IV of basic academic studies (hereinafter BAS) in the study program for *class teacher education*, with competency standards for the teaching profession, and critically analysed them in comparison to the competencies stated in *the Regulations* (5/2012). On this occasion, our attention was directed to the following research tasks:

- to ascertain if educational outcomes comprise all aspects of competencies – *knowledge, planning, implementation, assessment/evaluation and professional development*;
- if the educational outcomes gave priority to the development of competencies for the *learning area, subject and methodology of teaching* or to *teaching and learning*.

Student competencies for *communication and cooperation* with partners in their educational work (with students, parents, colleagues, local community) have not been the subject of our analysis, but not because we consider them less necessary or important in comparison to the former types of competencies. These competencies were not considered in more detail for two reasons: firstly,

¹ In higher education of students – Genc et al., 2014.

² Hereinafter FPNJ

³ <https://pefja.kg.ac.rs/wp-content/uploads/Knjiga%20predmeta/OASU.pdf>

⁴ Hereinafter MN

because communicative competencies of students at the Faculty of Education in Jagodina are developed within other study programs⁵ as well, and secondly, because this would, in our opinion, result in exceeding the framework. For similar reasons we have not considered teacher competencies for *supporting students and their development*.

Standard teacher competencies outlined in *the Regulations* have been compared with educational outcomes of six study programs in academic year three (Methodology of Teaching Serbian Language and Literature, Methodology of Teaching Mathematics, Methodology of Teaching Science and Social Studies, Methodology of Teaching Music Culture, Methodology of Teaching Art, and Methodology of Teaching Physical Education) and six study programs of compulsory courses in academic year four (Methodical Practicums – hereinafter MP), since the answer to the question of how to “equip” and train future teachers for efficient and professional “individual and social functioning” has already been integrated in the outcomes of study programs.

Research Results with Discussion

Expected professional competencies of a teacher are in direct relation with the choice of educational contents, thus when establishing the structure of study plans, it is necessary to choose things considered to be key factors for development of these competencies. Study Program BAS: Class Teacher at the Faculty of Education in Jagodina, which was constituted in compliance with the Law on Higher Education of the Republic of Serbia and the Bologna Declaration⁶, aims to train students for teaching in lower grades of primary school.

When it comes to competencies needed for *the learning area, subject and methodology of teaching*, teachers should primarily have a wide and deep knowledge regarding the school subjects they teach in primary schools (Partono Prasetyo et al., 2017). Being competent and professional in this discourse means to possess the appropriate body of knowledge of, roughly speaking, six basic scientific areas: Serbian Language and Literature, Mathematics, Science and Social Studies, Art, Music Culture, and Physical Education. This is mostly achieved during the first two academic years within the study programs of compulsory courses (see *Book of Courses*, BAS: Class Teacher). *Competencies for the Methodology of Teaching* have special importance for future teachers, because besides basic scientific knowledge, teacher competency includes skills and behaviour which help or enhance the capabilities of a teacher to educate,

⁵ Academic year one: Communicology Basics – compulsory course; Speaking Skills and Communication, Interaction and Communication in educational work – elective courses; academic year two: Rhetorics – elective courses

⁶ <https://pefja.kg.ac.rs/osnovne-akademske-studije-ucitelj/>

teach, guide, direct, train, and evaluate the pupils" (Partono Prasetyo et al., 2017: 87). Educational outcomes of the above mentioned courses have been analysed from various aspects of competencies: *knowledge, planning, implementation, assessment/evaluation, and professional development*.

In the domain of **knowledge**, *possession of didactic and methodical knowledge necessary for the subject which a teacher is teaching*, is the most important for our research, because the quality of teaching is not defined only by the way it is organized, but also by "special aspects related to teachers' actions" (Jevremov et al., 2016: 500). In order to "act" in an appropriate and efficient way, teachers should have certain didactic and methodical knowledge. By analysing study programs in academic year III, we have come to the following results: 1) the most complete formulation of outcomes from the aspect of didactic and methodology knowledge⁷ was given in the study program of Methodology of Teaching Music Culture, since the emphasis is on delivery of learning contents, fostering the musical abilities of primary school students, working with the school choir and orchestra, and appropriate usage of modern teaching technologies, with pedagogical and professional music literature. In this methodology, the domain of **knowledge** is interlaced with the domain of **implementation**, in spite of the fact that students in academic year III should acquire theoretical knowledge which will, in academic year IV, be implemented in schools where teaching practice is carried out; 2) the emphasized didactic and methodological knowledge is found in outcomes formulated in Methodology of Teaching Science and Social Studies (after successful completion of the course, students are expected to have acquired basic knowledge [...], to be able to prepare teaching materials and lesson plans on their own) and in Methodology of Teaching Art (a student "is acquainted with specific procedures of artistic techniques and their passing on to students; mastering⁸ forms, methods and principles of Methodology of Teaching Art"). Least attention was dedicated to didactic and methodical knowledge in outcomes of Methodology of Teaching Physical Education, where the domain of **implementation** prevails: "A student can independently [...] deliver activities with primary school students [...] and implement modern exercising methods"; Methodology of Teaching Serbian Language and Literature: "A student has been trained to teach initial reading and writing; analysis of literary works; practical usage of grammar and orthography in teaching [...] and use practical methods for developing students' culture of speech and expanding vocabulary", and Methodology of Teaching Mathematics, where competencies for the *learning area and subject* have been primarily emphasized, while the outcomes ("implements modern teaching systems") only partially refer to the

⁷ Although the formulation refers to the aim instead to the outcome ("to enable students to...") – remark of the author

⁸ In our opinion, a formulation which refers to the outcome should be "master", "has mastered" or "knows" – remark of the author

domain of **implementation**, and not to didactic and methodical knowledge necessary for teaching the school subject Mathematics in class teaching.

In the domain of **planning**, *the Regulations* specify, among other things, that a teacher plan his/her work so that it is receptive, understandable, and interesting to students; he/she plans implementation of various methods, techniques, and forms of teaching, as well as the evaluation of prescribed educational standards and learning aims. By analysing the outcomes of study programs in academic years III and IV, we found that the segment of planning was neglected, namely that development of student competencies in this domain is not part of the analysed study programs. The outcomes defined in the context of training students for planning are found in the study program Methodology of Teaching Science and Social Studies ("students are expected to make independently a curricular draft of **learning subjects**") and Methodology of Teaching Art ("preparation and implementation of a yearly and monthly plan") in academic year III, i.e. in the study program Methodological Practicums of the Study Program for Physical Education ("a student independently plans, programs, [...] activities with primary school students") in the academic year IV.

In the domain of **implementation**, considering competencies for *the learning area, subject and methodology of teaching*, a teacher is expected to achieve aims in compliance with general educational principles, aims and outcomes; to correlate learning contents with students' previous knowledge and experience, their needs, examples from everyday life, contents from other areas, contemporary achievements; to implement various methodological approaches (underlined by the authors). Although, as we previously emphasized, the concept of a study plan was made in order to provide students with theoretical knowledge during academic year III, with the emphasis on their practical training in academic year four, in outcomes of most study programs (except for Methodology of Teaching Art), we noticed elements of practical implementation and inconsistency, a discrepancy with the competencies stated in *the Regulations*.

Considering the competencies related to *teaching and learning*, according to *the Regulations*, a teacher is expected to apply various forms of teaching and activities in compliance with the knowledge and experience of students, their individual characteristics and needs; to encourage, support and assist different learning styles and strategies; to develop and implement various cognitive skills; to support students in expressing their ideas freely, asking questions, discussing, and commenting (*the Regulations*, 5/2012: 5). In this case, results of the comparative analysis suggest coherency of the analysed documents, since the implementation of curriculum contents is expected as an outcome of study programs of all six methodical practicums in academic year IV.

Competencies in the domain of **assessment/evaluation** in academic year III, have been stated only in the educational outcomes of Methodology of Teaching Serbian Language and Literature (a student teacher has been trained for [...])

monitoring and assessment of primary school students' progress) and Methodology of Teaching Science and Social Studies ([...] *continuous monitoring and integrated evaluation of primary school students' work*), while they are present in the outcomes of methodical practicums only in Methodology of Teaching Physical Education ("evaluates motoric abilities of a student") and Methodology of Teaching Science and Social Studies (a student has been trained to "monitor the teaching process and assess primary school students' progress using various assessment types and techniques"). Knowing that students do not study thoroughly enough the contents related to possibilities, monitoring methods, evaluation of primary school students' work and progress in the previous academic years (only partially within the Didactics course), we consider this to be a serious downside. Testing and assessing primary school students is an important and necessary part of the teaching process for which competencies cannot be developed spontaneously and incidentally, nor it would be good to do this part of their job unprofessionally and intuitively. Taking into account the fact that assessment in the first grade is descriptive, and numerical in higher grades, it is essential to have a study program/course within which future students could develop the above-mentioned competencies.

Special attention in this domain was dedicated to fostering students' critical thinking about didactic and methodical segments of classes they deliver practically in schools where teaching practice is carried out "which is the essence of self-reflection" (Cekić Jovanović & Golubović Ilić, 2011: 59). Outcomes of all methodical practicums, except for Physical Education, expect students to develop competencies for evaluation and self-evaluation, i.e. critical evaluation and methodical analysis of delivered classes, theirs, as well as their colleagues' classes, which is in compliance with the paradigm of educating a teacher to be a reflexive practitioner (Radulović, 2011; Maksimović & Bandjur, 2013; Korthagen, 2014).

In the domain of **professional development**, in none of the six analysed study programs were there outcomes which refer to development of student competencies for continuous monitoring and development of personal pedagogical practice. By what means and how can teachers develop competencies for thinking, objective perception and evaluation of their work, planning and responsible and autonomous decision making in relation to their professional development? Future teachers should be aware that their education is not finished after graduation, but it continues in the form of continuously working on themselves, education on changes and novelties in education, being well informed about literature, and attending seminars, professional, academic conferences, etc. Professionals will deal with various problems and situations in the classroom, which are mainly unpredictable and context-based, by implementing the knowledge acquired through formal education, but, mainly, by considering practice from different perspectives, understanding situations in a

different way, knowledge and experience acquired through professional development (Korthagen, 2014).

Conclusion

By comparing teacher competency standards and educational outcomes of study programs in BAS in the study program for class teacher education, we have come to the conclusion that educational outcomes have not equally comprised all domains of competency. Competencies in the domain of *planning* have not been included in educational outcomes of most study programs we have analysed, while there is a large discrepancy relating to competencies in the domain of *assessment/evaluation* and *professional development*. Upon completion of basic academic studies, students are neither properly nor sufficiently trained for planning, programming and developing strategies required for achievement of aims and outcomes of primary education⁹, not even for continuous monitoring, testing and assessment of students¹⁰, thus we should, in the next accreditation period, consider and create methods for overcoming these deficiencies.

In outcomes of study programs, competencies for the *learning area*, *subject* and *methodology of teaching* prevail in comparison to competencies for *teaching and learning*, and domains of *knowledge* and *implementation* have not been clearly demarcated. Knowing that teachers cannot do their jobs efficiently and in compliance with high standards without didactic and methodical knowledge and skills, we would find a solution by making changes in the system and introducing study programs which will directly prepare future teachers for their forthcoming challenges. Enhancing the quality of studies is possible in courses where students are taught how to master skills and methods of *how*, not the knowledge of *what*, to teach their pupils, and practice-oriented teaching. The time of traditional beliefs that studying “academic disciplines” in combination with “teaching talent” is sufficient for a high-quality teacher’s performance, subject-oriented teaching in which the emphasis is on the reproductive assimilation of knowledge where students are allowed to “manage on their own” and implement this knowledge when necessary, is long gone.

The fact is that countries whose primary-school students achieve best results in international testing and whose educational systems are said to be the best in Europe do not have a list of standard teacher competencies, which makes us believe that these actually inhibit and limit a teacher in important aspects of teaching. Competency standards stated in *the Regulations* are, for the

⁹ Zakon o osnovnom obrazovanju i vaspitanju, član 21

¹⁰ Pravilnik o ocenjivanju učenika u osnovnom obrazovanju i vaspitanju, br. 72/09, 52/11 и 55/13

most part, formulated using the syntagm “a teacher should”: know, understand, implement... which could be understood as a kind of *shouldology* – declared, expected teacher performance in defined areas. In our opinion, this leads to “moulding”, restraining and “suffocating” teachers’ creativity, inventiveness, and originality; thus, it would be interesting for future research to find out what teachers’ beliefs about this question are. This paper opens many questions: selection of candidates for faculties of education, developing motivation and students’ awareness of the need to take responsibility for their own education, the need to redefine educational outcomes in precise and clear descriptions of what a student should *know*, *understand* and *be able to do* upon completion of studies, the need for professional development and supervised work of university teachers etc. In the future, the research should examine attitudes of graduate students towards content and purpose of some study programs, characteristics and abilities of university teachers which students consider to be important for their education, possibilities and methods for modernizing university teaching and many other segments of teacher education, but within the academic context, in order not to reduce educational reform to “rewriting ready-made solutions” from other countries, and higher education to “serial production” of incompetent and unprofessional workers.

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Section II

Teaching Competences in Preschool Education

Chapter IV

DEVELOPMENT OF PRESCHOOL STUDENT TEACHERS' COMPETENCIES FOR CAREER DEVELOPMENT AND MANAGEMENT

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Abstract: The training of students for career management and their preparation for inclusion in the world of work is one of the key competences of modern society. Providing support to students in taking responsibility and an active role in their future career development should represent a significant segment of initial [college/undergraduate] education of preschool teachers. The aim of this research was to determine student's opinion on ways of improving career competencies during initial education through the following tasks: 1) what skills in the field of career management students want to develop within the initial education 2) through which forms / types of activities it is possible to provide support to students in this field. Students of the final year of elementary studies (N = 45) and specialist and master studies (N = 55) were surveyed. Material, technical and human resources in the school were analysed. The results of the research indicate that first of all students want to further develop the skills to conduct interviews with employers, research and self-assessment of skills, knowledge, and personality traits and skills and communication in a foreign language. In accordance with available human and material resources in the school and suggestions made by students regarding possible ways of improving career skills, the realization of a research and development project that focuses on instruction/student training in the field of skills is deemed necessary. The sustainability of the project would involve the expansion of activities: online realization, as well as the establishment of a Centre for Management and Career Development.

Keywords: *initial education of preschool teachers, career management skills, competencies, trainings courses and instructions, project.*

Introduction

The contemporary development of society is characterized by scientific and technological information expansion, with constant modification of jobs and occupations. Instead of the competencies for performing specialized tasks, competences are increasingly needed which enable the vertical and horizontal mobility of individuals in the labour market, their adaptability to changes in technologies, and new forms of organization of work (Korać, 2011). It is expected that an individual will enhance existing competencies and gain new ones for competitiveness in the labour market, as well as having highly developed skills in managing their career, which indicates that career guidance and counselling is an extremely current and significant area, both from the perspective of the individual and of society as a whole. It is present in all relevant policies focusing on education and employment and it is a strong link between the world of work and the world of education (Hooley, Sultana & Thomsen, 2018).

In the *Career Guidance and Counselling Strategy in the Republic of Serbia* (2010), career guidance is a term that includes all aspects and actors of the education system. It is defined as a series of activities that enable individuals, at any age, at any time in their lives, to identify their own competencies and interests, to make decisions regarding their education, training and profession, and to manage the flows of their lives in the field of learning, labour and other areas in which they can acquire and apply competencies. The goal of career guidance is to develop competencies for decision-making on education, profession, and career management (OECD, 2004) to give them support in choosing options within available career opportunities, in order to optimally develop and use their own potentials and achieve satisfaction in professional and private life (Djurovic, 2018). Career development always takes place within a context that is bound to a person and his/her environment (Marković & Nikolić, 2015). In career choice, this context includes the inner reality of the decision maker and the external reality of the world of work.

In accordance with the above, higher education institutions are facing new challenges and responsibilities. Providing support for students in taking responsibility and an active role in their future career development should represent a significant segment of initial [college/undergraduate] education. Students need to develop their competencies in relation to the conditions and requirements of the profession, and to manage as successfully as possible their own professional development and career, independently. In the *Strategy for the Development of Education in Serbia until 2020* (Službeni glasnik RS No. 16/2010) and the *Career Guidance and Counselling Program for young people aged 19–30 years* (2014), standards are defined in these areas: personal development of the individual, research of possibilities for learning and employment, planning and managing their own careers, enabling all providers and

implementers of career guidance and counselling services to systematically implement their activities and to achieve the goals of career guidance and counselling (Ibid: 7).

Career guidance and counselling in higher education institutions: current situation

In recent years, more and more works have been formulated/published that are theoretically and empirically concerned with the problem of career guidance and counselling at the level of higher education. The authors mainly focused on: researching the needs of students for career guidance (Kaufman et al., 2003; Kaufman, 2006; Fouad et al., 2006, according to Crisana et al, 2014), how to engage in this process (Lee & Johnston, 2001), an analysis of the existing conditions in career guidance (Watts, 2007; Roberts, 2013;), as well as the concept of a career adviser (Sun & Yuen, 2012). An analysis of available literature suggests that career guidance and counselling at the higher education level is usually organized within a certain Career Center, or departments for career guidance and counselling at faculties, within which are held various courses, lectures, on-line programs, employment fairs, experiential-style guidance (which implies simulated job interviews and experience through practice), campuses and/or individual counselling, at different times. Although there is no single, comprehensive solution to the organization of career guidance and counselling in higher education institutions, the authors agree that it is very important for the well being of both the individual and society as a whole.

In our country, within the Tempus CareerS project – the development of career guidance in order to improve higher education in the Republic of Serbia (Janković Balović et al., 2014), which aimed at the comprehensive development of career guidance and counselling in the field of higher education in Serbia and implementation of *Career Guidance and Counselling Strategy in the Republic of Serbia* (2010) a number of activities were organized involving representatives of the Career Development Center of the University of Belgrade, representatives of the University of Novi Sad, Niš and Kragujevac, Singidunum University, the Youth Office, Ministry of Youth and sports, Belgrade Open Schools, as well as partners of the University of Silesia and Padua and Svonsi University.

The document *Program and methodology of career guidance and student counselling* was formulated/devised, which foresees the framework of standards for program development, methodology of work, and certain contents of the program of work of student career centres. The document proposes that career guidance and counselling services are provided through specific

modules (modular access) and extracurricular (central model). A modular approach can be realized at universities through: 1) a *general module*, available to students in any class, study program or course requiring limited development time; 2) a *custom module*, in accordance with the needs of a particular department, study program or course leading to more active involvement of the academic community in career guidance and counselling activities; 3) a *specific module* developed for specific purposes within a particular department or course that represents a strategy which is developed for the specific needs of a particular academic community. The central model implies the provision of career guidance and counselling services outside the curriculum, and the relocation of career guidance and counselling services to careers centres, specialized institutions for providing such services.

In accordance with the Framework of Standards defined through the mentioned *CareerS project – the development of career guidance in order to improve higher education in the Republic of Serbia*, the contents can include: 1) career information (information on the profession, the situation and trends in the labour market, employment perspectives, opportunities for gaining work experience and professional development, etc.); 2) career counselling (focused on the individual plan and specific contents that students recognize as important e.g. assistance in compiling a work biography, applying for a scholarship, etc.); 3) career education (educational contents that enable them to make choices in the field of education and professional work, to plan and manage their careers, etc.); and 4) connect with educational institutions (providing opportunities for acquiring practical experience, reflection).

Initial [undergraduate] education of students – future educators: competencies in development and career management

Competences represent a dynamic combination of knowledge, skills and values that enable the individual to act actively and efficiently in a particular situation (Pantić & Wubbels, 2010) and represent the integration of *declarative knowledge* (knowledge of), *procedural knowledge* (knowledge of how) and *conditional knowledge* (knowledge when) (Rajović & Radulović, 2007). Being competent is more than a sum of individual competencies as a set of separate skills and knowledge of what an individual must possess to successfully perform certain tasks. A competent preschool teacher is professional in his / her work, which implies autonomous and responsible action in accordance with the ethical nature of the practice of the preschool teacher and the complex, dynamic and contextually conditioned practice of upbringing (*Standards of competence for the profession of preschool teachers and their professional development*, 2018).

Within the framework of the competence of preschool teachers for the development and management of careers, the competencies would represent knowledge, skills, and values that enable preschool teachers to collect, analyse and organize information about themselves, the world of work, as well as knowledge, skills and the value of attitudes that are necessary for making and implementing decisions and career advancement.

So far, the current practices of initial [undergraduate] education of preschool teachers have not identified activities that would strategically support the development of career skills of students – future preschool teachers, although the results of research carried out on the student population at the College of Professional Studies for Preschool Teachers in Sremska Mitrovica (Marković & Dedaj, 2018) that students recognize the need to develop the skills of career management and of linking initial [college/undergraduate] education with the labour market. In order to gain a clearer insight into the needs of students in this field, we conducted a survey with the aim of determining student's opinion on ways to improve career competencies during initial education. In accordance with the aim of the research, two tasks were defined: 1) determine which skills are in the area of career management that students want to develop in the framework of initial education; 2) determine through which types of activities it is possible to provide support to students in the field of developing their career skills. The starting point is that students want to further develop communication skills in a foreign language and the skills to conduct interviews with an employer, primarily through instructions/trainings that will be achieved within the project. It is expected that there will be differences in the assessment of the desired competencies in relation to previous work experience of students.

Method

Sample and variables of research

A survey of students of the final year of elementary studies (N = 45) and specialist and master studies (N = 55) was conducted. In basic studies, 33 students (73.3%) had no work experience, and 12 students (26.7%) did have work experience and worked in day nursery groups because they had previously completed secondary medical school. Within the specialist and master studies, 17 students (30.9%) had no work experience, while 38 students (69.1%) had experience working in educational groups in pre-school institutions. Previous work experience in the pre-school institution was an independent variable, which was divided into two categories at the level of the overall cause: no work experience (N = 50), with working experience in day nursery and preschool groups in preschool institution (N = 50).

In the first stage of the research, during classes at basic [undergraduate], or specialist and master studies level, students filled out a purpose-built questionnaire. In the second stage, the analysis of human and material-technical resources in the school was carried out. In the analysis of human resources, emphasis was placed on the specific competencies of teachers in the area, while the analysis of material and technical conditions focused on the spatial and technical capacity support that would be needed for the development of students' competences in the field of career development and management.

Used instruments

For the purpose of the research, a combined type questionnaire was constructed, in which general data on the respondents was collected in the introductory part: the year of studies and work experience. The second part was designed in the form of a five-stage Likert scale of assessment with the offered categories of 1 – “I completely disagree” to 5 – “I completely agree”, where the respondents evaluated their level of agreement with 13 skills in the field of career development and management, such as: “I need to further develop communication skills in a foreign language”. The third part of the questionnaire asked the respondents to evaluate the ways in which, during their initial [undergraduate] education, they could develop the skills of developing and managing careers. Each of the seven offered ways of developing career skills (within regular subjects, additional courses, projects, etc.) were evaluated by respondents in the YES or NO category. If an affirmative answer was given for some of the offered options, respondents were asked to describe their proposal in more detail through an open-type question. Additionally, respondents could, besides the offered options, also describe (suggest) some other way that was not envisaged by the list of claims.

For the needs of analysis of specific teachers' competences, a form was created in which teachers provided data on: certified training courses, trainings, participation in projects, experience in the conduct of training, and training.

Procedure

In the first stage of the research, specialist and master students completed a questionnaire during the course of classes. The data collected by the questionnaire was analysed with a quantitative and qualitative approach. The procedure lasted 15 minutes, which speaks in favour of the economics of this part of the research. In the second stage, the analysis of human and material-technical resources in the school was carried out. In the analysis of human resources, emphasis was placed on the specific competencies of teachers in the given area,

and the analysis of the Teacher's Book containing academic data on academic careers as well as additional knowledge and skills developed by teachers as part of their professional training through various education, then on participation in projects, etc. Since by filling out the course books teachers assessed personally what data was relevant in their professional development, and as the course books had a relatively limited space, there was the possibility that some important data was not contained in this document, so teachers were asked to provide information about their additional competencies in a form that was specifically created. The analysis of material and technical conditions focused on the spatial and technical capacities that would be required for the development of students' competencies in the field of career development and management. The procedure consisted of insight into the documentation of the institution's accreditation from the last period, where precise data on spatial capacities and technical support existed.

Data analysis

The data collected by the questionnaire was analysed using a quantitative and qualitative approach. Answers to closed-type questions were analysed by methods of descriptive statistics (frequencies and percentages), a t-test of significance of differences between arithmetic meanings and the hi-square test method in the SPSS 19.0 package. Answers to open-ended questions were listed and categorized, and then quantified. Qualitative Approach: content analysis The Teacher's Book, and forms where teachers recorded additional skills that are relevant to the career development of students, was also used in human analysis. By compiling data from relevant documents from the institution's accreditation, the situation in the field of material and technical resources was determined.

The results

On the basis of the collected data, analysis of average scores was performed on the scale of the assessment of the desired competences, in relation to the work experience of the respondents. The results are shown in Table 1.

Table 1: Desired competencies of students for career development and management

Career skills	Work experience	N	AS	SD	t	Df	p
Teamwork	Without work experience	50	3,62	1,244	0,461	98	0,349
	With work experience	50	3,50	1,359			
	Total	100	3,56	1,297			
Using ICT	Without work experience	50	3,50	0,953	-1,528	98	0,799
	With work experience	50	3,80	1,010			
	Total	100	3,65	0,989			
Writing projects	Without work experience	50	3,20	1,429	-2,769	98	0,013
	With work experience	50	3,92	1,158			
	Total	100	3,56	1,343			
Creating a business plan	Without work experience	50	3,54	1,328	0,079	98	0,206
	With work experience	50	3,52	1,199			
	Total	100	3,53	1,259			
Communication in a foreign language	Without work experience	50	3,58	1,430	-1,315	98	0,003
	With work experience	50	3,92	1,140			
	Total	100	3,75	1,298			
Researching your own knowledge, skills, personality traits	Without work experience	50	3,64	1,083	-1,468	98	0,043
	With work experience	50	3,94	0,956			
	Total	100	3,79	1,028			
Creating a Career Plan	Without work experience	50	3,52	1,015	-0,384	98	0,810
	With work experience	50	3,60	1,069			
	Total	100	3,56	1,038			
Developing additional skills through online learning	Without work experience	50	3,40	0,990	-2,802	98	0,452
	With work experience	50	3,98	1,078			
	Total	100	3,69	1,070			
Talking / interviewing with the employer	Without work experience	50	3,96	0,856	1,248	98	0,057
	With work experience	50	3,70	1,199			
	Total	100	3,83	1,045			
Business communication with the employer	Without work experience	50	3,62	1,193	0,256	98	0,584
	With work experience	50	3,56	1,146			
	Total	100	3,59	1,164			
Writing a CV	Without work experience	50	3,32	1,463	-0,213	98	0,282
	With work experience	50	3,38	1,354			
	Total	100	3,35	1,403			
Writing a motivation letter	Without work experience	50	3,12	1,189	-1,919	98	0,277
	With work experience	50	3,60	1,309			
	Total	100	3,36	1,267			
Making career decisions	Without work experience	50	3,48	1,092	-0,401	98	0,027
	With work experience	50	3,58	1,386			
	Total	100	3,53	1,243			

Students estimate that they had the greatest need to develop the ability to conduct interviews with an employer (AS = 3.83), the ability to research their own knowledge, skills, personality traits (AS = 3.79) and ability to communicate in a foreign language (AS = 3.75). The lowest average scores were obtained in assessing the importance of improving the skills for writing a CV (AS = 3.35) and a motivation letter (AS = 3.36). Students without work experience assessed a significant improvement in teamwork skills and the skills to conduct a conversation/interviews with employers in relation to students with work experience. Differences in estimates on the importance of improving the skills of conducting interviews with the employer are close to the level of statistical significance ($t = 1,248$ df (98); $p = 0,057$). Students who had work experience assessed the improvement of all other skills more relevant to students without work experience. Statistically significant differences were found on assertions relating to skills: project writing ($t = -2,769$; df (98), $p = 0,013$), foreign language communications ($t = -1,315$; df (98); $p = 0,003$) (-1.468; df (98), $p = 0.043$) and making career decisions ($t = -0.401$; df (98); $p = 0.027$).

In the following, displayed results underline which were the preferred ways of improving career skills, in the opinion of the students surveyed (Table 2).

Table 2: Student opinions on possible ways of developing career skills

The ways of developing career skills	Work experience	N _o of affirmative answers (f)	Percentage of respondents who gave a confirmed answer (%)	χ^2	Df	P
Expanding the contents of regular items	Without work experience	19	38	1,461	1	0,157
	With work experience	25	50			
	Total	44	44			
Introduction of new subjects in curriculum I and II level of studies	Without work experience	11	22,9	1,012	1	0,218
	With work experience	16	32,0			
	Total	27	27,6			
Organization of foreign language courses and ICT skills at school	Without work experience	21	42	2,560	1	0,081
	With work experience	29	58			
	Total	50	50			
Organizing educational and psychological workshops	Without work experience	24	48	1,004	1	0,212
	With work experience	29	58			
	Total	53	53			
Developing a wider project that would include education, workshops, short courses, contacts with employers, etc.	Without work experience	45	90	3,473	1	0,048
	With work experience	38	76			
	Total	83	83			
Through online activities	Without work experience	42	84	0,071	1	0,500
	With work experience	41	82			
	Total	83	83			
Through the formation and operation of the Career Development Center	Without work experience	30	60	1,099	1	0,201
	With work experience	35	70			
	Total	65	65			
In some other way	Without work experience	0	0	2,041	1	0,247
	With work experience	2	4			
	Total	2	2			

The results indicate that most affirmative responses are identified in relation to the proposal that career skills can be enhanced through a wider project that would include education, workshops, short courses, and contacts with employers. As many as 90% of students with no work experience and 76% of students with work experience supported this way of improving their career skills. The difference in the number of students without work experience and with work experience suggesting the realization of the project is statistically significant ($\chi^2 = 3.473$; $df(1)$; $p = 0.048$). Online activities were proposed by 84% of students with no work experience and 82% of students with work experience. A significant number of respondents advocated the establishment of a Career Development Center: 60% of those without work experience and 70% of those with work experience. The organization of educational and psychological workshops was supported by 48% of the respondents without work experience and 58% with work experience, and the organization of foreign language courses and ICT skills by 42% of respondents without work experience and 58% with work experience. 44% of respondents expressed an opinion about expanding the content of regular subjects in order to improve their career skills: 38% without work experience and 50% with work experience. The smallest number of respondents, 22.9% without work experience and 32% with work experience, was for the introduction of new subjects in the curriculum of I and / or II level studies. Two students (4%) who had work experience suggested that courses for the development of career skills should be organized at the school.

A number of students gave suggestions on how the contents of regular subjects could be improved, which subjects could be included in the curriculum I and/or II level of studies, what ICT courses and foreign language courses they would like, and which contents of educational and psychological workshops. It was proposed to expand the content within the framework of regular movements: Entrepreneurship (14.28% of responses) – production of business plan, business development; Change Management (10.34% of responses) – how to manage change, how to overcome resistance to change; Management systems in education (10.34% of responses) – examples of project designs; Team work (10.34% of reactions) – team work; English language (6.89% of answers) – use of language in business communication; Marketing (4.76% of answers). Students suggested the introduction of the following subjects: Business communications (18.64% of answers), Development of career management skills (12.5% of answers), Other foreign languages (6.89% of responses), Project writing (3.44% of responses), and Management of preschool institutions (3.44% of answers). As part of organizing courses, students propose: Business English (74.31% of answers), ICT skills (22.52% of answers) and Foreign language course – German (19.78%). They proposed educational and psychological workshops in the field: Collaboration and team work (18.75% of answers), Assertiveness and communication (12.5% of responses), Business relations

(12.5% of responses), Psychology and sociology of behaviour in the work environment (9.09% of the response).

In planning the realization of these activities, human and material-technical resources in the school were analysed. Based on insight into the Teacher's Book, specific competencies of employees were identified that would be a significant resource to support the career development of students. It was found that 12 teachers from the pedagogical-psychological area, the areas of language, economics and informatics had the following specific competencies:

- Certificate for the ToT trainer and assertive skills;
- REBT certificate and systemic family psychotherapist;
- experience in conducting training in the realization of accredited programs of professional development: Professional orientation (mentoring in the application of professional orientation programs and professional orientation and empowerment of young people for self-awareness), Career guidance and counselling, Team work;
- experience in realization of IT skills courses;
- experience in preparing students, educators and employees for Cambridge exams in English;
- education in the field of: modern business decision making skills, project planning, project management, communication skills;
- experience in the realization of workshops in the field of interpersonal skills as part of a research and development project.

The material and technical resources identified as supporting the activities of improving the career skills of students include: spatial capacities (amphitheatres, classrooms, cabinets, library and reading room) and the latest equipment (all-in-one and laptops, projectors, LCD TVs, digital cameras with stand). Equipment for distance learning in school was especially distinguished.

Discussion

The conducted research pointed out skills in the field of career management that students would like to further develop in the framework of initial [undergraduate] education. These are, first and foremost, the skills to conduct an interview with the employer, then research skills and self-assessment skills, knowledge and personality traits, and communication skills in a foreign language, which is in line with the hypothesis set. A tendency was identified for students who had work experience to a higher degree need to advance certain competencies in the field of career development and management in relation to students without work experience, indicating that they were probably more aware of the need for additional career advancement, and had adopted

the concept of professional development through lifelong learning. Students without work experience expressed to a significant degree the need to improve the skills of conducting interviews with an employer, in accordance with the important role these play in the process of employment. These students recognize the importance of further developing the skills of functioning and work in a team. The obtained results confirm the assumption that there are differences in the assessment of desired competencies in relation to the previous work experience of the students. When it comes to forms (types) of activities through which it is possible to provide support to students in the field of career development, a smaller number of students proposed curriculum teaching, and significantly more suggested other activities – primarily a project that would include education, workshops, short courses, contacts with the employer, etc., which is also in accordance with the set hypothesis. A significant number of students pleaded for online activities, language courses and ICT skills, as well as for the formation and operation of a Career Development Center.

Taking into account the results of the research, as well as the fact that a significant number of teachers had specific competencies in the field of career management and development, and that there were adequate material and technical resources in the school that could be supportive of these activities, it can be concluded that the College of Professional Studies for Preschool Teachers in Sremska Mitrovica should initiate a research and development project aimed at defining the concept of supporting students in the final years of studies at the school for educating preschool teachers in the development of career management skills. In the initial phase of the project, it was necessary, with a questionnaire, to examine self-assessment of the skills of career management of students in the final years of basic studies, specialist and master studies. The next step should identify students who estimate that they need support in developing the skills of career management and with whom project activities could be accomplished. In accordance with research findings, in the main phase of the project, training focused on content related to the importance of improving the skills of career management, competencies in the context of employability and transition into the world of work, teamwork, assertiveness, successful business communication, self-awareness and self-confidence, creating a business plan, and creating projects. One segment of project activities would also be based on a short course of business English and ICT skills. After the completion of the project activities, a final examination of self-assessment of career skills of all students should be carried out with the aim of determining the effects of the achieved activities by identifying differences in the self-assessment of the career skills of student-participants of the project and other students of the final year of basic, specialist and master studies. The sustainability of the project would include teacher training that would, at the next stage, include online career management skills and establish a Career Management and Career Center.

Conclusion

The conducted research indicated that the students of specialist and master studies need to improve their skills in career development and management. Up until now, at the Higher School for Education of Educators, there have been no systematically implemented activities through which students could prepare for inclusion in the world of work. Based on the recording of students' needs in the field of development and improvement of career competencies, several important areas have been identified in which additional education, training and courses are required. A greater number of teachers have specific competencies for the realization of these activities, and there are adequate technical capacities for their realization, directly and online.

In addition to extending the content of regular subjects to respond to a cross-curricular model, the introduction of a change in the practice of initial [undergraduate] education of educators in the field of development of career competencies could be realized through a research and development project in the form of action research. The realization and evaluation of project activities would be the basis for the conception of the Career Development Center program within the initial [undergraduate] education of educators, in accordance with the central model.

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Chapter V

DEVELOPMENT OF PROFESSIONAL COMPETENCIES OF PRESCHOOL STUDENT TEACHERS: METHODOLOGY COMPETENCIES

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Abstract: The paper deals with the issue of the development and improvement of professional competencies of future preschool teachers with special emphasis on methodical competencies. The aim of this research was to determine how students in the final year of vocational studies evaluated and which level of importance they attached to the competencies considered necessary in pedagogical activities in order to perform the work of a preschool teacher. The research issue is reflected in the question: Are students of the final year of vocational studies empowered with important professional competencies? The research tasks were carried out by analysing the assessment of competencies that the respondents provided using a survey and scaling techniques, as well as instruments such as a questionnaire and a scale of attitudes. The research sample included 73 respondents, students in the third year of undergraduate studies. Students' assessments point to the importance of developing professional competencies through the implementation of professional practice. The current competence of students is the most important within specific competencies, knowledge, skills and abilities – visual, musical, speech, and drama. Based on the obtained results, in the opinion of students it is essential to focus on: greater representation of professional practice during the course of studies, relation of methods in professional practice with work in other course subjects, professionalism of mentors – preschool teachers and supervising professors, and the pedagogical climate in which activities are carried out. The obtained results show the importance of students' assessments and opinions on the role of professional practice in improving competencies directed at their quality training for the future vocation of competent preschool teachers.

Keywords: *professional competence of preschool teachers, professional competence, development.*

Introduction

In a time of accelerated social and technical development, preschool institutions are expected to monitor this development and solve current problems that accompany the education system in contemporary society. A preschool teacher in a modern preschool institution has become one of the key factors for the improvement of the education system. The new roles of preschool teachers nowadays require the development of professional competencies, affirmation of the profession, and the building of a strong and recognizable professional identity. The status and role of the profession of preschool teachers in contemporary preschool institutions are conditioned by numerous changes in the social system which cause this vocation to be complex and responsible.

Examining professional competencies of students – future preschool teachers, leads to understanding of their behaviour, which forms the basis of planning their professional development. Hence originates the significance of examining the impact of initial [undergraduate] education on the development of their methodical competencies as well as the way they think about their qualifications to perform the job of preschool teacher. Pedagogical competencies of preschool teachers are complex and represent an elaborate set of different areas of knowledge and skills that are necessarily included in the practical area of each professional. Since methodological competencies are very important in professional development and improvement, only a comprehensive model of diverse competencies of students – future preschool teachers can lead to the modernization of educational institutions.

Over the last few decades, the vocation of preschool teachers has gained increasing significance and attention in public and political life, as well as in the creation of modern educational policies, so that many European countries have become committed to stimulating its further improvement and development. Almost all modern states and inter-state bodies (*European Commission for Education and Culture*), have resorted to the standardization of competences in order to raise the quality of educational work in pre-school institutions and included the list of standardized competences which teachers need to fulfil their role in their educational documents.¹

According to facts deriving from the professional role of preschool teachers, the expected outcomes or goals in the field of preschool education, world trends, and our policies in the sphere of education and the role of the segment of institutional preschool education in the wholeness of our education system,

¹ European Commission Documents (Children in Europe, Policy paper 2007; OECD, 2006; UNICEF, 2008; ("Education & Training 2010" the Success of the Lisbon Strategy Hinges on Urgent Reforms); (Key Competences for Lifelong Learning – A European Reference Framework, The European Parliament and the Council of The European Union, 2006).

the most important professional competencies of teachers nowadays are predominantly related to the performance of certain tasks and work assignments, which can only be realistically accomplished on the basis of the following:

- Knowledge of the theory and practice of upbringing (especially knowledge related to the development and upbringing of children);
- Capacity for one's own lifelong education and professional development (especially in the form of innovations known today as "action research"), that is, solving problems in practice as a special type of professional development in partnership with children, colleagues and parents (Pešić, 1998).

Thus according to Kamenov, the approach to education oriented to competencies is based on the awareness that in a globalized and individualized society of knowledge, competencies are becoming more important than narrowly specialized knowledge which is rapidly changing. Nowadays young people are facing the challenge of continuous advancement and adoption of new knowledge. Therefore, communication ability, lifelong learning ability, and competent interaction with the changes are becoming increasingly important (Kamenov, 2006). Due to the complexity and diversity of the methodology of educational work, the issue constantly present in current preschool education is the search for ways of changing educational practice as well as for innovations in educational work. These innovations to a great extent depend on the professional capacity of the staff working in preschool institutions – the professional competencies of preschool teachers – because they represent the basis for successful methodical work. The question of competence is also related to the roles which expect teachers in contemporary conditions of educational work, which are also being significantly innovated (Maleš, 2011).

Unlike the general approach to the notion of competence, which originates from the goals of education and universal values, "professional competence" is especially related to the knowledge, skills and personality characteristics needed for the successful performance of a professional role in one occupation and the work assignments or tasks arising from this role (Havelka, 2000).

The Law on the Foundations of the Education System prescribes measures for improving the quality of work of the educational institution, with the focus on all participants in the process of learning and teaching, especially preschool teachers. The *Rulebook on standards of competence for the vocation of preschool teachers and their professional development* is of particular importance. This document presents guidelines to employees and supports educational institutions in self-assessment and personal orientation of teachers in the context of planning and creation of professional development, monitoring and evaluation of work, and defining national priorities. Each area of competence is concretised through several competencies described in the dimensions of knowledge,

skills and values. Using the term “skill” (knowledge to do something) instead of the term “ability”, the difference between technical understanding of educational work, as the application of individual skills and ethical nature of the practice of a preschool teacher, which is essentially based on values and reflexive examination of knowledge, is highlighted. Every competence should be comprehensively envisaged, through knowledge, skills and values, and related to other competencies.²

Preschool teachers are expected to demonstrate their competencies in areas defined by the necessary corpus of knowledge and skills as well as the set goals and expected outcomes of the program. These demands are established from the outside – independently from a preschool teacher and the context in which he/she operates (Krnjaja & Pavlović Breneselović, 2013).

Pavlović Breneselović (2014) points out the fundamental differences between two approaches to the professionalism of preschool teachers – *discourse of competence* versus *discourse of competencies*. The technocratic one (*discourse of competencies*) is based on the understanding of professionalism as the application of certain knowledge and skills in one's own professional practice. The technical emphasis in the approach is reflected in the idea that a precise list of individual knowledge and skills can be made in order to be mastered by a preschool teacher, and the role of a practitioner is reduced to the one of an “implementer”. Such competencies are perceived as a fixed and sustained capacity that an individual possesses or does not possess, regardless of the context; they are the separate responsibility of the individual who needs to possess certain competencies in accordance with the set requirements, and if he/she does not have them, to take measures to acquire them, most often through professional development.

Systemic (*discourse of competence*) is based on the recognition of different types of knowledge: in addition to theoretical – knowledge for practice, there are both knowledge in practice and knowledge of practice (Cochran Smith & Fries, 2005 according to Pavlović Breneselović, 2014: 6). This discourse recognizes the profession of a preschool teacher as the ethical practice of responsible behaviour based on values, multiperspectivity, democracy, and a critical approach.

The competence of preschool teachers is the result of a continuous learning process, a process through which one's own practice and beliefs are constantly being re-examined in relation to the changing social and educational context. Developing competence is a process that requires a systemic approach in order to support it, and it is not just the individual responsibility of preschool teachers (Ibid: 9).

² Rulebook on standards of competence for the profession of educators and its professional development, *Official Gazette of RS*, no. 88/17 and 27/18 – and other acts

The author points out that, although the goals and principles of preschool education set in the *Law on Preschool Upbringing and Education of Serbia* imply a value basis that is appropriate to the discourse of competence, many educational policy measures and educational practices are in discrepancy with this discourse. Consequently, comprehensive transformations are necessary and involve changes in the initial [undergraduate] education of preschool teachers – redefining the role of a preschool teacher from program implementer into researcher of one's own practice, opening scientific and university centres towards practice and networking with practice, as well as transforming the kindergarten into a learning community that supports the development of the competence of a preschool teacher. When it comes to initial [undergraduate] education, the changes would take place “towards an educational program that is integrated and based on research as a process of building knowledge and understanding through consideration, examination, and review of theory and practice” (Ibid: 15).

The way preschool teachers comprehend their role as researchers of their own practice, is shown in the results of a study according to which a small number of preschool teachers used their own research to review their own practice; and the highest benefit is regarded to be the benefit for children. Preschool teachers do not see the significance of the review due to the belief that the evaluation of the practice belongs to experts and external evaluators (Krnjaja & Pavlović Breneselović, 2011).

The results of the research on the perspectives of teachers on professional development point to three controversies: equalizing professional training with training seminars, the question of the effectiveness of seminars, and the discrepancy between the assessment of the importance and the need for giving credit to certain forms of professional development (Pavlović Breneselović & Krnjaja, 2012).

By examining the quality of the practice in kindergartens from the perspective of practitioners, on a sample of 105 preschool teachers from preschool institutions in Serbia, the most important dimensions of quality are: the number of children in the group and equipment with aids and material available to children, and then the adequate size and arrangement of the room. Professional training, among 28 identified quality criteria, was ranked as eighteenth i.e. 2.8% of the respondents opted for it (Krnjaja, 2016: 24).

“The professionalism of preschool teachers is reflected in continuous learning through the problematization of one's own practice and practice of others and in permanent upgrading of the answer to the questions like what it means to be a good preschool teacher and what a good program is” (Pavlović Breneselović & Krnjaja, 2017: 65).

It is significant that the education of students – future preschool teachers is in line with contemporary scientific knowledge and trends on which the humanistic approach to the educational process, as well as the constructivist interaction concept of learning, is based. In order to be trained for this, trainee teachers must, besides general knowledge, be well versed in the general and special methods of educational work. They need to be trained to apply modern, interactive, cooperative and other methods, workshops and organizational forms and ways of working in accordance with children's needs, opportunities, rights, and interests. Thus formed experts will understand the advantage of indirect guidance and orientation, which allow a child to develop his/her personality only in line with his/her capabilities, to find his/her own rhythm, to decide, to solve conflicts through communication, and become more independent. C. Peklaj and M. Puklek Levpušček, 2008, in the findings of their research, point out that greater emphasis should be placed on developing the skills of students in practice, which can only be achieved by larger and more consistent involvement of well-conducted pedagogical practices at all levels of the study – perhaps even at the beginning of the studies, together with demonstration classes (observation practice), and above all, with the practice of general and special didactics (methodology). It is particularly important to note that modification of the program is not sufficient for better training in practice itself.

Method

In the conducted empirical research, a descriptive method was applied. The assessment of students – future preschool teachers relating to the influence of initial [undergraduate] education on the development of their competences and their ability to perform the vocational education in a quality manner was studied. The sample consisted of 73 students of the final, third year of undergraduate studies of the Preschool Teacher Training College in Šabac, in the 2017/18 school year. The data was collected by interviewing. The survey questionnaire, compiled for the purpose of this research, contained five questions of closed and combined type and one of open type. The obtained data were processed using descriptive statistics and is represented in frequencies and percentages.

Results

The researchers were interested in the way students of the third year of vocational studies evaluated the subject-professional competences for quality performance of the vocational training, based on the data obtained from the survey on satisfaction with the acquired competences at the end of the school year of 2017/18.

Table 1: Evaluation of subject-professional competencies for quality education

No	Evaluation of professional competences	Average rating
1.	Self-assessment of subject-professional competence of teachers	4.73
2.	Self-assessment of the ability of vocational preschool teachers to solve practical problems	4.61
3.	Self-assessment of the abilities of preschool teachers to acquire more specific knowledge and skills in methodology, which correspond to contemporary living conditions	4.89
4.	Self-assessment of the ability of professional preschool teachers to think analytically and critically	4.66
5.	Self-assessment of the development of work habits among professional preschool teachers	4.73
6.	Self-assessment of the abilities of professional preschool teachers for team work	4.82
	Overall average rating	4.70

The ratings ranged from 4.61 (the ability of professional preschool teachers to solve practical problems, the ability of professional preschool teachers to think analytically and critically, the development of work habits) to 4.89 (the ability of professional preschool teachers to acquire more specific knowledge and skills from methodologies that meet modern living conditions). Students rated with the highest average grades the competencies that are of great importance for the profession of preschool teachers – the ability to acquire more specific knowledge and skills in methodologies, which correspond to contemporary living conditions and ability for team work. Based on this, it can be recommended that in future work on developing study programs and improving the pedagogical work of preschool teachers, greater attention should be paid to developing the aforementioned competencies. With somewhat lower, but still very high grades, the students evaluated: the ability of professional preschool teachers to solve practical problems, and the ability to acquire more specific knowledge and skills that meet contemporary living conditions.

When asked a question of an open type about capabilities of special competencies, several different answers were obtained, which indicate that the ability to articulate a text, acting out a play, and the like, on the stage, the artistic ability to create a scene, the ability to perform drama, presenting small dramatic forms, were found with the students to a much greater degree, as well as digital competences (82.17%), while for musical competence – playing on an instrument, was opted for by 16.43% of the respondents.

Table 2: Types of skills within students' special competences

What skills within special competencies have you acquired during your studies?	f	%
Skills to articulate the text, actor's performance on the stage, artistic ability to create a scene, etc.	20	27.39
Skills for drama play, presentation of small dramatic forms, processing of stories, games and songs into drama forms, activity games, creation of dramatic texts from uttered statements, dramatization, creation of simple forms of selected theatre pieces, puppet theatre, table theatre, theatre of shadows and others	26	35.61
Skills to use information and communication technology in upbringing and education	14	19.17
Musical competence: playing on the instrument	12	16.43
Σ	73	100

As a part of the third question, five statements relating to the professional competence of preschool teachers for specific areas were offered, and the respondents were asked to express a degree of agreement on a five-level scale.

Table 3: Attitudes of preschool teachers about the vocational training for specific areas, topics

Statement	Totally disagree	Disagree	Indecisive	Agree	Totally agree
Preschool teacher should possess appropriate knowledge and know the contents of the field of learning and teaching			2	25	46
	0	0	2.73	34.24	63.01
Preschool teacher should have the developed capacity for interdisciplinary linking of learning and teaching content; an integrated approach to learning			4	36	33
	0	0	5.47	49.31	45.20
Preschool teacher needs to know and understand the curriculum, as well as the goals that the preschool teacher should reach in a particular field		4	6	31	32
	0	5.47	8.21	42.46	43.83
Preschool teachers are expected to have knowledge of didactic materials and tools for learning and teaching certain areas of development and topics			8	42	23
	0	0	10.95	57.53	31.50
Preschool teacher needs to know the novelties in the content that are offered to children in teaching procedures			7	31	35
	0	0	9.58	42.46	47.94

The attitude of students regarding the vocational training of preschool teachers in certain areas, is represented by the fact that 97.25% of them agreed with the statement. The preschool teacher should have adequate knowledge and know the contents from the field of learning and teaching. Also, most of them (94.51) believed that a future preschool teacher needs to possess a developed capacity for interdisciplinary linking of learning and teaching content – an integrated approach to learning. When it comes to the knowledge and understanding of the curriculum by preschool teachers, as well as the goals that the students need to reach in a particular field, the answers were divided: 5.47% did not agree, 42.46% agreed and 8.21% were indecisive. The distribution of answers regarding the statement that preschool teachers are expected to have knowledge of didactic materials and tools for learning and teaching certain areas is as follows: 89.03% agrees and 10.95% is indecisive.

The next question in the survey referred to the self-assessment of students' knowledge in the area of competence – *Developing professional practice* as shown in Table 4. The ratings ranged from 4.42 (understanding of social and economic trends affecting the work of preschool institutions and requirements that are placed before the profession of preschool teachers, knowledge of the place of preschool upbringing and education in the local, national and international context, knowledge of the goals and principles of preschool upbringing and education as well as functions of preschool institutions and programs, knowledge of different procedures and techniques of planning, monitoring, documentation and evaluation in program development, knowledge for work in the context of diversity) up to 4.92 (knowledge on the use of digital technologies).

Table 4: Self-assessment of students' knowledge in the field of competence – Developing professional practice

No	Evaluation of knowledge – Developing professional practice	Average rating
1.	Knowledge about the goals and principles of preschool upbringing and education and the functions of preschool institutions and programs	4.53
2.	Knowledge about different procedures and techniques of planning, monitoring, documenting and evaluating in program development	4.71
3.	Knowledge for work in the context of diversity	4.88
4.	Knowledge of the place of preschool upbringing and education in the local, national and international context	4.60
5.	Understanding the social and economic trends affecting the work of preschool institutions and the demands placed on the profession of preschool teachers	4.42
6.	Knowledge about the use of digital technologies	4.92
	Overall average rating	4.67

The last question in the survey related to getting information from students about proposed measures to improve professional practice that would contribute to acquiring professional competencies

Table 5: Proposed measures for improvement of professional practice

No	STATEMENTS	Percentage distribution
1.	More theoretical lessons are needed	1.77%
2.	More practical lessons are needed	19.42%
3.	More professional practice is needed	16.67%
4.	It is necessary to pay more attention to training students for team work	7.20%
5.	Teachers' pedagogical skills need to be improved	5.67%
6.	It is necessary to increase the amount of teaching materials	3.43%
7.	It is necessary to reduce the amount of teaching materials	4.67%
8.	It is necessary to increase the volume of literature	2.77%
9.	It is necessary to reduce the volume of literature	4.67%
10.	It is necessary to improve the quality of literature	4.17%
11.	It is necessary to increase the engagement of teachers and associates in working with students	3.23%
12.	It is necessary to reduce the number of students	4.50%
13.	It is necessary to pay more attention to the professionalism of preschool teachers – mentors and teachers in charge of professional practice	11.50%
14.	It is necessary to improve the students' abilities to create a positive pedagogical climate in the realization of activities in professional practice	9.33%
	Total number of proposed improvement measures:	140

As noted, the priority proposed measures are: more practical teaching (19.42%), more professional practice (16.67%), paying more attention to professionalism of preschool teachers – mentors and teachers in charge of professional practice (11.50%), and necessity to improve students' abilities creating a positive pedagogical climate in the realization of activities during professional practice (9.33%).

Discussion

The results of the research showed that, on a sample of 73 students of the third year of undergraduate vocational studies, evaluated with the highest average grades competencies that are highly significant for the profession of preschool teachers – the abilities to acquire more specific knowledge and skills from the methodologies that meet modern living conditions, and an ability for team work.

A positive attitude about the importance of possessing knowledge, knowledge of content in the field of learning and teaching scored a high percentage among students (97.52%). Also, most of them (94.51) believed that a future preschool teacher needs to have a developed capacity for the interdisciplinary linking of learning content and teaching, and an integrated approach to learning.

If we analyse the obtained research findings regarding the ability of special competencies of students acquired during the course of the study, it can be noted that the abilities of artistic narration of a text, the acting of a play and the like, on the stage, the artistic ability to create a stage, ability to perform drama, presenting small dramatic forms, were favoured by students in much greater scale, as well as digital competences (84%), while for musical competence – playing an instrument, was opted for by 16% of respondents.

Conclusion

In accordance with the analysis of the self-assessment of professional competencies of students in this paper, we can conclude that the need for quality organization and the realization of professional practices is not only required from the perspective of vocational colleges for training of preschool teachers, which need to educate and prepare them for work in a preschool institution. This need is also reflected among the students themselves, who recognized the importance of professional practice for improving professional competencies and their future professional development. Further improvement of students' training for work in preschool institutions is also necessary. Based on the obtained results, according to the opinion of students, it is recommendable to focus on: greater representation of professional practice during the course of studies, connection of methods in professional practice with work in other course subjects, professionalism of preschool teachers – mentors and teachers, and pedagogical climate in which activities are realized. The obtained results show the significance of students' assessments and opinions on the role of professional practice in improving competencies in the sense of their quality training for the future profession of competent preschool teachers.

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Chapter VI

CHILDREN'S PLAY AS A FORM AND METHOD IN PRESCHOOL EDUCATION

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Abstract: Starting from the theoretical background, considerable research, and implications in the educational practice itself, children's play has proved to be one of the fundamental elements of education as a form and method of work in the development of the youngest. The aim of this paper is to provide an insight into the attitudes of preschool teachers about the presence of play elements, based on the perception of their own professional strategies and procedures in practice. The research sample includes fifty-seven (57) practitioners who attend the master program of vocational studies of the Preschool Teacher Training College in Šabac. The survey was conducted in November 2018 by means of a *Questionnaire* specially designed for research purposes. The obtained results of the research showed that the majority of preschool teachers distinguish play as the basic method of educational work with children of preschool age; they recognize their own play "in-play" primarily in the activities of producing various creative contents from different artistic areas, in creation of work-and-play aids and in designing new games. The significance of this research is the reconstruction of the attitudes of preschool teachers about the presence of the elements of play within their own professional identity through self-evaluation, in the possibility of improving their own practice, as well as the practical application of the obtained results in improving the programs of higher education institutions for the education of preschool teachers in order to strengthen their professional competencies in accordance with the requirements of the practice and modern strategies of educational work in preschool education.

Keywords: *preschool teacher, children of preschool age, play, creativity, competence.*

Introduction

In the context of a holistic approach to the development of children's personalities, play and educational work are inextricably linked. Preschool age is defined as "the age of play" (Stern), since until children begin school, play

dominates as the basic activity of children, and its role is emphasized as a driving force because it leads them to new discoveries and to a higher level of development (Vigotski, 1996; Rajić & Petrović Sočo, 2015). Having a central role in early childhood, play is characterized as an essential need and a precondition for the proper development of children.

Due to its importance, great attention is dedicated to play during the upbringing and education of children, which is seen in our pedagogical science as a unique process. Confirmation of the educational values of children's play can be found in numerous foreign and domestic literature (Venger, 1973; Eljkonin, 1978; Woodhead, 1979; Clark, 1987; Marjanović, 1977; Kamenov, 1997; Šain, 1998). Affirmed as the cornerstone of work with children, "play is considered one of the most powerful latent energy generators in children, and all the teacher's skills include the ability to present to children what he/she wants as play" (Kamenov, 1989). Play stands out as an important principle for working with children, as it encourages a series of creative searches for appropriate methodical solutions (Šefer, 2005: 58). Pedagogical theory and practice are permeated by the study of the complex phenomenon of play and significantly direct educational work thus initiating the need for new roles of children, on the one hand, and changing the role in competencies of preschool teachers, on the other.

Having in mind the breadth and comprehensiveness of this issue and taking into account the importance of play in the organization of educational work, in this paper we have paid attention to insights regarding whether the experience in working with children influences formation of the attitudes of preschool teachers about the need for presence of the elements of play and in approaches to their own pedagogical practice, whether they recognize their own "play in play", as well as what the possibilities of applying the obtained results for the purpose of education of the future preschool teachers and teachers for pedagogical work are.

Theory framework

Upon considerations about children's play, depending on the area of their study, numerous authors have specified its definitions. Since play dominates preschool age, we state that "play is the basic form of children's activity" (*Pedagogical Dictionary 1*, 1967: 341).

Psychologists J. Piaget and J. Bruner contributed to a great extent to the understanding of children's play as an incentive for development (Bruner, 1976; Piaget, 1976). Lev Vygotski recognizes the basis (*praforn*) of children's creativity in play, pointing out that this is a "mental function of the greatest importance for the general development and maturation of a child" (Vygotski,

1996). Leontiev, Lukov, Fradkina, Zaporozhetsk, Elkonin and others (Duran, 1988: 16) developed the views of Vigotsky about play and its connection with the background processes of personality development in preschool age.

In our community, Aleksandra Marjanović has dealt with theoretical approaches to children's play, accepting Vigotsky's views that play is one of the stages in the development of thinking. The above author considers that play is an activity that contains the basic characteristics of the future creative activity of a man because "a child in play exhibits all those features that are characteristic of the creative personality: openness to experience, wonder, curiosity, dedication, passion, innocence, spontaneity, authenticity, sensitivity etc." (Marjanović, 1975). Emil Kamenov did not give a definition of play, believing that it is almost impossible to precisely define this phenomenon, but significantly illuminates this notion, advocating the systems of didactic games that will preserve the basic characteristics of children's play, in addition to logical, and creative, divergent thinking (Kamenov, 1989). In the mentioned considerations, play is seen from the perspective of a child's welfare in the educational process and, although other views appeared, its significant role has remained undisputed. Thus, for example, French authors Lechat, Vinclet and Kroy attempted to challenge the educational values of children's play, considering it an aimless activity (Kamenov, 1989). The existence of other tones in play's review failed to dispute its significance.

Most of the contemporary authors state that play has a notable place, advocating the encouragement of creative thinking and application of creative methods and procedures in the educational process. The creativity that children show during play is related to their ability to think divergently (Hutt & Bhavnani, 1976; Schaefer, 2005: 117). "The program concept of preschool education is based on the idea that a child learns through play, learns to play and thus grows into an active and creative being, since play is also a creative act", emphasizes Kopas Vukašinović (2006: 175). The support of adults to a child during play is valuable because it stimulates intellectual excitement, promotes concentration, focuses on the goal, and develops the ability to solve a problem independently (Medouz & Kešdan, 2000).

We believe that it is necessary to point to the current views on play that extend the scope of its positive effects, even on a preschool teacher, in addition to a child, giving new impulses to pedagogical practice. Thus, for example, we highlight the experiences coming from developmental psychology that emphasize the developmental function of play from a broader perspective directed at educational implications. The author who was amongst the first to point to play from a different angle was Bateson (Bateson, 1979; Nachmantovitch, 2009). According to this author, "play is not a name for an activity or action, it is the name for the framework in which a certain activity or action takes place" (Nachmantovitch, 2009: 139). The presence of play allows

for a wider viewing angle, contributes to different considerations and dynamics of changes of the angles from which it is seen, and thus to innovation. So “the opposite of play is neither work nor seriousness, because work can be play, and likewise play can be serious”, adding that the essential “contrast to play is the one-dimensionality in behavior and thinking, it’s inflexibility, rigidity” and literal “access to things (literar-mindedness)” (Nikolić Maksić & Ljujić, 2012: 117). Since play is in a meta-position in relation to other activities, play is easy to recognize but difficult to define. Therefore, numerous determinations of play are imprecise, because play by its nature and properties evades any definition; it is a protean phenomenon, in a meta position in relation to the activity of determination itself.

In the process of play it is possible to express freedom, curiosity, personal creativity and innovativity, because play is basically a holistic experience. The potential of play in education initiates new paths and shifts the boundaries of experience, enriching methodical practices and working methods. In order to succeed, the precondition is that the phenomenon of play is not only seen from the point of view of the play act itself, but requires a starting point that recognizes the basic human potential in play. Therefore, the presence of play is desirable in all activities that should be characterized by creativity, especially educational. (Nikolić Maksić & Ljujić, 2012: 124). Author J. Šefer also recognizes in play “a part of the creative behavior not only of children, but also of many scientists and artists – the determinants of play are similar to the determinants of creative behavior [...] such as: divergent imaginative thinking, logical and critical thinking, emotional expression, internal motivation” (Šefer, 2005: 112).

Based on the above, we notice that all the possibilities that play possesses have not yet been exhausted, because the play world is complex and should not be considered from one point of view only. Contemporary tendencies indicate that in methodical strategies within educational work, more innovative solutions should be encouraged that will enrich and develop the role of preschool teachers. Issues of the criteria for choosing activities, organization, monitoring and evaluation of children’s play include an active attitude of preschool teachers knowing the role of play in the development of children, as well as the role of play in acquiring their own practical experiences and developing professional competences.

Project and Methodology of Research

Starting from the theoretical settings, numerous research and implications in educational practice itself, children’s play as a form and method of work has proved to be one of the fundamental elements of educational work in

the development of the youngest. The aim of this paper is to provide an insight into the attitudes of preschool teachers towards the presence of play elements based on the perception of their own professional strategies and procedures in practice.

The research sample consisted of fifty-seven (57) practitioners who are students of the master program of vocational studies of the Preschool Teacher Training College in Šabac. The survey was conducted in November 2018 with a Questionnaire especially designed for the research purposes, and was used to review the attitudes and claims of preschool teachers concerning the following: the role of play in educational work; meaning of play for a child of preschool age; techniques used by preschool teachers in monitoring and interpreting preschool children's play; what they give priority to when choosing a playful activity; important incentives when choosing games and segments of educational work that represent play in which they themselves play. The questions were of closed type. As for statistical method, a statistical account was applied.

Research Results

In the Questionnaire for preschool teachers, the respondents gave the following answers to six questions, and the results are as follows:

Table 1: Educators' claims about the role of play in educational work

Claims on the role of play in educational work and that play is:	YES		NO		OCCASIONALLY	
	Frequency (f)	%	Frequency (f)	%	Frequency (f)	%
a. Basic method of work with children	55	96.5	2	3.5	0	0
b. Form of interaction in child-child relationship and preschool teacher-child	55	96.5	1	1.75	1	1.75
d. Way to achieve the goals of educational work	48	84.2	3	5.26	6	10.54
e. Challenge for both a child and preschool teacher	41	71.93	2	3.5	14	24.57
f. Support to preschool teachers to improve their own pedagogical practice	49	85.97	3	5.26	5	8.77
g. Applicable to all other activities in the work with children	55	96.5	0	0	2	3.5

As for the first question about the role of play in educational work, preschool teachers mostly opted for those aspects of play that are particularly important according to assertions that play is: a) a basic method of work with children – 96.5% of preschool teachers; b) a form of interaction in the relationship between child – child and preschool teacher – child – 96.5% of respondents; c) a way to achieve the goals of educational work – 84.2% of preschool teachers; d) a stimulus for both child and preschool teacher – 71.93% of respondents; e) a stimulus for preschool teacher to improve his/her own pedagogical practice – 85.97% of answers; f) applicable to all other activities in work with children – 96.5% of preschool teachers.

Regarding question number 2, the preschool teachers' claims about the meaning of play for preschool children, the answers were different. All respondents, 100% of them, believe that for a pre-school child, play represents a natural need and satisfaction; 98.25% of them believe that play for a preschool child is a possibility of gaining experience, and 94.75% of them think that play for a preschool child is the basis of children's creativity. What is noteworthy is that preschool teachers to a large extent, 92.98% of them, think that play is not a sole activity in which a child plays with toys; 77.2% of them consider that play is not just fun for a child with no special purpose, while a smaller number of respondents, 22.8% answered just the opposite i.e. that play besides entertainment has no special purpose.

Table 2: Preschool teacher's claims on the techniques used in monitoring and interpretation of preschool children's play

3. Claims on the techniques used by preschool teachers in monitoring and interpretation of preschool children's play:	YES		NO		OCCASIONALLY	
	Frequency (f)	%	Frequency (f)	%	Frequency (f)	%
a. Observation of children	57	100	0	0	0	0
b. Listening to children	56	98.25	0	0	1	1.75
c. Talk to children	55	96.5	0	0	2	3.5
d. Talk with parents of children about kinds of play that children love	37	64.89	6	10.54	14	24.57
e. Detecting the questions that children ask	53	92.98	0	0	4	7.02
f. Sharing experiences with other preschool teachers about which kinds of play children like	43	75.45	1	1.75	13	22.8

In relation to the question number 3, the responses of the preschool teachers about the claims on the techniques used in monitoring and interpretation of preschool children's play were as follows: all preschool teachers stated that they use the techniques of children's observation; 98.25% of them opted for listening, 96.5% of them talk to children, while 92.98% pay attention to the questions that children ask. When it comes to sharing experiences with other preschool teachers about which types of play children like, 75.5% of them supported this claim, while 22.8% of preschool teachers said they only sometimes use this technique. Also, 24.57% of preschool teachers stated they only sometimes talk to children's parents about the games children like, while a large number of them, 64.89% frequently talked to parents about children's games.

Table 3: Preschool teachers' claims about what they give priority to when choosing a playful activity

4. Preschool teachers' claims about what they give priority to when choosing a playful activity:	YES		NO		OCCASIONALLY	
	Frequency (f)	%	Frequency (f)	%	Frequency (f)	%
a. To be interesting to a child	55	96.5	2	3.5	0	0
b. To be equally interesting to both a preschool teacher and a child	24	42.1	7	12.28	26	45.62
c. To be interesting to a preschool teacher	6	10.54	34	59.64	17	29.81

As far as question number 4 is concerned, the proposed claims about what they give priority to when choosing playful activities, preschool teachers mostly opted for the attitude that play should be of interest to a child – 96.5%; attitudes of preschool teachers are divided in relation to the claim that when choosing a playful activity they give priority to those plays which are equally interesting to both a preschool teacher and a child – 45.62% of them do it sometimes, 42.1% always, while 12.28% never do so. Also, as many as 59.64% of preschool teachers think that when choosing playful activities, play does not necessarily have to be interesting to a preschool teacher – 29.81% of them are sometimes guided by this criterion, while 10.54% of respondents think that play should be interesting to a preschool teacher as well.

Table 4: Preschool teachers' claims about important incentives when selecting a type of play

4. Teachers' claims about important incentives when selecting a type of play:	YES		NO		OCCASIONALLY	
	Frequency (f)	%	Frequency (f)	%	Frequency (f)	%
A. Suggestions given in the <i>General Principles of the preschool program</i>	30	52.63	5	8.77	22	38.6
b. Experience of other preschool teachers and the application of their ideas	27	47.36	7	12.28	23	40.36
c. Ideas found on the Internet	23	40.36	7	12.28	27	47.36
d. Direct children's play	52	91.24	2	3.5	3	5.26
e. Reviewing professional literature	47	82.46	3	5.26	7	12.28
f. Attending seminars	41	71.93	2	3.5	14	24.57

As for question number 5, the preschool teachers responded to claims on major incentives when selecting a type of play. A significant number of respondents, 52.63% of them, relied on suggestions stated in the *General Principles of the Preschool Program*, 38.6% of them sometimes, and only 8.77% of them did not use the suggestions from the *General Principles*. Attitudes on application of the experiences of other preschool teachers and their ideas are divided – namely 47.36% of them applied their colleagues' experiences, 40.36% sometimes, whereas a smaller number, 12.28%, never relied on the experiences and ideas of other preschool teachers. The redistribution of answers concerning the use of electronic resources is similar: 40.36% of preschool teachers browse for ideas on the Internet, 47.36% of them do it sometimes, while 12.28 % of them never use the Internet.

Nevertheless, it turned out that most of the preschool teachers, as an important incentive in selecting games, actually use direct children's play – 91.24% of them, while a smaller number do it sometimes – 5.26%, and just 3.5% of them never do that. As a reference point in the selection of children's play, 82.46% of teachers regularly use professional literature, 12.28% of them sometimes, while a minor number of 5.26% never use professional literature.

When it comes to the professional development of preschool teachers, as an incentive for the selection of children's play, 71.93% of respondents use the experience gained in seminars, a significantly smaller number of them, 24.57%, use these experiences sometimes, while only 3.5% of preschool teachers do not apply these experiences.

Table 5: Preschool teachers' claims about segments of educational work that represent play in which they themselves play

Preschool teachers' claims about segments of educational work that represent play in which they themselves play	YES		NO		OCCASIONALLY	
	Frequency (f)	%	Frequency (f)	%	Frequency (f)	%
a. Participation in playful situations with children	53	92.98	1	1.75	3	5.27
b. Designing and creating work-and-play means	55	96.5	0	0	2	3.5
c. Organizing various kindergarten activities	48	84.2	3	5.26	6	10.54
d. Creating various artistic content (visual, musical, language, dance, dramatization, etc.)	55	96.5	0	0	2	3.5
e. Designing new games	50	87.72	3	5.26	4	7.02
f. Entering change and gaining new experiences in working with children	50	87.72	0	0	7	12.28

To the last question, number 6, in the Questionnaire, which refers to the preschool teachers' claims about segments of educational work that represent play in which they themselves play, a large number of preschool teachers answered affirmatively. For participation in playful situations with children 92.98% of respondents responded positively, 5.27% sometimes participated, while only 1.75% did not take part in children's play situations. All preschool teachers are involved in designing and developing work-and-play aids: always 96.5% of respondents, and only 3.5% at times. The majority of preschool teachers, 84.2%, are involved in organizing various kindergarten activities, while

10.54% do it sometimes, and 5.26% do not take part in organizing various kindergarten activities. When it comes to creating different artistic content (visual, musical, linguistic, dance, dramatization, etc.), all preschool teachers gave an affirmative answer, with 96.5% of them always doing it, while only 3.5% of them sometimes. Even 87.72% of preschool teachers participate in the design of new games, with a smaller number of 7.02% doing it sometimes, while the number of those who never do it is relatively small, but it is nevertheless noted that 5.26% of the total number of respondents never do this. One of the important aspects of the educational process is the initiative of preschool teachers to introduce changes and gain new experiences in working with children, for which all the respondents opted; thus 87.72% do it always, while 12.28% do it sometimes.

Discussion of Results

Starting from the assumption that play is one of the basic forms of educational work, it can be concluded on the basis of the obtained results that most preschool teachers are aware of the importance of play in the educational process, thus establishing the role of a preschool teacher who by using methodical design coordinates this process.

When it comes to the role of play in the educational work, most of the preschool teachers distinguish play as a basic method of educational work with children of preschool age: that play is a form of interaction in the relationship between child – child and preschool teacher – child; that play is a way to achieve the goals of educational work, that play is a challenge for both the child and the preschool teacher; that children's play is an incentive for a preschool teacher to improve his/her own pedagogical practice and is applicable to all other activities in the work with children.

As far as the preschool teachers's claim relating to their opinion on *what play is for a preschool child*, most of them think that for a preschool child, play is as a natural need and satisfaction, then the possibility of gaining experience, and finally that play is the basis of child's creativity and that it cannot be understood only as fun for a child without special purpose.

With respect to the *techniques that preschool teachers apply in monitoring and interpretation of preschool children's play*, the majority referred to the use of techniques for observing children such as listening, talking with children, and noticing the questions that children ask; the choice to exchange experiences with other preschool teachers about what kind of play children like, is also important; but likewise most of them talk with children's parents about children's play.

When asked *what they give priority to in the choice of playful activities*, preschool teachers mostly opted for the attitude that play should be of interest to a child, but when asked about the claim that they give priority to the selection of playful activity equally interesting to both preschool teacher and a child, the attitudes are distributed proportionately, as well as in case of the attitude that when choosing playful activities, play does not necessarily have to be interesting to a preschool teacher.

As important *incentives in the selection of plays*, a significant number of respondents stated that they rely on suggestions offered in the *General Principles of Preschool Programme*; while concerning application of the experiences of other preschool teachers and their ideas or use of the Internet, the attitudes are proportionally distributed among the respondents. It was found that most preschool teachers use direct children's play as an important stimulus when choosing a game and as a reference point in the choice of children's games; a greater number of them constantly use professional literature, as well as the experience gained during seminars.

Preschool teachers' claims about *segments of educational work* that represent a kind of play in which they themselves play, a large number of preschool teachers gave an affirmative answer where they primarily recognize their own play "in play" during the activities of making different creative contents from separate artistic areas, in the creation of work-playful aids, in the design of new games, but also in direct participation in playful situations with children. As one of the important aspects of the educational process is the initiative of preschool teachers to introduce changes and gain new experiences in working with children, which all respondents opted for.

Conclusion

The significance of this research is in the reconstruction of the attitudes of preschool teachers about the presence of elements of play within their own professional identity through self-evaluation, with the possibility of improving their own practice, as well as the practical application of the obtained results in improving the programs of higher education institutions for training of preschool teachers in order to strengthen their professional competencies in accordance with the needs of practice and modern strategies of preschool educational work.

The organization of educational work with children refers to respecting play as a basic activity of a child, since the child's knowledge and opinion are inseparable from play. In this regard, the paper points out certain theoretical considerations that confirm the above assertions. The obtained research results indicate that the dominant attitude of preschool teachers is noticeable,

which confirms that the significant majority indicate play as the basic method of working with children of preschool age. The research confirmed that preschool teachers are aware of the importance of play as a prerequisite for the development of a child, but also that play is an important driving impulse that contributes to the enrichment of experiences within personal professional development.

The need for innovative methodical approaches suggests the necessity of finding a solution that will result in a higher degree of creativity of both the child and the preschool teacher. The above requirements can be achieved in the educational process, which includes, with serious effort by preschool teachers, playful elements as well. Thus, the complex corpus of the play definition expands, suggesting even more space for the development of a child and preschool teacher, linking both to each other. The presence of play allows preschool teachers – practitioners, in the context of their own professional practice, to express their own freedom and creativity, which influences the fact that the developmental potential of play does not end its active role, but rather encourages further productivity.

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Chapter VII

PRESCHOOL TEACHERS' COMPETENCIES FOR IDENTIFYING AND FOSTERING GIFTEDNESS FOR VISUAL ARTS EXPRESSION IN PRESCHOOL CHILDREN

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Abstract: This paper focuses on preschool children having a gift for expressing themselves in visual art forms. The aim of the research is to determine which competencies preschool teachers own and additionally need for identifying this specific type of giftedness and creating and implementing programs to promote it. The research includes questionnaires for two defined groups. The first group is composed of preschool teachers with certain work experience and the second one includes final year students of the Faculty of Education in Jagodina, department for preschool teachers. Questions are designed to assess the competencies preschool teachers have for working with artistically gifted children, whether these competencies were obtained through formal or informal education, and finally which competencies teachers do not possess but do need for working in this area. Collected results will be used to indicate directions for improving initial [undergraduate] preschool teacher education curriculum in Serbia in order to enrich their competencies for efficient work with children gifted for visual arts expression.

Keywords: *preschool teacher competencies, giftedness, artistic ability, preschool children, visual arts expression.*

Introduction

Gifted education as we know it today is a relatively recent invention. As Barbara Kerr points out in her Introduction to *Encyclopaedia of Giftedness, Creativity and Talent*, "[...] it is in recent past that education stakeholders realized that, while focusing on identification and remediation of those students who are slower to learn, students who learn rapidly and think creatively are being left behind" (Kerr, 2009: xxvii). Researches on cognitive, motivational and socially affective characteristics of being gifted, as well as the practice of advisory work with gifted children, confirm the thesis that those students have certain specificities which also pose specific educational needs (Altaras Dimitrijevic & Tatic Janevski, 2016: 24).

When considering “giftedness”, authors firstly make sure about their definition of the term, to avoid any possibility of being misinterpreted. The reason for this is the non-existence of a firm general and universally accepted definition of giftedness in all disciplines. In an effort to elaborate the issue, authors of *Exploration of giftedness* give a useful overview of modern concepts, definitions, and theories of intellectual giftedness, and of past and current developments in the field of gifted education (Sternberg et al., 2011). Definitions of giftedness, accepted for further research in this paper, would consider giftedness in a wide and open understanding as expressing natural abilities in a specific area of expression, in a measure significantly above the average for that certain age. What this paper is more specifically interested in, is artistic ability or giftedness for expression in visual arts of preschool children and competencies of their teachers to recognize their giftedness and to help them develop it to the next level, where it could grow into a functional talent. As a child gifted in visual arts expression, this paper will consider a child who shows high intrinsic motivation to engage with art techniques (painting, drawing, sculpting: making, creating and designing new objects), demonstrates highly developed skills (compared to an average for that age), to operate with art tools and to manipulate different materials (paper, cardboard, clay, linoleum), who easily understands and solves artistic assignments and problems, who is continuously interested in exploring new materials and art techniques, and prefers to express themselves using visual art mediums.

Sternberg expresses the opinion that in a highly competitive globalized world, those nations that do not do well with their gifted students put themselves at risk of falling behind (Sternberg et al., 2011:16). This paper is not interested in the competitiveness of a state, or a country, or a nation, achieved through nutrition of their gifted citizens as a valuable resource, but in a child’s well-being, ensured through accomplishment of their own unique, creative, productive potentials. As pedagogues, we should nurture and develop our students’ giftedness and talents in order to help them achieve their full mental, intellectual, creative, and emotional potentials to live healthy and happy lives. In order to make these goals achievable, pedagogues, teachers and others involved need a set of competencies, enabling them to react appropriately in any given situation.

Assessing the structure of competencies of gifted preschool children, prof. Jevtic explains how the years of early childhood are crucial for establishing a child’s learning process and that if all engaged in preschool education waste their time by enabling only a formally defined normative plan of instructed activities, as well as only having a regular approach to working with children, there is a risk of negatively affecting the overall development of a child. She stresses the necessity of a holistic approach to preschool teachers education on the giftedness of preschool children because, as she suggests, preschool

teachers must be competent to recognize gifted children, thus previously knowing the characteristics of different types of giftedness, as well as knowing each gifted child individually (Jevtic, 2009: 251).

Identification of artistically gifted preschool children

There are numbers of modern theories considering art education, relevant to notions of giftedness, creativity and talent, providing scaffolding for further research on artistic modes of thought and expression (Kerr, 2009: 49). In Europe, art education has been identified as a key factor in social and economic development, while offering students valuable opportunity to experience and build knowledge and skills of self-expression, imagination, creativity and communication (Road Map for Arts Education, 2006). What art education encompasses is a scope of versatile areas from engagement with art objects and art-making processes, learning in the domain of art and exploring issues that range from making interdisciplinary connections to social issues and the study of visual culture. On the other hand, there is a need and a responsibility for art teachers to care for those who have artistic potential. While educational policies focus on using art education as a resource for developing other skills, interest and investment in artistically gifted students has been neglected.

The term artistic ability is often defined as advanced ability in the visual arts as it relates to conceptions of giftedness, creativity, and talent (Kerr, 2009: 50). This ability will not necessarily develop into adult artistic productivity because, in preschool years of a child, it may only be related to a pleasurable engagement with art making, which can disappear when a child grows up. In order to keep and develop this ability or giftedness, a child needs a support system including educational institutions and family.

Most studies imply that when assessing students' giftedness, teachers work most efficiently while using some list of characteristics or check lists, when they have enough time to observe and meet students and when they do have a certain education (formal or informal) in the field of identification of giftedness. Teachers themselves believe that their evaluation increase accuracy of identification based on testing, because they have direct contact with students, and researchers agree that teachers' opinions are undoubted factors in the process of identifying gifted students (Altaras Dimitrijevic & Tatic Janevski, 2016: 55). This is even more relevant in identifying an artistically gifted child, having in mind that authentic assessment in the arts may only be performed by the teachers themselves, as a continuous effort to improve learning through a better understanding of creation and communication processes in the classroom (Kárpáti & Gaul, 2013: x). As a supplement to some existing tests, such as Torrance Tests of Creativity (TTC) or Clark's Drawing Abilities Test (CDAT),

which can be used to measure art appreciation, art aptitude and drawing abilities, Stanley S. Madeja points out some advantages of “authentic (non-standardized) evaluation methods” such as observation techniques as a research methodology in evaluation in the arts since “[...] they are characteristic of a more humanistic and less mechanistic approach to describing the phenomena; they are compatible with the diversity of the arts experience (which tends to be non-linear). Because observation reports are more descriptive of a non-linear process or event they are based on primary data – student work – rather than on secondary data – student performance on a test. Thus, they provide concrete examples of the actual experience while taking a neutral stance as to the worth or value of the experience” (Madeja 2013: 20). Madeja also warns on this method’s disadvantages since being non-standardized, they are subject to personal interpretation, which implies that observers have to be trained. On the other hand, identifying the artistically gifted still comes mostly to the knowledge of the domain, personal judgment and intuition than to a scientific approach. With no precise and scientifically defined instruments to measure artistic ability, it comes down to a teacher’s competence to notice, recognize, test and identify artistically gifted child. In the article “Identifying Artistically Talented Students in Four Rural Communities in the United States”, authors Gilbert Clark and Enid Zimmerman described their observation that each community (a region or even a school) needs specifically designed identification measures, developed by teachers and community members in addition to those standard ones in order to efficiently identify artistic giftedness. Authors also listed a number of their recommendations as guidance to the teacher’s work in this direction (Clark & Zimmerman, 2001: 104–114).

Having this in mind, we have come to the point where we need to put in question professional competencies of teachers to carry out such a responsibility. More precisely, this research starts with questioning the level and quality of knowledge, skills and abilities of preschool teachers, gained through their formal initial [undergraduate] education to operate in the domain of artistic giftedness in preschool children.

As one step forward to exploring the question of whether preschool teachers have, competencies for identifying and fostering artistically gifted children, and if they do, on what level, this research focused on a narrow sample of respondents in order to make a solid starting position for further exploration of the issue.

Methodology of the research

As previously elaborated, this research emerged from the question: Are preschool teachers competent to recognize, identify, and successfully work

with children gifted in visual arts expression? An additional question is: If they do have necessary competencies for working with artistically gifted children, how were those acquired and how well developed are they?

The hypothesis of this research is that in order for every preschool teacher to have these competencies, a responsibility for it is in initial [undergraduate] preschool teacher education. More precisely, it is a presumption that curricula of initial [undergraduate] preschool teacher education programs need to be created aiming at developing competencies for working with artistically gifted children.

The goal of the research was to determine if preschool teachers have competencies for recognizing and fostering giftedness for visual art expression in preschool children. An additional goal was to ascertain if existing competencies were acquired through formal education. These goals were aimed at understanding if present and past programs incorporated topic of artistic giftedness effectively enough to promote teachers competent to work with artistically gifted children.

The research conducted was empirical, and the method of research was descriptive. It was conducted by applying the technique of survey. Instruments used within this technique were questionnaires. The first type of questionnaires was aimed at experienced preschool teachers. Questions were designed to comprehend how teachers evaluate their competencies for working with artistically gifted children and how they assess their initial [undergraduate] education role in acquiring these competencies. The focus group for this part of the research were teachers working with children aged from 4 to 6 years old in preschool institution "Pionir" in Jagodina.

The second type of questionnaire targeted final year students on Preschool Teacher Education of Faculty of Education in Jagodina. The goal was to examine the quality of knowledge these students obtained regarding artistically gifted children during their studies. Students who took part in the research are going to be preschool teachers soon, they are yet to get experience in the work, so the question is: What competencies do they bring into their jobs, right after graduating from initial [undergraduate] preschool education? The questionnaire was also designed to test students' self-confidence regarding the researched issue.

In order to give a solid framework for assessing and representing results of the empirical research, a summary of initial preschool teacher education programs in Serbia was given, with a more detailed review of the initial [undergraduate] preschool teacher education program curriculum of the Faculty of Education in Jagodina.

The research

Formal initial [college/undergraduate] education for preschool teachers in Serbia

Educational policy in Serbia has been facing many changes and redefinitions on all levels (preschool, elementary school, high level education) since 2000. Goals, visions and focus topics often depend on a leading political structure. Faculties of Education get affected by both laws and regulations at high level and primary level education, having to adapt their programs accordingly. How this will be implemented, depends on each faculty individually to improve, redefine and reform their curricula. There are nearly twenty public higher education institutions in Serbia, including 7 Faculties of Pedagogy or Education and 11 High vocational schools, implementing initial education for preschool teachers. Even though basics of all these programs are the same, there are inevitable differences, not only depending on the unique curricula and syllabuses but there are also differences as a result of human factors included in every single course.

The basics of initial preschool teacher education curricula make courses from the areas of pedagogy, psychology, sociology, methodical-didactic subjects (mathematics, elementary science, maternal language, arts and sports), while other mandatory and elective subjects differ from school to school.

In order to determine how all these curricula treat giftedness in visual arts expression, large scale research would be needed. Research conducted on “Preschool teachers’ competencies for working with gifted children” in 2017 suggested that preschool teachers are of the opinion that their best developed competencies are for recognizing spatially-pictorial and musical giftedness, while competencies for developing pedagogical profile, individualization of work with gifted, and developing individually educational plan are insufficiently developed. As most desirable methods of improving these competencies, questioned teachers listed additional education and cooperation with professionals from the relevant fields, pedagogues and psychologists, as well as systematic cooperation of preschool institutions with schools for initial preschool teacher education (Nikolic et al., 2017).

Questionnaire for preschool teachers

“Teachers of gifted students must possess competencies not required of general educators. They have the same foundational competencies as other educators (e.g., classroom management skills, organization, lesson plan development), but must add other competencies to their repertoire when teaching gifted students. These competencies include the knowledge, skills, and

dispositions that provide appropriately paced education with sufficient depth and complexity for gifted students to make reasonable yearly progress in their academic development” (Kerr, 2009: 164). Having in mind this quote, empirical research on preschool teachers’ professional competencies for working with artistically gifted children started with one preschool institution as a research sample.

There are 37 preschool teachers employed in Kindergarten “Pionir” in Jagodina, 31 of whom are responsible for children aged from 4 to 6, which is the age relevant for this research. All 31 teachers took part in it. In order to assess their competencies for working with artistically gifted children, these preschool teachers were asked to complete a questionnaire, composed of four groups of questions.

The first group of questions was directed at assessing information on employment status, level of education, and school of their initial preschool teacher education in order to get the background for assessing collected answers.

Table 1: Work experience

Question	over 30 years		between 10 and 20 years		less than 10 years	
	F	%	F	%	F	%
How long have you been working as a preschool teacher?	4	12,9	14	45,1	13	41,9

Dividing years of employment in three groups, the question showed that 4 teachers had work experience of over 30 years, 13 of them had worked for 10 years or less, and 14 teachers had been employed between 10 and 20 years. This gave us a picture of a collective with experienced preschool teachers who for years had learned in practice how to understand a child’s nature and to foster them. This information also shows that the majority of teachers gained their preschool teacher diploma over 15 years previously, when initial preschool teacher education curricula differed from those present today.

Initial preschool teacher education in Serbia is conducted through three or four year-programs, depending on the type of higher education school – High vocational schools offer three-year programs, while Faculties offer four-year programs. There are also master and additional programs for upgrading the three-year level studies. Six of the questioned preschool teachers had a master’s degree, while the rest of them had gained a diploma of initial preschool teacher education (there was no division of those with three-year education from four-year because many of questioned teachers had enrolled in one-year upgrading studies).

The next group of questions asked for “Self-assessment of competencies for working with artistically gifted children”.

Table 2: Self-assessment of competencies' quality

Statement	excellent		good		satisfactory		informative		non-existing	
	F	%	F	%	F	%	F	%	F	%
I consider my competencies for working with gifted children:	2	6,45	18	58,06	6	19,35	1	3,23	0	/

Preschool teachers had to answer five questions within this section. The first one asked for their assessment of competencies for working with gifted children in general. They needed to rate these competencies on a scale from excellent to non-existing. The majority of 18 (58,06%) teachers considered their competencies good, 2 of them would say they were excellent, 6 teachers believed their competencies satisfied basic necessities for working with gifted children. While none of the respondents circled the last answer on the scale, 4 of them did not give any answer to this question. It was not determined if they could not or did not want to approach self-evaluation in this form.

The rest of the questions were directed toward teachers' understanding of artistic giftedness and respondents were asked to circle one of the given answers, which were supposed to confirm, negate or partially confirm the given statement.

Table 3: Self-assessment of competencies for working with artistically gifted children

Statement	true		partially true		not true	
	F	%	F	%	F	%
I can easily identify a child gifted for visual arts expression.	31	100	0	/	0	/
I possess competencies for identifying and nurturing giftedness in visual arts expression.	13	41,94	18	58,06	0	/
I am acquainted with tests for assessment of visual-spatial abilities in preschool children.	2	6,45	17	54,84	12	38,71
I am acquainted with methods for nurturing and developing giftedness in visual arts expression in preschool children.	10	32,26	20	64,52	1	3,23

This part of the research showed that respondents were highly confident about their competencies for identifying a child gifted for visual expression, but only 41,94% were confident about competencies for nurturing this giftedness, while the others had doubts about it. Even though all respondents confirmed possessing competencies for identifying artistic giftedness, only 2 of them were familiar with tests used for that purposes, while 38,71% were not familiar with these tests at all. Question number 4 slightly modified and more precisely defined question number 2 from the Table 3, leading to the conclusion that when giftedness for visual arts expression is identified by themselves or some other party, preschool teachers consider themselves knowledgeable and skilled to implement appropriate methods in order to foster this giftedness (32,26% completely and 64,52% partially acquainted with applicable methods). So, even without conducting tests, these teachers can employ their knowledge and experience to, at least, nominate artistically gifted children.

The following group of questions was created to comprehend preschool teachers' opinions on the contribution of their formal education to the development of competencies for working with children gifted in visual expression. Respondents had to answer by confirming or negating seven given statements. Questions and answers from this section are shown in Table 4.

To the question if competencies for working with gifted children were gained exclusively through formal studies, 41.94% answered affirmatively, 22.58% negatively and 35.48% of respondents would say it was a partially correct statement. After aiming at giftedness in general, respondents evaluated their initial program syllabuses slightly better when considering competencies regarding dealing with artistic giftedness: 45.16% respondents would say they gained these competencies through formal education, 41.94% would say this a partially true statement, while 12.90% would say that they did not obtain these competencies through their initial education.

Table 4: Initial studies' contribution to the development of preschool teachers' competencies for working with children gifted in visual arts expression

Statement	true		partially true		not true	
	F	%	F	%	F	%
Competencies that I possess for working with gifted children have been obtained exclusively through my initial studies program.	13	41,94	11	35,48	7	22,58
Initial studies enabled me with basic knowledge and competencies for identifying and working with children gifted for visual arts expression.	14	45,16	13	41,94	4	12,90
My Bachelor studies' curriculum included visual arts expression giftedness as a study area.	10	32,26	17	54,84	4	12,90
Subject Methods of teaching art in preschool equipped me with sufficient knowledge of giftedness in visual expression and competencies for working with such gifted children.	7	22,58	21	67,74	3	9,68
Art subjects' syllabuses enabled development of my competencies for working with children gifted for visual arts expression.	3	9,68	19	61,29	9	29,03
Practical artistic work within art subjects provided techniques and methods for nurturing and developing giftedness in visual arts expression of preschool children.	15	48,39	11	35,48	4	12,90

With the next question, the aim was to find out if any of the respondents could say their initial education curriculum included visual expression giftedness as a study area. Results showed it was true for 32.26%, not true for 12.90% while it was partially true for 54.84%. Due to discrepancies among the answers of teachers even graduated from the same school without a significant time gap, the only intelligible conclusion is that no curricula introduced giftedness in visual arts expression as a particular or distinct subject, or at least part of the subject syllabus, therefore preschool teachers had only a subjective understanding according to their own involvement in studying. This result is interpreted as understanding that artistic giftedness was studied through most of the preschool teacher initial education programs, but not directly and usually not separately from other types of giftedness.

Having in mind that giftedness as a phenomenon is being studied mostly within pedagogy and psychology, but on the other hand being interested in giftedness for visual arts expression, the next question asked which study areas introduced preschool teachers to artistic giftedness and competencies for fostering it. Responses to this question are shown separately in Table 5.

Table 5: Distribution of respondents' answers

Statement	art teaching methods		pedagogy		Psychology		none	
	F	%	F	%	F	%	F	%
I gained competencies for working with children gifted for visual expression through subjects:	17	54,84	4	12,90	6	19,35	4	12,90

Respondents were not limited to only one answer but could circle all subjects they felt contributed to their competencies for working with artistically gifted children. Having Methods of teaching visual arts, Pedagogy, Psychology or none of them as possible choices, 54.84% of answers were given to the Methods of teaching arts, 19.35% to the Psychology, 12.90% to Pedagogy and another 12.90% answers went to “none of them”. This order of answers was anticipated, since Methods of teaching arts is lectured by art field professionals, while the other two subjects mostly deal with giftedness in general. Therefore, the following question referred to the level of knowledge regarding visual arts giftedness, acquired within lectures of Methods of teaching arts (Table 4, question number 4). Only 9.68% of teachers would disagree that the level of acquired knowledge was sufficient, 67.74% would say it was partially sufficient for what they face in their working practice, while 22.58% of respondents believed the knowledge they acquired through this subject was sufficient enough.

Methods of teaching arts as a subject is assisted by a group of visual arts subjects, with diverse variations in subject concepts and syllabuses, depending on each school program. With a presumption that these kinds of subject can potentially provide useful practical skills and techniques for developing artistic giftedness in preschool children, teachers were asked if they benefited from such subjects in this context.

When it comes to acquiring competencies for working with artistically gifted children, only 9.68% answered affirmatively to such contribution of art subjects, 29.03% answered negatively and 61.29% answered it was only partially true. But when it comes to learning techniques and methods for developing artistic giftedness from practical art subjects, higher scores were noted: 48.39% agreed, 12.90% disagreed while 35.48% partially agreed. When it comes to existing discrepancies within these answers, one of possible explanations is that in elective courses students can choose so those who attended artistic courses benefited more in this area.

The last group of questions was created to inquire into preschool teachers' encounters with artistically gifted children: 96.77% said they met such children throughout their career, while 48.39% of teachers believe there are artistically

gifted children in their current groups. And to the final questions, if they think that initial preschool teacher education programs should consider studying characteristics of each kind of giftedness in children separately, 87.10% answered affirmatively, but to the question if acquiring competences for working with artistically gifted children must be done through initial studies, opinions were divided: 61.29% agreed while 38.71% disagreed.

Table 6: Distribution of respondents' answers

Question	Yes		No	
	F	%	F	%
Have you met children gifted in visual art expression in your career?	30	96,77	1	3,23
Do you have children gifted for visual art expression in your current group?	15	48,39	16	51,61
Do you think that initial studies' program for preschool teachers should treat characteristics of each kind of giftedness in children separately?	27	87,10	4	12,90
Competencies for working with children gifted for visual arts expression must be obtained through initial studies of preschool teachers	19	61,29	12	38,71

What comes as a conclusion from this questionnaire is that in this one Kindergarten, there are teachers who are confident in their competencies for recognizing children with giftedness for visual arts expression. Most of these teachers also feel competent to implement methods in order to foster this giftedness. The fact remains that there are also preschool teachers who feel uncertain in this context and would use additional knowledge, practice and skills to work with artistically gifted children. Most of the teachers who participated in this research agreed that initial preschool teacher education should enable the acquisition of competencies for identifying and fostering visual arts giftedness for teachers' effective and efficient work. As presented through this part of the research results, a significant number of preschool teachers could not thank their initial studies for acquiring necessary competencies for working with preschool children with artistic giftedness.

Questionnaire for final year students of initial program for Preschool teacher education

The second part of this research was aimed at final year students of Preschool teacher education. Fifty-seven students, finalizing their preschool teachers' studies at the Faculty of Education in Jagodina were questioned in

order to collect data on the level and quality of competences for working with artistically gifted children they would rely on in their upcoming careers. Unlike the questions for preschool teachers which were designed to get respondents' own opinions on the competencies they had, the questionnaire for students had more of a test-like structure. The goal was to check what students know about giftedness for visual art expression and how confident they are in that knowledge. Knowing the curriculum of the program they are graduating from, this data would be used as an indicator of the curriculum's contribution to the competencies discussed.

Questions were separated in three groups. The first group tended to examine students' knowledge on giftedness in general; the second group questioned their knowledge on the artistic giftedness and ways of identifying artistically gifted children; the third group of questions aimed to understand if these students would appropriately approach work with artistically gifted children once they entered a preschool group as self-reliant teachers. In general, through testing students' knowledge, the goal was to assess the contribution of Preschool teacher program curriculum to the development of competencies for working with children gifted for visual arts expression.

To all 29 questions, students' could answer by circling one of possible answers: *Yes*, *No*, *I am not certain* and to some questions additional choice was *Partially*, since the answer was potentially more complex than simple *yes* or *no*.

Table 7: Nature of giftedness

Statement	Yes		No		Partially		I am not certain	
	F	%	F	%	F	%	F	%
Giftedness is reordered genetically	11	19,3	15	26,3	29	50,9	2	3,5
Giftedness and talent are synonyms.	17	29,8	16	28,1	14	24,6	10	17,5

For the first group of questions, results were encouraging, meaning that over 50% of students, by choosing the right answer, demonstrated understanding of the nature of giftedness and confidence in their knowledge. Answer “I am not certain” was chosen in less than 15% on average. The exception was seen for the question “Giftedness is inborn and cannot be developed with external factors”, as presented in Table 8. Here 25% of students were uncertain if the statement was correct. However, 86% of students demonstrated knowledge on the nature of giftedness, by giving correct answers to questions if above-average intelligence is a prerequisite for the manifestation of all kinds of giftedness and if “economic, geographic, cultural, family, health and other conditions

can affect (positively or negatively) manifestation of giftedness”, as presented in Table 8. On the other hand, 61.4% respondents believed that a gifted child will manifest his/her giftedness regardless of the environment they grow up in, which is actually only partially correct, depending on many individual factors. Even though understanding giftedness demands a broader scope of knowledge in psychology, it is important for future preschool teachers to know that, if put in unfavourable or discouraging environment, a child may not express their giftedness.

Table 8: Manifestation of giftedness

Statement	YES		NO		I am not certain	
	F	%	F	%	F	%
Any kind of giftedness will be manifested only in children with high IQ.	4	7	49	86	4	7
Giftedness is inborn and cannot be developed with external factors.	11	19,3	32	56,1	14	24,6
All gifted children will eventually manifest their giftedness regardless of the environment they grow up in.	35	61,4	15	26,3	7	12,3
Economic, geographic, cultural, family, health and other conditions can affect (positive or negative) manifestation of giftedness.	49	86	3	5,3	5	8,8

When it comes to giftedness for visual arts expression in preschool children, students were less confident in giving their answers. For 12 questions in this group, an average of 18.5% of answers went to *I am not certain* (check Table 9). The highest uncertainty of over 30% was manifested within questions “if there are available tests for examining artistic giftedness in preschool children” and if “a preschool teacher needs education within art field in order to recognize artistically gifted child”. A similar case occurred with the question “if it is possible to determine artistic giftedness in preschool age given the presence of general drawing phases”. On the other hand, correct answers were more dominant, therefore indicating solid knowledge of students regarding specificities of recognizing artistic giftedness.

Table 9: Recognizing artistic giftedness

Statement	YES		NO		I am not certain	
	F	%	F	%	F	%
There are tests which can be used to examine visual arts giftedness in preschool children.	36	63,2	2	3,5	19	33,3
It is impossible to determine art giftedness in preschool children given the general drawing phases which characterize that age.	7	12,3	33	57,9	17	29,8
In order to recognize artistically gifted child, a preschool teacher needs education within art field.	26	45,6	12	21,1	19	33,3
Only artists and art pedagogues can recognize artistic giftedness in preschool children.	4	7	46	80,7	7	12,3

To the question “Is it more important to consider the final result rather than the art process when evaluating artistic giftedness”, (Table 10) an encouraging 43.9% answered with No, while 17.5% would partially confirm this statement. Still, 24.6% responded affirmatively to this statement, which is less than expected. However, there is a considerable number of future preschool teachers who will overlook a child’s enthusiasm in exploring art techniques and materials, evaluating exclusively the final result of their work, which is not good. On the other hand, when transforming this question into the opposite formulation as “Enthusiasm and intrinsic motivation of a child for working in art assignments can be an indicator of artistic giftedness” only 12.3% chose negative answer, while 78.9% (answers *Yes* and *Partially*) understood that enthusiasm can be a valuable indicator of a child’s possible giftedness (check Table 10). In addition to the previous statement, “Capability to observe visual details in the environment can be a sign of artistically gifted child” is a statement 86% of students would completely or partially confirm.

Table 10: Identification of children with giftedness in visual arts expression

Statement	YES		NO		Partially		I am not certain	
	F	%	F	%	F	%	F	%
Artistically gifted children can be identified most reliably within art contests.	3	5,3	29	50,9	19	33,3	6	10,5
It is more important to consider artistic results rather than art process when evaluating art giftedness.	14	24,6	25	43,9	10	17,5	8	14
Art giftedness in preschool children is assessed only through comparison of their artistic work with average results for their age.	11	19,3	16	28,1	17	29,8	13	22,8
In the process of identification of artistically gifted children, cooperation of preschool teachers and art experts is of big importance.	27	47,4	4	7	18	31,6	8	14
Artistically gifted children are usually unsuccessful in dealing with mathematic assignments.	2	3,5	39	68,4	4	7	12	21,1
All artistically gifted children manifest equally highly artistic results in all art techniques.	7	12,3	28	49,1	13	22,8	9	15,8
Enthusiasm and intrinsic motivation of a child for working in art assignments can be indicator of artistic giftedness.	28	49,1	7	12,3	17	29,8	5	8,8
Capability to observe visual details in the environment can be a sign of artistically gifted child	35	61,4	4	7	14	24,6	4	7

This set of questions led to the conclusion that approximately half of the students (more precisely 47.58% of the respondents) will graduate competent enough to recognize or identify a child potentially gifts in visual arts expression. On the other hand, the other half will have incomplete knowledge of what it means to be an artistically gifted child, risking depriving those who are gifted of appropriate development. It is of great importance that all preschool teachers are aware that, in accordance to preschool children's developmental level, focusing on the whole process of art production provides richer assessment and education than the end product and that focus in assessing these youngsters is often socially and process oriented (Kerr, 2009: 53).

Considering the final group of questions, it might be said that the general "test" score was positive. While there were still different relations in numbers of given "correct" answers, the majority of students would approach an artistically gifted child in an acceptably efficient and productive way, according to their answers to this questionnaire.

Table 11: Nurturing giftedness for visual arts expression in preschool children

Statement	YES		NO		Partially		I am not certain	
	F	%	F	%	F	%	F	%
Artistic competencies of preschool teachers are prerequisite for working with artistically gifted children.	20	35,1	8	14	22	38,6	7	12,3
A specially organized educative-stimulating environment is prerequisite for developing artistic giftedness.	15	26,3	23	40,4	9	15,8	10	17,5
It is necessary to enable as much individual work as possible to artistically gifted child when assessing art assignment, separately from other children.	12	21,1	22	38,6	16	28,1	7	12,3
It is important to enable diversity of art materials for artistic experimenting to an artistically gifted child.	38	66,7	4	7	14	24,6	1	1,8
An artistically gifted child is always intrinsically motivated, so doesn't need to be motivated additionally.	3	5,3	30	52,6	15	26,3	9	15,8
An artistically gifted child should exclusively have freedom of uninterrupted and undirected research of materials and techniques for their artistic expression.	23	40,4	12	21,1	20	35,1	2	3,5
It is of most importance to let artistically gifted children choose their own subjects and materials for artistic expression.	18	31,6	7	12,3	24	42,1	8	14
It is important to face an artistically gifted child with more complex art assignments compared to their peers.	24	42,1	9	15,8	15	26,3	9	15,8
It is not necessary to give any feedback to artistically gifted child during their work process.	4	7	36	63,2	8	14	9	15,8
It is important to provide more complex art techniques to artistically gifted child, compared to those proposed by a standard curriculum.	26	45,6	6	10,5	11	19,3	14	24,6
It is not necessary to explain characteristics of newly introduced art techniques to artistically gifted child.	3	5,3	50	87,7	3	5,3	1	1,8

Even though one section of students did not think artistic competencies of teachers are necessary for working with artistically gifted children, 73.7% would oppose them (sum of answers *Yes* and *Partially* was considered as correct answers through the Table 11). With 4 students disagreeing, 91.3% of respondents confirmed the statement that “an artistically gifted child should be supplied with as much diverse art materials for art research as possible”. To the statement that “an artistically gifted child is always intrinsically motivated, so does not need to be motivated additionally”, 52.6% gave negative answer and 26.3% answered it is only partially correct statement, while 15.8% were not certain about giving the answer.

Moreover, 68.4% of students would support the statement that “it is important to face an artistically gifted child with more complex art assignments compared to their peers” and 75.1% of them would consider letting gifted child choose their own art mediums and themes in order to express themselves. When it comes to instructing a child’s work, 93% of students knew that although gifted, a child still needs guidance through their work and practical instructions in meeting with new art techniques.

The high number of correct answers indicates that these graduating students have developed decent competencies for nurturing artistic giftedness and this is a general conclusion to this part of the research. However, these competencies should be further advanced. Looking at the other side of the results, towards students who “failed this test”, there is another conclusion: Even though there could be students who paid less importance to this issue or failed to fulfil all of their student’s assignments which would lead to a deeper understanding of it, these results may suggest the need to rethink the existing curriculum and direct it toward more comprehensive studying of giftedness in visual art expression.

Preschool teacher education curriculum at the Faculty of Education in Jagodina and giftedness for visual art expression

In order to comprehensively confirm the previously presented results, it is necessary to introduce students’ learning background, more precisely to look at the curriculum of their study program. The initial [undergraduate] program for preschool teachers at the Faculty of Education in Jagodina (<https://pefja.kg.ac.rs/osnovne-akademske-studije-vaspitac-u-predskolskim-ustanovama/>) lasts for four years. During those four years, students study both obligatory and elective courses / subjects. For the purpose of this research, courses related to children giftedness, and more specifically to artistic giftedness, will be mentioned. These courses on one hand include pedagogy, didactics and psychology, teaching students to understand their role in children’s lives as teachers and

train them to approach children with consideration to their developmental, emotional, intellectual and individual characteristics. Being either mandatory or elective course from these subjects, they target giftedness in general. For example, there is an elective course called Work with gifted children. The goal of this course is to develop professional competencies of students for quality organization of educational activities with children in order to recognize and encourage giftedness. This subject covers everything relevant to the concept of giftedness from pedagogical aspects, enabling students to efficiently apply theoretical knowledge in practice. The shortcoming is in the subject's elective status, which means not all students will take it. Observing this from the aspect of this paper's subject, it cannot offer sufficient competencies for working with artistically gifted children. On the other side, there are courses closely related to children's visual art expression. From mandatory courses in Methods of teaching art and Basics of Visual Arts, through elective courses in different art techniques and artistic work, students have a chance to gain competencies for recognizing and developing artistic giftedness.

The mandatory course Methods of teaching arts for preschool teacher education trains students to prepare and implement art activities while being aware of the characteristics of a preschool child's visual art expression. Even though this is not directly aiming at artistic giftedness, this subject targets it indirectly through lectures on: Characteristics and phases of child's drawing, Visual types of children, Child's drawing assessment, and others. After passing the exam from this course, it is expected that a student is competent enough to understand and assess the quality and level of children's artistic abilities and to develop and apply appropriate teaching methods and styles with regard to children's specific needs. The basics of Visual Arts is a course that provides basic artistic competencies to students in order for them to be able to understand the art process and to be familiar with diverse art techniques and styles. According to the above elucidated, when graduating from the initial [undergraduate] program for Preschool teacher education at the Faculty of Education in Jagodina, it is expected that students will have basic professional competencies to work with artistically gifted children.

Referring to the previous conclusion, this one can elaborate that "more comprehensive studying" implies incorporating artistic giftedness as a separate area of stud into the existing syllabus of Methods of teaching arts in order to introduce students with specific instruments that could be useful in the process of identification, to include several practical assignments of art giftedness identification and to allow students practice development of specific art programs for artistically gifted children.

Conclusion

Summing up all previously particularized conclusions, the overall result of this research suggests several facts.

The first one: When it comes to giftedness in visual art expression on the level of a preschool child, experienced preschool teachers evaluate their competencies for working with gifted ones as sufficient or good. Most teachers-respondents consider themselves competent to identify artistically gifted children and to implement appropriate methods in developing artistic giftedness. Students-respondents also demonstrated a quality level of knowledge on how to treat artistically gifted children in order to help foster this giftedness.

The second fact is that, regardless of possessing these competencies, most of teachers-respondents do not have enough knowledge and experience on utilizing specific instruments (such as tests) for identifying artistic giftedness. Results from the questionnaire filled out by students also suggest lack of knowledge about available methods and instruments for identifying artistic giftedness. The conclusion is that concrete methods and instruments for identifying artistic giftedness do not form part of the curricula of preschool teacher initial [undergraduate] education.

On the other side, having a significant number of respondents feeling insecure in their competencies regarding certain aspects of artistic giftedness and work in this area (both in the group of teachers and among students) and being of the opinion that the curriculum of [undergraduate] preschool teachers education should deal with artistic giftedness more comprehensively, the final conclusion of this research is twofold:

On one hand, preschool teachers, graduated from different schools' programs for preschool teacher education, included in this research, as well as graduating students from the preschool teacher program, indicated a proper level of knowledge regarding art giftedness and functional level of competencies for working with artistically gifted children. This lead towards the commendation of initial [undergraduate] programs for preschool teachers in Serbia when dealing with this study area, with a recommendation to advance their curricula in order to enable more in-depth learning and development of higher-quality competencies.

The second part of the conclusion directs towards the necessity of a broader study of this issue, aiming to examine existing initial [undergraduate] preschool teacher education programs' curricula in order to identify the ones which could serve as good practice examples, as the recommendation of this paper goes to the relevant higher education institutions to redefine and improve their programs so that preschool teachers acquire high-quality competencies for working efficiently with children gifted in visual arts expression.

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COMPETENCIES FOR CREATING AN INTEGRATED APPROACH IN THE EDUCATIONAL PROCESS OF PRESCHOOL STUDENT TEACHERS¹

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Abstract: The preschool teacher is the main initiator of the dynamics and efficiency of the educational process. The children need to acquire more functional knowledge, which raises questions about the preschool teacher students' competencies.

The paper emphasizes the necessity of raising awareness of preschool student teachers about the importance of their role in enriching children's experiences, and bringing scientific, musical and linguistic phenomena closer. This further implies modernization of university education by encouraging and raising students' motivation to apply innovative approaches to work and the creation of specific competencies and skills. The competence of preschool student teachers in the realization of activities is not only reflected in building moral values and habits among children, but also in activating children's potentials and encouraging creativity.

The aim of the research was to examine the attitudes of preschool student teachers towards their competencies necessary for implementation of an integrated approach. The method of theoretical analysis and scaling techniques are used. The paper emphasizes the importance of extending specific professional competencies of preschool teacher students, as well as the importance of the continuous development of pedagogical knowledge for supporting holistic development of children, through monitoring, listening and supporting various children's expression (sound and voice, dance, movement, narration, etc).

Keywords: *student's competencies, cross-curricular integration, integrated approach, holistic development of children.*

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Introduction

The competence of preschool teachers in the realization of activities is reflected not only in the development of moral values and habits among children, but also in encouraging creativity and developing children's potentials. The preschool teacher has active participation in work and encourages social interaction, communication, and children's creativity to explore their environment. S/he also supports successful creation of critical thinking skills and the acquisition of permanent and more functional knowledge that will be applied at other levels of education.

Therefore, for preschool student teachers it is necessary to permanently develop pedagogical knowledge and competencies through monitoring, listening and supporting different ways of expressing children (sound and voice, dance, movement, narration, etc.). Given that the preschool teacher is the main driver of the dynamics and efficiency of the educational process, it is necessary to point out to students the importance of their role in enriching children's experiences in approaching scientific, musical and linguistic phenomena through their professional transformation. In general, competencies can be defined as a "context-specific cognitive dispositions (e.g. knowledge, readiness, and training), which enable to overcome certain types of situations and demands" (Pijanović, 2014: 322), although the authors of PISA studies in our country the term 'competence' is used synonymously with the term 'literacy' (Pijanović, 2014: 322).

In university education, differences in the acquisition of general, professional and pedagogical-psychological competencies have been identified. Pedagogical-psychological education is dominant, as shown by the analysis of some research (Munjiza, Lukaš, 2006), because it covers about 60% of teaching, followed by methodical education, which is represented by over 40%.

However, the questions are, which preschool teacher students' competencies need to be perceived as specific and necessary, how to distinguish their broader and narrower definitions, and then to further exploit and direct such knowledge to improve specific competences through lifelong learning. This further implies the need to modernize university teaching by encouraging and increasing students' motivation, their training, the creation of interest for further enrichment of acquired levels of knowledge (Kuka, 2007: 66), and the creation of specific, professional competencies for the application of innovative approaches.

Theoretical approach to the problem

Tendencies of the modern educational process are gaining knowledge through experience and systematic thinking (Vilotijević, 2016), because this

contributes to the understanding that all segments of the educational process are linked, so the change of only one segment directly affects its total course. Cross-linking of the contents of various fields of work in the kindergarten, achieving harmony between them, and freeing from differentiation, can just provide an integrated approach.

The term *integration* (the renewal or joining of elements into one whole), from a pedagogical point of view, signifies the functional connection of different educational areas, which are processed into a meaningful whole. The concept of integration is to deal with knowledge as a whole, to structure content from the known to the unknown, where different topics will be presented in a way that makes sense to the child, enabling, thus, the child to progress from one level to the other.

To apply an integrated approach, preschool teacher students should have competencies to apply different techniques, methods and strategies; to use the relevant ideas, facts and opinions of other entities to explain their views; to apply various teaching resources; to use the local environment and resources; to include children in practical activities and to develop necessary skills in children to form their behaviour, attitudes and values.

According to the document that regulates standards of preschool teacher competencies (*Pravilnik o standardima kompetencija vaspitača*), the competencies of preschool teachers are defined in three areas: 1) direct work with children (which includes knowledge of the holistic nature of child development, different strategies for teaching children, communication and participation of children, knowledge in the field of different sciences, arts and culture as a source of content in developing educational programs); 2) developing cooperation and learning communities (encompassing knowledge of joint learning and cooperation, as well as knowledge of cooperation with the local community); and 3) developing professional practice (encompassing knowledge about different procedures and techniques of planning, monitoring, documenting and evaluating in developing the program).

The application of the integrated approach contributes to the comprehensive development of the child, his intellectual, emotional, aesthetic and social development because "the human organism and its systems, especially the thought, act on the principle of integrating system parts into one whole. As a result, the child achieves inner consistency" (Vilotijevic, 2016: 105). The meaningful integration of activities involves the structural linking of two or more fields and the elimination of boundaries between them, through critical reflection and finding more different, logical ways to connect suitable content, where their various aspects will be unified into a meaningful whole, with a focus on a wider subject. The integrated knowledge acquired in this way will make effective decisions which will help the child to solve problems in everyday life. That the planned activities have the desired, affirmative integrated effect, it

is necessary to know the program of preschool education (*Osnove programa predškolskog vaspitanja i obrazovanja*) and then to set real and child-relevant tasks and objectives. An integrated approach implies that the preschool teacher, together with the child, comes to some knowledge, unlike the traditional approach where the teacher gives the child finished knowledge. It can be noticed that in the integrated approach the role of the teacher changes, since s/he now has the task of encouraging a child to express various ideas, to point to the observation and conclusion, to insist on finding more ways to solve a problem, whereby the child actively participates.

The nature of science is to ask questions, explore, nurture initiative and self-direction, and stimulate lifelong learning, while art provides a link between learning and topics that are relevant to understanding the contemporary world of every child, precisely because it is based on the free expression of imagination and creative instinct. By linking the content of science and language through music and art, we transform the concept of professional practice and include new skills and dispositions for 21st century learning. The way the teacher thinks and acts, his/her professional competence and creativity, enables the realization of performing activities and expressing creativity, skills and knowledge by the children s/he educates. The teacher should know how to apply his professional knowledge through planning and organization, to achieve good relationships with family, colleagues and the wider community and to monitor the development of children.

The global tendencies that have emerged in the last two decades are committed to the implementation of new learning models. Based on literature, emphasis has been placed on three topics: the motivation for a new learning model, the development of specific competencies and skills needed for effective functioning in the 21st century, and the pedagogy necessary for the creation of these abilities. However, due to the constant and rapid development of society, the potential economic and global crises, the question is whether students generally have a combination of critical thinking, creativity, and skills of cooperation and communication, necessary for solving unexpected events which the modern age can set in front of them.

The quality of early childhood education, teacher qualifications and quality practice in teaching and learning are in a correlative relationship. We believe that these results can contribute to proper practice shaping, despite the fact that some studies show that students are not aware of the (low) level of their knowledge and how insufficient knowledge can further influence their ability to provide appropriate scientific, linguistic, artistic knowledge and experiences to young children (Garbett, 2003).

Students, future preschool teachers, must recognize the importance of constant, personal improvement, in order to provide as high quality education as possible to children. "A creative pedagogue is usually defined as a person

who has ideas for innovation in teaching and upbringing, which even the most conventional didactic forms and methods apply in original variants as the creation of their own pedagogical innovation" (Plavša, 1989: 24). Therefore, for proper selection of related and for integrating suitable content, specific competences for planning through elements of integrated learning are necessary, which is the ultimate goal of the Serbian Strategy for the development of education (Strategija razvoja obrazovanja u RS do 2020. godine, *Službeni glasnik RS*, broj 107/12).

One of the trends in the current reform of higher education is the formation of multidisciplinary competence centres that will replace separate academic sections. The integration of thematic contents in the initial [undergraduate] education of preschool teachers is preferable, and the examination of attitudes of future preschool teachers about the integrative approach in planning and realization of content in preschool institutions, is an initial phase of curriculum reform. Although the introduction of an integrated approach has been recognized as a need in modernizing the educational process, it is not sufficiently represented at present, although advancements such as the application of the STEAM model in education are increasingly demonstrating and confirming the benefits of its application.

Research methodology

The goal of the research was to examine the extent to which student preschool teachers consider that they have developed competencies for applying an integrated approach in educational work. This goal was achieved through research tasks: 1) to determine the extent to which students believe they have competencies for planning and implementation of integrated contents in the field of different sciences, languages, arts and culture within the educational activities, taking into account the different learning strategies and the holistic nature of child development; 2) to examine the attitudes of students towards the competencies for monitoring the continuous development of children; and 3) to examine students' attitudes towards competencies for collaborative learning and cooperation with colleagues and with the local community.

The method of theoretical analysis and scaling techniques was used. As an instrument, the assessment scale with 16 statements on the competences of preschool teachers was used. The statements were compiled according to the document *Regulations on the Competence Standards for the Teacher* (Pravilnik o standardima kompetencija za profesiju vaspitača i njegovog profesionalnog razvoja, *Službeni glasnik RS, Prosvetni glasnik*, broj 16/2018).

The research involved 58 students of the third year of undergraduate academic studies, study program Preschool Teacher Education, at Faculty of Education in Jagodina, University of Kragujevac.

The research results with discussion

Within the first research task *students' attitudes about the necessity of developing and possessing competences for planning and realization of integrated contents and different learning strategies within educational activities* were examined (Table 1).

The majority of students (96.55%) agreed that *during planning and realization, integrative activities should be harmonized with children's needs, abilities, pre-knowledge and interests*, which was the expected response. Theme and content, close to the child's understanding and perception, stimulate his/her interest. Adaptation of themes and contents to the psycho-physical age of a child is one of the basic didactic principles. Through activities, engagement and additional support, these themes should be realized to activate all the potentials and holistic development of the child.

With the statement *the preschool teacher should create and organize an incentive environment for the implementation of integrative activities, adapted to the content*, 12.07% of students agreed and 86.21% completely agreed. Affirmative environment, with the support of teacher, has positive effects on the development of talents, intelligence, and the overall childhood personality. Exploring the environment, the child through interaction learns how to understand the world around him/her; therefore, a stimulating environment is an important factor for the success of integrated activities.

On the statement about *the preschool teacher develops a work program relying on various content sources*, 94.83% of students gave positive answers. The results can be interpreted as the ability of students to critically examine and develop their practice with the *program* through their own content research and self-reflection. Then, based on constant monitoring of children, as well as exchanging ideas with family and colleagues, the teacher flexibly plans educational work.

The students' answer to the statement *on the need to use professional literature from various fields in the organization of integrative activities* is surprising: 24.14% of students could not estimate whether professional literature is necessary. In the organization of integrated activities it is necessary to rely on professional literature of various fields, books, vocabularies, encyclopaedias, collections of poems, special handbooks and practices for integrative activities. Ideas and information can be taken from media as well (Pijanović, 2014: 381). For example, scientifically popular texts adapted to the younger age, interesting facts about flora and fauna, or about well-known composers and writers' lives, as well as excerpts of contemporary literary works, quizzes, logical tasks and ideas for simple experiments, can be found in children's magazines. Therefore, students, future preschool teachers need to be educated to work with data

and information, to find and analyse information in different media and to use them when applying integrative activities.

Such students answers can be interpreted in two ways, as insufficient commitment, lack of readiness for lifelong learning and skilful professional literature search, or as insufficient equipment in semi-structured and unstructured materials for work and lack of support teams and centres that offer assistance with innovative work models (as STEAM).

With the statement that *an integrative approach to learning activates more different senses and potentials of the child*, 39.66% of students agreed and 55.17% completely agreed. We can conclude they have perceived the values of competence they should have as future preschool teachers. They approach learning as an open process with a focus on an integrated approach, and children are seen as active, equal players and protagonists of their own learning.

However, 5.17% of students were undecided, which can be interpreted as their not being sufficiently familiar with an integrated approach or do not know the benefits of an integrated approach in the comprehensive development of the child. By gaining knowledge in the field of various sciences, language, arts and culture through research, discovery and problem solving, knowledge becomes more permanent. Moreover, the preschool teacher, by linking multiple fields and offering various contents during one activity, prevents the occurrence of boredom in children, retains their attention and interest longer and additionally excites children's curiosity. Because of the wide spectrum of benefits it brings, it is necessary through university teaching to clearly demonstrate the importance of applying integration to students, future preschool teacher.

The majority of students (87.93%) agree that *the preschool teacher should bring the local, national and cultural heritage of mankind closer to children*. Cultural heritage can enrich the human spirit (Pijanović, 2014: 339). Students agree that cultural heritage should be brought closer to children from the earliest age, and this is possible primarily through introducing the literary heritage (oral and written literature), because it carries "a distinct presence of national consciousness and belonging to Serbian culture" (Pijanović, 2014: 470). Short forms of folk literature, such as tongue twisters, puzzles, and counting rhymes are part of national cultural heritage. Counting rhymes provide a possibility for the integration of speech development and the development of mathematical concepts (Maričić, Purić 2010). Verbal literacy games today can have a modern form, as "mysterious stories, mathematical brainstorms, rebuses, anagrams, or crosswords" (Obradović, 2014: 392).

Also, through national folklore, abundant with rhythms and the extraordinary built-in sense of our people to express their emotions through movement

in a variety of performing forms and choreographic settings, student preschool teachers can bring musical cultural heritage closer to children. The national folk heritage is carefully preserved to this day and has a significant place in the education of young people, and therefore is an essential part of the activities within Music Education, Language, Physical Education, and Science. It also contributes to the development of the national entity, the preservation of national tradition, cultural traditions and the holistic development of the child in general. "The dance is the mother of all arts" (Sachs, 1980), it is a product of common thoughts and reflects the spirit of one nation, the degree of cultural development, national characteristics, lifestyles, even the occupations of certain ethnic groups.

Students' attitudes about *competencies for monitoring the continuous development of children* were examined within the second research task (Table 1). With the statement *preschool teachers should approach to learning as an open process that allows the active participation of all participants and encourages further learning* agrees 46.55% of students agreed, and 53.45% completely agreed. These results show that students recognize the need for additional support to children in education and upbringing, as well as the demands of the modern reform that every child in the group is actively involved in their work. They also recognized the importance of continuous and constant encouragement of cultural creativity and creativity in general, both of which are related to entrepreneurial thinking, and further imply the ability to recognize opportunities, and readiness to accept risk and responsibility. Children should be taught to think, encouraged to be inventive, and even be given autonomy to organize entrepreneurial activities such as the sale of their creative products. Also, the teacher, together with children, can organize exhibitions of children's work, an exhibition of photographs taken by children during a visit to a park (a farm, a local factory, a concert etc.) or actions for decorating public spaces where children will participate.

To the statement, *the preschool teacher should develop pedagogical knowledge through monitoring, listening and supporting different ways of children's expression*, almost all of the students (93.1%) answered affirmatively, thus examining the importance of expanding their specific professional competences as future preschool teacher, while 6.9% of students were undecided.

Only a student who, during his initial [undergraduate] education, is well-trained to detect the expressive characteristics of children's speech, for example, possesses the necessary competences for monitoring and supporting children's spontaneous linguistic creativity. Nurturing children's language expression is aimed at their acquiring communicative skills, understanding the speech of others, and strengthening creative language capacities (Ivanović, 2014: 11). Language units are elements of literary expression and cause stylistic effect. In other arts, different means are used: colour is an element of artistic

expression; tone is an expressive means in music; a movement in dance; and a moving image in film (Pijanović, 2014: 237).

An integrated approach enables the linking of different expressions of children. It can include linguistic development and the acquisition of skills necessary for the development of literacy through the use of different language varieties, such as discussion about activities, information exchange, asking questions and responding to them, consulting literature for information, and a detailed description of a careful observation (French, 2004). As linguistic development is parallel to cognitive development, it is necessary to strive for the interweaving of elements of musical, artistic expression, and expression with movement with verbal expression in work with preschool children. Therefore, during the education of future preschool teachers, it is necessary to link contents of different methodologies. Silent games, rhythm games, rhyming games or game styles, breathing exercises, locomotor development exercises and vocal exercises, alongside the development of auditory perception for speech and the development of kinaesthetic movements of muscular speech apparatus are important for the development of future speech and language (Kostić, Vladislavljević, 1995: 155), and at the same time have a place in music education. Also, authentic life situations are “the most natural framework for learning and developing children speech skills” (Ivanović, 2014: 13), so children should be encouraged to use speech to satisfy curiosity about the world around them while visiting the zoo, botanical garden, market, farm, florist etc.

The results showed that 56.9% and 32.76% of students consider that *the preschool teacher should encourage children to participate in cultural creativity as a means of self-expression (performing plays, storytelling, artistic expression, drama expression, etc.)* while 10.34% were undecided. Specially trained preschool teacher can enrich children’s knowledge, but can also awaken in children a desire to learn more (Pronin Fromberg, 2006). The competencies necessary for the application of the integrated approach in educational work are reflected in the abilities of preschool teacher to activate the child’s potentials to the personal maximum of each person through the development of intellectual abilities and encouraging creativity, which is connected not only with innovation, but also with entrepreneurial thinking.

Since artistic creativity is an important element of the curriculum at all levels of education, it is important to examine the attitudes of preschool teachers towards the competence to include artistic creativity in work with children. Studies show that, during self-evaluation, competencies for teaching mathematics and mother tongue were evaluated more positively than competencies for teaching any field of art, whereby some teachers do not deal at all with certain artistic fields in everyday practice, especially drama, media, and music (Garvis, Pendergast, 2011). Artistic creativity dominates over other forms

of creativity in working with children (Irwin, 2018). Other kinds of creativity, such as musical creativity, dramatic creativity and spontaneous child linguistic creativity must not be neglected in the work on fostering children's creativity. For the integration of arts with other thematic areas, continuous work on cross-curricular competences is required during the education of future preschool teachers.

Creativity is a prerequisite, whether we are talking to children about cultural contents or talking about children's creativity. Contrary to traditional education, with its emphasis on memorization and facts reproduction, in today's world of global competition, innovative capacity and creative spirit have become imperatives for professional and personal success, and therefore a central place should be provided systems for creativity and innovation in education.

Within the third research task (Table 1), students' attitudes on *competencies for collaborative learning and cooperation with colleagues and with the local community* were examined. These competencies can be of great importance for the improvement of educational work. Based on answers, students appear to recognize the necessity for *organizing various forms of cooperation*, which can be realized through visits to museums, music schools, theatres and other institutions. Most students believe that the preschool teacher has competencies to *organize activities that will involve the child's family, through various workshops, kindergarten activities, or joint actions*.

However, 6.9% of students were not sure that *preschool teachers should involve children in local projects, events and activities* through visits to festivals, concerts, exhibitions, sports events or ecological campaigns. Also, 3.45% of them did not think that *cooperation with the local community* is needed and did not realize the *possibility to use this cooperation for the application of innovative approaches to work*. They should be informed that cooperation and a critical and reflexive approach to the practice of preschool education are the basis for development. The values that will be expressed by such an approach are respect for the rights of the child as a citizen through his full participation in social and cultural community life, as well as the development of social and cultural identity and the sense of belonging to the peer community, kindergarten, and local community.

Students' responses to the additional statement that the *competencies acquired during the study program allow the preschool teacher to organize integrative activities* (where 84.49% of students affirmatively replied), indicate that certain changes have been incorporated into university education. Interdisciplinary competencies, which are especially emphasized in the most recent documents on competencies, as well as in the new *Law on the education system* (Zakon o osnovama sistema obrazovanja i vaspitanja, *Službeni*

glasnik RS, 88/2017), have been globally identified as a prerequisite for the quality of educational work in the 21st century. However, for 15.52% of students (3.45% did not agree, while 12.07% were undecided), it is necessary to find ways to motivate them further through work responsibility and personal example (Kopas Vukašinović, Lepičnik Vodopivec, 2018), and further encourage them to apply innovative methods in order to meet the requirements of quality education for the 21st century in the field of professional competences development.

Although, in general, the view that scientific facts are considered unfavourable in pre-school institutions, mainly because of the desire to protect children from school culture (Sundberg, Ottander, 2013), the results of this research imply that through university education it is possible to form student teachers' specific competencies for knowledgeable transformation of certain scientific contents with integration with music and language culture. "The best connection, the greatest transfer from theory to practice, will exist when a relationship is created and emphasized during learning" (Nešić, 2003: 158). If the person clearly understands what he is learning, continually applying previous experiences, if he flexibly uses the adopted general rules, and openly examines new assumptions and changes in the flow of thought, then we can say that the transfer is successful (Nešić, 2003).

Table 1: Students' attitudes towards competencies for application of integrative activities

Statement		1 Strongly disagree	2 I do not agree	3 Neither agree nor disagree	4 I agree	5 I agree completely	Σ
1.	The preschool teacher plans and realizes integrative activities in accordance with the children's needs, possibilities, interests and their active participation in the group.	0	0	2	22	34	58
		0 %	0 %	3.45 %	37.93 %	58.62 %	100 %
2.	The preschool teacher should create and organize an incentive environment for the implementation of educational integrative activities adapted to the children and the contents.	0	0	1	7	50	58
		0 %	0 %	1.72 %	12.07 %	86.21 %	100 %
3.	The preschool teacher develops a work program relying on various content sources: authentic experiences of children, different life situations, culture, science, art, technology, ecology, sport, etc.	0	0	3	24	31	58
		0 %	0 %	5.17 %	41.38 %	53.45 %	100 %
4.	When organizing integrative activities, it is necessary to rely on professional literature of various fields.	0	0	14	20	24	58
		0 %	0 %	24.14 %	34.48 %	41.38 %	100 %
5.	An integrative approach to learning activates different senses and potential of the child.	0	0	3	23	32	58
		0 %	0 %	5.17 %	39.66 %	55.17 %	100 %
6.	The preschool teacher should bring the local, national and cultural heritage of mankind (music, dance, tradition, visual arts, drama, etc.) closer to children.	0	2	5	10	41	58
		0 %	3.45 %	8.62 %	17.24 %	70.69 %	100 %
7.	The preschool teacher should approach learning, within the activity, as an open process which allows the active participation of all participants and encourages further learning.	0	0	0	27	31	58
		0 %	0 %	0 %	46.55 %	53.45 %	100 %
8.	The preschool teacher should develop pedagogical knowledge through monitoring, listening and supporting different ways of children's expression (sound and voice, dance, movement, narrative, construction in space, etc.).	0	0	4	10	44	58
		0 %	0 %	6.9 %	17.24 %	75.86 %	100 %

9.	The preschool teacher should encourage children to participate in cultural creativity as a means of self-expression (performing plays, storytelling, artistic and drama expression, etc.).	0	0	6	19	33	58
		0 %	0 %	10.34 %	32.76 %	56.9 %	100 %
10.	The preschool teacher should involve children in local projects, events and activities (ecological actions, music events, festivals, exhibitions, daily life of the community, sports events).	0	0	4	15	39	58
		0 %	0 %	6.9 %	25.86 %	67.24 %	100 %
11.	Cooperation with colleagues from the same and other institutions is crucial in the planning of educational activities.	0	0	17	25	16	58
		0 %	0 %	29.31 %	43.1 %	27.59 %	100 %
12.	Partner relations between preschool teachers and local community institutions can be of great importance for the improvement of educational work.	0	0	8	26	24	58
		0 %	0 %	13.79 %	44.83 %	41.38 %	100 %
13.	If a possibility for cooperation with the community appears, this should be used to apply innovative approaches to work.	0	2	3	12	41	58
		0 %	3.45 %	5.17 %	20.69 %	70.69 %	100 %
14.	It is necessary to frequently organize various forms of cooperation with the local community (museums, music schools, theatres, etc.).	0	2	4	7	45	58
		0 %	3.45 %	6.9 %	12.07 %	77.59 %	100 %
15.	The preschool teacher can organize a variety of activities to include family and other community members through workshops, kindergarten activities, joint actions, etc.	0	0	0	23	35	58
		0 %	0 %	0 %	39.66 %	60.34 %	100 %
16.	The competencies obtained during the studies allow the preschool teacher to organize integrative activities.	0	2	7	23	26	58
		0 %	3.45 %	12.07 %	39.66 %	44.83 %	100 %

Conclusion

In this paper, we highlight the key elements of the competencies necessary for the preschool teacher of the 21st century, which include personalization, cooperation, communication, productivity and content linking. We also emphasized the importance of personal knowledge, taking the initiative, responsibility, and the necessity of creativity in work, teamwork, management and organizational skills. Based on the research results, students, future preschool teacher, largely evaluate themselves as persons with competencies that enable them to apply an integrative approach in their educational work. They have a positive attitude towards an integrated approach, but despite increasing competence, they have a lack of self-confidence in applying it.

Pedagogical implications of this research can be seen in five directions:

1) The integration of thematic content into initial [undergraduate] university education of students, future preschool teacher is desirable. The main goal should be the training of students for planning that includes an integrated approach, depending on the interests and possibilities of a particular group of children. We find support for above-mentioned implication in the report of the European Political Strategy Center, *10 trends: Transforming education as we know it* (Trend 6:5, 2017), which supports local and global challenges, including sustainable development issues, as well as cultural diversity within a society and demands for the application of an integrated approach, to understand the causes of contemporary challenges and find innovative solutions.

2) Integration of thematic contents enables cross-curricular cooperation and team work by university teachers.

3) It is necessary to present or at least sketch possible ways of developing methods that includes innovative approaches, which in the planning and realization of content represents the initial phase of the curriculum reform. Also, the formation of activity centres, in which students, future preschool teachers would be active participants, would directly influence the creation of their specific competencies.

4) Encourage creativity and find ways, through study programs for preschool teacher, to make student teachers interested and encouraged to challenge and apply innovative procedures. Further consideration may include monitoring the development of students' integrative skills, giving instructive ideas and referring to the use of a variety of children's literature to help students to find links between different fields.

5) One of the directions in which content integration can be considered, would be experimental research, in which the effects of the integrated approach that students would apply in their activities would be examined. The organization and practical realization of these activities would show whether

students have, and to what extent, specific competencies for linking the contents of different fields of work.

Since preschool age is the most sensitive period in the life of a child, a person who works with children should be highly qualified and competent to perform his/her profession. S/he needs to be full of “experience, knowledge, and power of guidance, who fills with enthusiasm” (Nešić, 2003: 150), to identify the child’s abilities, and “by approval and praise think of the best they can give and thus acts beneficial and stimulating on them” (Nešić, 2003: 150). Therefore, students, future preschool teachers are expected to critically and reflectively approach their own practice, and monitor and understand social and economic trends that directly or indirectly set new demands on the teacher profession and have an impact on the preschool institutions work. They need to realize their role in the full sense, to be successful in all domains of their work and thus confirm the quality of university education.

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Section III

Teaching Competences in Primary Teacher Education

Chapter IX

CLASSROOM ENVIRONMENT AS AN ESSENTIAL FACTOR IN THE DEVELOPMENT OF QUALITY OF PRIMARY SCHOOL TEACHING

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Abstract: Teaching is an educational process which sets aims and tasks. Education processes have several factors which can contribute to the success of education: teachers who are leading figures in classrooms and in the teaching process, students for whom the training is intended, curriculum content which is transmitted to students, and general conditions in the classes, including seat ranking and ambient factors, classroom equipment and so on. To be a successful teacher, despite these factors, teaching requires a favourable classroom's ambience. This research aims to determine the attitudes and opinions of elementary school teachers and high school teachers (N=357) towards the influence of the classroom's ambience during the teaching process. According to the survey results, participants believe that a positive or negative classroom atmosphere affects the quality of the teaching process, it affects the teacher and his or her quality of teaching, behaviour and mood, as well as the pupils and their responses, and it can influence the quality of their results. Furthermore, we can assume that elementary school teachers and high school teachers use different methods to improve the positive ambience in their classrooms, they respect other teachers' suggestions, and all of this helps to create a motivating atmosphere for pupils' progress.

Keywords: *classroom ambience, influence, students, teachers, teaching process*

Introduction

When we discuss teaching and learning today, many questions, problems and dilemmas arise. We are confronted with changes that are fast and large on a daily basis and it is understandable that problems of our time in terms

teaching and learning are very complex. Every period is accompanied by certain characteristics, particularities, requirements and needs, but also its problems. Among other things, this also refers to teaching and classroom atmosphere. As a “specific bipolar manageable process, in which the generational experience is transmitted and adopted” (Švajcer, 1987, 22), “teaching is a fundamental part of school work in which a planned and organised education of students is carried out according to the prescribed curriculum and syllabus” (Potkonjak & Šimleša, 1989, 88). While Bogнар & Matijević (2005) state that teaching is an educational process which is most systematically organised, Tomić and Osmić (2006, 7) try to offer a more complete and more comprehensive definition of teaching and say that teaching is “a unique educational process that takes place in a planned and systematic way under the guidance of a teacher with a relatively permanent group of students with the aim of (...) acquiring socially modified program contents in order to develop all student’s potentials to a maximum extent”.

Therefore, teaching represents an organised institutional and non-institutional interactive creative effort to adopt the prescribed content and acquire knowledge as well as to develop skills and habits in order to enable students – the subjects of education – for further permanent work with the intention of developing all their potentials and thus remain open for all contents and future progressive changes in itself and the society (environment) in which they are. (Tomić & Osmić, 2006; Stevanović, 1998). In doing so, there is a need to “see teaching as a balancing act” (Tot, 2010: 66).

When we observe the student and his/her functioning and behaviour in the classroom and how it affects the teacher and the transfer of knowledge in general, then the classroom atmosphere must be taken into account. This is because the classroom atmosphere has a great impact on the teacher as well as on the entire teaching process. It is understandable that there are students in each classroom who disrupt the discipline and hence the attention of the whole class and that the realisation of a lesson and the success of teaching depends on such students. It is therefore the most important role of a teacher to find ways to “teach” students how to behave in certain moments in order to create the desired conditions i.e. the appropriate classroom atmosphere.

The Influence of the Classroom Atmosphere on the Teaching Process

According to Bošnjak (1996), the classroom atmosphere includes the processes in the immediate environment or a class where, for understanding, it is important to recognize the overlapping of different forms of activities of the participants in classroom interaction. Furthermore, Bošnjak (1997) states that “a classroom atmosphere can include relationships between teachers and their

students or among students and the school atmosphere can include a teacher's relationships with other teachers, administrative staff and the school director". Domović (2003) sees the classroom atmosphere as classroom events that include teacher support, satisfaction, connectivity, competition, difficulties, research, and other. Furthermore, Domović points out that this term is associated with teachers and students, their behaviour and everything else that happens in a classroom. The classroom-teaching environment encompasses educational factors, the physical environment and the psychological atmosphere that are expressed through social contexts as well as numerous other components that are related to the teacher and his behaviour (Vlahek 2016, according to: Miller Cunningham 2011).

If we want to define the classroom atmosphere from a sociological point of view, then we can conclude that classroom atmosphere is the realization of a complex interaction at organization (class) and management (teacher) levels as well as at the level of interrelation between the participants of the educational process (students and teachers), (Jagić and Jurčić, 2006).

Kyriacou (1991, 100) states that Wragg and Wood (1984) compared experienced teachers with students, future teachers, and noted and concluded that experienced teachers were friendlier and kinder, more stimulating and professional, humorous and that, when communicating with students, they looked into their eyes, knew how to take up an attitude and rule by their authority. In that they used the mentioned features to create a working teaching atmosphere.

As teachers and students feel differently in different classrooms, the classroom atmosphere can therefore be defined "as a common teacher and student perception of the environment that is created by intertwining the immediate environmental factors – the physical, material, organisational, operational and social variables of the environment " (Vlahek 2016, 120, according to: Fraser and Picket 2010; Adelman and Taylor, in press). The classroom atmosphere or classroom climate that a teacher achieves during lessons has a strong impact on students' learning and motivation. Kyriacou (1991, 97) believes that the classroom atmosphere that best and most affects the student's work and learning is the one that is "described as purposeful, working, relaxed, cordial, motivating and arranged".

Students prefer a classroom-teaching atmosphere in which pleasure and openness prevail, an atmosphere full of confidence and mutual understanding at the student-teacher level as well as at the student-classmates level and in which there is no fear of failure and no negative competitive spirit. The sense of security is very important in that. A student feels secure if the teacher and his classmates appreciate his value (activity, friendship, cooperation, obedience, ...) and if the teacher empathizes with the student's experience and satisfaction with the teaching integration. (Jagić and Jurčić, 2006).

Matijević (1998, 23) points out that “the quality of the entire teaching atmosphere is certainly mostly affected by the main subjects of the teaching process – students and teachers”, where the teacher together with his/her students must work to create a positive atmosphere in the classroom. With their emotions and behaviour, effort and will, the teacher and students participate in creating a desirable climate for work and progress. Furthermore, Matijević states that (1998, 24) “in order to make the teaching atmosphere encouraging for various student activities and for it to be able to satisfy the diverse developmental needs of students, the teacher will try to change the pedagogical scenarios in which students of one class participate”. So, the teacher can devise various research projects, create class or school newsletters, carry out more field trips and excursions, create new didactic games and so on. In this way, the teacher will not only create a pleasant classroom-teaching atmosphere, but s/he will involve students and thus activate their knowledge, abilities and skills. To put it briefly: *they will connect business with pleasure* and get a lot of satisfaction for it. Hence, Božić (2015, 93) concludes that “the quality of the classroom atmosphere is, without doubt, mostly influenced by the main subjects of the teaching process – the students and the teachers.”

Purposeful and working atmosphere

“The ethos of purpose and work is mainly based on the way the teacher emphasizes the need for continuous improvement in learning” (Kyriacou, 1991, 97). To make teaching more purposeful and work-oriented, it requires a quick and efficient start, tracking students’ achievement and progress, organization to make everything function within the teaching process, and its factors satisfied and fulfilled. The teacher’s voice influences the purposeful and working atmosphere because his/her performance at the beginning of a lesson makes students know whether the topic being discusses is important or not. Also, a too early completion of the lesson has the same effect .

Furthermore, for purposefulness and diligence, Kyriacou (1991, 98) points out that they can be described as “business methods of organization”. He says that it “is characterized by students’ acceptance of the teacher’s authority as the organizer and leader of learning activities and by expectations of teachers and students that will try to do what they are told and make good progress”.

It is important for students to have high self-esteem and self-confidence, that they respect and accept themselves, and that they set themselves high expectations.

Relaxed, friendly, stimulating

Kyriacou (1991, 98) points out that “the meaning of being relaxed, friendly and stimulating is based mainly on the kind of relationship that you establish with your students”. It is important to emphasize the teacher’s calmness and steadiness which allows solving student’s disobedience and idleness, while helping students to relax and become interested in the teaching contents that are subject of the classroom work.

As for cordiality, Kyriacou (1991, 98) believes that “students have the feeling that the teacher particularly cares about them, partly because of the fondness for them as persons”. A student will feel the teacher’s cordiality in tone, movement or gesture. If a teacher cordially addresses the students and maintains such communication throughout the lesson, he can be sure that the students will respond in the same way because they understand and feel gentleness and tenderness.

Kyriacou (1991, 98) states that “to be stimulating means to help and encourage students to carry out their tasks they are required to and to solve problems they encounter in a situation where they need help instead of rebuking them”. In the encouragement, one has to be moderate, to provide help in a natural and logical manner, and to know when to retreat. If the teacher provides too much help and support to the students, they could abuse it by their inactivity, inattention and by over reliance on the teacher himself. The teacher should ask for encouraging feedback from students because, as Kyriacou points out, it could help them develop their learning ability.

Feedback information, where we encourage students to pay attention, fosters the development of a pleasant classroom atmosphere.

Order

In order to create a pleasant classroom atmosphere, we must establish order among students. As Kyriacou believes (1991, 99), order “must be based on complementing other elements which are necessary to establish the meaning of purposefulness, relaxation, cordiality, diligence and encouragement”. He further states that “order is based on the skills of an effective organization and structure of the lesson as well as on the relationship with students based on mutual respect and understanding”.

It should be noted that the classroom atmosphere – as Bošnjak (1997, 41) points out – is expressed through the remarks of the teacher and students and that the school atmosphere is measured by a teacher’s remarks.

The students’ observations are taken to measure and express the classroom atmosphere as it is considered that the students know each other well

in the classroom, each year more and more strongly. On the other hand, they are not relevant for measuring the school climate because they are not familiar with other aspects of the atmosphere at the school level.

Methodology

The aim and the method of the research

The aim of this research was to define the attitudes and opinions of students of primary classroom and subject education about the impact of the classroom atmosphere on the teaching process.

The method used for data collection and obtaining results was a questionnaire designed for this research which was posted on *Face book* social network and distributed in elementary schools. The survey questionnaire was intended for teachers of primary classroom education and for teachers of subject education.

The participation in completing the questionnaire was anonymous and voluntary and the research participants (respondents) could at any time give up expressing their opinion and reflection, i.e. stop filling in the questionnaire.

Measuring instrument

The survey questionnaire used in this research consisted of 13 variables, of which three variables were: *gender*, *years of work experience* and *I am a* (classroom or subject education) *teacher* independent. There were ten dependent variables.

Since the item scale included in the questionnaire was used in a research context for the first time, it was necessary to determine its basic metric characteristics. The results obtained are shown in Table 1.

Table 1: Factor loadings and Cronbach alfa reliability coefficient

	= .773
Statements	
The classroom atmosphere has a great impact on the quality of teaching performance.	.737
A favourable classroom atmosphere during lectures greatly contributes to a better and more successful adoption of program contents.	.735
With their positive emotions, teachers can create a pleasant and stimulating classroom atmosphere.	.745
The classroom atmosphere greatly influences the behaviour of students during lectures.	.717
The classroom atmosphere affects the teachers and his teaching.	.613
The classroom atmosphere affects my mood.	.721
The teaching process can be successful even without a good, positive classroom atmosphere.	.761
The teacher's authority affects the classroom atmosphere.	.738
An unfavourable classroom atmosphere affects attitudes and the fulfilment of students' obligations in class.	.745
Teachers find it hard to cope with an unfavourable classroom atmosphere.	.755

The reliability of the statement scale expressed by *Cronbach alfa coefficient* has shown that it meets the Nunnally and Bernstein's internal consistency criterion of .70. Namely, the obtained internal consistency coefficient is = .773. Only the item that referred to *The classroom atmosphere affects the teachers and his teaching* had significant factor loadings (.613).

The Likert type scale, adapted to the needs of this research, was used for dependent variables. In addition to each statement, a response scale of 1 to 5 was offered, with 1 being complete disagreement and 5 complete agreement, and the respondents could choose one of the five offered responses.

The sample

357 respondents participated in the study, of which 94.7% were female and only 5.3% of the respondents were male. This information is not surprising because the occupations in education tend to be female.

The majority of research participants, i.e. respondents, work in subject teaching: 67.5%, whereas there was 32.5% o work in classroom teaching.

Work experience of the research participants was as follows:

- the largest number of respondents are those *with 5 to 15 years*: 37.0%,
- they are followed by the group of respondents with *less than 5 years*: 23.8%,
- and 21.6% of respondents were in the group *from 15 to 25 years*.

15.1% of respondents were in the group *from 25 to 35 years* and those with *35 or more years of work experience* were in the minority, only 2.5%.

Results and Discussion

The analysis of data (obtained by this research) and *the results* (obtained from the processing of that data) *is directed towards the aim of this research*, to analyse the *experiences and reflections regarding some factors that influence the classroom atmosphere* for teachers who teach in the classroom or subject education system based on their attitudes and opinions.

The arithmetic means and standard deviations for each particular statement are shown in Table 2 *Classroom atmosphere and teaching*, separately for classroom teachers and for subject teachers.

It can be noticed that all arithmetic means are greater than 4 except for those with two items – the one relating to the statement *The teaching process can be successful even without a good, positive classroom atmosphere* with the arithmetic mean of 2.36 for classroom teachers and 2.54 for subject teachers; the other item with arithmetic means less than 4 is *Teachers find it hard to cope with an unfavourable classroom atmosphere* where, for classroom teachers, the arithmetic mean is 3.74 and for subject teachers 3.57.

Table 2: Classroom atmosphere and teaching

Statement	teacher	M	SD
The classroom atmosphere has a great impact on the quality of teaching performance.	RN	4.66	.510
	PN	4.66	.549
A favourable classroom atmosphere during lectures greatly contributes to a better and more successful adoption of program contents.	RN	4.74	.478
	PN	4.71	.505
With their positive emotions, teachers can create a pleasant and stimulating classroom atmosphere.	RN	4.55	.637
	PN	4.30	.755
The classroom atmosphere greatly influences the behaviour of students during lectures.	RN	4.52	.582
	PN	4.41	.660
The classroom atmosphere affects the teachers and his teaching.	RN	4.53	.678
	PN	4.56	.597
The classroom atmosphere affects my mood.	RN	4.53	.704
	PN	4.39	.752
The teaching process can be successful even without a good, positive classroom atmosphere.	RN	2.36	1.050
	PN	2.54	1.057
The teacher's authority affects the classroom atmosphere.	RN	4.14	.733
	PN	3.91	.812
An unfavourable classroom atmosphere affects attitudes and the fulfilment of students' obligations in class.	RN	4.11	.862
	PN	4.07	.779
Teachers find it hard to cope with an unfavourable classroom atmosphere.	RN	3.74	.896
	PN	3.57	.947

Legend: RN = classroom teaching; PN = subject teaching

Unlike Table 2, where arithmetic means and standard deviations are shown for classroom teachers and subject teachers separately, in Table 3 the *arithmetic means* and *standard deviations* for the *total* are shown. It can be noticed that the values of these arithmetic means are very high, that they have a tendency to fully agree with the set items except for the item *the teaching process can be successful even without a good, positive classroom atmosphere* of which the arithmetic mean is 2.48 and which also has the greatest dispersion of answers (SD = 1.056), as well as of two items of which the arithmetic means are also less than 4; it is the item *teachers find it hard to cope with an unfavourable classroom atmosphere* with the arithmetic mean of 3.62 and the item *the*

teacher's authority affects the classroom atmosphere with the arithmetic mean of 3.99. For these two items, the dispersions of answers are: SD = .933 for the first of the two and SD = .812 for the second.

The highest arithmetic mean is associated with the item *a favourable classroom atmosphere during lectures greatly contributes to a better and more successful adoption of program contents* and it is 4.72. The dispersion of answers with this item is the least and it is SD = .496.

Table 3: The arithmetic mean and standard deviation for total

Statement	M	SD
The classroom atmosphere has a great impact on the quality of teaching performance.	4.66	.536
A favourable classroom atmosphere during lectures greatly contributes to a better and more successful adoption of program contents.	4.72	.496
With their positive emotions, teachers can create a pleasant and stimulating classroom atmosphere.	4.38	.728
The classroom atmosphere greatly influences the behaviour of students during lectures.	4.45	.637
The classroom atmosphere affects the teacher and his/her teaching.	4.55	.623
The classroom atmosphere affects my mood.	4.44	.738
The teaching process can be successful even without a good, positive classroom atmosphere.	2.48	1.056
The teacher's authority affects the classroom atmosphere.	3.99	.812
An unfavourable classroom atmosphere affects attitudes and the fulfilment of students' obligations in class.	4.08	.806
Teachers find it hard to cope with an unfavourable classroom atmosphere.	3.62	.933

From the data presented in Table 3 and the above, it can be concluded that the majority of the research participants consider that the classroom atmosphere has a great influence on the teaching process. Namely, it is not the same when there is a favourable and serene atmosphere in a classroom or when the atmosphere is unfavourable and negative. The teaching depends on the teacher, the person leading and managing it, and students, the factors of the teaching process to whom the teaching is addressed. It is equally easy to conclude that

a favourable classroom atmosphere has a positive impact on teaching and an unfavourable atmosphere the opposite i.e. a negative impact on teaching. However it is, the atmosphere affects the entire teaching process (which includes teachers, students, and teaching contents).

For the item *A favourable classroom atmosphere during lectures greatly contributes to a better and more successful adoption of program contents* almost 97.8% of the research participants *completely agree* (88.8%) or *mostly agree* (9.0%). Only 2.2% of respondents did not express a specific opinion regarding this item (*I do not have a specific opinion*). For this item as well, none of the respondents opted for the option *I completely disagree* i. e. *I disagree*. Consequently, it follows from these responses that the vast majority of respondents still believe that a favourable and pleasant classroom atmosphere affects the better and more successful mastery of teaching subjects. None of the research participants (i.e. respondents) considered the opposite.

The next, third item given to the respondents to answer was *with their positive emotions, teachers can create a pleasant and stimulating classroom atmosphere*. None of the respondents answered *completely disagree* with the set item and only 0.9% of them *mostly disagreed* with this item. Regarding this item, 13.6% of respondents did not have a specific opinion. Almost 86% of respondents *mostly agreed* (34.7%) or *completely agreed* (50.8%) with the set item. From the above, it is possible to conclude that a large majority of respondents consider that teachers can create a pleasant classroom atmosphere for students with their positive emotions. The classroom atmosphere can change during one teaching day and does not always have to be under the influence of students and teaching contents. With their emotions, teachers and lecturers can create an atmosphere which will motivate students to work and thus feel better in the classroom.

The statement *the classroom atmosphere greatly influences the behaviour of students during lectures* was the fourth item given to research participants to express their opinion. None of the respondents chose the answer *I completely disagree* and only 0.3% chose the answer *I mostly disagree*. There were 7.3% of indecisive respondents i.e. those who chose the answer *I do not have a specific opinion*, and there were 37.5% of those who answered *I mostly agree* or 54.9% with the answer *I completely agree*. It should be noticed that only one respondent (0.3%) felt that classroom atmosphere does not affect the behaviour of students during lessons. The indecisive respondents have reasons why they could not choose the set item. However, the largest number of respondents consider that the classroom atmosphere affects the behaviour of students during lessons since the teaching i.e. classroom atmosphere is created by the teacher and students and the mutual relations and communications that they establish during lessons.

For the item *the classroom atmosphere affects the teacher and his/her teaching* only 0.3% of respondents *completely disagreed* and 4.1% of them could not opt in relation to set item i.e. they did express a specific opinion. 32.3% of the research participants *mostly agree* and there were 63.3% of those who *completely agreed* with the set item. There were no participants who *completely disagreed* with the item! It can be noticed that almost 96% of respondents think that the classroom atmosphere has a particular influence on the teacher and his teaching performance. The factors of the teaching process are the teacher, students, teaching contents (material) and objective conditions. All of these creates an atmosphere during lessons i.e. in the classroom, affecting some teachers less and some more.

The next, sixth item that the research participants were given to respond to was: *The classroom atmosphere affects my (the teacher's) mood*. 0.9% of 357 respondents *completely disagreed* with the set item and 0.3% of them *disagreed* with the statement. 9.1% of the research participants did not express a specific opinion. With the item *the classroom atmosphere affects my (the teacher's) mood*, almost 90% of the respondents agreed: *mostly agree* (34.1%) and *completely agree* (55.6%). However, they consider that the classroom atmosphere may have oscillations and thus it can change for better or for worse in a moment. It can be said that when the classroom atmosphere is good and pleasant, the teacher also feels good and has the will and desire to work; on the contrary, if the class atmosphere is bad and tense, this will affect the teacher's mood which will gradually weaken and eventually completely fade away.

The answers to the statement *The teaching process can be successful even without a good, positive classroom atmosphere* provided a variety of responses covering all five possible answers, from total negation to complete affirmation. The option *I completely disagree* was chosen by 20.2% of respondents, and 30.0% of them opted for the offered answer *I mostly disagree*. A great surprise is the number of respondents who were indecisive about this item i.e. who did not have a specific attitude, or those who on this item *have no specific opinion*; there were more than one third of such respondents, almost 36.6%. The offered answer *I mostly agree* was opted for by 10.4% of the respondents and 2.8% *completely agreed*. It should be pointed out that only a small number of respondents thought that the teaching process can be successful without a good and positive atmosphere. There were 50.2% of respondents in total who mostly or completely disagreed. Hence, it can be concluded that half of the research participants claim that teaching cannot be successful without a good atmosphere, which is, of course, understandable and comprehensible. We should mention the indecisive respondents, those who do not have a specific opinion on this item and these are in the majority.

One of the statements that was given to the research participants to respond to was the item *the teacher's authority affects the classroom atmosphere*.

A minimum of respondents, 0.6% of them, opted for the assessment *I completely disagree or. I mostly disagree*, for which 2.9% opted. Almost one fourth of the research participants, 24.1% of them, did not have a specific opinion on this item. The largest number of respondents chose the assessment *I mostly agree* (43.8%), whereas 28.6% opted for *I completely agree*.

When it comes to authority as a concept, then it should be considered whether it is authoritarian teaching style or authoritarian communication that the teacher establishes and maintains with the students. However, the characteristics of authority in teaching and communication are similar, almost the same: the teacher speaks with a sharp voice, gives orders and demands fulfilment of tasks, takes up the position of a leader and a chief in the classroom, and may be prone to punishment. Almost three thirds of respondents agreed that authority influences the classroom atmosphere; this implies that it affects students (their attention, concentration and behaviour), teaching contents which is being discussed during the lesson, and other factors of various kinds.

The penultimate item offered to the research participant to consider was: *An unfavourable classroom atmosphere affects attitudes and the fulfilment of students' obligations in class*. Only 0.9% of respondents chose the answer *I completely disagree* whereas 3.5% of them answered that they *mostly disagree* with the set statement. 15.1% of the research participants were indecisive regarding this statement i.e. did not have a specific opinion. Almost half of the respondents (49.2% of them) *mostly agree* with the set item and 31.3% of them opted for *I completely agree*. It can be noticed that more than three quarters of the research participants (more precisely 80.5% of them), thought that an unfavourable classroom atmosphere influences the students' attitudes and obligations fulfilment during lessons as well as their relation to lessons. If there is a bad atmosphere in the classroom, it is easy to understand that this will be reflected in students through behaviour and conduct during school hours, fulfilment of school obligations, and opinions and attitudes. Students quickly understand if there is an unfavourable and negative atmosphere in the classroom, and accordingly they change their behaviour and attitudes towards lessons to worse. If the classroom atmosphere is unfavourable and unacceptable, it quickly leads to dissatisfaction of students.

Finally, the last statement that was given to the research participant to decide was: *teachers find it hard to cope with an unfavourable classroom atmosphere*. 1.6% of the respondents *completely disagree* with the set item and 9.1% of them *mostly disagree* with the statement. More research participants, 37.5% of them, were indecisive regarding this statement i.e. did not have a specific opinion. Those who *mostly agreed* with the statement comprised 33.4% and 18.3% *completely agreed* with the statement. From the presented responses regarding the item *teachers find it hard to cope with an unfavourable classroom atmosphere*, it can be concluded that almost half of the research participants,

48.2% of them, have a negative attitude towards this item i.e. disagree with the set statement or are indecisive about it. It may be said that some teachers are not very concerned whether there is a favourable or unfavourable atmosphere in the classroom and, in spite of the bad atmosphere, they will carry out their work during lessons undeterred.

Conclusion

Teaching represents an organized process of acquiring and transferring knowledge for the purpose of education. Today, teaching can take place in a variety of ways, ranging from classical institutional to distance learning or so-called e-learning. Classical teaching and distance learning have common teaching process factors and they are: *the teacher*, the person presenting teaching contents to students, teaching and formatting them; students who are in this process for the purpose of acquiring new knowledge; and *teaching contents* which are transferred by the teacher and adopted by students. Where these two types of teaching differ are the objective teaching conditions as well as the atmosphere which is created.

It should be noted that the teaching process in the classroom creates an atmosphere that has a great impact on all the participants in it. This climate or, in other words, the *classroom atmosphere*, includes the interaction between the teacher and students, the student's behaviour and conduct during lessons, his/her attitude towards school subjects and their contents, and the general *social atmosphere* which is created within a class and among students. In this regard, some authors identify the classroom atmosphere with the term teaching atmosphere and state that the classroom-teaching atmosphere includes numerous components such as educational, psychic and physical component that are present in a class.

The classroom atmosphere is not same in all classes, which is confirmed by teachers in subject teaching who teach in more classes. Classroom teachers teach only one class and thus they can "shape" it to some extent to create a favourable and positive atmosphere.

The results obtained from the research conducted clearly show some facts:

- the classroom atmosphere greatly influences the quality and the implementation of the teaching process as well as the teacher, his/her teaching, and mood;
- the classroom atmosphere influences students, their behaviour during lessons, and fulfilment of school obligations.

In that, teaching cannot and will not be successful if there is an unfavourable classroom atmosphere because the atmosphere significantly depends on the teacher and students.

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SELF-ASSESSMENT OF TEACHER COMPETENCIES FOR IMPLEMENTING PROJECT BASED TEACHING: RESULTS OF AN EMPIRICAL STUDY

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Abstract: Since the project model of teaching was introduced as a compulsory way of working in elementary schools in Serbia, the question of teachers' competence for its implementation has been raised. The aim of this research was to examine the attitudes of primary school teachers towards the competencies for applying the project model of teaching, to confirm the psychometric characteristics of a constructed competence assessment tool, and to determine the basic factors and dimensions of competence. In addition to the descriptive method, elementary procedures of nonparametric and inferential statistics were used. The sample consisted of 619 elementary school teachers from the territory of eight municipalities in Serbia ($M = 67,40$, $SD = 10,68$). For the needs of the research, *Self-assessment of teacher competency for project model of teaching scale* (STC-PMT), a five-step Likert type scale of 18 positively formulated items in the preliminary phase of the study and 9 items of the final form of the scale were constructed. Satisfactory internal consistency indices ($\alpha = 0.907$) were obtained. In the preliminary examination of the psychometric characteristics of the scale, explanatory factor analysis, parallel analysis, and confirmatory factor analysis were used. A unique factor of competence was obtained which explains 57.53% of the total competency variance. On the basis of the obtained results it can be concluded that in order to increase teachers' competence for the implementation of the project model of teaching, theoretical education is necessary, but, above all, practical experience is crucial.

Keywords: *project model of teaching, competencies, factor analysis, teachers.*

Introduction

Social and technological changes that greatly affect the formation of the education system also make teaching competencies take an increasingly important place in the study of issues related to the teaching profession (Stanković, 2010). As educational paradigms change according to the social trends, changes in the whole or parts of educational systems are also being initiated (new goals and outcomes of different levels of education are proclaimed, new curricula are created, new modes are introduced, etc.). When it comes to the competencies that students need to acquire during formal education, it can be noticed that a new long-term goal is set in the educational space – to develop key competencies for lifelong learning among young people¹. In the literature dealing with the study of reform processes in the education of these competences, they are often referred to as 'skills for the 21st century', the main characteristic of which is the transferability of knowledge, and through the process of their development, an individual passes along the path from beginner to expert (Pellegrino & Hilton, 2012). This situation inevitably leads to the question of which competencies teachers should have in order to achieve this successfully. The expectation that during formal education, students are trained for teamwork, timely decision-making, effective time management, different planning strategies, advanced technologies, etc., causes the need for innovative, creative, critically oriented, and culturally competent professionals (Nessipbayeva 2012). In other words, the target competencies of students determine the necessary competencies of teachers (Lončarić & Pejić Papak, 2009).

Developing student competencies, and especially key competencies for lifelong learning, is in the focus of the current reform of basic education and upbringing in Serbia. In contrast to curriculum-oriented curricula and their implementation, new teaching and learning programs are being introduced, which put students first, developing their functional knowledge and process and learning outcomes. The concept of new programs implies that "the achievement of outcomes leads to the development of competencies, general and specific, subject and key ones" (*Program nastave i učenja za I razred osnovnog obrazovanja i vaspitanja*, 2018: 3). In this regard, one of the most important novelties is the introduction of project teaching as a compulsory model of work in the first cycle of elementary education and upbringing. This teaching model should serve to develop interpersonal competencies of students, it is aimed at "reaching outcomes that relate primarily to logical and critical thinking" (*Program nastave i učenja za I razred osnovnog obrazovanja i vaspitanja*, 2018: 269),

¹ Key competences for lifelong learning include: communication in the mother tongue, communication in foreign languages, mathematical competences and basic competencies in natural sciences and technology, digital competence, learning to learn, social and civic competence, sensitivity for initiative and entrepreneurship and cultural awareness and expression.

as well as the construction (primarily procedural) knowledge and abilities of pupils through work on research projects (Ristanović, 2019).

In view of the stated demands which are placed in front of the teachers by reformed teaching and learning programs, teaching competencies are necessarily multidimensional and involve mastering a wide range of knowledge, skills, attitudes and values (Stojanović, 2008). In order to successfully apply the project model of teaching with students for developing the competencies of adequate choice or independent formulation of the research problem, planning of research procedures and designing a research project, realization of the projected research, co-construction of knowledge, presentation of research results, critical analysis of work and results (Ristanović, 2019), teachers themselves must have those competencies. This is especially important if we considerate results of the research aimed at determining how teachers are informed about individual innovative models and how much they apply them in practice (Viloti-jević, Maričić, Starijaš, 2014). According to this study, conducted on a sample of 180 teachers from Serbia, the examined teachers stated that during initial education about project teaching they learned much less than about other innovative models and least applied it in practice. Similarly, in a survey conducted on a sample of 271 teachers from the territory of Vojvodina (Bošnjak, Branković, Gorjanac Ranitović, 2013), it turned out that the examined teachers were not sufficiently trained in the implementation of mini-projects in teaching. Also, in our research on the attitudes of students of the Faculty of Education in Jagodina on the ability to apply the project model of teaching (Stojanović, Ristanović, Živković, 2018), it was concluded that future teachers in the course of initial undergraduate] education need more adequate training for the quality application of this model.

Thus, taking all aspects into consideration, the main issue of this research is to examine self-reported attitudes toward teacher competency for teaching project model dimensions. Similar to that, the second aim of the present study was examining of the psychometric characteristics of *Self-assessment of teacher competency for project model of teaching scale* (STC-PMT) which was designed for the purpose of this research. It is expected that there is one plausible and interpretable teacher competency dimension that expresses teacher competency characteristics according to the STC-PMT and research results, respectively.

Method

Participants

The sample consisted of 619 elementary schools teachers from the territory of eight municipalities in the Republic of Serbia ($M = 67.40$, $SD = 10.68$). The sample comprised 26.20% male and 73.80% female participants. The

study group consisted of 84.30% of teachers with BA and MA degrees, 25% with 10 years of experience and below, 39.20% with 20 years of experience and above, 51.10% of urban and 48.80% of suburban schools sub-sample. Test distribution for self-reported competency (Kolmogorov–Smirnov $Z = 1.937$, $p = 0.001$, $M = 67.40$, $SD = 10.68$), and for all of the independent variables ($Z = 3.095$ – 11.503 , $p = 0.000$) are normal and uncorrupted.

Measurements

The final version of the *Self-assessment of teacher competency for project model of teaching scale* (STC-PMT) consists of 9 items. The initial set consisted of 18 items. On the basis of the obtained indicators of inter-item statistics, the factor loadings and communalities, the selection of items for the final form of the test was made. This questionnaire examines teachers' attitudes towards competence for implementing the project model in teaching. The teachers were asked to what extent they agreed with the items on a five-point scale, ranging from 1: complete disagreement, to 5: complete agreement. The questionnaire contains structured items presented in a Likert scale format (e.g. "The topic of the project is always formulated in the form of a problem issue") and teachers were required to rate the frequency of the behaviour.

Research proceeding

The questionnaire was developed based on an extensive review of the literature that provided the most important aspects to be evaluated, which were later reflected in the different items. The drafting of those items emerged from the fieldwork of different university professors who are experts in the subject matter. A first version with 18 items was drafted, which was reduced to 9 items. Theoretical background for the preliminary set of 18 items was based on content analysis of relevant references from the literature on teacher competence research. The questionnaires were completed in classrooms and before lessons in the presence of the main researcher. The main researcher informed the teachers of the research objective and instructed them on how to properly complete the questionnaire. He/she also resolved any doubts that the teachers had, and the whole process required approximately 10–15 minutes. Participation was voluntary and the participants' anonymity was preserved.

Data analysis

In order to determine and evaluate the instrument's factor structure, an exploratory factor analysis, confirmatory factor analysis and parallel analysis were carried out, respectively. The instrument's internal consistency was also analysed using Cronbach's alpha coefficient, and the descriptive statistics (av-

erages and standard deviations) and bivariate correlations of all items were obtained. The SPSS 17.0 and LISREL 8.0 statistical packages were used for the data analysis. The FACTOR 10.3 program was used to decide on the appropriate factor analysis.

Results

Construct validity in the context of rating scale design refers to assessing whether or not the scale measures the hypothesized construct it claims to measure. To test the extent to which the newly designed rating scale has meaningful structures stated in the hypothesized framework, factor analysis was employed. Factor loading was used as a criterion to select items for the scale, since items with higher loadings on a factor represent the underlying dimension.

The total number of valid responses (619 respondents for 18 items) is much higher than the 10 subjects to 1 variable ratio commonly used in most studies of factor analysis (Costello & Osborne, 2005). Kaiser–Meyer–Olkin’s (KMO) index of sampling adequacy was high (.89), as compared to the recommended value of 0.60, implies that the sample size was adequate. Bartlett’s Test of Sphericity was also significant ($p < .00$), suggesting factorability of the correlation matrix.

The factors were selected after factor analysis has been conducted and rotated using varimax rotation to identify orthogonal (independent) factors. Although it was assumed that the new scale would represent more than one dimension, factor analysis revealed one factor with Eigen values exceeding one. That one factor explained 57.53% of the total variance. The minimum value for retaining an item was .32, a value suggested as a good rule of thumb for the minimum loading of an item. Nine items have communalities above 0.4, a minimum value suggested for social sciences (Costello & Osborne 2005). All the 9 items have loaded into the various categories and showed acceptable values of communalities. Absolute values less than .10 were suppressed and omitted from the cells.

Exploratory factor analysis

After several exploratory factor analyses, certain items were eliminated due to their not reaching a minimum rotation of .40. Finally, factor analysis was carried out on one main component with direct oblimin rotation with subsample 1, the results of which were 9 items grouped into one factor: competence (7, 8, 9, 10, 11, 12, 13, 14, 17). The eigenvalues obtained were greater than 1.00 (5.178), explaining a total variation of 57.53% (Table 1).

Table 1: Component matrix

	Items	M	SD	Com.
1.	When formulating the project theme as a starting point I use the current events or students experiences	4.07	1.085	.803
2.	When formulating the project theme, I take care that students have sufficient knowledge about it	4.20	.951	.796
3.	When formulating the project theme, I take care that the students are particularly interested in it	4.02	.979	.792
4.	When working on projects, students must to a great extent use cognitive and social skills	4.06	.939	.779
5.	I define a project theme in agreement with students	3.86	1.075	.777
6.	The project theme is always formulated in the form of a problem	3.93	.938	.763
7.	During the project work, I insist that students write a project and plan their research	3.74	1.057	.753
8.	I encourage students to use multimedia to present the results of the research	3.97	1,027	.730
9.	During the project work it is sufficient that the students collect data from textbooks, books, magazines or from the Internet	3.90	1.089	.616

Extraction Method: Principal Component Analysis. 1 component extracted

Table 2: Scale Statistics

Mean	Variance	Std. Deviation	N of Items
35,74	46,270	6,802	9

Confirmatory factor analysis

The validity of the measuring model was considered using a series of fit coefficients, also called goodness of fit measures: χ^2 , χ^2/df , RMSEA, and the incremental indices (CFI, NFI and TLI). The maximum likelihood estimation method was used along with the bootstrapping procedure, since the result of Mardia's multivariate coefficient was 61.56, which indicated a lack of multivariate normality of the data. For this reason, following the example of Finney and DiStefano (2006), the robust maximum likelihood estimation method was used (Byrne, 2001). After an initial analysis, the overall results of the model indicated a moderate fit (χ^2 (59, N = 619) = 1899.01, $p = .000$; $\chi^2/\text{df} = 5.47$; CFI = .80; NFI = .77; TLI = .81; RSMR = .05; RMSEA = .08). With the goal of improving the

fit, we proceeded to carry out an analysis of the Lagrange test (LMtest), which showed that the fit was increased if the errors (9 interactions) of certain items belonging to a single factor, and whose significance level was $p < .000$, were correlated. All items belonging to the competence factor. The indices obtained were adequate: χ^2 (69, $N = 619$) = 1051.03, $p = .000$; $\chi^2/\text{df.} = 3.12$; CFI = .91; NFI = .90; TLI = .90; RSMR = .06; RMSEA = .06.

Parallel analysis

To verify this factor solution, we used a Horn (1965) parallel analysis (PA-Monte Carlo), which confirms the justification of the one-factor structure.

Table 3: Results of parallel analysis.

Root	Raw data	Means	Percentile
1.	5.177911	1.186772	1.243549
2.	.843911	1.124955	1.164819
3.	.650589	1.077585	1.111052
4.	.559430	1.036282	1.066065
5.	.486022	.996429	1.024139
6.	.375678	.958537	.985700
7.	.353634	.918672	.947138
8.	.302775	.875519	.907156
9.	.250050	.825249	.866044

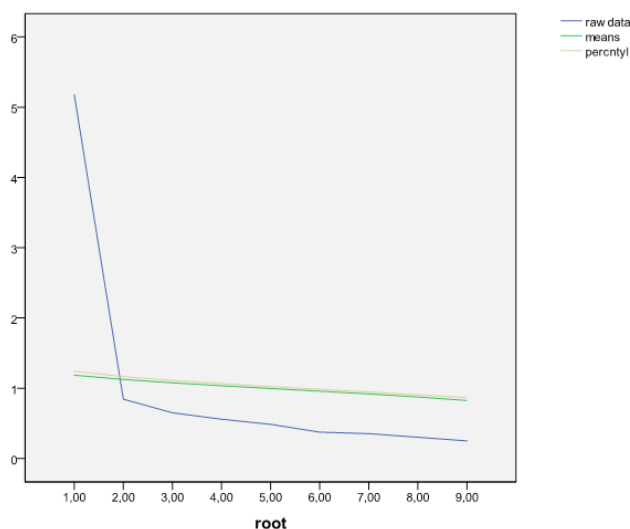


Figure 1: Root diagram

Analysis of internal consistency

Internal consistency reliability using Cronbach's alpha was conducted on the 9-item scale. Results indicated that the standardized alpha coefficient for the scale was $\alpha = 0.907$, revealing a high degree of reliability. Item-scale correlation confirmed this statistics, with all items exhibiting strong item-to-scale correlation.

Table 4: Internal consistency

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Mean	Variance	Std. Deviation	N of Items
.905	.907	35,74	46,270	6,802	9

Table 5: Inter-Item Correlation Matrix

Inter-Item Correlation Matrix									
	1	2	3	4	5	6	7	8	9
1	1,000	,685	,580	,573	,479	,542	,497	,395	,514
2	,685	1,000	,689	,625	,538	,513	,520	,384	,467
3	,580	,689	1,000	,703	,555	,426	,543	,381	,472
4	,573	,625	,703	1,000	,555	,482	,530	,451	,469
5	,479	,538	,555	,555	1,000	,587	,587	,405	,486
6	,542	,513	,426	,482	,587	1,000	,596	,432	,567
7	,497	,520	,543	,530	,587	,596	1,000	,440	,589
8	,395	,384	,381	,451	,405	,432	,440	1,000	,440
9	,514	,467	,472	,469	,486	,567	,589	,440	1,000

Regression analysis

The possibility of prediction of teachers' competence for project model of teaching on the basic set of independent variables was also examined. In the regression analysis of the items constituting the obtained factor and the total score of the initial set of items, very good results were obtained $R^2 = .866$; this factor explains 86% of the total competency variance; it gives a significant unique contribution to the prediction of total competence $\beta = .931$ and the semi-partial coefficient of correlation (SCC) indicates a unique contribution of 86% in explaining the variance of overall competence. For this, we used the technique of multiple regression analysis, enter procedure.

Nonparametric tests

The Mann Whitney U test did not reveal a significant difference of competency for set of independent variables (gender ($U = 36224,500$, $Z = -.406$, $p = .685$), work position ($U = 44061,500$, $Z = -1,091$, $p = .308$), and suburban–urban schools ($U = 44609,000$, $Z = -1.403$, $p = .161$). The Kruskal Wallis H test revealed a no statistically significant difference for six different groups of professional qualifications ($\chi^2 = 7.771$, $df = 4$, $p = 0.100$), and a statistically significant difference on second factor for seven different working age groups ($\chi^2 = 9.591$, $df = 6$, $p = 0.146$). The competence factor did not yield statistically significant differences in estimates for any category of independent variable.

Discussion

In a unique competence factor, the items that mostly deal with the activities of students and teachers characteristic for individual stages of the project model of instruction are highlighted. It is interesting to note that more than half of the items relate to the design of student projects, namely on the formulation of the research topic – 5 items, and the design of the project – 1 item, and that teachers estimate that they are highly competent when this activity is in question. The two activities are an integral part of the procedural stage of the project model of teaching, which is the primary function of acquiring and developing procedural knowledge of students (Ristanović, 2019), so recognition of their importance by teachers can be considered a significant result.

The highest factor loading was for the following entries: “When formulating the subject of the project as a starting point, I use current events or students experiences” (.803), “When formulating the project theme, I take care that students have sufficient knowledge about it” (.796) and “When formulating the project theme, I take care that the students are particularly interested in it” (.792). Focusing on previously acquired knowledge and experiences of students is one of the basic postulates of the modern teaching approach (Pešikan, 2010), and it is also stated in the instruction for realization of project teaching given in the Program of Teaching and Learning (*Program nastave i učenja za I razred osnovnog obrazovanja i vaspitanja*, 2018), so this result was somewhat expected. As for personal learners’ interest in specific topics, their appreciation by teachers has a highly motivating role in school learning (Brofi, 2015). Authors who are studying the project model of teaching note that one of the main features of the project and research topic is the importance they have for students. Significant questions are those that are interesting for students and are closely related to their lives and culture (Krajcik & Czerniak, 2008), so teachers are advised to direct the project to a greater extent to solving real problems.

The above items add to the phrase “I define a project theme in agreement with students” whose correlation is slightly lower than the previous (.777), but indicates a positive attitude of the examined teachers towards the position of students during the work on projects. Although the establishment of partnership relations and the increase in student autonomy as a way of overcoming the asymmetry between the roles of teachers and students (Havelka, 2000) appears to be one of the tasks of a modern school, research shows that students rarely have the opportunity to participate in decision making related to teaching (Lalić Vučetić, 2016). In the project model of teaching, the autonomy of the students takes a significant place, so by some authors it is taken as the main criterion for the classification of teaching projects. On this basis, they can be distinguished from the structured (teachers are assigned), semi-structured (usually, but not always, formulated by pupils) and unstructured projects (students are largely independent in the choice of topics) (Ristanović, 2019). As the student’s experience in project work increases, their autonomy and responsibility should also be increased, and the obtained result can be seen as a significant element of teachers’ competence for the application of the project model of teaching.

The last item that achieved a high correlation (.763), and within the framework of a unique competence factor related to the problem of formulating the topic of the project research, was: “The project theme is always formulated in the form of a problem”. Defining the theme of the project in the form of a leading problem (research problem) is defined by many authors as the central concept on which the project model of teaching is based (Blumenfeld et al., 1991), but teachers often do not perceive it in such a way (Marshall et al., 2010, Ristanović, 2019). Therefore, the high degree of agreement between the participants in this research with this assertion can be interpreted as a positive tendency in understanding the essence of teaching projects and a more significant focus on the development of students’ mental abilities.

A problem-defined topic implies that during the process of designing a project, conducting research, and producing and presenting reports, various mental operations (analysis, comparison, identification, classification, abstraction, etc.) are engaged and developed and thereby build knowledge (Milutinović, 2011), which implies the exchange of information between pupils (Bošnjak, Branković, Gorjanac Ranitović, 2013) and ensuring the development of collaborative, communication and organizational skills through group work (Šefer, 2005). In practice, these requirements may also be an obstacle to the application of the project model of teaching, especially for teachers who do not have a range of expectations from their students (Condliffe et al., 2017). However, in our research, the teachers asked to recognize the necessity of encouraging students’ cognitive and social skills, which showed the correlation value of .779 in the program “When working on projects, students have to a great extent use cognitive and social skills”.

In this regard, we would mention the results of an experimental study conducted with students of the fourth grade of primary school who showed that the adoption of all three categories of procedural knowledge (knowledge of specific skills and algorithms, specific techniques and methods and criteria for determining the use of the appropriate procedure) with pupils who studied by project model, but with students who studied by traditional model of teaching (Ristanović, 2019). We assume that for these reasons teachers value the importance of developing cognitive and social skills of students.

Writing of the research project is recognized by the teachers as a key characteristic that makes the project model different from other research oriented models of teaching, so in the teacher competence factor the item "During the project work, I insist that students write a project and plan their research" was entered with the correlation of .753. Here we should draw attention to the fact that elementary school students still do not have enough experience in writing research projects, and by the fourth grade they are not even in development. The priority task of teachers at that age should be to provide support to pupils in practicing project writing (Ristanović, 2019).

Although it has a slightly lower correlation (.730), the item "I encourage students to use multimedia to present the results of the research" can lead us to the conclusion that teachers take care of the application of ICT in the project model of teaching. Some other studies show that in the lecture there is a lot of insisting on the fact that the reports on the realized project are given in a combination of oral explanations and posters (Bošnjak, Branković, Gorjanac Ranić, 2013), and the poster form is often recommended as a preferred type of presentation in elementary students schools (Šefer, 2005). In the case of this research, it is necessary to take into account that in the teaching and learning program the project model of teaching is also seen as a means for developing the basics of digital literacy, which could affect the attitudes of teachers. However, when it comes to training students to make product work on projects visible, there are many different ways to do this, but without explicit reference to the use of ICT (*Program nastave i učenja za I razred osnovnog obrazovanja i vaspitanja*, 2018).

At the very end there is an item "During the project work it is sufficient that the students collect data from textbooks, books, magazines or from the Internet", with a correlation value of .616, significantly lower than the previously mentioned items. The aforementioned item also had a control role, because in the theoretical settings of the project model of teaching, it is emphasized that acquaintance with the data collected by others was significant, but it is only the beginning of student research (Polman, 1998). Due to the lack of significant teacher experience in the work with school projects, the obtained result can be qualified as a starting error. In order to implement the project activities properly, it is necessary to conduct 'first hand research' (Vulfović i dr., 2014), which

implies the independent approach to facts through field research, systematic observation, experiments, and the like. It can be assumed that the increase in the experience of teachers will increase the corpus of activities that are elements of the methodological propaedeutic.

Conclusion

Based on the results we can conclude that teacher competency for the project model of teaching identity scale meets the criterion of reliability and construct validity. The exploratory factor analysis confirmatory factor analysis and parallel analysis singled out a one-factor solution (teacher competence). The criteria for confirmatory analysis satisfy the nine-item solution, and it is applicable to the sample of respondents in the Republic of Serbia. This factor explains the competence of primary school teachers for the implementation of the project teaching model. It contains important elements of the project model, such as: designing a problematic question, formulated so that it can 'guide' students through the design process and the realization of the research, keeping their attention in a certain period of time; developing different cognitive and social skills; training students to write projects in order to plan their own activities; training students to present the obtained research results. However, some other elements have been omitted, which theory also recognizes as the essential determinants of the project model of teaching, and as a very possible reason it is a lack of the necessary practical experience. According to Marx et al. (1997), in order to fully understand the essence of a particular innovation, teachers must try it out in practice. Until then they are in a sort of 'transitional' status, which is a combination of new theoretical knowledge with existing ideas and experiences, which are influenced by various subjective factors and contextual constraints. In such situations, as one of the effective solutions, the team work of more teachers is recommended in the processes of planning, realization, and reflection.

The limitations of this research are reflected above all in the applied instrument. First, in the initial version of the scale, more than 18 items could be found, which would describe in more detail the characteristics of the project model of teaching. Secondly, the obtained results must be considered with a certain reserve, since consideration must also be given to respondents choosing socially desirable responses, which is characteristic of research in which the self-assessment of respondents is sought. Therefore, other methods such as systematic observation, case studies, different tests for insisting on learners' achievement, etc. should be applied to determine the competence of teachers for the application of the project model of teaching.

The curriculum of teaching and learning envisages that the project model of teaching is applied in both cycles of elementary education, which means that teachers and subject teachers must adapt equally to it. Since there are differences in the quantity and quality of their pedagogical-psychological and didactic-methodical education, it would also be worthwhile to investigate possible differences in the competence for applying the project model of teaching between these two groups of teachers.

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Chapter XI

ATTITUDES AND EXPERIENCES OF ELEMENTARY SCHOOL PUPILS AS GUIDELINES FOR IMPROVING PRE-SERVICE CHEMISTRY TEACHERS' COMPETENCIES FOR THE IMPLEMENTATION OF PROBLEM-BASED TEACHING¹

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Abstract: Modern society makes it a requirement of the educational systems to prepare pupils for successful adaptation to the changeable conditions of life and professional market, which also presupposes the preparedness to apply the knowledge of natural sciences, in order to overcome the numerous challenges caused by the fast scientific and technological development. Given that problem-based chemistry teaching can provide a significant contribution to this cause, five students of the study program Chemical Education at the Faculty of Chemistry University of Belgrade conducted a survey in which 93 pupils of the seventh grade and 74 pupils of the eighth grade of elementary school took part, in order to learn about the pupils' attitudes and experiences with this way of teaching. Students, also, comprised age appropriate tests, which checked the pupils' preparedness to apply the knowledge of chemistry, in order to solve problems from everyday life. In this way, it was ascertained that the pupils from both grades had previous experiences with the problem-based chemistry teaching, and that they do not have negative attitude toward it. They find such a way of learning to be more difficult, but also more interesting, possible learning difficulties could be more easily overcome with more help from the teacher, or by learning within a group of pupils, and in order to prevent them, the teacher must check whether the pupils possess enough previously acquired knowledge in order to solve the given problems. The results of the tests show that the eighth grade pupils, having more experience with the problem-based teaching, as well as the wider span of the previously acquired knowledge, were significantly more successful, in comparison to the seventh grade pupils. In this way, pre-service chemistry teachers gained insight into the greatest challenges of the problem-based teaching and the ways in which they could be overcome, thus improving their competencies for the implementation of this way of teaching.

Keywords: *problem-based teaching, pre-service teachers, chemistry.*

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Introduction

Life in the 21st century is shaped by fast scientific and technological development. New discoveries occur on daily basis and they quickly find their way into our homes and workplaces. Although these innovations have many benefits, incorporating them into our surroundings often causes great changes in our work and life routine. Given that the adaptation to such changes can be quite challenging, it is important for educational systems to ensure that pupils are enabled to apply the knowledge of natural sciences in all instances in which they have to overcome obstacles caused by the rapid scientific and technological progress (AAAS 1993; Elkind 2004; EURYDICE 2011; OECD 2009). However, the results of a questionnaire concerning the frequency of various pupils' activities during chemistry lessons, which was filled in by Serbian teachers within the framework of a TIMSS (Trends in International Mathematics and Science Study) survey, showed that pupils are rarely in a position to acquire new knowledge through solving problems from everyday life (Trivić et al. 2011). At the same time, the results of PISA (Programme for International Student Assessment) tests showed that most pupils in Serbia, having completed their elementary school education, are not able to apply the knowledge of natural sciences in solving real-life problems (Baucal, Pavlović Babić 2010, 2013). Considering these results, and the fact that the existing framework of professional competences envisaged by *The Standards of Competencies for the Teaching Profession and the Professional Development of Teachers* (ZUOV 2011) emphasizes the role of the teacher in the development of the key competences that enable pupils to live and work in the 21st century, it is clear that, within the study programs for the education of pre-service chemistry teachers, special attention must be paid to the development and advancement of their competencies for problem-based chemistry teaching.

Problem-based teaching

Within the framework of problem-based teaching, one proceeds from a problem-type situation for which there is no direct solution in the previously taught subject material. Instead, the pupils are expected to find the solution through their own efforts, by using and linking their previously acquired knowledge (Ivić et al. 2001; Mergendoller et al. 2006). In this way, the pupils first arrive at a potential solution to the given problem, that is, at a hypothesis. Following this, the pupils have to plan and carry out the procedure of its verification. Based on the results of the verification, the hypothesis is either accepted or rejected, and this represents new knowledge for the pupils. As can be seen, within problem-based teaching, new knowledge is acquired through a process of deduction (Bilgin et al., 2009; Cakir, 2008). Linking the existing and

the newly acquired knowledge is essential for the acquisition of new knowledge with understanding (Aidoo 2016; Iqbal et al. 2017). Furthermore, by adding new knowledge to the already existing knowledge base, a new, broader system of knowledge is formed, and it is only knowledge which is a part of such a system that can be responsibly implemented in practice, for the pupils are able to review the consequences of its implementation from various perspectives (Minner et al. 2010; Tarhan, Acar-Sesen 2013). Problem-based teaching promotes the pupils' motivation for learning science (Akinoglu, Tandogan 2007; Hacieminoglu 2015; Oh, Yager 2004), has a positive impact on the development of self-regulation of the learning process (Sungur, Tekkaya 2006; Tosun, Senocak 2013) and it also represents the most efficient vehicle for promoting pupils' creative thinking (Inel, Balim 2010; Linn et al. 2003).

Research methodology

The aim of research and research questions

The aim of this research was to enable pre-service chemistry teachers to gain insight into elementary school pupils' attitudes and experiences concerning problem-based chemistry teaching and to check their preparedness to implement chemistry knowledge in solving problems that can be encountered in everyday life. In this way, pre-service chemistry teachers were given the opportunity to learn about the greatest challenges of problem-based teaching and the ways in which they could be overcome, which should help them to develop and improve their competencies for the implementation of this way of teaching. In accordance with this aim, the pre-service chemistry teachers sought answers to the following research questions:

1. Do seventh and eighth grade elementary school pupils have previous experiences with problem-based chemistry teaching and what are their attitudes towards it?
2. Are seventh and eighth grade elementary school pupils enabled to implement chemistry knowledge in order to solve problems that they can encounter in everyday life?

Research sample and research organization

In order to find the answers to the research questions, five students of the study program Chemical Education at the Faculty of Chemistry University of Belgrade conducted research in which 93 seventh grade pupils and 74 eighth-grade pupils from three primary schools in Serbia took part. The research was approved by the government of each school and all pupils who participated in it were volunteers. The research, featuring both seventh and eighth grade pupils,

was conducted within the course of a single school lesson, during which the pupils filled in a questionnaire and completed a test aimed at their age group.

Research instruments

The data in this research were gathered by means of a questionnaire and two tests, compiled by pre-service chemistry teachers. The questionnaire was identical for both the seventh and eighth grade pupils, whereas the tests were adjusted to the level of knowledge of the two age groups.

The questionnaire consisted of four questions that referred to the pupils' attitudes and experiences with problem-based chemistry teaching. Of these, three questions were closed, whilst one was an open-ended question.

Both tests consisted of two problem-based tasks. The tasks in the test for the seventh grade pupils referred to the teaching topic *Solutions*, whereas the tasks in the test for the eighth grade pupils referred to the teaching topic *Salts*. The pupils had dealt with both teaching topics immediately before the research. The tasks in both tests referred to problem-type situations that the pupils could encounter in real life (e. g. preparing the solution of a hand disinfectant of a given mass percent composition during the flu season). Within the framework of each task, the pupils were expected to answer several open-type or multiple-choice items.

The full contents of all the questions in the questionnaire and tasks in the two tests will be presented within the Research results section.

Data analysis

Within the analysis of data gathered through closed question in the questionnaire, the number and percentage of the seventh- and eighth-grade pupils who opted for each answer that was offered were established. In the case of open-ended question, all the answers given by the pupils were coded and closely related coded data were classified within more narrowly defined categories. Within the analysis of data gathered through both tests, for each item within the problem-based tasks, the number and percentage of the pupils who gave a correct and incorrect answer, as well as the number and percentage of the pupils who provided no answer were established.

Results and discussion

The results of the questionnaire

Within the first question in the questionnaire the pupils were asked:

Whether, in the course of learning chemistry so far, you had an opportunity to acquire new knowledge through solving problem-based tasks?

The number (N) and percentage (%) of the pupils who chose each of the two proposed answers (Yes/No) are presented in Table 1.

Table 1: Distribution of the pupils' answers to question 1

Question	Grade 7				Grade 8			
	N(Yes)	%(Yes)	N(No)	%(No)	N(Yes)	%(Yes)	N(No)	%(No)
1	58	62.37	35	37.63	48	64.86	26	35.14

As can be seen in Table 1, more than 60% of the pupils in both grades have had an opportunity to acquire new knowledge through solving problem-based tasks.

The second question in the questionnaire was:

Do you agree with the claim that learning within the framework of problem-based teaching is harder, but also more interesting than learning within the framework of classical teacher's lecturing?

The number (N) and percentage (%) of the pupils who chose each of the three proposed answers (a-I completely agree; b-I partially agree; c-I disagree) are presented in Table 2.

Table 2: Distribution of the pupils' answers to question 2

Question	Grade 7						Grade 8					
	N(a)	%(a)	N(b)	%(b)	N(c)	%(c)	N(a)	%(a)	N(b)	%(b)	N(c)	%(c)
2	61	65.59	4	4.30	28	30.11	50	67.57	7	9.46	17	22.97

As can be seen in Table 2, more than 65% of the pupils in both grades completely agreed with the given claim.

Within the third question in the questionnaire, the pupils were asked to provide the following recommendation:

Please recommend to your chemistry teacher at least one way in which he/she could facilitate your learning, within the framework of problem-based teaching.

The key recommendations provided by the pupils were as follows:

- *problem-based tasks should be solved through group work;*
- *the teacher should not give too many problem-based tasks at once, since the pupils find it easier to acquire new knowledge gradually;*
- *the problem-based tasks should be interesting;*
- *it is of key importance for the teacher to check and review with the pupils all the previously acquired knowledge required for solving the given problem-based task.*

Within the fourth question in the questionnaire the pupils were asked:

Do you retain longer the knowledge acquired through classical teacher's lecturing, or knowledge acquired through solving problem-based tasks?

The number (N) and percentage (%) of the pupils who chose each of the proposed answers (a – I longer retain knowledge acquired through classical teacher's lecturing; b – I longer retain knowledge acquired through solving problem-based tasks) are presented in Table 3.

Table 3: Distribution of the pupils' answers to question 4

Question	Grade 7				Grade 8			
	N(a)	%(a)	N(b)	%(b)	N(a)	%(a)	N(b)	%(b)
4	34	36.56	59	63.44	33	44.60	41	55.40

As can be seen in Table 3, more than 55% of pupils in both grades believe that they longer retain knowledge acquired through solving problem-based tasks.

Discussion of the results of the questionnaire

The results of the questionnaire show that both the seventh- and eighth-grade pupils who participated in this research had previous experience with

problem-based chemistry teaching, and that they do not have negative attitude toward it. They find such an approach to be more interesting, knowledge acquired within it to be longer retained, and point out that learning could be further facilitated through group work and gradual introduction of problem-based tasks, the solving of which should be preceded with checking and revising of all the previously acquired knowledge that is necessary in order to find the required solutions.

The test results of the seventh-grade pupils

The concept of the first problem-based task that the seventh-grade pupils solved within the test was as follows:

Into a glass containing 100 cm³ of water Marija, while constantly stirring, gradually began to add white powdery substance X. Initially, no precipitate was formed, but as Marija continued adding substance X, at one point the precipitate began to form, and with the further addition of the substance, its quantity increased.

Based on this concept, the pupils were expected to answer items 1a), 1b) and 1c). Distribution of the pupils' answers to these items is presented in Table 4.

Table 4: Distribution of the seventh grade pupils' answers to items 1a), 1b) and 1c)

Item	N (correct answer)	% (correct answer)	N (wrong answer)	% (wrong answer)	N (did not answer)	% (did not answer)
1a)	53	56.99	4	4.30	36	38.71
1b)	40	43.01	18	19.36	35	37.63
1c)	16	17.20	6	6.46	71	76.34

Within item 1a), the pupils were expected to provide the definitions of unsaturated, saturated and supersaturated solutions, which represent key previously acquired knowledge required for solving this task. As can be seen from Table 4, less than 60% of the pupils provided the correct definitions.

Within item 1b), the pupils were expected to determine what the solution above the precipitate of substance X was like, in terms of saturation. As can be seen from Table 4, less than 45% of the pupils correctly stated that the solution above the precipitate of substance X was saturated.

Within item 1c) it was stated that, after a certain period of time following the appearance of the precipitate, Marija stopped adding substance X. The pupils were required to suggest a method that would enable her to reduce the

amount of the precipitate in the glass, without physically removing any of it. As can be seen from Table 4, more than 75% of the pupils did not attempt to answer this item, whereas less than 20% of them managed to answer it correctly, suggesting that the content of the glass should be heated. Given that this is a situation that they can often encounter in everyday life, it is worrying that such a small percentage of the pupils managed to answer this item correctly.

The concept of the second problem-based task that the seventh-grade pupils solved within the test was as follows:

During a flu epidemic, Andrija bought a hand disinfectant in a pharmacy. Handing him the disinfectant, the pharmacist explained: "You have here 100 grams of a 5% disinfectant solution. To disinfect your hands, use a 2% solution, which you are to prepare using the 5% solution you bought."

Based on this concept, the pupils were expected to answer items 2a), 2b) and 2c). The distribution of the pupils' answers to these items is presented in Table 5.

Table 5: Distribution of the seventh grade pupils' answers to items 2a), 2b and 2c)

Item	N (correct answer)	% (correct answer)	N (wrong answer)	% (wrong answer)	N (did not answer)	% (did not answer)
2a)	37	39.79	2	2.15	54	58.06
2b)	21	22.58	2	2.15	70	75.27
2c)	8	8.60	1	1.07	84	90.33

Within item 2a), the pupils were expected to provide a definition of the mass percent composition of a solution, which is the key previously acquired knowledge required for solving this task. As can be seen from Table 5, only 40% of the pupils successfully provided the required definition.

Within item 2b), the pupils were expected to answer what should be done in order to turn a 5% solution of a substance into a 2% solution, that is, whether a certain amount of water should be added to, or removed from it. As can be seen in Table 5, only 25% of the pupils attempted to answer this item, and those who did were relatively successful at it.

Within item 2c), the pupils were expected to recommend to Andrija the exact procedure for the preparation of the 2% solution of the hand disinfectant, starting from its 5% solution. As can be seen in Table 5, less than 10% of the pupils managed to give a correct answer to this item. Such a result in-

indicates that most of the pupils are still not enabled to prepare a solution of a given mass percent composition, which is a cause for concern, considering that this is a requirement which they may encounter relatively frequently in everyday life.

The test results of the eighth-grade pupils

The concept of the first problem-based task that the eighth-grade pupils solved within the test was as follows:

In a glass in front of you there is transparent lime water (a water solution of calcium hydroxide). When, using a plastic tube, you blow the air that you exhale into lime water, a white precipitate starts to form in the glass.

Based on this concept, the pupils were expected to answer items 1a), 1b) and 1c). Distribution of the pupils' answers to these items is shown in Table 6.

Table 6: Distribution of the eight grade pupils' answers to items 1a), 1b) and 1c)

Item	N (correct answer)	% (correct answer)	N (wrong answer)	% (wrong answer)	N (did not answer)	% (did not answer)
1a)	58	78.38	0	0.00	16	21.62
1b)	56	75.68	2	2.70	16	21.62
1c)	44	59.46	0	0.00	30	40.54

Within item 1a), the pupils were expected to answer which substance present in exhaled air, reacted with calcium hydroxide. As can be seen in Table 6, almost 80% of the pupils stated correctly that it was carbon dioxide.

Within item 1b), the pupils were expected to state which substance formed the white precipitate. As can be seen from Table 6, the percentage of the pupils who gave the correct answer to this item is similar to the percentage of the pupils who gave the correct answer to the preceding item, which indicates that more than 75% of the eighth-grade pupils correctly understood the reaction of calcium carbonate synthesis.

Within item 1c), in view of the fact that the substance that formed white precipitate also forms layers of lime scale on kitchen dishes, the pupils were expected to conclude whether water is an efficient means of lime scale removal. As can be seen in Table 6, almost 60% of the eighth-grade pupils correctly stated that water cannot be used to remove lime scale.

The concept of the second problem-based task that the eight-grade pupils solved within the test was as follows:

One drop of a water solution of substance A is transferred onto a piece of blue litmus paper. A red circle appears on the blue litmus paper. Following this, a drop of a water solution of substance B is transferred onto the red circle. The circle turns blue.

The pupils were then presented with two rows of substances, the ones in Row 1 representing the potential substance A, whereas those in Row 2 represented the potential substance B.

Row 1: K_2SO_4 , KOH, H_2O , H_2SO_4

Row 2: $MgCl_2$, $Mg(OH)_2$, H_2O , HCl

Based on this concept, the pupils were expected to answer three items. The distribution of the pupils' answers to items 2a) and 2b) is shown in Table 7.

Table 7: Distribution of the eight grade pupils' answers to items 2a) and 2b)

Item	N (correct answer)	% (correct answer)	N (wrong answer)	% (wrong answer)	N (did not answer)	% (did not answer)
2a)	57	77.03	0	0.00	17	22.97
2b)	52	70.27	7	9.46	15	20.27

Within item 2a), the pupils were expected to state under which conditions red litmus paper changes colour to blue. As can be seen from Table 7, around 77% of the pupils correctly stated that red litmus paper changes colour to blue under alkaline conditions.

Within item 2b), the pupils were expected to state whether, in the presence of a water solution of $MgCl_2$, the litmus paper could change colour. As can be seen in Table 7, around 70% of the pupils correctly stated that, in the presence of this substance, no change in the colour of litmus paper would occur.

Finally, the distribution of the pupils' answers to item 2c), requiring of them to state which substances from Rows 1 and 2 represent substance A and substance B respectively, is shown in Tables 8 and 9. In the case of substance A the correct answer was H_2SO_4 , whereas in the case of substance B the correct answer was $Mg(OH)_2$.

Table 8: Distribution of the eight grade pupils' answers concerning the choice of substance A

	N(K ₂ SO ₄)	%(K ₂ SO ₄)	N(KOH)	%(KOH)	N(H ₂ O)	%(H ₂ O)	N(H ₂ SO ₄)	%(H ₂ SO ₄)
1	3	4.06	0	0.00	0	0.00	71	95.94

Table 9: Distribution of the eight grade pupils' answers concerning the choice of substance B

	N(MgCl ₂)	%(MgCl ₂)	N(Mg(OH) ₂)	%(Mg(OH) ₂)	N(H ₂ O)	%(H ₂ O)	N(HCl)	%(HCl)
2	0	0.00	72	97.30	0	0.00	2	2.70

As can be seen from Tables 8 and 9, the overwhelming majority of the pupils correctly chose substances A and B. The high percentage of correct answers given by the eighth-grade pupils to all the items within the second task indicates that they have been adequately enabled to assess the acidity/alkalinity of substances that they encounter, which is of great importance for them in everyday life.

Discussion of the test results

The test results show that the eighth-grade pupils are better equipped to apply chemistry knowledge in various problem-type situations that they may encounter in everyday life, compared to the seventh-grade pupils. One of the reasons for this lies in the fact that the eighth-grade pupils have better mastered the knowledge required for solving the given tasks. Namely, although the pupils in both grades solved tasks related to teaching topics that they had dealt with immediately prior to doing the tests, the eighth-grade pupils, through dealing with previously taught teaching topics, both in the eighth and seventh grade, had already acquired certain knowledge about salts (e. g., they learned about acids and bases, the formation of the ionic bond and certain characteristics of ionic compounds). Consequently, it was easier for them to add the new knowledge about salts, such as reactions, solubility and acidity/alkalinity, to this already existing base of knowledge. On the other hand, the seventh-grade pupils, who had just begun learning chemistry, did not possess any significant previously acquired knowledge related to the teaching topic *Solutions*. This particularly refers to the teaching unit *The mass percent composition of solutions*, where in order to master the definition of this term, the mathematics knowledge (percentage calculus and proportions) which was new to the students, was also required. That is why it is, perhaps, not unexpected that less than 10% of the seventh-grade pupils were able to devise a procedure for preparing a

solution of a particular mass percent composition. The better results of the eighth-grade pupils can probably, also, be linked to their greater experience with solving problem-based tasks in chemistry, as well as other subjects, which certainly facilitated devising the procedure for finding the correct solutions.

Conclusion

The results of this research indicate that:

- The seventh and eighth-grade elementary school pupils had previous experiences with problem-based chemistry teaching and they do not hold a negative attitude toward it;
- The seventh and eighth-grade elementary school pupils find learning through solving problem-based tasks to be harder, but also more interesting in comparison to learning through classical teacher's lecturing;
- The seventh and eighth-grade elementary school pupils find that knowledge acquired through problem-based teaching is retained longer, in comparison to knowledge acquired through classical teacher's lecturing;
- The seventh and eighth-grade elementary school pupils believe that in order to facilitate the acquisition of new knowledge through solving problem-based tasks the new knowledge should be acquired gradually, preferably through group work, and before commencing the solving of a given problem-based task, all the previously acquired knowledge that will be required to find the solution should be checked and revised.
- The eighth grade pupils are better equipped for the implementation of chemistry knowledge in solving problems from everyday life, in comparison to the seventh grade pupils, which can be attributed to the broader scope of previously acquired chemistry knowledge, more time to consolidate and verify that knowledge, and greater experience with solving problem-based tasks.

The results of this research represent significant guidelines for the development and advancement of the competences of pre-service chemistry teachers, when it comes to problem-based teaching. In view of the fact that they gained insight into the greatest challenges of problem-based teaching, and pupils' recommendations on how to overcome them, the pre-service chemistry teachers will be able to implement problem-based teaching in the most effective way, and thus successfully prepare their pupils for the scientific and technological challenges of life in the 21st century.

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Chapter XII

TEACHING COMPETENCIES OF PRE-SERVICE PRIMARY SCHOOL TEACHERS TO USE AN INTEGRATED APPROACH IN TEACHING SCIENCE, ART, AND MATHEMATICS¹

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Abstract: STEAM (Science, Technology, Engineering, Arts and Mathematics) as a form of integration of different disciplines is recognized as a field that teaches twenty-first century skills since it incorporates many hands-on activities focused on solving problems, development of creativity, innovative and critical thinking, encouragement of social competences through cooperation and sharing results. Teacher education programs predict that preservice primary teachers acquire knowledge of separate scientific disciplines and develop pedagogical skills of subject specific didactics during their studies. On the other hand, integration of different subject contents takes up only a small part, if any, of the curriculum. The purpose of this study is to examine the self-reported teaching competences of final year preservice primary teachers for using an integrated approach in their future work. By using questionnaire technique, qualitative data was collected from 55 pre-service primary teachers. The results showed that although student teachers have a positive attitude towards an integrated approach, they do not possess optimal level of teaching competences to teach it. The results indicate that existing teacher education programs need to be improved and modernized in order to prepare the pre-service primary teachers of the twenty-first century.

Keywords: *STEAM education, integrated approach, pre-service primary teachers, and teaching competencies.*

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Introduction

In recent years, STEAM has become an increasingly present acronym in education, covering five areas: Science, Technology, Engineering, Art, and Mathematics. The starting point of this concept is based on the model of STEM education and it can be said that it represents a more comprehensive answer to the numerous educational challenges and social demands that all participants in the education system meet. The shift from STEM to STEAM education has been prompted by rapid changes in the labour market, primarily in STEM areas. According to the report of the World Economic Forum, by 2022 the global labour market will have undergone a drastic change in the division of labour between people, machines and software, and it will be aimed towards the automation of labour. Some analytic projections forecast that advances in automation will result in the wholesale replacement of the human workforce. One perspective of such development is that work currently performed by humans is being augmented by machine and algorithmic labour. The augmentation strategy takes into account activities that can be accomplished by human workers, often complemented with technology, when they are free of the need to perform routinized, repetitive tasks and therefore are able to use their distinctive human talents. Technological change and progress will make obsolete many of the current job profiles, but will cause the dynamic rise of wholly new ones as well. This in fact means that the children who are now being educated can expect future occupations that are only emerging or do yet not exist. A series of technological and economic trends (ubiquitous high-speed mobile internet, artificial intelligence, widespread adoption of large data analytics and cloud technology) are transforming the sphere of social activities in such a way that new jobs that appear no longer demand expertise and competencies in only one area. It is obvious that many of the new problems we face can be solved successfully if the limitations of narrow specialties are overcome. Along with proficiency in new technologies, skills such as creativity, originality and initiative, critical and analytical thinking, innovation, as well as active learning and learning strategies will have great prominence as twenty-first century skills. The case of a rise in the occurrence of new occupations involving knowledge from STEM and/or other fields is already evident. At the same time, the results of the PISA testing conducted in Serbia in 2012 indicate that the efficiency of the education system is low in the development of competencies that are important for the personal and professional development of the individual, but also for the functionality of society as a community (PISA 2012). Although PISA testing refers to the competencies of students who have support in compulsory curricula and which are content related to the teaching of individual subjects, the literacy that this test assesses is understood as an interdisciplinary and functional category. Literacy refers to knowledge that is considered as educational capital necessary for

continuing education and for successful learning in personal and professional roles, while competence refers to the ability to functionally apply appropriate knowledge. In accordance with the results of PISA testing, regardless of distribution of achievements by level, the general impression is that students do not acquire enough competence from the STEM area to respond to the future needs of society and for full participation in social life flows. Since PISA testing was not repeated in 2015, and judging by the relatively slight improvement in the 2012 levels compared to the 2009 tests, the assumption is that the performance indicators of the education system would not be significantly different.

These analyses and forecasts require urgent changes in education, which (optionally) need to be improved. In response to such challenges, STEAM proposes a dynamic way of functioning and development of education, strengthening of teacher competencies, and creativity as an important component of learning and new pedagogical procedures in practice, about creativity and innovation in the learning process – as well as the identification of concepts, methods and best practices which demonstrate and reflect innovative learning.

The application of the STEAM model as a concrete action for the development of education is in accordance with the vision of the future state of the education system in Serbia. According to the vision of the Education Development Strategy in Serbia until 2020, primary education and upbringing should represent a good and stimulating environment in which students master quality knowledge and skills, basic competencies and basic literacy in all areas studied in elementary school, so that this knowledge can interconnect and be applied in further education and in everyday life (Strategy for Education Development in Serbia 2020). In other words, it seeks to develop the education system “driven to the future”. Considering the fact that the development of schools in the STEM framework in Serbia is in the pilot phase (see http://eu.cpn.rs/active_projects/stem-school-label), the application of innovative ways and methods of teaching certainly represents a good basis for introducing this model, as well as the STEAM model efficiently into the formal frameworks of the education system. Consequently, in the education of teachers as key participants in the education system, special emphasis should be placed on strengthening their K1 competencies for subject teaching and teaching methods, and K2 competencies for teaching and learning.

Theoretical Background

The traditional concept of reproductive teaching, which is still dominant in educational practice, is in its outcomes, and is contrary to the aforementioned social and technological changes. This concept of teaching actually aims to reproduce social values and knowledge that can be defined as stable and

lasting. The static model of traditional reproductive teaching implies passive transmission of information and knowledge from teachers to learners in the final form, and the subjects of such learning are the rules of behaviour and the standards of the school system (Dewey 1966). In such cases, a student does not adopt concepts but words; he uses memory more than his thoughts and is incapable of applying the acquired knowledge with understanding (Vigotski 1977). However, due to the constant multiplication of knowledge, education can no longer be reduced to reproductive learning, i.e. to simple communication of existing knowledge. In a knowledge-based society that is rapidly changing, in which knowledge quickly becomes outdated, in the context of education the path to knowledge has become as important as the acquired knowledge itself.

The quality of the teaching process can also be reflected in the quality of acquired knowledge. "The smaller quantum of knowledge acquired in a more complex and more accurate way, with the participation of more fully thought-out, experiential, creative and seeking activities of pupils, although it took longer to acquire knowledge in a finished form, has a higher value than a larger amount of knowledge acquired by memory in ready form" (Vilotijevic, Vilotijevic 2014: 26). Contemporary teaching approaches based on a constructivist and cooperative model of teaching organization can be described by the metaphor "learning as the construction of knowledge" (Vilotijević, Vilotijević 2014: 23). In particular, educationalists advocate student-oriented education, which sets the student's independent work and his/her optimal thinking activity at the centre of learning activities, which develops motivation for learning, divergent thinking, encouraging the initiative and cooperation of those who are learning and those who teach and thereby contribute to raising the quality of their achievements (Kopas Vukašinović 2014; Mirkov 2013; Šefer 2012). According to the constructivist approach to the learning process "enriched by the socio-cultural theory, it follows that knowledge is active, that it is not a passive copy, an 'impression' of reality, that it is subjective, relative and in development, that it is the process (and not the result) in which social factors have an important formative role" (Pešikan 2010). The role of teachers is to create situations in which pupils actively participate, and act as incentives for their mental activity. In order to achieve the outcome of pupils' education according to the expected development of the twenty-first century skills, it is necessary to apply those teaching methods, models and approaches that go beyond the limitations of teaching based on teaching by lecturing, memorizing and reproduction. It is necessary to connect knowledge of different epistemological nature and to connect academic knowledge with immediate life experiences. Integrated teaching (IT) is certainly such a teaching model that can be applied very effectively in classroom teaching.

Although some pedagogues and educational theorists were advocating forms of curriculum integration in the early XX c. (Vars 1991) it has been

updated more recently. A move towards the integrated curriculum is supported by the premise that predominantly accepted discipline-based education system is not effective as it should be (Loepp 1999). Most of the problems and situations encountered today by students are very complex, they rarely have one exact solution, and require knowledge of multiple disciplines, while the contents that we study through subject-oriented teaching are based on disciplines, and thus the acquired knowledge has poor application in real situations. The very notion of “integration” incorporates the idea of unity between forms of knowledge and the respective disciplines (Pring 1973). The most common are three forms of teaching:

- Full integration – it is accomplished by merging different teaching contents into a single course;
- partial integration – it is achieved by choosing from the teaching material and by jointly processing those related contents;
- block integration – it is accomplished by the construction of freely programmed autonomous blocks (sets) or the separation of parts of a common program that is integrated in the process (Vilotijević, Vilotijević 2016: 262–263).

Integrated teaching relies on the principle of conscious activity and in fact it integrates teaching activity and the learning process. Teaching based on this approach can be very stimulating and an incentive for students. Some studies (Austin, Hirstein, Walen 1997; Kain 1993) have shown that the application of integrated teaching can result in greater intellectual curiosity, increased motivation for education, enhanced problem solving skills, and higher achievement in college, and that the attendance rate of the students is larger when they are engaged in an integrated curriculum (Meier, Dossey 1999).

In practice, the greatest trend of integrative teaching at the level of primary education is noticeable, and this is no surprise. Since the teacher predominantly organizes and performs most of the teaching contents, class teaching in the first cycle of education provides significantly greater opportunities for the realization of integrated classes in relation to subject teaching. The classroom is personally unified and content integration is easier to accomplish. A teacher can freely compile content entities in a way that integration has an interspecific, inter-subject or inter-systemic character. A teacher can easily integrate content within one subject into one problematic whole or combine related elements from several different subjects, or connect the contents of the natural and humanistic areas and thus create a qualitatively new whole by establishing a strong logical whole within.

This is the highest quality level of knowledge, which implies a high degree of development of connections and relationships between knowledge and the ability to apply knowledge in other areas, as well as solving practical problems in everyday life (Antonijević 2006). This is creative knowledge because the

student develops his own knowledge based on acquired knowledge (Potkonjak, Šimleša 1989), that is, he is able to apply knowledge, to transform knowledge and values critically and creatively and to evaluate the results (Blum 1981). In addition to the structure of the knowledge system, the much greater importance of applying an integrated approach in teaching is that, based on the method of acquiring knowledge, the student develops metacognitive knowledge, and reveals and learns the cognitive processes needed to acquire new knowledge. The application of integrated teaching in the educational process, at all levels of education, results in the creation of a rich, incentive situation for learning and the development of students' autonomy. In the context of integrated curricula, opportunities for more effective assessment of the achievements and abilities of students from several subjects are evident (Drake, Reid 2018; Cekić Jovanović, Đorđević, Miletić 2018).

In order to integrate teaching content with the best possible results, the teacher needs to know the curriculum well and to be able to apply different teaching forms, teaching methods and teaching resources. This implies his/her professional competencies, first of all in relation to the teaching field, subject and methodology of teaching, as well as in relation to students' learning and teaching, communication, cooperation and support to their development (*Standards of Professional Competences of Teachers and their Professional Development*, 2011). Great professional, didactic-methodical competence of teachers is required, with detailed knowledge of the materials of all subjects studied within the classroom as well as general culture, and knowledge of a large number of scientific fields (Mihajlović, Golubović Ilić 2018).

Since the faculties for education of teachers have an important and essential role in the development of professional competences of student teachers, we wanted to investigate their attitudes towards the use of an integrated approach as well as their self-reported teaching competencies.

Research methodology

The main aim of the paper was to examine the current state among final year pre-service teachers concerning the use of an integrated approach in teaching. The aim was accomplished through the following *research tasks*:

1. to examine the self-reported teaching competence of pre-service primary teachers for using an integrated approach
2. to investigate the attitudes of pre-service primary teachers towards the use of an integrated approach in teaching.

Instrument

The instrument used was a questionnaire that consisted of two parts. In the first part background information about student teachers was collected (course grades in methodologies of teaching Mathematics, Science, and Art). The second part of the instrument contained a pre-service primary teachers Self-Reported Integrated Approach Teaching Competence Scale (SRIATC) and eight Likert-type items. SRIATC is a five-point Likert-type scale that contained 11 items. It was developed by the authors and it aimed to determine the pre-service primary teachers' self-reported level of teaching competence for using an integrated approach in teaching. The items were constructed in accordance with some previous studies and literature. The Cronbach' alpha reliability coefficient of the SRIATC indicated good reliability ($\alpha=0.800$). The maximum score is 55 and the lowest possible score was 11.

Table 1: SRIATC Items.

Items code	Items
S1	I have gained basic knowledge and skills for applying an integrative approach in my future work with students.
S2	I am able to connect meaningfully (functionally) the contents of different subjects.
S3	I am able to translate real-life situations into the language of science, art, and mathematics and use them in teaching.
S4	The concept of an integrative teaching approach is clear to me.
S5	I am able to design and plan teaching activities that integrate the contents of different subjects.
S6	I am able to carry out teaching activities in which the contents of different subjects are linked.
S7	I am able to design and plan research activities that integrate the contents of different subjects.
S8	I am able to carry out research activities that integrate the contents of different subjects.
S9	I am able to evaluate the work of students during teaching activities that integrate the contents of different subjects.
S10	I am able to motivate students and to get them interested to work during teaching activities that integrate the contents of different subjects.
S11	I'm afraid I will not know how to apply an integrative approach to teaching.

The eight Likert-type items aimed to investigate the participants' attitude towards the certain aspects of using integrated approach in teaching. Participants were requested to rate their level of agreement with certain statements (1 = complete disagreement, 5 = complete agreement). All items are presented in Table 2.

Table 2: Attitudes towards the certain aspects of using integrated approach in teaching.

Items code	Items
A1	I would like to apply integrative approach in my work.
A2	The application of the integrative approach in teaching is interesting to me
A3	I think it is important that the teacher integrates the content of various subjects whenever possible.
A4	I think that the teacher is sufficiently burdened with the teaching of individual subjects and that he should not be burdened with the requirements for integration.
A5	An integrative approach gives the teacher a better insight into the quality of students' knowledge.
A6	It is impossible to assess the knowledge of individual subjects of students during teaching activities that integrate the contents of different subjects.
A7	The application of an integrative approach demands [from] the teacher extra time and effort to prepare the lesson.
A8	Applying an integrative approach requires teachers to continually improve in their profession.

Sample

The research was conducted during the school year 2018/2019 and included a sample of 55 final year pre-service primary teachers. All student teachers were categorized according to their achievement in methodology courses in four groups: low, moderate, high, and a group of students who did not pass the exam. The structure of the sample with regard to the achievement for three courses Methodology of teaching Mathematics (MTM), Methodology of teaching Science (MTS), and Methodology of teaching Arts (MTA) is given in Table 3.

Table 3: Structure of the sample in regard to the MTM, MTS and MTA grades.

		Not passed exam	Low	Moderate	High
MTM	F	20	16	11	8
	%	36.4	29.1	20.0	14.5
MTS	F	8	22	12	13
	%	14.5	40.0	21.8	23.6
MTA	F	2	10	11	32
	%	3.6	18.2	20.0	58.2

Results and Discussion

1. The first task of the research was to examine the self-reported teaching competence of preservice teachers for using an integrated approach in teaching.

Table 4: The level of the self-reported teaching competence for using an integrated approach

Item Codes	N	Mean (M)	Standard Deviation (SD)
S1	55	3.71	0.90
S2	55	3.87	0.75
S3	55	3.78	1.05
S4	55	3.84	0.84
S5	55	3.85	0.87
S6	55	3.93	1.00
S7	55	3.53	0.86
S8	55	3.45	0.96
S9	55	3.54	0.92
S10	55	3.94	0.78
S11*	55	3.25	1.11
SRTC	55	3.70	0.53

* Item S11 was reversed

Individual's score on the SRIATC scale (SRTC) represents the mean-item summated score of the individuals' responses. A mean-item summated score is calculated when an individual's summated score is divided by the number of items constituting the scale which creates a mean-item score for each individual that falls within the range of the values for the response continuum options (Warmbrod 2014).

For Likert average scale [1.00–1.80) indicates very low level of self-reported teaching competence, [1.80–2.60) indicates a low level, [2.60–3.40) indicates a moderate level, [3.40–4.20) indicates a high level, [4.20–5.00] indicates a very high level.

Results show that, in general, the preservice primary teachers self-reported teaching competence for using integrated approach in teaching indicates high level ($M = 3.70$, $SD = 0.53$).

As for the individual items, the values of statistical parameters (mean, standard deviation) indicate that pre-service primary teachers reported a high

level of teaching competence for all items except for the item S11 (*I am afraid that I will not be able to use integrated approach in teaching*), where they reported a moderate level (Table 4).

In order to examine if there is statistically significant difference in levels of self-reported teaching competence between different groups with regard to achievement in MTM, MTS and MTA courses, the Kruskal-Wallis test was performed. We determined that there was no statistically significant difference in self-reported teaching competence among different achievement groups of student teachers in any of the courses (MTM: $\chi^2 = 7.480$, $p = 0.058$; MTS: $\chi^2 = 6.268$, $p = 0.099$; MTA: $\chi^2 = 0.949$, $p = 0.914$).

The second research task was to investigate the attitudes of preservice primary teachers towards some aspects of using an integrated approach in teaching.

Table 5: Distribution of preservice primary teachers replies regarding some aspects of using of integrated approach in teaching

Item Codes	N		I totally disagree	I partially disagree	I am not certain	I partially agree	I totally agree	Mean (M)	Standard Deviation (SD)	Coefficient of Variation (C _v)
A1	55	f	0	2	8	25	20	4,15	0,80	19,38
		%	0	3.6	14.5	45.5	36.4			
A2	55	f	0	1	11	17	26	4,24	0,84	19,78
		%	0	1.8	20.0	30.9	47.3			
A3	55	f	0	2	4	24	24	4,30	0,77	17,88
		%	0	3.6	7.3	43.6	43.6			
A4	55	f	15	19	6	10	5	2,47	1,32	53,27
		%	27.3	34.5	10.9	18.2	9.1			
A5	55	f	0	3	9	23	20	4,09	0,87	21,18
		%	0	5.5	16.4	41.8	36.4			
A6	55	f	10	19	16	5	5	2,56	1,17	45,52
		%	18.2	34.5	29.1	9.1	9.1			
A7	55	f	1	2	6	29	17	4,07	0,86	21,06
		%	1.8	3.6	10.9	52.7	30.9			
A8	55	f	2	3	6	13	31	4,24	1,09	25,68
		%	3.6	5.5	10.9	23.6	56.4			

Results show that the attitudes of student teachers with regard to the use of an integrated approach in teaching are positive (Table 5). Values of coefficient of variation indicate that student teachers' attitudes concerning items A1, A2, A3, A5, A7 and A8 are relatively the same and homogeneous. The majority of students believed that it is important to integrate contents of different subjects whenever it is possible in teaching (87.2%), and that an integrated approach gives teachers better insight into the quality of pupils' knowledge (78.2%). Also, 81.9% of the students plan to use integrated approach in their future work and 78.2% find an integrated approach interesting. Pre-service teachers are aware that the use of an integrated approach requires teachers to invest additional effort and time in preparing for teaching (83.6%), and that they need to work constantly on their professional development (78%). Still, we cannot neglect those students who were not sure or who disagreed with those statements.

As for the items A4 and A6, the values of coefficient of variation indicate that students' attitudes are heterogeneous. Although the majority of students (61.8%) disagreed with the statement that teachers should not be additionally overloaded with the request to use an integrated approach, there is a significant percentage of those who agreed with this (27.3%) and those who were not sure (10.9%). A little bit more than half of the students (52.7%) disagreed with the statement that it is not possible to evaluate students' knowledge of separate subjects during integrated activities. Almost one third of the students were not sure (29.1%) and 18.2% agreed. All these indicate that special attention should be dedicated to the introduction of an integrated approach in teaching.

We determined that there was no significant difference among different achievement groups in MTS and MTA courses. However, we found that there was significant difference concerning the achievement in the MTM course for Item A2 ($\chi^2 = 14.167$, $p = 0.003$). Students with moderate grades found the use of an integrated approach more interesting than students who still did not pass the exam ($p = 0.003$). This is not surprising if we take into account the fact that students who did not pass the exam in MTM, MTS or MTA courses cannot teach during practice.

Conclusion

Raising the quality of teachers' work is one of the prerequisites for improving the quality of education. Apart from appropriate qualifications, it is necessary to train teachers for the modern concept of teaching. Therefore, the main aim of our research was to examine the current state among final year pre-service teachers concerning the use of an integrated approach in teaching. We investigated attitudes of student teachers towards the use of an integrated

approach as well as their self-reported teaching competencies. The results obtained by this research show that student teachers self-reported teaching competence for using an integrated approach in teaching, in general, indicates a high level. Nevertheless, although these future primary teachers believe that they have the necessary theoretical content and pedagogical knowledge and skills about the integrated approach, they report a moderate level of ability to use the integrated approach in practice. Results show that the attitudes of student teachers with regard to the use of an integrated approach in teaching are positive and relatively the same and homogeneous. However, there is no total agreement among student teachers about the evaluation of pupils' knowledge during integrated activities. Also, student teachers have different attitudes about the statement that teachers should not be additionally overloaded with the request to use the integrated approach. There were no differences among different achievement groups in MTS and MTA courses, but we found a statistically significant difference concerning the achievement in the MTM course for one of the items. Students with moderate grades in MTM course find the use of integrated approach more interesting than students who still did not pass the exam.

In order to make the application of the integrated teaching model in practice efficient, it is necessary to train students, future teachers, in the system of university education for its implementation. There is no current, appropriate course in the curricula of teaching and pedagogical faculties in Serbia that prepares students for the methodical application of the content of several teaching subjects in teaching in an integrated manner, that is, there is no course that approaches teaching as a process. The results of this study indicate the need for adequate training of future teachers in initial education, since the implementation of an integrated approach has become a mandatory part of the curriculum and teaching in primary schools.

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DEVELOPING ENTREPRENEURIAL COMPETENCIES IN STUDENTS AND TEACHERS BY STIMULATING CREATIVITY

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Abstract: Fostering entrepreneurship as a competence leads to divergence from the traditional education paradigms and the teachers and students focus on new, contemporary educational concepts. Teaching staff and students are seen as motivated, decisive, innovative and creative individuals, willing to contribute to a higher quality of everyday life whereby entrepreneurial skills are fostered and integrated in all segments of life. Creativity is regarded as one of the crucial skills related to the entrepreneurial spirit. A creative attitude towards life entails an individual (or society) who is conscious, nonconformist, independent and capable of critical thinking, ready to take risks in order to implement their ideas. Therefore, the aim of this paper is primarily to indicate the importance of stimulating creativity in children from an early age, and then to consider ways of fostering and cultivating creativity in both students and teachers as a prerequisite for the development of entrepreneurial skills. For the purpose of this paper, we analyzed the Arts Education and Serbian Language Curricula for primary schools and considered the compatibility of the teaching topics with the development of entrepreneurial competencies. Practical implications of integrating entrepreneurial skills into Arts Education and Serbian Language Curricula will be represented in the paper.

Keywords: *creativity, entrepreneurship in education, entrepreneurial competencies, arts education, Serbian language.*

Introduction

While entrepreneurship is usually regarded as belonging to the sphere of economy, fostering entrepreneurial competencies is one of the imperatives in

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conceiving modern education. Entrepreneurship education was pioneered by Shigeru Fijii, who started teaching in this field in 1938 at Kobe University in Japan (Alberti, Sciascia, Poli 2004: 5). After more than half a century, entrepreneurship in education started gaining traction in Europe, and soon become an indispensable component. Therefore, one of the goals of modern education is to foster entrepreneurial competencies in students and teachers. Entrepreneurship education require active, learner-centered pedagogies and learning activities that use practical learning opportunities from the real world (European Commission 2011: 3). In the publication *Key competences for lifelong learning. European reference Framework*, the European Commission highlights eight key competences, one of them being Sense of initiative and entrepreneurship (European Commission 2007: 5). There are a number of themes that are applied throughout the Reference Framework: “critical thinking, creativity, initiative, problem-solving, risk assessment, decision-taking, and constructive management of feelings play a role in all eight key competences” (European Commission 2007: 5).

Introducing entrepreneurship in education and fostering entrepreneurial competencies has become a noteworthy tendency in Serbia as well, where strategic commitments have recently been officially legislated (Zakon o osnovnom obrazovanju i vaspitanju, 2017; Zakon o srednjem obrazovanju i vaspitanju, 2017). Yet despite the efforts to implement fostering entrepreneurial competencies in education, both through theoretical systematizations and regulations, the conditions to achieve that are still lacking (Ševkušić, Stojanović, Simijonović 2018: 158). For that reason, a group of researchers (Bjekić, Stojković, Kuzmanović, Rendulić 2017: 28) advocate designing a new school subject, called Teaching Entrepreneurship, and integrating it into curricula for training and education of teachers of various profiles.

Entrepreneurial competences and creativity – mutually conditional

Creativity is reckoned to be a basic capacity for survival as well as for future success; also, creativity is possible in all areas of human activity and everyone has creative capacities (NACCCE 1999). While entrepreneurship has long been recognized as an act of creativity, entrepreneurial creativity can be viewed as a process occurring in an individual who has been shaped, in part, by a range of social factors (Amabile 1996).

In a 2007 essay, Matthews analyzes the relation between creativity and entrepreneurship, provocatively asking in the title whether they are “potential partners or distant cousins”. He concluded that both of them demonstrate the importance of attitudes, mindset, motivation, and that the fields of entrepreneurship and creativity are dynamic and changing. As Filllis and Rentschler (2010) pointed out entrepreneurship matches the flexible, exploratory paths

of creative discovery, and entrepreneurial factors overlap with many creative characteristics such as curiosity, self-confidence, high energy levels, risk taking and vision; entrepreneurial creativity impacts throughout the lifetime of the entrepreneur, and not just during the span of the business.

In Table 1, we present a comparison of entrepreneurial competencies and characteristics of a creative personality.

Table 1: Comparison of entrepreneurial competencies and characteristics of a creative personality

Characteristics of a creative person	Entrepreneurial competences
Critical thinking, humor, imagination, openness to experience, intuition, idea finding, innovation, creative problem solving, tolerance for ambiguity independence, insight (Montgomery, Bull & Balloche, 1993).	Specific, measurable, achievable, realistic and time bound goals, innovative, creative and hard/ smart working, risk management, high achievement motivation, moderate risk taking – not high nor low (Kumar, Yogi & Singh, 2015).
Imagination, originality and inventiveness, ability to adjust and improvise, curiosity, ability to change the point of view, exploring alternatives and having a fluency of thought (Jackson, 2006).	Entrepreneurial passion (Cardon, Wincent, Singh & Drnovsek, 2009). Team spirit, vision, determination, impressive and persuasive appearance (Bjekić et al., 2017).
Independence, self-confidence, nonconformism, preference for spontaneous creative behavior, receptiveness to new experiences (Kvaščev, 1981).	Creativity, innovation, showing initiative and risk-taking, ability to plan and manage projects in order to achieve objectives (EC 2011).
Willingness to take risks, curiosity and searching, independence in thinking, persistence and perseverance, courage, independence in judgment, self-starting and initiative, a sense of humor, asking questions about puzzling things, and attempting difficult things are among the most facilitative characteristics (Torrance, according to Shaughnessy, 1998).	Independence, self-confidence, leadership (Gavrilović & Pravdić, 2017). Utilisation of creative business networks, high motivational levels, intuition, strong communication skills, ability to visualization problems, flexibility and the ability to break down physical and perceptual barriers (Fillis & Rentschler, 2010).

Role of the teacher in fostering creativity and entrepreneurial approach

Creativity in schoolchildren is to a large degree influenced by the creativity of the teacher; a highly creative teacher can exert considerable influence in developing creativity in children, and vice versa (Škorc 2012).

However, even though there are many exceptionally creative teachers, most schools retain too many features which are fundamentally uncreative (Lucas 2001). Meanwhile, teachers agree on what constitutes a school environment conducive to fostering creativity in children: it is an environment which is stimulative and supportive, open, flexible, student-oriented, supporting personality development, different modes of thinking, learning, and skills necessary for creative thinking (Andiliou, Murphy 2010, according to: Maksić, Pavlović 2014); it encourages inventiveness, welcomes refining and pursuing one's interests, and cultivates the inner drive towards exploring (Sternberg, Grigorenko, Singer 2004).

Ken Robinson, as one of the global scholarly authorities in the field of creativity and education, holds that educational systems in the majority of countries worldwide are not invested in developing creative skills and abilities, for various reasons: disproportionate focus given to certain skills based on predefined rules (critical reading, writing, mathematics, etc.); arts subjects typically ranked at the bottom of the school subject hierarchy; reliance on various types of assessment, such as standardized tests, which are not always suitable for creative subjects (Robinson 2009). Similarly, Beghetto and Plucker argue that the creative process, both for students and teachers, is inhibited when the educational system is dominated by transmission of content which is uniformly prescribed by education authorities, through curricula and national school programs (Beghetto, Plucker 2006). A study by Aljughaiman and Mowrer-Reynolds (after Gralewski 2016) found that every other teacher feels incapable of inspiring creative behavior in the classroom; the authors believe that one reason might be that the teachers are insufficiently trained in creativity theories. Maksić (2006) proposes a whole set of methods and techniques for stimulating creativity in schools, ranging from modifying the curricula, individual subject contents, and specific teaching methods, to ultimately reimagining and redefining the entire cognitive process.

Classroom experience shows why these tasks are particularly demanding. Inspiring and cultivating creative behavior require a more active input from both teacher and students, and a more qualified class preparation. This eventually renders the classroom work considerably more complex.

Method

The research methodology follows the qualitative approach, with the body of data consisting of texts based on a subjective approach. Since our goal is to research stimulating creativity of students and teachers as a basis for developing entrepreneurial competencies, we analyzed several sources. One is the official government document titled Rulebook on standards of teacher competencies and professional development, issued in 2011 (hereafter, the Competencies Rulebook); the second is the curriculum description of the Arts Education subject as detailed in the national school program by the Ministry of Education. We next analyzed teacher competencies prescribed in the Rulebook by following the competencies in four selected areas, as well as lecture units from the class preparation guide in the Arts Education textbook published by Klett, by following the goals, the assignments, and the outcomes. On the tables below we list some examples of teacher competencies and lecture units for the Arts Education subject (1st and 2nd grade) and for the Serbian Language subject (4th grade) which aim at fostering entrepreneurial competencies by means of stimulating creativity.

We asked three research questions:

1. To what extent does the Competencies Rulebook include developing creative skills and entrepreneurial competencies?
2. Which specific contents from the first- and second-grade Arts Education lecture units contribute to developing creative skills and entrepreneurial competencies?
3. Which specific contents from the fourth-grade Serbian Language lecture units (grammar, literature, composition) contribute to developing creative skills and entrepreneurial competencies?

We set out with three working hypotheses:

- The current Competencies Rulebook affords only a limited space to developing creativity and fostering entrepreneurship;
- The most opportunities for developing creativity and fostering entrepreneurship is offered by the Arts Education subject.
- The least opportunities for developing creativity and fostering entrepreneurship is offered by the grammar instruction.

Results and discussion

In Table 2 we present the analysis of the Competencies Rulebook, according to the first task.

Table 2: Outline of compatibility between the Competencies Rulebook and the possibilities for developing creative skills and entrepreneurial competences in teachers

	Skills	Planning	Implementation	Evaluation	Self-improvement
Competencies in the field, subject, and teaching methodology (of total 26 sub-items)	/	Planning and structuring the workload, ensuring that the content is accessible (approachable, comprehensible, interesting).	/	/	/
Competencies in instruction and learning (of total 21 subitems)	/	Planning stimulation of critical, analytical, and divergent thinking.	Continually stimulates the development and application of various cognitive skills (identifying problems, solving problems, making decisions) and forms of thinking (critical, analytical, divergent).	/	/
Competencies in supporting personality development in students (of total 21 sub-items)	/	Planning various activities to stimulate creativity and initiative in students.	/	/	/
Competencies in communication and collaboration (of total 20 subitems)	/	Designs situations and activities that enable application of communication skills.	Participates actively and constructively in the school life -Actively participates in teamwork.	/	/

In the Introduction, the Competencies Rulebook (2011: 2) emphasizes the importance of preparing students for life in modern society by developing general competencies and specific knowledge and skills. Our analysis of the Rulebook demonstrates that all areas of competencies required for teachers are dominated by content learning, instruction skills, and psychological and pedagogical competencies, at the expense of creative skills, which are extremely underrepresented. The many creative skills and entrepreneurial competencies listed in Table 1, such as creativity, taking initiative, project management, critical thinking, nonconformist, independence, consistence, courage, go virtually unrecognized as competencies that a teacher might need. In other words, the Rulebook's preference for certain competencies makes the role of the teacher just as traditional and conservative as the much-criticized traditional and passive position of the student.

In Table 3 we present 7 lecture units from the Arts Education subject course contents. Since in all Arts Education course contents the possibility for stimulating the characteristics and competences under scrutiny is invariably omnipresent, these ones in particular we chose deliberately randomly.

Table 3: Arts Education subject course contents.

LECTURE UNIT	GOAL	ASSIGNMENTS	LEARNING OUTCOMES
1st grade			
<i>DRAWING AN IMAGINED CHARACTER</i>	Independent and creative application of adopted concepts, knowledge, and skills in the creative process; expressing critical viewpoints.		Individual and team work; curiosity and promptness to inquire and discuss a theme or a problem; applying original ideas and different methods in discussing and concluding; finding and systematizing information from different sources; combining acquired knowledge and skills with other course contents and applies them visually; experimenting and exploring expressive possibilities of visual technique; exhibiting inventiveness, diverging from the existing and prescribed, pursues changes.

*HOW DARK-
NESS BE-
CAME LIGHT*

Developing strategies for finding different solutions in their own work; Communicating and spontaneously expressing their attitudes, thoughts and feelings, verbally and through visual media; Conceiving and producing creative solutions and original ideas visually; Finding unusual, paradoxical points of view on familiar phenomena.

2nd grade*ON THE
MEADOW*

Enabling students to give an interesting, visual-aesthetic dimension (developing creativity, imagination). Cultivating curiosity, insistence, perseverance; stimulating a sense of creativity and sensitivity to aesthetic phenomena; Independently structuring a visual composition of one's own choice.

Independently structuring a composition and assembling individual parts into a unity.

*MAKING
A MAGIC
WORLD (A
COMPOSITION OF HETEROGENEOUS
MATERIALS)*

Stimulating students to follow up on visual and tactile perception by developing a sense of composition.

Developing originality by recombining familiar forms to achieve new and original result; Stimulating the development of creative observation; Creating new objects by assembling the existing ones.

Assembling materials by different procedures, with different instruments and materials for visual production.

*LABEL FOR A
CONTAINER –
JUICE BOTTLE
(PACKAGING)*

Developing combinatory imagination and a sense of decoration.

Stimulating individual and collective creativity through play; Developing a combinatory reasoning and imaginative solutions.

Independently reshaping homogeneous materials, making, decorating, and packing.

<i>CONSTRUCTING THE SCENERY FOR STAGING A THEATER PLAY "THE RAVEN AND THE FOX"</i>	Learning to make the scenery from various materials and to perform a play on it.	Perceiving the ambience and reconstructing the situation of scenic space. Cultivating creativity, and imaginative and unusual visual approach; Stimulating students to express themselves visually based on their own theatrical experiences, sensations, and associations.	Experimenting with colors and materials; learning to reshape objects so as to change their meaning.
<i>UNUSUAL SHAPES (CREATING FORMS FROM RANDOM SMUDGES)</i>	Expanding imagination and a sense of decoration.	Stimulating expanding imagination and the ability to combine through play, in order to design patterns from randomly made smudges.	Experimenting with colors and materials.

Select examples in Table 3 are representative of all of the 36 lecture units of Arts Education covered in first grade. This is in line with the main educational goal of the Arts Education instruction, as defined in the National Educational Program, which is to “stimulate and foster students’ creative thinking”. Invariably, classroom work is dedicated to independent and creative application of knowledge and skills in visual production and to expressing critical thinking. The main assignments according to the National Education Program are: 1) Capacitating students to adopt visual tools and techniques suitable to their age; 2) Providing the conditions for creative perception and interpretation of chosen subjects (shapes and their qualities, relations in the field of vision, light and shadow, tactility, cartoons and comic books, noticing different environments, design, material or object reshaping by reassembling); 3) Motivating students to freely express themselves visually, appropriate to each one’s age and individual abilities, as well as to articulate imaginatively the world around them. In other words, mentioning the adjective “creative” in the context of Arts Education is indeed redundant.

The Arts Education learning outcomes – conspicuously unlike the goals – unambiguously emphasize stimulating and cultivating creative visual expression and developing a creative personality (Table 3). The correspondence between stimulating creativity and entrepreneurial competencies is exemplified by characteristics such as innovativeness, motivation, creative attitude, inventiveness, team spirit (Table 3).

Some of the key assignments defined in lesson plans for all 36 lecture units in the second grade conducted in two-hour slots are developing creativity, inquisitiveness, independently structuring a visual composition, stimulating imagination and the ability to combine. For teachers to cover a lecture unit

adequately, that is, to ensure a creative environment, they need to be familiar with and confident in practical application of all visual techniques, individually and in combination; they need to be trained in Fine Art Theory and to combine tactile, visual, and auditory stimuli (Stojanović Stošić 2016). To quote a recent diagnosis, “Truly creative learning spaces are ones in which learners and teachers are mutually engaged in diverse thinking, critiquing each other’s viewpoints and working on problems collaboratively” (ICED 2014, Smith, Nerantzi, Middleton).

Unlike Arts Education, the school subject of Serbian Language does not offer opportunities for stimulating entrepreneurial competencies and creative skills in every lecture unit. Of those that do so, we have selected few of the most representative examples, evenly from Grammar, Literature, and Composition; they are presented in Table 4.

Table 4. Serbian Language curricula

LECTURE UNIT	GOALS	ASSIGNMENTS	LEARNING OUTCOMES
Grammar instruction			
VERBS, DEFINITIONS AND BASIC MEANINGS OF PRESENT, PERFECT, FUTURE TENSE		Developing the ability to apply acquired knowledge.	
MATERIAL ADJECTIVES		Capacitating the student to absorb knowledge independently; vocabulary enrichment.	
DEFINITIONS, MEANINGS, AND TYPES OF CLAUSES		Advancing linguistic and stylistic confidence; developing a sense of regular, fluent, and efficient oral and written expression.	
NUMBERS		Developing abstract thinking.	
Literature instruction			
YOU’LL NEVER GUESS WHY TWO GOLDEN BROTHERS QUARRELED – DOBRICA ERIĆ		Learning to adequately use literary language for different oral and written purposes and in different communicational situations; developing creativity and imagination.	Explaining and evaluating events and actions of literary characters.

<i>THE FIREFLY WHEAT-DEALER AND MILLER – A POEM BY DOBRICA ERIC</i>		Cultivating verbal expression, vocabulary enrichment; learning to work in groups.	Explaining why they like or do not like the text, why is it or is not interesting, do they approve of the actions of characters.
<i>AUTUMN - A POEM BY VOJISLAV ILIC</i>		Developing abstract thinking; focusing on creative and investigative process.	
<i>A STORY ABOUT A BOY AND THE MOON - BRANKO V. RADIČEVIĆ</i>		Critical evaluation of the text.	Identifying correlations between events; interpreting literary ideas, corroborates them by citing the text.
<i>THE LITTLE PRINCE – ANTOINE DE SAINT-EXUPÉRY</i>		Stimulating students to engage in independent literary writing; arousing the interest to explore.	Reaches conclusions about the text.
<i>CINDERELLA, A FAIRYTALE FOR STAGE PERFORMANCE</i>	Stimulating students to independently express themselves linguistically, literarily, and performatively.	Developing critical thinking and the deliberative abilities.	Learning to begin and end the narration in an interesting way; learning to defend a claim or a position.
Composition instruction			
<i>THE DEAREST PAGE OF MY DIARY, DESCRIBING SUMMER ADVENTURES</i>	Narrating an event independently.		Adopting basic principles of conversation; learning to begin and end the narration in an interesting way.
<i>AUDIENCE CHOICE (A POEM BY M. ODALOVIC); A THEMED WALL PAPER PROJECT</i>	Developing verbal expression culture and enriching vocabulary, staying on topic in a conversation, expressing viewpoints.	Learning to enjoy independent aesthetic articulation. Developing imagination and creativity. Learning to enjoy group work.	Learning to explain their ideas; learning to defend a claim or a position.

<i>SPEAKING THE MOST BEAUTIFUL VERSES AND SENTENCES, ILLUSTRATING STORIES AND POEMS</i>	Interpreting and evaluating select literary works.	Experiencing, comprehending, broadly interpreting, and evaluating a literary text; Developing competitiveness.	Communicating and explaining their attitude about the text.
<i>RECOUNTING AN EVENT; EXERCISES IN ORAL EXPRESSION</i>	Mastering basic guidelines of Serbian literary language.	Developing a sense of regular, fluent, and efficient oral and written expression; capacitating students to express and verbally articulate thoughts and feelings, impressions about their own or someone else's experience, and especially to describe a sight or an experience.	
<i>LITERARY CHARACTERS ROLE PLAYING</i>	Using literary language for different oral and written purposes and in different communicational situations.	Stimulating students to independently express themselves linguistically, literarily, and performatively; cultivating verbal expression, vocabulary enrichment.	Reaches conclusions about the text.
<i>MAKING OUR OWN FAIRYTALE</i>		Developing imagination and creativity.	Adjusting the speech register depending on the communicational situation (formal/informal).

The analysis above demonstrates that grammar instruction is not rich in contents that stimulate entrepreneurial competencies and creativity. Only a few grammar lecture units direct students towards tasks that stimulate entrepreneurial spirit. These tasks are by and large improving communication skills (Table 4); after all, the main goal of grammar instruction is to enable students to successfully communicate in native language (Klepić, 2018). Other competencies include developing cognitive activities, self-reliance, self-fulfillment, independence. Teachers provide a creative environment in the classroom when they approach a lecture unit creatively. To do so, they need to ensure appropriate motivation to students; for example, a grammar unit can be exemplified by comparing a literary text or a certain speech situation with the students' individual speech experiences and local linguistic habits (Marinković 1995: 130). Exercises like these can replace rote memorization of grammar rules, the old-fashioned approach still found present in modern classrooms.

Meanwhile the course in Literature within Serbian Language is shown to be far richer in content that stimulates entrepreneurial competencies through stimulating creativity. Alongside communication skills, assignments are oriented towards stimulating creativity, imagination, team spirit, cognitive activities, efforts to create and explore, critical thinking. The expected learning outcomes are to explain, evaluate, provide rationale and support with arguments, interpret events, characters, ideas, conclude, communicate and defend one's position, narrate in an interesting way. All of these activities contribute to developing critical thinking, imagination, originality, inventiveness, inquisitiveness, ability to adapt and improvise, self-reliance, self-confidence, nonconformism, receptiveness to new experiences, willingness to take risks, independent thinking and judgment, consistence and perseverance, courage, initiative, sense of humor, motivation.

Instruction in Composition likewise abounds in contents that stimulate entrepreneurial competencies and creativity (Table 4). This is because this area of language instruction is pragmatically oriented towards cultivating fluent and appropriate verbal articulation in everyday life (Janjić, 2008: 138). The goals, assignments, and learning outcomes all revolve around creative oral and written expression; thus, all those entrepreneurial competencies stimulated in other areas of Serbian Language course are here pursued through creative speech acts.

Examples of fostering entrepreneurial competencies in the arts education and serbian language instruction

There are various activities in Arts Education and Serbian Language which can stimulate entrepreneurial competencies. Some of the many include:

- Producing a theatre show – dramatizing and visualizing a script;
- Festive bazaar – fundraising sale of students' artworks from Arts Education class;
- Visiting local, privately-owned publishing houses for first-hand experience of a small business;
- Taking part in designing student web contents, such as the class website, under the guidance of senior students;
- Taking part in organizing thematic workshops, under the guidance of teachers/senior students;
- Taking part in initiating and editing school newspapers;
- Taking part in hosting visits by invited authors and artists;
- Taking part in decorating the school's interior and exterior;
- Inviting students to planning project-based learning as a foundation for developing entrepreneurial competences through practical application of the acquired knowledge.

Conclusion

We can conclude, therefore, that creativity and entrepreneurship are associated phenomena, and that stimulating creativity from the beginning of elementary education can contribute to developing entrepreneurial competences of students and teachers.

Their close interconnectedness calls for their equal representation in teaching. Despite growing tendencies, the current Competencies Rulebook analyzed above is for the most part lacking in contents that stimulate creativity and entrepreneurial competencies in teachers. The Teachers Competencies Standards reveal a narrow view on the learning process; they are restricted to acquiring knowledge in a given area, which can come down to essentially prescribing rote memorization as the preferred learning mode. This significantly discourages the creative initiative of teachers, which is fundamental for the creative input in fostering entrepreneurial competencies.

Meanwhile, possibilities for fostering these competencies are offered in every Arts Education lecture unit. Within the Serbian Language curriculum, grammar instruction, in contrast to literature and composition instruction, offers the least possibilities for developing creativity, although a creative approach can rescue grammar instruction from dryly memorizing rules and definitions. The curricula provided by the National Program constitute a promising starting point. It is now up to the teachers to organize class activities so as to keep creativity in focus, ultimately, to activate their own entrepreneurial and creative resources to inspire them in their students.

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Chapter XIV

STUDENT TEACHERS' MUSIC COMPETENCES ACQUIRED IN INITIAL CLASS TEACHER EDUCATION

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Abstract: The paper studies student teachers' competences needed for teaching music in lower grades of primary school (ages 7–11), acquired and developed in initial [undergraduate] class teacher education at faculties of education in Serbia. An appropriate approach to teaching young learners and achieving high standards in teaching music depends on class teachers' professional competencies to organise classroom activities in music lessons and to foster the development of children's music potential.

In the system of class teacher education, music culture belongs to an area of specific knowledge and skills. In initial [college/undergraduate] class teacher education, student teachers attend a large number of general education courses and pedagogical-psychological courses, while their music competencies are developed in music courses – Vocal and Instrumental Music Course, a basic course in teaching music, and the course Methodology of Teaching Music Culture. The paper aims to study senior student teachers' beliefs about and attitudes towards their professional competencies in music. The sample consisted of student teachers attending academic year four at the Faculty of Education in Jagodina and the Faculty of Education in Uzice. The study objectives involved a quantitative analysis of student teachers' beliefs about and attitudes to acquiring music competencies in Vocal and Instrumental Music Course and in the course Methodology of Teaching Music Culture, and their beliefs about and attitudes towards practical training for teaching music culture. The results of the study show that the participants hold positive beliefs about getting appropriate training to teach music culture. The study results can serve as a basis for modernising and improving certain segments of student teacher training for teaching the school subject Music Culture.

Keywords: *Vocal and Instrumental Music Course, Methodology of Teaching Music Culture, music culture, competences, student teachers.*

Introduction

The main problem of modern higher education of pedagogical orientation is the education of a complete and versatile personality of a teacher with

innovative ways of thinking, with an open-minded perception of the world and artistic culture. In solving the problem of how to improve the quality of education, great importance is attributed to systematic training of educated, highly-qualified and competent experts. In this respect, special importance is attributed to the problem of strengthening the continuity between all components of the educational system in which the aim of education should be multilayered: in social life – to socialize an individual, in the area of general education – key competences, in the professional area – professional competence. Thus, a competent approach has become the most relevant and appreciated in the contemporary pedagogical knowledge (Белойсова [Belousova], 2012). Introduction of such approach into the domain of higher education enables improvement of the educational system and reaching a new level of quality.

Contemporary approaches and requirements for the professional education of class teachers teaching Music Culture in primary schools emphasize the problem of how to identify integrated indicators for the development of future experts in musical education at Faculties of Education. An important and necessary requirement of modern reality is the professional competence resulting from students' readiness to work as teachers. Competence can and should be considered as a criterion of the quality of teachers' pedagogical work in a pedagogical activity, communication, personal development, while competency is an individual indicator of the quality of proficiency (Барышникова [Baryshnikova], 2012).

Music education at Faculties of Education should comprise different music competencies at multiple levels (Савельева [Savelyeva], 2012: 10). The aims of the music pedagogical process are its predictable results: in the most general sense, it is necessary to prepare specialists for general education school, those who are able to perform a completely functional music pedagogical activity (Полякова [Polyakova], 2009: 241). A teacher needs to have music and methodological competencies to the extent necessary to understand logics of the music profession. Professional competence of a teacher, as information integration (a complex of various fields of knowledge), creates a potential for producing a modern, responsible and versatile teacher, who is aware of the importance musical education has for the child's intellectual, mental, moral, and aesthetic development.

The paper studies student teachers' competencies acquired and developed in initial class teacher education at Faculties of Education. An appropriate approach to teaching young learners and achieving high standards in teaching music depends on class teachers' professional competencies to organise classroom activities in music lessons and to foster the development of children's music potential.

Music competencies

The first person to provide primary school children with music education systematically and professionally is the teacher. Very young learners express themselves through music by singing, playing an instrument, and movement, while active participation in music creation and performance leads to a creative and cheerful learning environment which can encourage more active and more meaningful engagement of children in curricular, extra-curricular, and other types of music activities. A professional and creative approach to teaching music enables a teacher to build foundations for students' further music education, which is his/her main responsibility.

Teaching Music Culture to very young learners in primary schools is conducted by teachers trained at the Faculty of Education. They have the most responsible role through all stages of the teaching process. Knowing that teaching music largely depends on teachers' competence, they need to have appropriate competences and scientific and professional knowledge. Baryshnikova (2012) believes that music competence of a teacher is a unity of the main components, and at the same time it is characterized by specific competencies, getting a variety of integrative and secondary new components, contributing thereby to raising the level of professionalism of music teachers. When defining teachers' competencies, we should consider all special features of their work which is complex and comprises the necessity of continual professional development.

The Taxonomy of teachers' competencies presented in Standards for Teacher' Competence and Their Professional Development (Standardi kompetencija za profesiju nastavnika i njihovog profesionalnog obrazovanja 2011) defines competencies as a teacher's set of necessary knowledge, skills, values, and attitudes, which is defined in relation to learning aims and outcomes. From the perspective of professional education, professional competencies can be defined as the ability to perform complex working roles, functions and responsibilities based on specific professional knowledge and skills, attitudes and values according to a defined standard or expectation (Despotović 2010: 136). Kozyreva (Козырева 2008) points out that professional competence of a music teacher is a characteristic of a teacher, while his/her primary quality is the practical readiness to deliver a music and pedagogical activity professionally, based on integration of pedagogical and special abilities, acquired knowledge, developed skills and abilities.

Teaching music in primary education comprises the areas presented in the Teaching and Learning Plan in the first cycle of primary education (Plan nastave i učenja za prvi ciklus osnovnog obrazovanja i vaspitanja 2017), such as singing, playing an instrument, listening to music, and musical games. Accordingly, a primary school teacher should be trained to perform the above said activities, and to be able to sing and play a musical instrument. According

to the defined competencies for teaching music in primary schools and determined minimum music competencies of student teachers, a framework for musical education at the Faculty of Education has been created (*Knjiga predmeta – osnovne akademske studije Učitelj*, Jagodina/Užice, n.d.; [*Book of Courses – undergraduate academic studies Teacher*, Jagodina/Užice, n.d.]; BCJA; [BCUE]). Kane (2005) states that the music education curriculum has to be founded on practical music knowledge and skills which are acquired through teaching methods used in teaching music.

The main source of student teachers' musical and methodical competencies is their musical education at Faculties of Education. The acquired knowledge, skills and attitudes to music, will influence children's development and learning, as well as the way their attitude to music art is formed.

Musical education of student teachers at Faculties of Education

Teaching music at Faculties of Education is conducted with the aim of providing students with music competencies in order to ensure high standards of children's musical education from the beginning of general education. This is why it is important to identify the aspects of teaching music which have a positive influence on the development of music competences, in order to use their efficiency to achieve the best possible outcomes of student teachers' professional education.

Faculties of Education educate student teachers to teach Music Culture from academic year one in the Vocal and Instrumental Music Course, a basic course in teaching music. The aim of this course is to introduce students to the basics of music theory and skills required for successful teaching the school subject Music Culture in lower grades of primary school (BCJA: 17; BCUE: 8). Teachers' music competencies include playing a harmonic instrument which is used to accompany class singing, as well as training a student teacher to sing. In order to be able to teach singing, teachers need to be able to sing themselves, but in reality there are often teachers who are unable to reproduce vocally a children's song. Therefore, playing an instrument is important as it can support a teacher's singing. Singing training is, according to Šulentic-Begić, Begić and Škojo, "a relatively simple task, because students with at least an average amount of musical ability can be trained to sing in the appropriate way by simply teaching them songs appropriate for children, without any specific effort and special teaching methods that would be a problem for the students" (Šulentic-Begić, Begić, Škojo 2017: 206). However, we have to be aware of the fact that students come to University with different music abilities, thus teaching methods need to be adapted to the abilities of most students, which leads to the usage of various teaching methods, with outcomes varying from one generation to another.

Further music education is based on building methodical competencies in the course Methodology of Teaching Music Culture, with the aim "to enable students, from the aspect of theory, to teach Music Culture" (BCJA: 64). Student teachers should implement learning subjects according to the age-related possibilities and abilities of young learners. They should answer the questions related to convenience of certain learning subjects, i.e. what are the subjects of the learning content, and which means, methods, procedures and organized forms are used to implement them (BCUE: 48).

The ultimate goal of student teachers' education at Faculties of Education is to provide them with practical training for their professional career, when students try to understand and apply their theoretical knowledge. For student teachers, this period of education is the most important for acquiring professional competencies, as their practical training is conducted in realistic conditions and the environment where they will work one day, i.e. primary schools. During the working week, students attend classes of a certain school subject under the mentorship of a professor or teaching assistant. As for practical training for teaching Music Culture, each student should create, plan, organize and deliver independently two lessons, if possible in two different classes, in order to be able to feel and comprehend the differences in methodical approaches, communication and special requirements implied by working with students of different ages, as well as differences in curricular contents related to Music Culture. Students also attend the classes delivered by their colleagues and keep a *diary* of practical lessons where they note down basic methodical information on each class they observed, methodical particularities they noticed during classes, and give their critical opinion on the observed class.

Practical Training is a very important and necessary component of student teachers' education. The extent to which this practical method of gaining experience will have an influence on their future job and professional development depends a lot on students' motivation, interests, and personal engagement; on the other hand, the quality of such experience and to which extent it will contribute to further development of their professional skills depends on the actual process of organization and students' practical training (Grkić 2012: 209).

The main downside of students' musical education is the fact that there is a gap, one or two terms long, between the Vocal and Instrumental Music Course and the course Methodology of Teaching Music Culture, resulting in discontinuity in work and reduced efficiency in musical education. The other downside is the insufficient number of classes and academic terms for studying music courses. Such organization of music courses can influence the quality of student teachers' education. Da Vries (2011) established that the amount of time spent on music courses during studies determines whether a teacher will teach music during primary education. This problem is not related to

Faculties of Educations in Serbia only. The participants of research on music competencies conducted by Šulentić-Begić et al. (2017) in Croatia, methodology teachers from seven Faculties of Education, came to the conclusion that more classes should be dedicated to music courses, with particular emphasis on an increased number of practical classes, and reduced number of music theory classes. Considering that there are not enough classes as part of music courses at teacher education studies, music must be taught *from practice to theory*, or in other words, when there is not enough time, music must be taught from music and the appropriate teaching methods should be acquired simultaneously (Šulentić-Begić et al. 2017: 207).

The purpose of this paper was to examine student teachers' beliefs about and attitudes towards the quality of education, i.e. acquiring music competences and practical ability to teach Music Culture at primary schools, since in our country research into students' beliefs about their musical education at Faculties of Education has never been conducted. This is how we could understand in a more comprehensive way the advantages as well as disadvantages that the above-mentioned teaching method used in initial [undergraduate] education definitely contains, and perceive objectively particular segments which need to be improved or changed.

Research Methodology

Research Goals and Tasks

For the above said reasons, we conducted research at the beginning of the second term of the academic year 2018/19. The basic goal of our research was to examine the beliefs and attitudes of student teachers attending academic year four of the study programme: Teachers at the Faculty of Education in Jagodina and Faculty of Education in Uzice to acquiring professional competencies for teaching music during their studies. Besides this, the goal was to collect empirical data which used as a basis for improving the quality of the Vocal and Instrumental Music Course and the course Methodology of Teaching Music Culture and practical training to teach music, i.e. data on the ways and aspects in which, according to students' beliefs, teaching of these courses should be improved.

In compliance with the research goal, the following tasks were set:

- To examine students' beliefs about competencies acquired in the Vocal and Instrumental Course;
- To examine students' beliefs about competencies acquired in the course Methodology of Teaching Music Culture;
- To examine students' attitudes to their practical competencies to teach Music Culture;

- To examine students' beliefs about the learning content of the Vocal and Instrumental Music Course which needs to be improved;
- To examine students' beliefs about the learning content of the course Methodology of Teaching Music Culture which needs to be improved;
- To examine students' beliefs whether the number of classes of Vocal and Instrumental Music Course, the course Methodology of Teaching Music Culture and practical training need to be increased.

Research Hypothesis

The basic hypothesis is: students hold positive beliefs about and attitudes to their training to teach Music Culture, but there are a lot of details which should be dealt with and accomplished in a different and more versatile way.

The auxiliary hypotheses which were the starting point of our research are as follows:

1. we assume that more than half of students (50%) hold positive beliefs about competencies acquired in Vocal and Instrumental Music Course;
2. we assume that more than half of students (50%) hold positive beliefs about competencies acquired in the course Methodology of Teaching Music Culture;
3. we assume that more than half of students (50%) hold positive beliefs about their practical competence to teach Music Culture;
4. we assume that more than half of students (50%) believe that in Vocal and Instrumental Music Course singing should be improved;
5. we assume that more than half of students (50%) believe that the course Methodology of Teaching Music Culture should be improved in the aspects related to intensive song analysis according to musical notation;
6. we assume that more than half of students (50%) believe that the number of classes of the Vocal and Instrumental Music course, and Methodology of Teaching Music Culture and practical training course should be increased.

Research variables

As an independent research variable we defined the place where research participants study (Jagodina and Uzice).

Dependent variables represent students' beliefs about and attitudes to competences acquired at the Faculty in the area of music culture and practical competence to teach Music Culture.

Research Methods and Instruments

For the research purposes we used a descriptive-analytical method, survey, and scaling techniques. The instrument which was specially designed for the research purposes consisted of a Likert-type 5-point scale, ranking and single selection questions. It was conceived to enable the collection of empirical data necessary to improve the quality of teaching, with students answering the questions and thus expressing their beliefs about and attitudes to acquiring competencies in Vocal and Instrumental Music Course, the course Methodology of Teaching Music Culture and practical training for teaching Music Culture in primary schools. Their attitudes were classified in segments important for students' professional education in music. Students answered the questions by circling one of the answers given in the 5-point scale – strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4) and strongly agree (5). The survey was anonymous, whereby objectivity was ensured.

Statistics procedures belonging to the field of descriptive statistics which were used, are the following: frequencies, percentage, measures of average (arithmetic mean and median) and their measures of variability (standard deviation, quartiles, variation quotient). For testing the null hypothesis we used the Mann–Whitney Test and the Chi-Square Test. Survey results were statistically processed using the SPSS software package.

Research Sample

The research included 92 full-time student teachers attending academic year four of the study programme: Teacher at the Faculty of Education in Jagodina (42) and the Faculty of Education in Užice (50). This generation of students had enrolled in the Faculty in the academic year 2015/16. The research sample was planned, since the students attending year four had already completed the Vocal and Instrumental Music Course and the course Methodology of Teaching Music and attended practical training, i.e. attended or delivered practical lessons in Music Culture.

Considering the fact that teaching music at Faculties of Education was organized to provide students with the best possible and the most efficient professional training, we assumed that it was important for students to do a self-evaluation of their practical training and express their beliefs about their professional competencies. On the other hand, we wanted to compare the attitudes of student teachers from two different Faculties of Education.

Research Results

The first part of the Opinion Scale which we used in the research to analyze students' opinions is related to competencies acquired in the Vocal and Instrumental Music Course as a basic course in teaching music. We examined the influence of the above mentioned course on their understanding of how to apply the knowledge they acquired at the Faculty, on improving students' competences in the field of music theory and their practical skills (singing, playing an instrument, performance of rhythmic exercises) which they will find useful when teaching. The results are presented in Table 1.

Table 1: Student teachers' beliefs about competencies acquired in the Vocal and Instrumental Music Course

Vocal and Instrumental Music Course has helped me:	M	σ	Percentiles		
			25	<i>Md</i>	75
to become familiar with the basics of music theory	4.20	.92	4.00	4.00	5.00
to learn basic concepts in music	4.43	.77	4.00	5.00	5.00
to learn how to play an instrument with both hands	4.09	1.04	4.00	4.00	5.00
to be able to write a rhythmic exercise independently	4.13	.95	4.00	4.00	5.00
to be able to perform a rhythmic exercise independently	4.16	.89	4.00	4.00	5.00
to perform a song <i>parlato</i>	3.87	1.03	3.00	4.00	5.00
to play a children's song properly	4.24	.87	4.00	4.00	5.00
to sing a children's song properly	4.03	1.05	4.00	4.00	5.00
to analyze a children's song independently	4.05	1.01	4.00	4.00	5.00

On the basis of the students' answers presented in Table 1, we can notice that a large number of participants agree with the statement that Vocal and Instrumental Music Course helped them to acquire competencies in the basics of music theory and practical skills. Students most positive attitudes refer to the knowledge of elementary music theory, which is the foundation for further learning music, while they are less certain when it comes to performing songs *parlato*. Knowing that performing *parlato* is very demanding and complex and implies a technique of rhythmic reading of a musical notation while beating the bars, so it needs more attention. *Parlato* is developed through comparative

procedures – practising the letter notation and working on the rhythm. Clearly, students have to practise on their own as well, at home, but with the help of continual work, performing *parlato* might be improved.

On the whole, students hold positive beliefs about competencies acquired in the Vocal and Instrumental Music Course, which is shown by the median values ($Md = 4$), thus confirming our primary auxiliary hypothesis.

However, we compared beliefs of student teachers' from both Faculties about competences acquired in the Vocal and Instrumental Music Course and came to a conclusion that the null hypothesis was proved in all cases except for one – when it comes to writing a rhythmic exercise independently (Table 2).

Table 2: Mann-Whitney Test results

Vocal and Instrumental Music Course helped me:	Mann-Whitney <i>U</i>	Wilcoxon <i>W</i>	<i>Z</i>	Asymp. Sig. (2-tailed)
to be able to write a rhythmic exercises independently	730.000	2005.000	-2.681	.007

Research results show that student teachers from the Faculty of Education in Užice are less certain when it comes to writing a rhythmic exercise independently (Table 3).

Table 3: Measures of average according to the faculty in reference to the participant's place of studying

Vocal and Instrumental Music Course helped me to be able to write a rhythmic exercises independently				
Place of studying	<i>M</i>	<i>N</i>	<i>σ</i>	<i>Md</i>
Faculty of Education, Užice	3.88	50	1.02	4.00
Faculty of Education, Jagodina	4.42	42	.76	5.00
Total	4.13	92	.95	4.00

The rhythm-related problem can be connected with the previous problem (*parlato* performance of a song). If the rhythm is successfully dealt with, reading the musical notation will be spontaneous and easy to perform. Working on the rhythm has to be gradual and adapted to student's individual abilities. First, it needs to be correlated with the speech rhythm and movements, followed by practicing even pulsation, then grouping into wholes which leads to metric configuration, and then to various divisions of rhythmical units which create figures of various types. In this way, various rhythmic patterns are acquired and can be written down by students on their own.

The second part of the opinion scale was used for analyzing students' beliefs about competences acquired in the course Methodology of Teaching Music Culture, i.e. if they can make the appropriate choice of teaching methods depending on the nature of curricular content, if they can choose successfully the most efficient forms of teaching, if they know how to use the Internet in order to find pictures, information, and musical notation examples they need, what their beliefs about their ability to use and choose the appropriate literature for preparation and delivery of Music Culture classes are, and how much the course Methodology of Teaching Music influenced their interest in choosing the job of a teacher as a vocation. Collected data relating to the above mentioned segments of students' methodical training can be best perceived from Table 4.

Table 4: Students' beliefs about competencies acquired in the course Methodology of Teaching Music

The Course Methodology of Music culture:	<i>M</i>	<i>σ</i>	Percentiles		
			25	<i>Md</i>	75
is very important for our professional training	4.22	.95	4.00	4.00	5.00
helped me to choose appropriate teaching methods depending on the nature of learning content	4.18	.90	4.00	4.00	5.00
helped me to choose and combine successfully forms of teaching	4.04	.88	4.00	4.00	5.00
helped me to use and choose appropriate pedagogical and professional literature	3.91	.92	3.00	4.00	5.00
helped me to obtain information, pictures, musical notations etc. from the Internet	3.82	1.14	3.00	4.00	5.00
Increased my interest in working as a teacher	4.05	.93	4.00	4.00	5.00

As for the choice and combination of teaching methods and forms, the importance that the course Methodology of Teaching Music Culture has for the professional training and increasing interest in working as a teacher, student teachers are quite certain. Most students said that they agree, which is supported by the median value ($Md = 4$), thus proving our second auxiliary hypothesis.

However, students showed least certainty when it came to the choice of professional and pedagogical literature for lesson planning, as well as their ability to collect necessary pictures, information, and notation examples using the Internet. We assume that these types of students' answers can be explained by the lack of contemporary (music) literature, and because the literature which is in use at the moment is old and only a few copies or none can be found in our libraries. Furthermore, song collections are also old and most of them are not used in modern teaching. Notation records of children's songs used in

teaching Music Culture are very rarely found on the Internet, and students do not have such music abilities to write down by themselves the notation text of a song based on listening only, thus they are forced to ask their professors for help when preparing a music lesson.

We compared beliefs of student teachers from both Faculties about acquiring competencies in the course of Methodology of Teaching Music Culture and testing of the null hypothesis shows insignificant statistical differences.

The third part of the survey was designed with the intention to perceive students' attitudes to their training to prepare a music lesson plan in primary schools, and according to their practical training to deliver a music lesson. Because of the fact that survey participants attend or deliver practical music lessons, we wanted to find out what their attitude to their abilities to plan and prepare music lessons is. The research data we obtained is presented in Table 5.

Table 5: Student teachers' attitudes to practical training to teach Music Culture

	<i>M</i>	<i>σ</i>	Percentiles		
			25	<i>Md</i>	75
I understand how to apply the knowledge acquired at faculty	4.11	.89	4.00	4.00	5.00
I can make independently a yearly plan for teaching Music Culture	3.44	1.20	3.00	4.00	4.00
I can make independently a monthly plan for teaching Music Culture	3.53	1.08	3.00	4.00	4.00
I can successfully divide the learning content into logical units	3.94	.94	3.00	4.00	5.00
I can independently create the methodical concept of a music lesson	4.21	.97	4.00	4.00	5.00
I can successfully apply the acquired knowledge when specifying goals and tasks	4.21	.91	4.00	4.00	5.00
I can independently choose and make some teaching materials	4.26	.83	4.00	4.00	5.00
I can successfully deal with methodical procedures and methods for motivating children	4.26	.91	4.00	4.00	5.00
I can independently prepare a lesson plan for Music Culture	4.30	.94	4.00	5.00	5.00
I can independently prepare and deliver a Music Culture lesson	4.43	.84	4.00	5.00	5.00
I understand the importance of writing daily lesson plans for direct educational work	4.00	.98	4.00	4.00	5.00
my competence has been significantly improved	4.21	.99	4.00	4.00	5.00
my assessment of the practical experience gained in classes is positive	4.44	.97	4.00	5.00	5.00

Students had positive attitudes about their ability to independently create a methodical concept of a lesson, make a lesson plan, use various methodical procedures, teaching materials and deliver a music lesson. Such attitude was not a surprise to us, since students often come up with methodical concept of lessons, attend various lessons every day, or make lesson plans for their practical lectures. Median value ($Md = 4$) suggest that students' attitudes to practical training to teach Music Culture is mainly positive, thus confirming our third auxiliary hypothesis.

On the other hand, as for students' ability to make a yearly and monthly plan, and to divide the monthly plan into logical units, students are mostly hesitant. The research shows that student teachers from the Faculty of Education in Jagodina are not confident enough about lesson planning in teaching Music (Table 6.).

Table 6: Measures of average according to Faculties in reference to the participant's place of studying

	Faculty of Education, Užice				Faculty of Education, Jagodina			
	<i>M</i>	<i>N</i>	σ	<i>Md</i>	<i>M</i>	<i>N</i>	σ	<i>Md</i>
I can make independently a yearly plan for teaching Music Culture	3.98	50	1.12	4.00	2.81	42	.99	3.00
I can make independently a monthly plan for teaching Music Culture	4.00	50	1.01	4.00	2.98	42	.90	3.00
I can successfully divide the learnign content into logical units	4.12	50	1.02	4.00	3.74	42	.80	4.00

The reason for this could be the fact that students are provided with mainly theoretical knowledge of global and monthly plans. Taking into account a rather small number of classes of Methodology of Teaching Music Culture and practical training, and a lot of learning content which needs to be implemented, leads us to the conclusion that students' knowledge of how to plan teaching remains only at theoretical level, without practical training on how to make these teaching plans.

Within the research framework on students' beliefs about and attitudes towards competencies acquired during studies in the field of Music Culture, we were interested in analyzing students beliefs about the need to change the share of certain contents, i.e. which contents from Vocal and Instrumental

Music Course and the course Methodology of Teaching Music Culture should be improved, in order to improve knowledge and skills, as well as competences.

As for the need to intensify the learning content in Vocal and Instrumental Music Course, students gave priority to playing an instrument, music theory, and singing, respectively (Table 7).

Table 7: Students' beliefs about contents of Vocal and Instrumental Music Course which should be improved

	<i>M</i>	σ	<i>V</i>	Percentiles		
				25	<i>Md</i>	75
Playing an instrument	1.85	.82	44,32	1.00	2.00	3.00
Singing	2.15	.81	40,97	1.00	2.00	3.00
Music theory	2.00	.81	40,50	1.00	2.00	3.00

We assumed that majority of participants would choose singing as the learning content which should be improved. Singing is indeed a dominant music activity which was given most space in teaching Music Culture, thus presuming that the development of children's music potential depends on teachers' knowledge and skills, as well as their attitude towards singing and adopting the habit of singing. It was proven in practice that many students lack self-confidence or are afraid to sing in front of their colleagues or children, giving the excuses such as *I don't have a nice voice* or *I can't sing*. On the other hand, we were terrified by the fact that a large percentage of students enrolled in the Faculty has a voice range between a quarta and quinta (people aged 19 or 20). However, research showed different results. The majority of students believed that they needed to be more engaged in classes where they learn to play an instrument, although most of the time in Vocal and Instrumental Music Course is dedicated to this activity, by which the fourth special hypothesis has not been proved. This belief is based on the fact that a very large groups of students attend practical classes. In comparison to music schools, teaching to play an instrument at Faculties of Education is not individual and a professor does not have much time to dedicate to each student. A student is instructed how to continue on his own. On the other hand, it seems to us that being able to play an instrument well is a valid students' alternative to not being able to sing well.

Results of the research into students' beliefs about the learning content which should be improved in the course Methodology of Teaching Music Culture are presented in Table 8.

Table 8: Students' beliefs about contents in the course Methodology of Teaching Music Culture which should be improved

	<i>M</i>	σ	<i>V</i>	Percentiles		
				25	<i>Md</i>	75
song analysis based on hearing	2.73	1.19	43,58	2.00	3.00	4.00
song analysis based on musical notation	2.29	1.25	54,58	1.00	2.00	4.00
listening to music	2.60	.98	37,69	2.00	3.00	3.00
children's creative work	2.38	.99	41,59	2.00	2.00	3.00

Most students chose to analyse a song according to the musical notation. Analysis of a song according to the musical notation is one of the most difficult tasks in teaching Music Culture because successful completion of this task requires combining theoretical and practical knowledge. The fact that a successful analysis of a song according to the musical notation depends on students' music abilities, theoretical and practical literacy, this subject matter is closely connected to the Vocal and Instrumental Music Course. Our assumption matches students' beliefs, thus confirming our fifth auxiliary hypothesis.

Considering values of a standard deviation, the relation between a standard deviation and arithmetic mean which can be expressed through the variation quotient (*V*), presented in Tables 7 i 8, we come to a conclusion that participants hold heterogeneous beliefs about course contents which need to be improved. Although research results give advantage to particular contents, participants classified the contents given differently, since their needs to intensify particular learning content are different, which leads us to a conclusion that it is necessary to take different needs of students into account.

We examined students' beliefs about the need to increase the number of classes in Vocal and Instrumental Music Course, the course Methodology of Teaching Music Culture and practical training. Research results are presented in Figure 1.

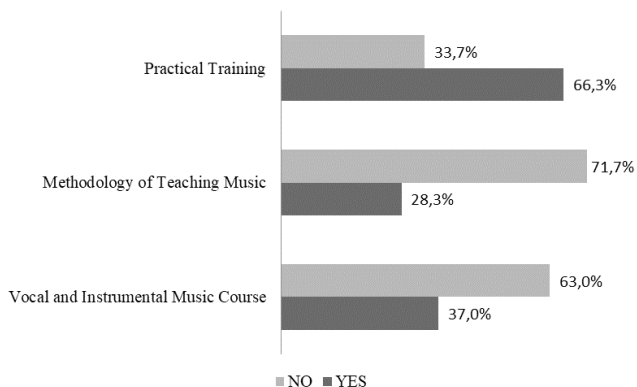


Figure 1. Students beliefs about the increased number of classes

Most students (66.3%) said that an increased number of classes should be introduced in practical training. Such students' beliefs were absolutely expected, knowing that at the most they deliver independently two lessons of Music Culture during the academic year four. All study programmes have the same goal, and that is to acquire necessary knowledge and professional competences, but the lack of practical work is an impediment to the practical application of knowledge and skills acquired at the Faculty. Thus it is necessary to pay special attention to students' practical training in the natural conditions and authentic environment which is going to be their workplace in the future – i.e. primary schools.

Conclusion

The starting point of this research is grounded in the attitude that a competent teacher can teach Music Culture in a primary school, while teachers' competence is grounded in proper education acquired during undergraduate academic studies. In order to discover the beliefs and attitudes of students at Faculties of Education in Jagodina and Uzice, to competences for teaching Music Culture which are acquired in initial [undergraduate] class teacher education, we found data which can be interpreted as positive, but nevertheless needs to be dealt with special attention.

Generally, students hold positive beliefs about competencies acquired in Vocal and Instrumental Music Course and the course Methodology of Teaching Music Culture, except for the rhythm-based areas, i.e. when they have to write independently a rhythmical exercise and do a *parlato* exercise. We need to pay more attention to these areas or use different teaching methods in order to improve skills.

Students' beliefs about all segments of practical training to teach Music Culture are mainly positive. Students feel insecure about lesson planning (preparation of yearly and monthly plans). Knowing that well prepared lesson plans increase efficiency of teaching and lead to better results, additional attention should be paid to lesson planning.

Students are satisfied with the number of classes dedicated to music courses (Vocal and Instrumental Music Course and the course Methodology of Teaching Music Culture), but emphasized the need to increase the number of practical training classes.

Research results are very encouraging, but the question is how objective or realistic students can be when evaluating their practical abilities. On the other hand, if students are satisfied with the music knowledge acquired at the Faculty, what happens when they start their professional career, and why do not they apply the acquired knowledge when teaching music?

Although we can be satisfied with the obtained research results, we have to be aware of the fact that the school subject Music Culture is neglected in primary schools, with a possible cause lying in teachers having insufficient music education. Unlike other courses at undergraduate academic studies, music courses are specific and require special skills (singing, playing an instrument, music literacy). Students of mixed abilities enroll in Faculties of Education, without any previous music experience. A modern school sets very high training standards for teachers who should possess necessary performing and teaching skills, who are able to accomplish all artistic and educational tasks professionally. In order to discover the creative potential of an individual when preparing experts of this profile, the educational process needs to be continually improved and adjusted to contemporary requirements (Нургаянова [Nurgayanova] 2010).

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CREATIVE ABILITY OF STUDENTS AS A PRECONDITION FOR THE SUCCESSFUL DEVELOPMENT OF CHILDREN'S MUSICAL CREATIVITY IN TEACHING MUSIC IN LOWER GRADES OF PRIMARY SCHOOL¹

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Abstract: The effectiveness of teaching music in lower grades of primary school depends on competences of pre-service and in-service teachers who have to teach the subject curriculum. During their formal education, student teachers at pedagogical faculties acquire elementary knowledge of the theory of music and didactic-methodical competencies, but the important factor of successful teaching has to be their musical-performing and creative abilities. In this paper we examine the musical and creative abilities of student teachers in the final year of their bachelor studies (N = 48), by analyzing their products within the course of the Methodological Practicum of Music Teaching. Descriptive method and procedure of qualitative analysis of obtained student teachers' products in the field of music creation were used. The results show that student teachers' musical and creative abilities and the quality of their creative products do not exceed the level of curriculum requirements for teaching music in the fourth grade of primary school. The aim of this paper is to determine the level of creativity aptitude of student teachers in order to improve it by adequate methodical procedures and training in order to achieve an optimal level sufficient for developing musical and creative activities in teaching young children in a regular school context. On the basis of the obtained results, it can be concluded that frequent neglect of work in the field of developing children's musical creativity in music teaching practice is connected with teachers' insecurity about their own creative abilities and competencies necessary for teaching music.

Keywords: *creative abilities, musical creativity, student teachers, music teaching.*

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Introduction

Starting from the current state of affairs in the educational practice in which the teaching of musical culture is marginalized, in this paper we wanted to shed light on the factors which brought about this situation. An especially neglected area of work in the primary school is musical creativity. Bearing in mind the fact that children of this age have a natural need for free creative expression, and that the contents of the Curriculum entail the realization of different forms of creativity, the main responsibility lies in the hands of the teacher who plans and organizes lessons. In order for the above mentioned area of work to reach its potential in the modern teaching/learning process, we looked into the possibility of developing competencies of students/future teachers for the realization of children's musical creativity. The focus of work in this area lies in encouraging, monitoring and evaluating children's creative activities. In that sense, it is necessary for the teacher to possess, apart from musical abilities, a certain level of creative ability. The aim of this paper is to determine the level of creative predispositions of students so that we could, by using adequate methodological procedures and training, improve them to the optimum level sufficient for the realization of the musical-creative activities when working with children at lower elementary grades.

The students' competences for the realization of music

In the modern understanding of the educational process, the interest of teachers and researchers is especially aimed at the *outcomes* of learning, as the "final development qualities which should be encouraged in education" (Pekeč 2011) and *competences of the teacher*, which "should provide professional standards according to which teaching is considered successful" (*Standards of competences for teaching professionals and their professional development* 2011). What can be concluded from the previously said is that in the function of ensuring the quality of the education, in order to have a greater and more productive engagement of the learners in the learning process, it is necessary to establish the standard competencies of teachers for their teaching.

It is a known fact that the notion of competence is used in all areas of human dealing pointing to somebody's acknowledged expertise, being well-trained for a job, having the qualification for a certain task (Požar 2016), but in the context of pedagogic-educational work it is defined as the inner capacity of the teacher, "an integrated set of personal characteristics, knowledge, skills and attitudes that are needed for effective performance in various teaching contexts" (Tigelaar et al. 2004).

Knowledge as the key teacher competence is most frequently defined with-in four areas: subject matter knowledge, pedagogical-psychological knowledge,

knowledge about the school and learner's social context, and didactic-methodological knowledge (Grossman 1990, according to Avramović, Stanković, Vukačić 2009: 127). In the pedagogical literature there exists a number of models² which came about in an attempt to describe and determine the corpus and the categorization of teachers' knowledge. In relation to different sources of knowledge, we can talk about personal knowledge, knowledge acquired during initial [undergraduate] education and continuous improvement within the curriculum, and knowledge gained in practice.

In the domestic pedagogical literature teachers' competencies were described and analyzed in a great number of theoretical and empirical works (Gojko, Stojanović 2015; Despotović 2010; Sučev 2008; Kundačina, Marinković 2012; Korać 2014; Stojanović, Mišić 2018; Pavkov, Živčić 2013). The consideration, discussion and establishment of teachers' competences for teaching in the music education can be reduced to a few expert papers (Sudžilovski 2015; Škiljević 2012; Svalina 2015; Vidulin, Cingula 2016; Šulentić Begić 2012; Nikolić 2018).

In the literature written in English there has been a greater interest in researching the professional competencies of teachers for the realization of music education in primary schools. The greatest number of works (Mills 1989, 1996; Wiggins, Wiggins 2008; Seddon, Biasutti 2008; Hennessy 2000; Holden, Button 2006; Ruddock, Leong 2005; Jeanneret 1997) have pointed out that future primary school teachers, as well as teachers with different work experiences of teaching, consider music education to be the most complex and the most demanding area of educational work. Considering music competencies to be a stable and unchangeable category that cannot be improved, teachers lose self-confidence for the realization of music activities (Hennessy 2000; Holden, Button 2006). They state that the undeveloped perceptive musical capabilities (observation and reproduction of the rhythm and melody), musical-performing capabilities (playing a harmonic musical instrument and knowing the technique of playing children's musical instruments), but also insufficient knowledge of the theory of music are all important reasons why music education in primary school should be done by a specialist music teacher, and not the primary school teacher (Mills 1989; Holden, Button 2006). In the conclusions of the research of musical competencies of future teachers, Mills (1996) has pointed out that future teachers had more developed musical competencies than the majority of learners at primary school. The research carried out in Croatia (Nikolić 2018) showed that the quality of the teaching process in music education, as well as the attitudes of primary school teachers about the importance of the realization of the music education, can be positively changed during initial [undergraduate] teachers' education.

² Elbaz 1983; Shulman 1986, 1987; Wilson, Shulman, Richert 1987; Freire 1985, 1996; Tardif 2002; Gauthier 1998, Pepper 2008, according to Fernandez 2014: 80.

Creative abilities as an important segment of primary school teachers' competencies

The initial [undergraduate] education of teachers in our surroundings is in the didactic-pedagogical sense more content-rich and "more concretely directed towards the preparation for teaching practice" when compared to specialist teachers that realize teaching in higher grades of elementary school (Avramović, Stanković, Vujačić 2009: 138).

On the other hand, primary school teachers lack a set of specific skills, abilities, and knowledge which are necessary for the methodological modeling of the specific contents and delicate areas of work, as is children's musical creativity. In order to encourage creative expression of the learners in primary school, it is necessary to create a creative atmosphere in the class, to motivate learners, and to develop strategies by which the creative potential of children can be further developed (Kvašček 1981: 455, according to Gajić 2004: 88). The set tasks can be realized only by a creative teacher, who apart from musical and pedagogical competencies, has sufficiently developed creative abilities. In relevant studies about the characteristics of the creative individual (Polland 1994; Segal 2001; Torrance 1965), fluency, flexibility, originality, and elaboration are distinguished as important characteristics of creative thinking (Chronopoulou, Riga 2012: 196). Torrance founded his system of developing the creative abilities of learners on the stated theoretical postulates (Torrance 1965), out of which certain components in the adapted variation can be applied in children's musical education. This included forms of musical creativity which are achieved with regard to the initial idea and initiative of a teacher: the construction of musical thought based on the offered motifs, designing musical units based on the given text, or the combination of musical ideas of teachers and learners. The efficient educational strategy is the use of association connections between different artistic areas. The common characteristics of musical and visual work enable the students a spontaneous representation of music experience by visual elements without necessary guidelines and explanations. The analogy between the spoken and music syntax makes it easier for learners to understand the logic of the melody progression based on which they will complete the incomplete melody-rhythmic unit or realize the "music dialogue" in the form of questions and answers. The integration of the contents of different artistic areas and the structural connectedness can be accomplished only if the teacher has a high level of knowledge in a single artistic area: music, visual arts and literature. Apart from the stated preconditions, the creative abilities of learners can be recognized and developed only by the primary school teacher who himself/herself has such potential and abilities. During the formal education of future teachers, not enough attention is devoted to this segment of students' competencies, which results in their insecurity, lack of motivation

and, as an ultimate result, the neglect of children's music creativity in their future pedagogical-educational work. In the latest research of the university education "learning is treated as the product of interactive play of a number of factors" and the learning outcomes greatly depend on capability, work and motivation (Mirkov 2009: 256). The research dealing with the creativity problem so far, oriented towards education in elementary and high school, but also all the theoretical postulates, the empirical data and the pedagogical implications can be applied to education at the university level.

According to Carl Rogers, important factors for the development of creativity are motivation, openness for new experiences, the ability to play spontaneously with elements and ideas, and the encouragement of free creative expressions (Gajić 2004: 88). Similar learning models can be applied to encourage inventiveness and creativity, out of which we have already mentioned analogy as a procedure of creative learning in the context of creativity. Analogy as a procedure of creative solutions to the problem was defined by Gordon, stating that during the creative process it is most important to enable learners to independently, in a creative way, connect the elements which are at first sight irrelevant (Gajić 2004: 89).

Although it is impossible and unacceptable to give grades for children's musical creativity (Burnard, White 2008; Sefton-Green 2000), teachers are expected to encourage, nourish, and develop the creativity of learners. In that context, the recognition and evaluation of creativity and creative work of learners can be perceived as important information for the manner of planning and organization of practical work in this area (Kokotsaki, Newton 2015:1). The thinking of primary school teachers about the creative activities and efforts by learners is that they are not a mechanical process, but rather aims at producing a certain measure or the innovative approach by which they would encourage or "open" the learners for the new experiences and opportunities (Kokotsaki, Newton 2015: 2). The same measures can be undertaken also in the initial [un-dergraduate] education of future teachers in the music-creative area.

Musical education of good quality, as opposed to other subjects in primary school, apart from the fact that there exist basic categories of teachers' knowledge, entails the creative integration of all types of knowledge and music-pedagogical abilities. Unfortunately, a widely spread opinion is that the teacher should know only the specific contents and that s/he does not need any other skills (Fernandez 2014:79).

"In the context of teacher education a central issue is the definition of what are the skills that a teacher needs to know to teach" (Fernandez 2014: 80). Despite the belief of many that the primary school teacher should above all be knowledgeable about subject matter, teaching practice shows that this is not the only characteristic of a good teacher (Fernandez 2014: 79). S/he is expected to have the most dominant and active role in encouraging the creativity of

learners in school. The encouragement of creativity overcomes the concepts of learners' creativity in education "which supports the creative growth" or creates "creative atmosphere in the class" (Maksić, Pavlović 2009: 283).

Creativity is a pedagogical aim and the educational strategy which sets "high demands and expectations regarding the expressing and development of learners' and teachers' creativity" (Maksić, Pavlović, Pavlović 2009: 281). In that sense, the development of the innovative and creative abilities of students, future teachers, exceeds the framework of music education and represents the pre-condition of teachers' competencies in the overall pedagogical-educational work. Acquiring and development of special skills and knowledge, as are creative pabilities, can benefit students in concrete activities in their future teacher work (Mirkov 2009). Teachers' competencies for the 21st century entail the "knowledge base" necessary for practical work, but also a number of skills which are further developed during the educational activities (Fernandez 2014).

The methodological framework of the research

Based on theoretical grounds and the research so far in the area of creativity and inventiveness, we decided on a qualitative methodology which, apart from the evaluation of the creativity products, also includes observation of the creativity process itself and observations about student activities during classes. The problem of the research are the creative abilities of students as a precondition of the successful realization of the children's musical creativity in primary school.

The aim of this paper is to establish the level of the creative predispositions of students based on their musical-creative works. The investigation into the music-creative abilities of students of the final year (N = 48) was carried out during regular classes of the subject The Methodological Practicum of Music Teaching. The respondents had basic theoretical knowledge about children's musical creativity, the factors which have an impact on creative activities and products and about the curricular demands for the primary school. From numerous forms of creative expression, simple and often present form of musical fill-in tasks was chosen – "music questions and answers". Although it is not a form of completely free creative expression, it is important as a good basis for getting acquainted with the basic principles of music syntax and music form, and for further creative advancement and development. Based on the designed musical answers we can identify: a feeling for the formal completion of the musical thought, a sense of closure, harmony feeling, a feeling for the melody movement, inventiveness in the sense of unusual solutions, music experience, pre-knowledge, and the level of creative predisposition.

In order to have the characteristics of a “question”, the initial motive, which is given to students, ended in the dominant function (examples number one and three). The second example ended with the fifth degree, but within the tonic function. Students had a task to complete the three melody examples: the first in the form of 2-bar musical motif in 2/4 time signature, second as 2-bar musical motif in 4/4 time signature and third example as a music sentence made of 4 bars. Before designing and writing down the adequate music phrase, they listened to unknown examples of the complete music thought which came about by connecting the motives in the harmonically reciprocal relationship – questions and answers.

Discussion

In order to create the complete picture about the creative abilities of students, we also used data about their personal experience of the competencies for the realization of the children’s music creativity. They expressed insecurity, lack of self-confidence and stage fright in front of a group of students while they reproduced designed music motives. This was due partly because of the inadequate demands of the curriculum by which there must be choice of creative forms for each grade in particular, without clearly defined didactic-methodological instructions for their application. The acquired methodological knowledge during studies enable them to plan and realize the contents, but cannot compensate for the lack of personal creative experiences and capabilities in the area of creativity.

After writing down and completing music units, they had the task of singing their “answers” by using solmization syllables. Most of the respondents could not sing their example, whereas other students’ melodies, when sung, did not match the example which were written down. Based on that, we can conclude that the completed melodies are not the expression of their melodic feeling and reflection of their creative ideas; rather they represent the application of knowledge from the theory of music. Creating and writing down the melody at the same time is a double task, which hinders the process of free creative expression (Požgaj 1988; Radičeva 1997; Svalina 2013) and the precedence should be given to the oral reproduction.

The works are grouped according to the following parameters:

1. The ending of the melody with the first degree and the authentic cadence
2. The answer ends in tonic, but does not follow the logic of leading a melody and does not cadence in harmony with the “school” (music) practice (Začkalik, Stambolić 2005)
3. Musical phrases which end with a half-cadence (including the ending on 2nd degree), but the music unit is in accordance with harmonic rules and rules of melodic architectonic (Radičeva 1997)

4. Musical answers in which the completeness of the music thought is achieved by plagal cadence (which often appears as an expansion after the authentic cadence)
5. Works in which motifs of the treated songs are recognized
6. Works which contain rare ideas in comparison with the other members of the sample (Guilford). This particular characteristic was not defined by us as originality, but inventiveness, because they came about due to theoretical knowledge.

Familiar motifs were taken from the songs *The Lilac Tree Has Blossomed* (*Razgranala grana jorgovana*), *A Birthday Song* (*Rodjendanska pesma*) and *A Stroll* (*Šetnja*), but with changed rhythm and meter. The melody is the basic means of expression on which they recognized and memorized the composition.

The first example, due to its simplicity, did not offer the possibility for a greater reach, and exactly with this example the answers of the students were identical or very similar. The continuation of the melody started most of by repeating the last tone in the given melody (tone *fa*), and the same in the range of melody ($c_1 - f_1$). A few examples of inversion are also not a sign of exquisite ability, but a logical ending of the musical thought of a gradual ascending melody matches the melody descending gradually.

The melody line of all three music answers is based on the contrast principle. By alternating the ascending and descending, gradual and leaping movement, students achieved in their music answers the wavy movement of the melody with the distinct continuity of the tone line. The choice of the interval contributes to the impression of the simplicity of the melodic component. The most frequently used interval movements are the second and thirds, with rare examples of the application of intervals bigger than fifth (sixth). The melody of the music answer range from the octave ambitus ($c1-c2$) which is suitable for the learners of the fourth grade and for the characteristics of the melody of the children's music expression. The simplicity of the melodic component in the music examples can be found in the pronouncedly diatonic movement of the melody. By looking into the melodic flow it was determined that students, in most cases, do not know the principles for the logical leading of the melody line. The exception is the design of the melody in the first music answer, where in a 2-bar example the students showed that they understood the principles of leading the line in the cadence process. The applied ending melody formulae were typical endings for the songs learned in music lessons in primary school. In the other two examples of music answers, a greater variety of ending the melodic flow was recognized, which can be considered to be an inventive procedure by the students.

In music answers by the students, short rhythmic values and simple combinations of eighth notes and quarter notes were used. The motor character of

the rhythmic outline, which was achieved in the music examples by the combining of shorter notes, point to the fact that students understand the significance and effect of the rhythmic-kinetic dynamics in the music flow (Despić 1993:12). The more complex rhythmic phenomena, (syncopated rhythm and dotted rhythm, triplet, and the four-part division of the beat) are not present, although the students have enough music knowledge for their application. By that the simple character of the thematic material of the music, the work of students is additionally stressed.

All the examples had the same scale and tonal foundation, C major scale. In the application of the melodic movement the gravitation towards one tone is present. That tone, in the majority of cases, is the first degree of C major, but besides melodic closure with the root tone of tonic, the students finished the music phrase with the third and the fifth of the tonic chord. The ending of the melody by the second degree is also present which is interpreted as the ending of the music phrase within the dominant function. Although the ending by the second degree is considered to be unstable, it is a frequent music practice of cadence in children's folk songs, so it is supposed that the knowledge of the mentioned music literature influenced the music-creative expression of the students. In the three particular cases (all three concerning the first task) the music answers of students were finished with the subdominant function, i.e. by the root tone and by the third of the subdominant chord. In this way the students weakened the cadence effect at the end of the phrase and left the music example "open" for further music development. Apart from the choice of the final tone (melodically), the cadence with the ending effect are in the music answers of students weakened also in the metrics/rhythmic (the final tone as eighth on the position of the unaccented beat).

The students reached the ending tone in three ways: by the gradual descending movement, which is the most frequent case, an interval leap (fourth, fifth, sixth) or resolving by a skip. The signal of the ending of the music phrase is recognized by the appearance of the cadence. In every example of the music answer there is an expressed sense for the cadence process, with better and worse music solutions. The table shows the relationship of the type of cadences which were applied in the music examples. The advantage by far was held by the authentic cadences with the usual position of the harmonic functions D-T, the ending in the form of the half cadence music answer exists also (T-D, and less frequently also T-S). As in the other music literature in general, the plagal cadence, with the position of harmonic functions of S-T, was rarely applied in the creative student's work. We suppose that such an ending of the music thought is the spontaneous intention of the students for the ending of the music thought to be represented by the tonic function, but without theoretical or sound understanding of the character and persuasiveness of the harmonic progression which is realized in the process of cadence. In a smaller number

of students' answers, the ending of music answer with tonics was present (the third or the fifth). The melody which leads to the last tone does not follow the logic of building the melody and is not cadenced with established practice (Začkalik, Stambolić 2005), so such examples can be identified as minor typical cadence progression. Although latent, it is possible to recognize the alternation of harmonic functions in the melody. The examples based on only one harmonic function (tonic – with the presence of non-chord tones) are rare, as are those where all the three major functions are recognized (tonic, subdominant and dominant). In connection with that, the most frequently present was the presence of alternating the tonic and a dominant harmonic function within one tonality.

Concerning the motivic content, it was possible to identify in the works motifs of well-known songs (*The birthday song*, *The Lilac tree has blossomed*, *The Stroll*), where the rhythm and the metric foundation had been changed. In the notational appendix which follows it is possible to recognize the motivic material of the children's song *The Birthday song*.



Example 1: The notation of the creativity work with the motive of the well-known / familiar song

We consider the individual cases of the melodic-rhythmic invention as exceptions, bearing in mind that these motives cannot be connected with the theme of a certain song. Varied and partly changed repetition are the most common procedures in works with a motif, but there are examples of the application of diatonic transpositions in the melody. We believe that their application does not reflect the conscious intention of students; rather they are the result of the accidental, spontaneous leading of the melodic-rhythmic flow. Much more frequent, however, is the presence of the new motivic material (without elaboration of the initial motifs of the music in question) which either contributes the impression of a fragmented structure without a stable cadence, or a musical conclusion which does not fit into the "standard model of the music sentence" (Ristić 2009: 51).

The structural rounding in the form of the music period was achieved in only two examples (both in the third task). With enough similarities between the beginnings of the music question and answer and enough difference between their cadence progressions students have shown that they possess feeling for the construction of the higher order structure.

In the following notational example it is possible to recognize the meeting of several criteria of successful work: the ending of the music answer by using

the authentic cadence, leading the tone line according to the principles of melody architectonics, and in the structural sense, the success of the task can be observed in the periodic structure of music thought.



Example 2: The music notation of the creative work in the form of the period

Apart from the qualitative aspect, the evaluation of the creative work can be completed by the quantitative data about the number of students and the expected level of the creative achievement.

Table 1: The Characteristics of the creative works of students

Characteristic of works	Authentic cadence (%) (D-T)	Ending on the first degree (%)	Half-cadence (%)		Plagal ending (%)	Number of students in total (%)
			on S	on D		
The first example	31 (64,5)	4 (8,3)	3 (6,2)	5 (10,4)	5 (10,4)	48 (100)
The second example	37 (77,0)	4 (8,3)	-	4 (8,3)	3 (6,2)	48 (100)
The third example	33 (68,7)	3 (6,2)	-	4 (8,3)	8 (16,6)	48 (100)
Works in total	101 (70,1)	11 (7,6)	3 (2,0)	13 (9,0)	16 (11,1)	144

Despite the simplicity of the music expression, the analyzed works have shown that the students had a developed sense for the ending of the music phrase and that they could understand how they can independently incorporate the signals of ending in their works (Table 1). In some cases, typical ending melodic-rhythmic formulae of the majority of children’s songs can be recognized, so we will not classify them as examples of inventive solutions; rather, they are a reflection of students knowing children’s music literature of the intended to area of performing music. As far as the works with the best marks are concerned, certain regularity in designing all the three works is present (the ending on the tonics, the harmonic sense and the melody lead in the correct way).

By way of a conclusion

The importance of work on the development of the music-creative capabilities of learners in primary school is pointed out in the defined outcomes for the subject Music education. It is expected that learners are capable of creating music effects such as music illustrations of the surrounding sounds, of designing suitable movements with the music, of designing rhythmic units and rhythmic accompaniments for the counting chants and simple songs, of providing adequate answers to music questions by using the rhythmic instruments of the voice, of composing simple melodies for the dedicated short text. The mentioned forms of childrens' music creativity can only be successfully achieved by a primary school teacher who, apart from didactic-methodical knowledge, possesses a certain level of musical and creative abilities necessary for the encouragement of learners' creative expression.

The research carried out on the sample of the fourth year students of the Faculty of Education, future primary school teachers, has shown that they do not have enough confidence in their own music abilities and that the possibilities of their music expressions are limited. The simplicity of the music expression in their creative works matches the simplicity of the material and of other characteristics of children's music. Based on all that, it is possible to conclude that the music-creative abilities of students and the quality of their works do not exceed the curriculum requirements for the fourth grade of primary school. These indicators are at the same time implications for further work on creating teaching situations and methodical approaches in the area of music during the initial [undergraduate] education of teachers, which should be steered towards development of the performing and creative abilities of students.

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Section IV

Teaching Competences in Language Education

DEVELOPMENT OF PLURILINGUALISM AND INTERCULTURALISM AS AN OBJECTIVE OF PROJECT- BASED L2 LEARNING IN PRIMARY SCHOOL EDUCATION

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Abstract: In 2017 the Ministry of Education of the Republic of Serbia approved Standards of Competence for Foreign Languages in Formal Primary Education, a document that provides criteria for defining students' achievement at the end of primary education. In order to guarantee a better implementation of the Standards in primary school education, the Institute for Education Quality and Evaluation created a large-scale on-line training program in 2018. In addition to specific objectives in terms of better understanding of the nature and purpose of standards of competence for foreign languages, the program aimed at raising awareness of the importance of pluri-lingual and intercultural education in primary school. The final task of the program was for the participants to design a mini-research project that would enable inclusion of students of different school languages and development of transversal competences. Here, we explore the participants' concept of plurilingual/intercultural education by analyzing their school-project proposals according to a criterion that focuses on the content and process of project proposals. The results reveal the participants' epistemologies that are relevant for the development of pluri-lingual and intercultural competence in the context of formal foreign education.

Keywords: *L2 teacher competences, standards of competence, project-based learning, plurilingualism, interculturalism.*

Introduction

The implementation of standards of competence in formal primary education of Serbia began in 2010 when standards for ten school subjects were

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introduced by decision of the Ministry of Education, Science and Technological Development of the Republic of Serbia. Standards for foreign languages were developed, however, during 2015 and 2016, so that in 2017 the Ministry of Education officially approved *Standards of Competence for Foreign Languages in Formal Primary Education* (the *Standards* in the remainder of the text). Following this act, the Institute for Education Quality and Evaluation published a *Manual for Standards of Competence for Foreign Languages in Primary Education* (Durbaba et al. 2017) and implemented large-scale on-line training in 2018. The main goal of these actions was to guarantee a better understanding of the purpose of standards of competence in education as well as their role in the foreign language learning/teaching process within the constraints of formal education. Here, we set out to explore some of the effects of the on-line training by analyzing tasks completed by participants of the training. More specifically, we examine the participants' underlining teaching philosophy that can be extracted from their project proposals, which were created with the aim of developing students' plurilingual and intercultural competence. For that purpose, we briefly describe the theoretical foundations behind the standards of competence for foreign languages and we present the design of the on-line training in reference to the concept of the standards in question. A qualitative analysis of teachers' project proposals offers an overview of themes and activities they favor in the development of plurilingualism and interculturalism and creates a platform for the analysis of their teaching epistemologies.

Theoretical Background

Standards of competence for foreign languages in primary education

It is only natural that the topic of plurilingualism and interculturalism has dominated academic and professional literature in the last decades due to the fact that they represent a precondition for successful and fulfilling participation in the multicultural society. As early as 1995 the Council of Europe published a *White Paper* in which plurilingual and intercultural competence were recognized among the goals of European education. In line with this underlying educational ideology¹, the topic of plurilingual and intercultural education represents one of the central domains of activity of the Language Policy Division of the Council of Europe. Its main goal is to provide tools that would assist education systems "to develop learners' linguistic and intercultural competences so that they can operate effectively as citizens, acquire

¹ Here, the concept of ideology does not refer to any specific philosophical, political, or other doctrine, but to "a construct of a number of complex, hierarchically organized attitudes that are created at the interaction of personal experiences and acquired cultural models" (Jovanovic 2016: 20).

knowledge, and develop open attitudes to otherness” (Language Policy Division, n.d.). Three guides have been published for this purpose (Beacco, Byram 2007; Beacco et al. 2016a; 2016b); their main objective is to support the development of language education policies for plurilingual and intercultural education by providing a mark of reference for language learning/teaching as well as for language teacher education. Since two of the documents were published only after the *Standards* had been completed, a starting point in the elaboration of *Standards* were Beacco & Byram (2007) as well as the *Common European Framework of Reference* (CEFR, Council of Europe, 2001; see also the companion volume Council of Europe, 2018), followed by the analysis of other relevant documents and reports from research studies (see Durbaba et al. 2017; Jovanovic 2018).

The final version of the *Standards* proposes that global communicative competence should be observed through the prism of three specific competences: functional-pragmatic, linguistic, and intercultural. Functional-pragmatic competence refers to communicative competence in the strict sense, so that it implies a capacity for successful realization of activities of oral and written reception, production, interaction, and mediation. Linguistic competence, in turn, is related to the functional knowledge of linguistic system (e.g., phonological, orthographic, lexical, and morphosyntactic aspects) that is always understood in the function of communication. Finally, intercultural competence addresses students’ capacity to explore, interpret, and understand their own culture as well as the cultures of the foreign language(s) they are learning, so that they may participate in the multicultural and multilingual society in a successful and fulfilling way. Naturally, the expected outcomes in the three competences are adapted to the total number of learning/teaching hours of the foreign language(s) in primary education as proposed by the official curriculum.

The role of project-based learning/teaching in plurilingual and intercultural education

Streaming from the constructivist paradigm in education, contemporary theories of foreign language learning/teaching propose that knowledge creation occurs through an active engagement in meaningful and purposeful activities. Different theories in language education feed on this idea and develop it in different albeit complementary directions that emphasize the importance of meaningful communication in language learning (see Jovanovic 2016). In line with this, in task-based and project-based learning² learners complete specific

² It is argued here that task and project-based approach rely on the same set of didactic principles as exposed in the section; the main difference between the task and the project is their complexity, that is, projects generally involve a set of sub-tasks and are usually completed over a larger period of time.

tasks that require a realistic context for language use. The purpose is not to teach communication but “to engage learners in communication, the assumption being that by [so] doing learners develop communicative competence” (Ellis 2003: 333). The crucial aspect of the task is, thus, learning by doing in a vast variety of different activities that are easily linked to real-world concerns. As such, they engage the student on different levels by providing space for both cognitive and affective participation. Stoller (2002: 110) enumerates a series of characteristics intrinsic to the task: focus on content rather than on specific linguistic structure or category; student-centeredness; the importance of collaborative over competitive components; an authentic integration of communicative skills and processes; motivational potential, and the presence of the end product. Stoller emphasizes that the task involves both product and process orientation since its value “lies not just in the final product but in the process of working toward the end point” (2002: 110); hence its potential for stimulating, challenging, and empowering students because, through a more or less successful realization of the task, they receive authentic feedback on the quality of their activity. This is also crucial for the development of autonomy since, by being engaged in reflection and (self-)evaluation in different stages of the task, students develop a better understanding of their own learning process and strengthen their metacognitive capacities (Beglar, Hunt 2002: 104).

Skehan (1998) proposes three dimensions for the analysis of tasks: linguistic complexity, cognitive complexity, and communicative stress, which takes into consideration the specific context in which the task is being completed (e.g., time limit, type of expected response, length of presentation or text etc.). Teachers then may adapt the difficulty of the task by tuning up its specific components, such as variety and complexity of linguistic components (lexical, morphosyntactic, etc.). Cognitive complexity in particular may be reduced when more guidance is provided in terms of description of the task, modeling and exemplification and, especially, clearly elaborated instructions that provide a scaffold for gradual execution of the task. Given the fact that the expected outcomes for foreign languages in our primary school education is at A2 level (according to the CEFR), we anticipate that the project proposals in our data would take into consideration these three factors.

Methodology

The context of the study

In line with our intention to investigate foreign language teachers' understanding of plurilingual and intercultural competence, we explore our participants' teaching epistemologies through analysis of their mini-project proposals, which represent the final task of on-line training. The elaboration of the

on-line training lasted several months and was completed by the team who participated in the creation of the *Standards*. It included two modules: 1. Standards of competence for foreign languages – the general overview; and 2. Implementation of the Standards in teaching; it was envisaged that their completion would require eight hours. The modules involved a series of activities such as presentations, descriptions and explanations with examples, mandatory and additional readings, forum discussions, tasks, tests, and a final mini-project proposal. It is precisely the final task that is the focus of our attention: the participants of the on-line training were given examples of two mini-projects and they were asked to create their own proposal that would enable involving students of different foreign languages from the school. While the participants were not given strict instructions as to the elements the mini-project should involve, it was explicitly stated that it should promote plurilingual and intercultural awareness.

The training was organized in on-line format (designed in Moodle, an on-line platform), in order to reach a wider L2 teacher population. It was completed in the period between October and December 2018 and it was directed to L2 teachers employed in primary schools of the Republic of Serbia. The on-line training was successfully completed by 3,292 participants: 2,242 teachers of English as L2, 68 teachers of Italian as L2, 265 teachers of German as L2, 307 teachers of Russian as L2, 378 teachers of French as L2, and 32 teachers of Spanish as L2. The unequal number of participating teachers of different foreign languages reflects to a large degree the presence of foreign languages in primary schools of the country.

In our analysis of the mini-project proposals we followed a qualitative approach so that we could extract the underlying teaching epistemologies of the participants. After obtaining consent for the study from the Institute for Education Quality and Evaluation, we described, analyzed, and interpreted the final tasks of 69 participants of different foreign languages. Following recommendations for a sound qualitative research (Dörnyei 2007), we did not impose a strict criterion prior to the task description; instead, we opted to extract all the elements from the data that might be relevant for the understanding of the development of plurilingual and intercultural competence in formal education. Together with the theoretical research, this strategy has provided a solid ground for the identification of crucial criteria of analysis that we have divided into two broad categories: content and process. Within the first category, we look at the proposed topic, objectives in terms of competences, as well as the choice of languages that the mini-project involved. As for the process, we analyzed the following aspects: instructions that introduce the task and guide the student through its realization, level of cognitive complexity required by the task, and flexibility of the task that opens space for its modification according to students' needs. In the remainder of this section, we synthesized the results

of our analysis and we attempted to identify main traits in the understanding of plurilingual and intercultural competence among our participants.

The topics of the mini-projects may be subsumed into three general groups: 1) mini-projects that propose to explore specific aspects of sociocultural reality, 2) mini-projects that focus on the development of plurilingual lexicon, and 3) miscellanea. Among the first group we identified 39 mini-project proposals, 23 proposals target lexical competence, and 7 proposals could not be included within either of these two categories.

Sociocultural mini-projects

Within the first group, undoubtedly the most common theme in our data is the topic of holidays ($N = 19$) that either focuses on a specific holiday such as Christmas, New Year's Eve, or Easter, or combines several and leaves space for students to choose which aspect they would like to explore. Within this general theme, students are encouraged to explore different phenomena, such as rituals, songs, food, relevant linguistic expressions (e.g., greetings, names for key concepts, etc.), festival origins and alike. Other common topics include capital cities, gastronomy, important figures of historical or contemporary times, and cultural landmarks. There is also an example of a mini-research project that explores contemporary music. A common outline of these activities implies a three-step process starting from the identification and selection of relevant information, through its organization and presentation, to a final product demonstration. In the case of sociocultural topics, students are required to complete the mini-project divided into groups that are mainly formed according to the foreign language the students learn, so that in the final stage the results of group work could be presented in a comparative way (as audio-visual presentation or mini-posters dedicated to different L2 cultures). Interestingly, in addition to the investigation of L2 cultures, only 15 mini-projects also involve an exploration of the respective phenomenon from the perspective of L1 cultures.

The main objective of these projects is the development of sociocultural competence through the identification and description of different elements of L2 cultures. In the case of the proposals that involve L1 cultures as well, there is also potential for the development of intercultural competence since a deeper understanding of one's own culture is a requisite for the development of intercultural awareness. Some participants also find a way to creatively make correlation with other school subjects such as musical education, drawing, history, IT, etc., which enables a strong correlation of the school curricula. More importantly, however, this strategy contextualizes the content, by which it becomes more realistic and relevant for the student due to the fact that this is the way real-life problems are normally approached. Some projects also require the student to take an analytical attitude when exploring a sociocultural phenomenon

in question. This is particularly evident in two proposals that involve the use of different sources such as Internet, books, magazines, but also personal and other people's experiences. In this way, the students are instructed to look for the plurality of voices and to evaluate the relevance, quality, and priority of the obtained information. Consequently, these projects would not only improve learners' communicative and sociocultural competence but would also develop their skills for research and interpretation that are at the core of intercultural competence or any sort of life-long learning, for that matter. In fact, two project-proposals specifically state descriptors for intercultural competence from the *Standards*, which is in line with the main goal of this final task of the on-line training. The fact that there are only two such examples is indicative of the need to explicitly include specific requirements of this sort in the task description if it is to be expected that they should be addressed.

On the other hand, insufficiently developed projects risk maintaining and even promoting stereotypes and ethnocentrism. This is true in the case of the proposals that end in a simple contrastive description of the observed phenomena without an attempt to interpret and evaluate students' findings. By focusing only on the typical aspects of a phenomenon, students are deprived of the possibility to observe it in all its complexity and diversity, which naturally leads to the consolidation of cultural stereotypes. Another problematic strategy could be an unbalanced exploration of different cultures. Thus, a well-elaborated and complex mini-research project focuses on the topic of Easter: students are required to explore the phenomenon in a vast array of different contexts of their L1 culture, ranging from personal experiences, to a number of religious, historic, and public manifestations (class presentations and discussions, personal testimonies, readings, video viewing, liturgy, discussion with a curator of the ethnographic museum, etc.), which provides ample terrain for a rich analysis. On the other hand, the same phenomenon of Italian and English culture is introduced through one class presentation and interactive discussion followed by viewing of two short videos and a quiz to test students' acquisition of relevant terminology. This unequal treatment of the same phenomenon in native and foreign cultures may lead to inappropriate conclusions in respect to the manifestations and values associated with this holiday. A strategy that could help overcome this risk might be an equally complex investigation of the phenomenon in L2 cultures completed by the students themselves. Since they would have already been introduced to an excellent example for exploring a religious holiday (within their own culture), they could apply this model to their own investigation of the phenomenon within L2 culture. Under the teacher's guidance, they would look for relevant sources of data and they would be required to select, organize, and evaluate the information; it is also likely that the students would come up with other creative solutions for the task (such as the use of digital sources and social networks, to mention only two). Without this

development of the project, however, there is a danger of the students creating partial understanding and misconceptions about the meaning of this religious holiday in the cultures they study, which is detrimental for their development of intercultural competence.

Lexical mini-projects

The second group of mini-project proposals focuses on the development of lexical competence through the elaboration of plurilingual lexicon. Here, students make an inventory of lexemes of a specific semantic field (e.g., school, gastronomy, sport, IT jargon) or they identify a list of words based on a specific linguistic criterion (loan words, words of same origin, cognates, false friends), so that in the next stage of the project they may prepare a plurilingual mini-dictionary that would be shared among all the participants. Some projects involve another step that proposes analysis and discussion about the identified words of different languages. In addition to the development of lexical competence, these mini-projects also target plurilingual competence and, more specifically, the development of language learning strategies. Namely, by fostering cross-linguistic analysis of words from different languages that share some linguistic features (origin, meaning, form, etc.), students may identify specific regularities in the way languages function. Consequently, they may develop better awareness of the linguistic systems in general and try to use compensation strategies in real-life communication. Furthermore, by this activity they are encouraged to make inferences about linguistic structures, which promotes their higher order cognitive processes and makes them better thinkers.

The choice of languages for lexical mini-projects is mainly influenced by the school curriculum: the languages of the projects are the foreign languages of the school with or without Serbian as L1. In other words, the bi-/plurilingual lexicons in our data involve from two to four languages from the following list: English, Italian, Spanish, French, German, Russian, Bulgarian as L2 (in order of their frequency) and Serbian as L1. It is curious, however, that there is not a single proposal that would involve languages not learned in the school. This is perhaps influenced by the example from the mini-project description in the on-line training that also focuses only on the school languages. In any event, the choice of languages in mini-projects reveals our L2 teachers' focus on the institutional norms and practices and a lack of their awareness for the plurilingual realities outside of the school walls. It is quite probable that their students are familiar with or even fluent in languages not taught in their school and that their linguistic experience would be a valuable contribution to a plurilingual project of this sort. Furthermore, this would provide an excellent platform for engaging the students according to their experiences and needs, and particularly so in the case of the children who use minority languages. On the

other hand, inclusion of different and diverse languages in plurilingual lexicons would also be beneficial for all students since it promotes development of higher order cognitive processes such as synthesis and evaluation.

Special cases

The final group of mini-project proposals covers a variety of themes and procedures. Two proposals suggest an elaboration of school presentation, which would involve identification and selection of information about the school and preparation of the bi-/plurilingual presentation. Common to the two projects is their focus on the final product that would be presented to the schools' communities and published on the schools' websites. An additional feature is the focus on mediation in the strict sense, that is, translation of contents to different foreign languages of the schools. Another project that targets activities of mediation uses a famous fairytale and explores it through the prism of different languages by focusing on the story's protagonists, key concepts, magical beings, and their symbolic meaning. An interesting proposal indicates the possibility of connecting students with schools from abroad in a trilingual context—by using two foreign languages in addition to sign language. In this setting, the school environment is no longer an artificial L2 learning environment, but a real life experience that enables students to acquire foreign languages and cultures in an authentic context (see Vuco, Zavisin 2013).

A particularly creative project entitled "The story of six words", inspired by E. Hemingway, introduces a creative challenge for students: they are asked to create a story of six words. The students are divided in groups according to the language and their personal affinities and interests and they are required to create as many six-word stories as they can. They are also encouraged to use different media in their final presentation, such as drawings, audio-visual presentations, and alike. For the project finale, the teacher proposes publication of the selected stories in the school magazine, creation of bookmarks, organization of a literary evening, and creation of a short film. This seemingly simple task primarily develops pragmatic competence through the creation of short narratives. However, it opens possibilities for the holistic engagement of students, both in cognitive and affective domains, and insists on the creative aspect of the task through which each student is invited to find his or her way of creative expression. At the same time, this is the only proposal that included as many as six languages (Serbian, English, French, Italian, Spanish, and Russian).

Concluding remarks

Our analysis of the mini-project proposals leads to a general impression that these L2 teachers are familiar with this kind of teaching practice that promotes interdisciplinary approach. They skillfully provide topics that highlight the relationship of topics across different disciplines and they successfully involve teachers of different school subjects, which is an important movement toward thematic education. The topics of the proposals are mostly chosen by teachers and conceptualized in a way that develops students' sociocultural and lexical competence. At the same time, the realization of the projects is generally flexible enough to enable adjustment to students' needs and interests.

Our data further reveal specific shared features in our participants' teaching epistemologies relevant for their understanding of intercultural and plurilingual competence. In the design of their mini-project proposals, the teachers-participants of this study primarily focus on the development of sociocultural competence. This in itself would not be problematic if the task had not required focus on plurilingual or intercultural competence, or both. More successful projects open possibilities for the development of intercultural competence, mainly by providing clearer guidance for different stages of project elaboration that promote skills of investigation and learning. Particularly important in this respect are the strategies of evaluation and self-evaluation when included in the final stages of the mini-projects. Not only do they provide a sort of closure to the exerted effort but also instigate critical thinking and student autonomy.

It is clear from our analysis that a number of proposals show competence, ingenuity, and creativity of their authors. Nevertheless, there are also proposals in which the participants fail to explicitly state the main objectives of their mini-projects, so these can only be inferred from the project description. This is also true for other aspects of project description such as clear instructions as to the number of students involved, their age and level of competence, time for project elaboration, materials used, and final product design. Consequently, some excellent and creative ideas do not reach all of their potential since they remain underdeveloped. In light of these findings, the on-line training should have certainly addressed these aspects more explicitly. It is crucial that future teacher education programs of the sort focus on different strategies for planning, execution, and evaluation of the school projects that aim at developing intercultural and plurilingual competences in primary education.

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Chapter XVII

EMPOWERING TEACHERS TO MANAGE CHANGE IN THE 21ST CENTURY

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Abstract: In the context of the 21st century education, which is characterised by great changes and constant restructuring of education systems in order to improve student achievement, teachers face a number of challenges while playing their complex roles. The current context requires teachers to become lifelong learners able to reflect on their regular practice and 'theorise from it and practice what they theorise'. High quality preservice and inservice teacher education constitutes a major prerequisite in supporting teachers' development of required competences. The paper studies the contribution of a professional development program to empowering teachers as lifelong learners and managers of change in the 21st century. The participants in the study were 400 primary English language teachers in Serbia who completed the accredited professional development (PD) program titled *Theme-Based Instruction in Teaching English to Young Learners* in the period from 2014 to 2018. The study aimed to trace all six dimensions of teacher empowerment, a construct that recognises teachers as experts on teaching and learning and as active participants in making decisions. Six instruments were applied in the study and both quantitative and qualitative data were collected. The results indicate that the participants gained the critical capacities of empowered teachers and acquired attitudes and beliefs necessary for successful management of change. Evidence showed that a PD program can be truly empowering when it allows teachers to apply the newly acquired knowledge and skills and to reflect on the program's success in terms of student engagement and their own growth. These findings should be acknowledged by policy-makers and preservice and inservice teacher education institutions for supporting teacher empowerment as a critical competence needed for successful teaching in the 21st century.

Keywords: *continuous professional development, empowered teachers, reflective practice, pedagogical skills, management of change.*

Introduction

The Serbian system of education has undergone major restructuring in the second decade of the 21st century, introduced by the *Strategy for Education Development* and *The Action Plan for the Implementation of the Strategy for Education Development in Serbia by 2020* (Pantić & Wubbels, 2010; Pantić & Wubbels, Mainhard, 2011). *The Action Plan for the Implementation of the Strategy for Education Development in Serbia by 2020* was adopted by the Serbian government in 2012, and the recently published Report highlights all achievements in the period 2015–2018 in four broad areas, one of them being “to initiate the renovation of curricula and teaching and learning programs in primary and general secondary education in accordance with the orientation towards the outcomes and the development of competences (key and inter-curricular)” (MoESTD, 2019c: 8). In the area of primary education, instead of obligatory and recommended contents prescribed by the previous national primary curriculum, the new curriculum includes key concepts of curricular content, oriented towards outcomes and learner competences, in line with the recommendations issued by the Council of the European Union (2018) promoting key competences for lifelong learning, such as literacy, multilingualism, mathematical competence and competence in science, technology and engineering, digital competence, personal, social and learning to learn competence, active citizenship, entrepreneurship, and cultural awareness and expression.

The curricular changes have put new demands on teachers in terms of knowledge, skills and strategies needed to effectively introduce the policy changes into their classrooms. Since teachers have the most direct impact on student achievement (Edelenbos, Johnston, Kubanek 2006; Enever 2011, 2016; Garton, Copland, Burns, 2011; Hattie, 2015; Murphy, Evangelou, 2016; Pinter 2011; Savić, Shin, 2016), an important component of restructuring initiatives is enhancing the quality of preservice and inservice teacher education and empowering teachers as lifelong learners and managers of change occurring in the 21st century. Furthermore, an adequate response to policy changes is needed in the area of preservice and inservice teacher education and professional development, i.e., teacher education curricula need to incorporate changes, while professional development (PD) programs need to respond to new educational demands. The chapter aims to shed more light on how professional development (PD) can contribute to building teachers’ awareness of their own power to successfully adapt to educational changes and new curricular requirements, and to effectively cater to the changing needs of their learners. More precisely, the chapter studies the impact of a PD program in Serbia on foreign language teachers’ capacities critical for successful management of change.

Background of the Study

Educational Changes

Globally, teachers' roles are changing under the influence of access to information resulting from extremely fast technological development (Pantić & Wubbles, 2012). Teachers now need to build capacity to face the new challenges: to learn to build new content knowledge and pedagogical content knowledge relevant to the new requirements; to unlearn by abandoning "deeply held assumptions about what it means to be a teacher, what classrooms look like, what the essence of teaching and learning is" (Klein, 2008: 80); and to relearn by creating new concepts in these three areas. These teacher abilities are critical for giving teachers "the opportunity and the confidence to act upon [their] ideas as well as to influence the way [they] perform in [their] profession" (Murray, 2010: 3), and for equipping them with the appropriate competences to provide quality education, to manage change in their teaching contexts, and, above all, to instill in their learners "a disposition towards lifelong learning" (Day, 1999: 2). Although changes may be introduced by governments in a variety of ways and time periods, such changes are always obligatory (Day, 1999), and teachers are expected not only to deal with them, but they should also be ready to change themselves by unlearning old habits and attitudes and adopting new ones (Franklin, 2015). In order to be able to teach effectively today and in the future, teachers are required to develop transversal knowledge, skills and attitudes, apart from expanding their specialist and subject-specific competences (Huber & Mompoin-Gaillard, 2011; Cekić-Jovanović & Mihajlović, 2018).

The requirement for teachers to quickly acquire new pedagogical skills, to effectively introduce novelty into their classrooms, and to transform their attitudes and abandon some of their practices, makes management of educational changes rather demanding. This process does not always run smoothly as teachers may resist changes or be reluctant to change, so that the impact of the training programs aiming to introduce educational changes may often be minimal (Harris & Lázár, 2011). Research has found that novice teachers tend to teach in the ways that mirror the approaches of their previous education rather than the university curriculum or innovative approaches they have been introduced to in academic or PD programs. They may also find it too time-consuming to introduce changes while they are still developing their teacher personality, particularly if they are not supported either by the teaching materials or experienced colleagues in their teaching environments (Harris & Lázár, 2011). Summarising research results, Harris & Lázár, (2011) emphasize the following reasons for teachers' resistance to change: powerful misconceptions about teaching and learning they develop prior to attending teacher education courses, the absence of first-hand experience or knowledge in the given area,

feelings of incompetence due to insufficient training, or the inability to see the value of change. As a result, PD courses may be ineffective in terms of raising teachers' awareness of their own misconceptions or in relation to introducing sustainable changes into everyday practice.

Bringing about change in educational contexts may be achieved through teachers' feelings of self-efficacy, which need to be encouraged and supported (Bandura, 1994). It is a complex psychological process that requires "creating and strengthening self-beliefs of efficacy through the vicarious experiences provided by social models. [...] People seek proficient models who possess the competencies to which they aspire. Through their behavior and expressed ways of thinking, competent models transmit knowledge and teach observers effective skills and strategies for managing environmental demands" (Bandura, 1994: 3). The process of the development of new knowledge and skills is, therefore, best facilitated by quality PD programs that result in teacher empowerment for successful implementation of new programs (Pyle, Wade-Woolley, Hutchinson, 2011). It is widely accepted that transforming educational landscapes requires teachers to engage in continuing professional development (CPD) targeting the development of specific pedagogical skills and strategies, so that they can successfully face the current and future challenges of the teaching profession (Day 1999; Guskey 2002; Pyle, Wade-Woolley, Hutchinson, 2011). What is more, teachers need to be empowered to autonomously make decisions both about their career development and about their everyday practice. Continuing professional development and empowerment go hand in hand in building the key skills of 21st century educators.

Teacher Empowerment

Generally, empowerment refers to "individuals' belief that they have the skills and knowledge to improve a situation in which they operate" (Bogler & Somech, 2004: 278). In the area of education, the term has been used to refer to the process of or the conditions for becoming an empowered teacher/educator (Guskey, 2002; Klein, 2008; Murray, 2010; Pyle, Wade-Woolley & Hutchinson, 2011), or to the capacities and strategies possessed by or needed for becoming an empowered teacher/educator (Aliakbari & Amoli, 2016; Bernat, 2008; Franklin, 2015; Stacy, 2013; Zembylas & Papanastasiou, 2005). Teacher empowerment is "allowing teachers to be an active participant in the instructional decisions of the school [...] [and] recognizing teachers as the experts about teaching and learning issues, [allowing them to] be involved in quality professional learning and providing it [and] acknowledging teachers' major contributions to improving student achievement" (Squirre-Kelly, 2012: 19).

Short & Rinehart, (1992) have identified six dimensions of teacher empowerment: 1. decision making; 2. professional growth; 3. status; 4. self-efficacy; 5.

autonomy; and 6. impact. Teachers are empowered when they are allowed to make decisions about their teaching and work environments (*decision making*), and when they are provided with opportunities for their professional growth through collaborative work in teams and participation in professional learning of new strategies and skills (*professional growth*). To feel empowered, teachers need to believe that their work is valued and respected by colleagues, students, parents, and community members (*status*), that they have the necessary skills to help students learn (*self-efficacy*), and that they are competent to design curricula (*autonomy*). They are empowered when they believe that they can influence school life and school environment (*impact*). The authors have developed the scale for measuring teacher empowerment that has been used to determine how empowerment relates to constructs like teachers' commitment to teaching, organisational commitment, professional commitment, job satisfaction and student engagement (Aliakbari & Amoli, 2016; Bogler & Somech, 2004; Squire-Kelly, 2012; Zembylas & Papanastasiou, 2005).

All six dimensions of teacher empowerment have been found to relate to teachers' commitment to teaching (Aliakbari, Amoli 2016). Moreover, research has shown positive correlation between teachers' job satisfaction and teacher empowerment, and evidence has been provided that teacher empowerment leads to job satisfaction and that there is an impact of job satisfaction on teachers' sense of empowerment (Zembylas & Papanastasiou, 2005). Although there is still no solid evidence about the relationship between teacher empowerment and student achievement, some recent studies have shown that teacher empowerment has a direct impact on student achievement and that teachers' commitment to teaching has a positive effect on students' learning (Aliakbari & Amoli, 2016; Squire-Kelly 2012). Furthermore, there are indications that teacher empowerment is important in making pedagogical decisions, and can directly affect EFL student engagement and motivation (Zembylas & Papanastasiou, 2005). Importantly, teacher empowerment can play a decisive role in the implementation of new programs (Pyle, Wade-Woolley & Hutchinson, 2011).

Franklin, (2015) argues that one of the guiding principles for empowering educators is the introduction of a Big Idea of 'learning, unlearning and re-learning', and stresses the significance of these capacities in higher education settings:

Higher education classrooms must be the place where thinking occurs. The work of the classroom must be one of co-learning in which lessons are designed such that students construct meaning and connect in a networked environment. We have to move to a new model of Bloom's Taxonomy in which we teach conceptually and the students learn the skills as they work through the materials to learn the 'big' idea. The problems of today and tomorrow will need to be solved

through big ideas. Ideas matter; big ideas are what excite, engage and motivate learners. [...] Changing instruction to embrace big ideas, the use of technology to flip a classroom or connect students in participatory learning requires an educator that is willing to learn, unlearn and relearn new pedagogies for teaching, learning and moving higher education forward. (Franklin, 2015: 1091–1092)

The Big Idea of ‘learning, unlearning and relearning’ is particularly important in teacher education, as teaching at all levels involves the process of making difficult changes in one’s teaching practice through learning new content and pedagogical knowledge and skills, through unlearning by abandoning old assumptions, and through relearning by creating new concepts about effective teaching practices (Klein, 2008). It is argued that “the demands on teachers to learn, unlearn, and relearn, more and more require that the model of the isolated teacher be set aside” in order to build “professional communities that support learning, unlearning, and relearning” by engaging teachers in PD (Klein, 2008: 95). Murray, (2010: 3) links PD very closely to teacher empowerment, arguing:

One of the main reasons to pursue professional development is to be empowered – to have the opportunity and the confidence to act upon your ideas as well as to influence the way you perform in your profession. Empowerment is the process through which teachers become capable of engaging in, sharing control of, and influencing events and institutions that affect their lives. Feeling empowered can also manifest leadership skills, and teacher empowerment leads to improvement in student performance and attitude.

To conclude, teacher empowerment can be a key to introducing and implementing curricular changes. However, there may be a number of obstacles to achieving teacher empowerment (Stacy, 2013), which calls for providing quality PD programs to support teachers in building the six dimensions of empowerment (Aliakbari & Amoli, 2016; Klein, 2008; Kumaravadivelu, 2006; Pyle, Wade-Woolley & Hutchinson, 2011; Stacy, 2013).

Professional Development

Behind any teacher’s learning and development is a desire to have an impact on the lives of their students (Day, 1999). Consequently, PD programmes have three major goals, i.e., to generate “change in the classroom practices of teachers, change in their attitudes and beliefs, and change in the learning outcomes of students” (Guskey, 2002: 383). PD programs provide teachers with “opportunities to participate in a range of informal and formal activities which

will assist them in processes of review, renewal, enhancement of thinking and practice, and, importantly, commitment of the mind and heart” (Day, 1999: 1). Continuing PD, therefore, is the process through which teachers are equipped with resources to plan and practice new ideas and approaches, and enhance their own theoretical knowledge and pedagogical and reflective skills. It is made effective when teachers manage to achieve a balance “not only in the ‘what’ and the ‘how’ of their teaching but also in the ‘why’ in terms of their core ‘moral’ purposes” (Day, 1999: 7). The success of any ongoing PD process is, therefore, grounded as much in content knowledge and practice as “in the context of particular students and classrooms” (Klein, 2008: 85) and depends on the development of reflective skills and on applying a reflective approach to teaching.

Since PD has been recognised as a crucial component in enhancing the quality of teaching and the success in achieving learning outcomes, the influence of PD programs on these two areas has extensively been studied (Büyükyavuz, 2013; Day, 1999; Guskey 2002; Ingvarson, Meiers, Beavis, 2003, 2005; Savić & Shin, 2016). Examining the factors that affect the impact of PD programs on teachers’ content knowledge, classroom practice and learner outcomes, Ingvarson, Meiers, Beavis, (2005) have found a dynamic relationship among these variables and a significant improvement of learning outcomes as a result of enhanced teacher efficacy. The factor that has been found to correlate significantly with the impact of a PD program is teachers’ belief that the program has influenced learners’ learning outcomes. This leads to a conclusion that “[p]rograms that model effective practice and invite teachers to try them out tend to be more successful than programs that devote resources primarily to changing attitudes first” (Ingvarson, Meiers, Beavis, 2005: 16). Another significant finding of this study refers to duration of PD programmes, both in terms of contact hours of training and the overall duration of a program (i.e. extension in time), and both variables have been found to contribute to enhancing a program’s impact. Furthermore, the school context and the professional community of teachers in it have been found to play an important role in making a PD program effective (Patton, Parker, Tannehill, 2015). For a change to be introduced, teachers need to be given time and opportunity to discuss with colleagues and administrators what and how learners are learning and how successful they are (Ingvarson, Meiers, Beavis, 2005). However, some recent studies conducted with English language teachers show that, although teachers generally value PD programs, young teachers usually lack proper understanding of PD and need guidance in planning their careers (Patton, Parker, Tannehill, 2015), while experienced teachers see a number of obstacles to fitting PD activities into their busy schedule (Büyükyavuz, 2013).

Nevertheless, effective PD can help teachers to build capacities to face the challenges and changes. Their understanding of a change is shaped by the

depth of their reflection on practice and by the scope of feedback they get on their classroom practice (Ingvarson, Meiers, Beavis, 2005). Besides, implementation of new initiatives depends on teachers' sense of empowerment that "provides teachers with the motivation to and the belief that they can improve their practice" (Pyle, Wade-Woolley, Hutchinson, 2011: 259). Innovation and change can, however, be introduced only upon careful and detailed planning of PD and upon deciding which skills, knowledge and attitudes must be acquired by all involved in managing change in a certain educational context.

Educational System in Serbia: Curricular Changes and Professional Development of English Language Teachers

In the last two decades there have been significant curricular changes in the Serbian system of education that affected the area of foreign language teaching, the first one being the introduction of compulsory foreign language learning from primary Grade One (children aged 6.5 years) in 2003, and a later introduction of English as a compulsory school subject from the very beginning of primary education. Moreover, a second foreign language was made obligatory from primary Grade Five (age 10.5), while the Common European Framework of Reference for Languages (Council of Europe, 2001) was applied for restructuring the language curricula (Filipović, Vučo, Djurić, 2007). The implementation of early language learning policy in Serbia was part of a global trend of lowering the beginning of formal English language learning and teaching (Shin & Crandall, 2014), which posed a number of challenges, a major one being a shortage of language teachers qualified to teach young learners (Zein, 2019).

Generally speaking, in the past two decades teachers in Serbia did not receive extensive capacity building for their new roles in the selection of textbooks, participation in school or curriculum development, or cooperation with parents and the community (Pantić, Wubbels, Mainhard, 2011). Preservice teacher preparation remained primarily, if not exclusively, concerned with subject matter content and, to varying degrees, with pedagogy and psychology, approached from disciplinary foundations rather than in terms of educational value (Pantić, Wubbels, Mainhard, 2011). Moreover, inservice teacher training was the responsibility of the local authorities, yet without the resources and the authority to allocate funds for teacher training activities.

In the second decade of the 21st century the main document that guided educational policy changes has been The Action Plan for the Implementation of the Strategy for Education Development in Serbia by 2020, adopted in 2012 (MoESTDS, 2019c). The aim of this document was to guide the planning and preparation of the new national Law on Education System Foundations of Serbia, passed in 2017, and followed by primary grade curricula in 2018 and 2019

(MoESTDS, 2017a, 2017b, 2018, 2019a, 2019b). The new primary foreign language curriculum prescribed by the Law requires teachers to focus on defining appropriate objectives in teaching and applying approaches and materials to achieve them. Primary EFL teachers are expected to prepare children to achieve the new standards for foreign language proficiency at the end of primary education, determined and published by the Institute for Education Quality and Evaluation in Serbia, structured as three groups of learner competences: pragmatic, linguistic and intercultural, all defined with a number of descriptors at three levels, from basic, through intermediate, to advanced (Najdanović Tomić, 2017). As communicative competence is given priority in the new curriculum, teachers are required to contextualise their teaching by introducing self-created and self-selected materials from different sources, and, most importantly, by applying a cross-curricular approach to language teaching. Moreover, teachers are encouraged through primary curriculum and several documents published to assist them in applying the curriculum instructions (Najdanović Tomić, 2017) to introduce innovative approaches, like project-based learning (PBL) and computer-assisted language learning (CALL), and to apply formative assessment as a major form of monitoring learners' progress.

Extensive training of foreign language teachers for applying the new standards in their particular contexts was provided online by the Institute for the Improvement of Education in Serbia as late as in 2018. The training focused on determining the teaching objectives in terms of developing particular learner competences, and on identifying cross-curricular themes that could be transformed into projects, but lacked the development of teachers' competences for designing the curriculum, for selecting, adapting and designing quality multi-modal teaching materials, and for planning the lessons that would integrate a variety of subject-area content and language. The training in these key skills was timely provided in the period 2014-2018 by a PD program titled *Theme-Based Instruction in Teaching English to Young Learners* (TBI in TEYL) (Savić 2014; Savić & Shin, 2016). Although this PD program for primary English language teachers was accredited by the Institute for the Improvement of Education in Serbia, it was not as large-scale as the training provided by the Institute for the Improvement of Education in Serbia in 2018. Nevertheless, the effects of *TBI in TEYL* program were monitored and measured for the whole period of four consecutive years while it was carried out throughout Serbia and will be presented in the Study section of this chapter. Given that well planned and conducted PD programs may greatly contribute to empowering teachers to manage change affecting their particular teaching contexts, the paper aims to examine how the *TBI in TEYL* PD program affected teachers' empowerment based on Short and Rinehart's (1992) six dimensions of teacher empowerment.

The *TBI in TEYL* PD program was accredited as a training program for practising EFL teachers in state primary schools. It was a three-day inservice

seminar bearing 24 hours of PD, and was unique in terms of quality and open access¹ as all 22 seminars conducted in the course of four consecutive years were offered free of charge. It was designed to respond to the pedagogical requirements of teaching English as a foreign language to young learners (aged 7–11) and to train teachers to introduce innovation into their practice in terms of contents (cross-curricular themes, culture contents) and methodology (designing problem-based activities, development of learners' communicative competence, critical and creative thinking, 21st century skills, and fostering learning through storytelling, multimedia materials and formative assessment). The training involved three stages: 1) Stage One: two-day intensive training in theme-based instruction and the best practices in teaching languages to young learners; 2) Stage Two: two-month participant team work on developing and teaching thematic units in the participants' contexts; and 3) Stage Three: one-day workshop involving the participants' presentations of team-created thematic units and their reports on the thematic lessons taught in their own contexts, followed by reflections, discussions and self-, peer- and trainer evaluation.

At the time of commencing the program in 2014, the aim was to train teachers to introduce innovation that involved an effective child-friendly EFL pedagogy. By the end of the fourth academic year of the program's implementation, it could be regarded as a positive response to the requirements of the new primary EFL curriculum introduced in Serbia in the same academic year (2017–2018).

Purpose of the Study

The purpose of the study was to determine the impact of teacher professional development in *TBI in TEYL* program on six dimensions of Serbian EFL teachers' sense of empowerment, that is decision making, professional growth, autonomy, self-efficacy, status and impact. Specifically, the study aimed to answer the following research questions:

1. In what ways did *TBI in TEYL* program contribute to enhancing opportunities for perceived decision making, autonomy and professional growth of EFL teachers in Serbia?
2. In what ways and to what extent did *TBI in TEYL* program contribute to enhancing a sense of self-efficacy, status and impact of EFL teachers in Serbia?

¹ The funds for training 16 teacher trainers (in collaboration with an expert from a US university) and for conducting 22 seminars were provided with five grants awarded by the American Embassy in Belgrade in the period 2013–2018.

3. In what ways and to what extent did *TBI in TEYL* program contribute to EFL teachers' willingness to learn, unlearn and relearn content knowledge and pedagogical skills?

Method

Mixed methods were used and both quantitative and qualitative data were collected and analysed with the statistical analysis package SPSS and by categorising qualitative data (answers to open-ended questions) through a process of thematic analysis.

Participants

The sample involved exactly 400 EFL teachers who had completed *TBI in TEYL* PD program in the period 2014–2018 (see Tables 1 and 2). They were drawn from 255 state schools located in 97 towns throughout Serbia, and taught English in town schools, village schools (or village branches of town schools), or in both urban and country schools (see Table 2). Regarding the length of experience in TEYL, almost two thirds of the participants were at the beginning of their careers with up to 10 years of experience, while the rest were experienced teachers of English with more than 10 years of experience in the field (see Table 1). A great majority of the participants held bachelor's degrees as fully qualified English language teachers, a small minority were class teachers eligible to teach English, while about a fifth of the participants held master's degrees in English philology (see Table 1). The participants were mainly female, approximately representing differences in the overall ratio of women to men in TEYL in Serbian state primary schools.

Table 1: Participants' experience in TEYL, qualification and gender

Experience in TEYL			Qualification			Gender		
Years of experience	Frequency	Percent	Title	Frequency	Percent		Frequency	Percent
0-10	258	64.5	BA English teacher	278	69.5	Female	363	90.8
11-20	126	31.5	BA class teacher	41	10.3	Male	37	9.2
21-30	16	4.0	Master	77	19.3			
Total	400	100.0	Other	4	1.0	Total	400	100.0

The sampling was random, as teachers voluntarily applied for being trained within the program, which affected the sizes of the 22 seminar groups (ranging from 6 to 29 participants) (see Table 2).

Table 2: Number of seminars, venues, participants, towns and schools represented, and evaluation grade awarded by the participants

Academic Year	No. of seminars (venue)	No. of participants	No. of towns represented	No. of schools represented	Grade (M) (on the scale 0-4)
2014–2015	Jagodina (FEJ ²)	22	6	14	3.97
	Belgrade (AC ³)	22	4	15	3.92
	Novi Sad (AC)	9	3	8	3.87
	Kragujevac (AC)	8	2	8	3.79
	Nis (AC)	6	2	4	3.90
	Bujanovac (AC)	9	2	8	3.84
	Vranje(AC)	27	4	12	3.76
2015–2016	Kruševac (RPDC ⁴)	26	4	19	3.86
	Belgrade (AC)	26	7	20	3.54
	Čačak (RPDC)	8	4	5	3.79
	Kikinda (RPDC)	16	6	13	3.82
	Nis (RPDC)	29	8	16	3.87
2016–2017	Leskovac (RPDC)	20	7	13	3.90
	Užice (RPDC)	14	5	10	3.85
	Novi Pazar (RPDC)	26	3	12	3.87
	Belgrade (AC)	14	7	9	3.86
	Niš (RPDC)	22	9	14	3.85
2017–2018	Šabac (RPDC)	11	2	6	3.62
	Knjaževac (RPDC)	28	4	15	3.73
	Zrenjanin (RPDC)	16	1	13	3.74
	Smederevo (RPDC)	26	3	13	3.88
	Kragujevac (RPDC)	15	4	8	3.95
TOTAL	22	400	97	255	-

² Faculty of Education in Jagodina

³ American Corner

⁴ Regional Professional Development Centre

The participant seminar groups represented geographically distant areas located throughout the country (see Figure 1), the majority of the venues being outside the major big cities.



Figure 1: Seminar venues and location of the participants' schools on the map of Serbia

The seminar venues involved very well-equipped educational training centres (six American corners and seven Regional Professional Development Centres; see Table 2), with modern technological devices and internet access, necessary for the multimodal training materials.

Instruments

The participants' attitudes and reflections were surveyed with a number of instruments used for monitoring the effects of the PD program. For the purpose of the study, the following sets of data were collected: 1) KWL Chart; 2) Stage One Evaluation Form; 3) Stage Three Self-Evaluation Form; 4) Final Evaluation; 5) ZUOV Questionnaire; and 6) Trainers' notes. The first four sets of

data were designed by the authors, while questionnaire 5 was the official questionnaire created and implemented by the Institute for the Improvement of Education in Serbia (ZUOV for short in Serbian), which also provided background and demographic data about the participants. All five sets of data were questionnaires with both closed and open-ended questions and are referred to as questionnaires 1–5. In Stage Three trainers' notes with comments on thematic unit plans and the participants' presentations were collected in a structured form developed by the authors and analysed for major themes.

Procedure and data analysis

Stage Three of the PD program was the final day of the training held for each of 22 seminar groups approximately two months after the initial two-day training in Stage One. The period between Stage One and Stage Three was Stage Two that was not officially structured but rather organised independently by small participant teams to work on planning a thematic unit collaboratively and teaching it in their own contexts. In Stage Three the participants shared the results, reflected on their own achievements and experiences, and self-evaluated the effectiveness of their collaborative experience and their classroom application. Two questionnaires (questionnaires 1 and 2) were distributed to the participants at the beginning (questionnaire 1) and at the end (questionnaire 2) of the two-day initial training in Stage One, while the other four instruments (questionnaires 3, 4, 5 and 6) were applied on the final day of the program, i.e., in Stage Three. The SPSS program was used for statistical analysis, while the answers to open-ended questions were analysed for recurring themes.

Results

The results will be presented as the participants' beliefs, attitudes and reflections obtained in two stages of the program: Stage One and Stage Three.

Participants' beliefs, attitudes and reflections in Stage One of the PD Program

Although the seminar groups differed in terms of the participants' background knowledge of content-based instructional approach to teaching English to young learners, general thematic analysis of the first column (K = know) of KWL charts, filled in at the beginning of the training (before the content of the program was introduced), indicated that a half of the respondents knew nothing or very little about TBI (Savić & Shin, 2016; Cekić-Jovanović & Milanović, 2019), while the results collected through questionnaire 2 at the end of Stage One, after two-day initial training, indicated that about 70 percent of

the participants were mainly or entirely acquainted with the approach. Only a quarter of the respondents reported that TBI ideas were mainly or completely new to them (see Table 3).

Table 3: Participants' evaluation of the content of TBI in TEYL training in terms of novelty of ideas (on a four-level rating scale)

How much are the ideas new to you?		Frequency	Percent
Valid	Missed	20	5.0
	Completely new	11	2.8
	Mainly new	85	21.3
	Mainly familiar	229	57.3
	Entirely familiar	55	13.8
	Total	400	100.0

At the end of Stage One the participants were asked to evaluate the usefulness of the program's content on a four-level scale (see Table 4). A great majority (almost 90%) believed that the content was completely or mainly useful.

Table 4: Participants' evaluation of the content of TBI in TEYL training in terms of its usefulness

How much is the content useful to you?		Frequency	Percent
Valid	Completely useful	263	65.8
	Mainly useful	91	22.8
	Slightly useful	43	10.8
	Useless	3	0.8
	Total	400	100.0

Responding to the open-ended question about the most useful concept of the two-day training, the participants provided answers that involved various ideas and aspects of the training (see Table 5). The responses were grouped on the basis of a recurring theme and are presented in order of frequency. It is significant to note that the most frequent answers related to the strategies and techniques were how to use storytelling and picture books and how to apply multimedia in the classroom. Moreover, the participants highly valued the ideas about how to develop young learners' 21st century skills, especially their

critical thinking, and how to use blogs, songs and games. Demonstration of a thematic unit, which was held in the form of a workshop, was found to be very useful, as well as creative activities used in the training to exemplify the basic principles of teaching young learners and applying thematic approach in the language classroom. Some participants also found the suggestions about how to integrate the language skills in the classroom useful.

Table 5: Participants' beliefs about the most useful contents of the training (in order of frequency)

No.	For me, the most useful content of the training has been
1	Storytelling/Picture books
2	Multimedia
3	21 st century skills for young learners
4	Demonstration of a thematic unit
5	Developing critical thinking skills
6	Songs
7	Games
8.	Creative activities
9.	Integration of skills

Three open-ended questions in Stage One evaluation Form (questionnaire 2) were designed to call for an overall reappraisal of the participants' own pedagogical practice under the background of the thematic approach training. The participants were asked to devise an action plan involving the decisions which strategies and techniques they planned to introduce into their pedagogical practice, which to keep and which to abandon. The responses were analysed on the basis of the frequency of recurring themes and the results are given in Table 6 in order of frequency.

Table 6: Participants' action plans based on the initial training (in order of frequency)

No.	Based on the training in TBI Program, my action plan is to		
	start	continue	stop
1.	Using stories and storytelling	Using multimedia	Using some traditional methods
2.	Creating thematic units and using TBI	Developing 21 st century skills	Forcing grammar tests
3.	Giving children interesting activities	Using songs	Using a coursebook or sticking to it
4.	Developing critical thinking in the classroom	Using stories	Being rigid
5.	Using multimedia and ICT	Using the internet	
6.	Improving ICT literacy	Developing critical thinking in the classroom	
7.	Developing creativity in the classroom	Using CLIL/TBI	
8.	Doing more group work	Being creative	
9.	Doing crafts	Improving ICT literacy	
10.	Having lessons outside and organising activities in which children are more physically active	Using role play and real-life communication	
11.	Using a blog	Using TPR	
12.	Using the wiki	Using flashcards	
13.	Using songs	Using group work	
14.	Using riddles	Preparing exhibitions and plays	
15.	Using cartoons	Using riddles	
16.		Using games	
17.		Using picturebooks	
18.		Using a blog	
19.		Using poems	

The participants' reflections on their new experiences in initial TBI training in Stage One indicated the areas of professional development they valued most and planned to introduce into their everyday practice ('start'), which

pedagogical practices were already part of their everyday practice and were recognised by them as ‘good practice’ (‘continue’), and which of their own regular pedagogical practices they found to be ‘bad practice’ and decided to abandon (‘stop’). As many as 19 different themes were proposed by the participants.

To sum up, the data collected in Stage One indicated different levels of familiarity of the participants with the concept of TBI before and after the training, as well as a very high level of usefulness attributed to the program. Moreover, the data show the participants’ willingness to better their practice by implementing the ‘good’ pedagogical practices both by introducing the new techniques and by abandoning the ‘bad’ ones.

Participants’ beliefs, attitudes and reflections in Stage Three of the PD Program

The self-evaluation questionnaire (questionnaire 3) required the participants to reflect on their experiences, both on difficulties and benefits, of designing a thematic unit in collaboration within their teams in Stage Two. These were open-ended questions and the findings were analysed for recurring themes. Table 7 shows the main difficulties reported by the participants and the ways of solving them.

Table 7: Self-reported difficulties experienced in teamwork and solutions (in order of frequency)

No.	Difficulties	Solutions
1.	Finding and creating appropriate materials and activities	Looking for a variety of activities
2.	Using ICT	Asking IT teachers for help
3.	Organising collaborative work	Using the internet, Viber, or Google forms
4.	Fitting the TU into the syllabus	Consulting other colleagues at school
5.	Using wikispaces for uploading the unit plans	Changing the syllabus
6.	CLIL	
7.	Time management	
8.	Having too many ideas and too much material	

The difficulties referred to the relationships within the teams and to practical constraints of working with members from different schools and towns, then to using technology, and finally to designing a TU (four lessons connected thematically) in the way that they allowed learning the language and the

content simultaneously in interesting, appealing and engaging activities. Moreover, there were formal restrictions, such as the existing syllabus, that had to be overcome. The solutions reported did not respond to all the challenges, but mainly to those that referred to technology, the syllabus and the provision of teaching materials.

More information on Stage Two collaboration and teaching content-based lessons was obtained through an open-ended question in the self-evaluation questionnaire (instrument 3) asking the participants to reflect on the benefits of teamwork and teaching a TU in Stage Two. The data were analysed by applying the interpretational analysis method, and are presented in Table 8.

Table 8: Self-reported benefits of teamwork and teaching a TU (in order of frequency)

No.	Benefits
1.	Cooperation, teamwork and collaboration
2.	Fitting the TU into the syllabus
3.	Learning new games
4.	Getting new ideas
5.	Sharing ideas
6.	Finding and designing appropriate materials
7.	Using ICT
8.	Using multimedia
9.	Connecting other subjects with English
10.	Learning more and more
11.	Storytelling
12.	Pupils are more interested in thematic language teaching
13.	Brainstorming ideas

The perceived benefits of designing a TU in collaboration mapped most of the difficulties, like collaborative work, fitting the TU into the syllabus, using ICT and multimedia, finding and designing appropriate materials, and cross-curricular language teaching. Unique to benefits were the participants' self-reported learning, storytelling and increased pupils' interest.

Asked to self-evaluate their expertise in planning a TU in terms of content, activities, teaching materials and syllabus fit, the participants felt they had achieved the highest expertise in selecting appropriate activities, and the lowest in selecting and designing teaching materials, although all TBI expertise components were rated rather high (over grade 8, on a scale 5–10) (see Table 9).

Table 9: Self-evaluation of participants' own expertise in planning a TU (on a scale 5 – poor to 10 – excellent)

		Expertise			
		TU content	TU activities	TU materials	TU syllabus fit
N	Valid	400	400	400	400
	Missing	0	0	0	0
Mean		8,815	8,913	8,808	8,783

Final evaluation (questionnaire 3) involved overall evaluation of the PD program in terms of developing and enhancing the participants' professional expertise. A great majority of the participants (96%) believed that the program had contributed to their professional competences substantially or very much (see Table 10), while the answers *not at all* and *a little* were not chosen by the participants.

Table 10: Self-reported contribution of the PD program to enhancing the participants' own professional expertise (on a five-point rating scale, from not at all to substantially)

Scale		Frequency	Percent
Valid	Substantially	159	39.8
	Very much	225	56.3
	Somewhat	16	4.0
	Total	400	100.0

Final Evaluation questionnaire (questionnaire 4) was designed to evaluate the effectiveness of the PD program in terms of the participants' self-reported acquisition of new knowledge and pedagogical skills. It involved a number of statements with a five-point scale of agreement, from 0 – strongly disagree to 4 – strongly agree. The participants were mostly satisfied with the extent to which the PD program responded to their needs, deepened their understanding of TBI and how their TU encouraged learner participation in the classroom.

Questionnaire 5, ZUOV questionnaires required the participants to evaluate the effectiveness of each of the 22 seminars on a scale from 0–4 (0 – strongly disagree; 1 – disagree; 2 – neutral; 3 – agree; 4 – strongly agree) in terms of the content presented, its usefulness, the presenters' expertise, communicative

skills, and appropriateness of feedback provided, venue, time, and technology applied. All of the 22 seminars were rated excellent, with grades over 3.50, ranging from 3.54 to 3.97 (see Table 2).

Finally, trainers' notes with comments on thematic unit plans and the participants' presentations of the TU content and of its practical classroom application in Stage Three were analysed for major themes. Three areas appeared to be significant and interconnected: 1) Content of a TU; 2) Collaboration of team members; and 3) Learners' interest and motivation. Creative and innovative TU materials resulted as a rule from collaborative efforts of teams that reported and displayed excellent communication and collaboration, and success in motivating and engaging all the learners in a class. The reports also involved results of collaborative efforts within schools presented by the respondents, that included not only effective language teacher collaboration, but also the participants' collaborative work with subject teachers (e.g. Art teacher) in designing and selecting creative teaching materials for cross-curricular language teaching, such as origami, or appropriate video materials (e.g. about housing or food throughout the world). However, the trainers noted down that even in cases when the materials were not so varied (e.g. the use of simple flashcards), the participants reported fun and enjoyment in the language classroom. The trainers reported about extremely enthusiastic teams consisting of the participants from different schools that had managed to collaborate successfully on designing a TU by using Google forms or connecting on social networks, and succeeded in attracting the attention and admiration of all the faculty by displaying learners' products in school halls and participating in the thematic day activities. They assessed their new professional actions as highly supported by the school management and other colleagues and having an effect on school life.

On the other hand, there were presentations given by single members of teams, when other team members failed to be present and participate in Stage Three, that lacked creativity, and in whose lessons the learners did not show much interest in the activities. In such cases a TU was mainly a product of a single participant who had done all the work in Stage Two of the program. However, the trainers reported a very small number of such presentations.

The above data show a rather comprehensive and consistent display of the participants' attitudes, beliefs and reflections on how effective the PD program was in improving not only their own pedagogical knowledge and skills, but also their own readiness to share and learn from peers.

Correlation analyses of the participants' attitudes and beliefs

Correlation analyses of the relationship between the participants' attitudes and their qualification, gender or teaching experience, showed no

statistical significance. However, correlation analysis between the participants' attitudes at the end of Stage One and those at the end of Stage Two (ANOVA test) showed that there was a statistically significant difference ($p < .001$, see Table 11).

Table 11: ANOVA test scores

Total score					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13334.251	36	370.396	35.520	.0003
Within Groups	3743.636	359	10.428		
Total	17077,886	395			

The statistical significance indicates a factor or factors that made the difference. Although there is no statistical analysis that might indicate the exact variable(s), it can be assumed that the PD training process resulted in significant changes.

All above results will be discussed in the following section in terms of teacher empowerment.

Discussion

The data described in the previous section will be discussed in the sequence of the research questions.

Research Question 1

The answer to this research question was obtained by applying the self-evaluation questionnaire (questionnaire 3). The results indicated a number of challenging situations identified by the participants that provided opportunities for their decision making in terms of introducing changes required for introducing an innovative approach into their teaching practice (see Table 7). The critical decisions involved issues related to scheduling and curriculum content, i.e., fitting the TU into the syllabus, which directly affected the participants' work (Bogler & Somech, 2004). Moreover, selection of materials and the process of planning a TU provided opportunities for developing autonomy as the participants expressed a feeling to freely make classroom decisions, from choosing the teaching materials to overall instructional planning.

What is more, the participants' decisions reflected their perception that the school environment provided opportunities for them to grow professionally

and expand their own knowledge and skills in order to successfully introduce the innovative TBI approach, like ICT skills, using multimedia in teaching, learning cross-curricular content and creating appropriate teaching material (see Table 5). The participants reported the usefulness of the PD program for their teaching practice (see Table 4) and its contribution to their own professional growth through horizontal learning and sharing at school (Bogler & Somach, 2004; Short & Rinehart, 1992; Squire-Kelly, 2012, Golubović-Ilić, Ćirković-Miladinović, Ćekić-Jovanović, 2010).

Research Question 2

The second research question was answered through the analysis of the data obtained by applying the self-evaluation questionnaire (questionnaire 3), final evaluation questionnaire (questionnaire 4), ZUOV questionnaire (questionnaire 5) and the trainers' observation notes (questionnaire 6). The results indicated that the participants had developed a very high sense of self-efficacy in terms of upgrading the competences to help learners learn and to increase their motivation (see Table 8). The self-reported areas of very high expertise included planning a TU, selecting TU content and materials, and fitting the TU lessons into the existing syllabus (see Table 9). What is more, the participants' rated the contribution of the program to enhancing their professional competences extremely high (see Table 10). The participants' feeling of mastery in knowledge and teaching practice was also noted by the trainers (questionnaire 6) who reported of the participants' accounts of increased learner enjoyment and engagement in the TU activities (Bogler & Somach, 2004; Short & Rinehart 1992; Squire-Kelly, 2012).

Regarding status and impact, a great majority of the participants reported a high level of collaboration and horizontal teaching in schools where they had opportunities to share their new expertise (thematic day activities) (questionnaire 6). Moreover, in their presentations they reported about successful collaboration both with other language teachers and ICT and other subject teachers at school (see Table 8), expressing a belief that their new professional actions were highly supported by the school management and other colleagues and had an effect on school life (Bogler & Somach, 2004; Short & Rinehart, 1992; Squire-Kelly, 2012). From the participants' report on effective teamwork in the process of creating a TU as a major benefit of the PD program (see Table 8) it can be concluded that their sense of status and impact was highly assessed.

Research Question 3

The question related to the PD program's contribution to the participants' willingness to learn, unlearn and relearn content knowledge and pedagogical

skills was answered with data collected with all six instruments used in the study. The participants' awareness of the need for acquiring new knowledge and skills was revealed by analysing their reflections in the KWL chart on what they knew (K) about TBI approach before the training and wanted to know (W) about it before the training. The areas of their learning were revealed by thematic analysis of the column "learned" (L) in the KWL chart and by studying the responses related to the action plan based on the initial training, then to the benefits of teamwork, and finally to the newly developed areas of professional expertise. General learning about the innovative approach was indicated by an increased number of the participants familiar with TBI at the end of Stage One as compared to much lower percentage familiar with it before the training (see Table 3). The areas of intensive learning involved pedagogical skills for using storytelling and picture books in TBI, applying multimedia, developing 21st century skills for young learners, developing critical thinking skills, using songs, games, creative activities and integrating the language skills in teaching young learners. Moreover, the participants also reported a high level of expertise in planning TU activities, developing TU content, designing TU materials and fitting a TU into the syllabus (see Table 9).

One important aspect of learning in the PD program resulted from creating a community of practice (Klein, 2008; Murray, 2010) for completing the practical tasks of the program, that allowed the participants to gain competences needed for collaborative work, using ICT and multimedia, finding and designing appropriate materials, and cross-curricular language teaching. Although some aspects of teamwork were challenging, they provided opportunities for learning and problem solving. Moreover, sharing within the community enabled the participants to develop skills specific not only to cross-curricular language teaching, but typical of effective early language teaching, such as storytelling and using games in the YL classroom (see Table 8).

Newly acquired knowledge and pedagogical skills were summarised as part of the participants' action plans to be introduced into their regular teaching, indicating their empowerment through learning. Significantly, a great number of identical pedagogical practices were recognised both as newly learned and worth being introduced into practice, and as already practised and worth being kept, indicating the differences in the participants' experience in TEYL generally. For example, while a number of participants expressed readiness to introduce storytelling, a number of the participants reported planning to keep that type of good practice. The same holds for applying multimedia in the classroom, using technology and the internet, developing critical thinking and creativity, using group work, blogs, songs, and riddles.

On the other hand, the decision to abandon the practices they did not find effective based on the newly gained content and pedagogical knowledge and

skills, indicated the participants' capacities to unlearn (Franklin, 2015). The decision to reject grammar explanations and tests as ineffective traditional methods is fully in line with the current theory on teaching languages to young learners (Cameron, 2008; Pinter, 2011; Savić & Shin, 2013; Shin & Crandall, 2014), showing the process of relearning what good practice of early language teaching should be like (Franklin, 2015). In that way the participants gained the critical capacities of empowered teachers able to relearn by introducing innovative approaches, changing the syllabus, fitting the thematic unit into the existing syllabus, introducing subject content into the language curriculum, collaborating and sharing with colleagues in successful teamwork.

Conclusion

The purpose of this study was to determine the relationship between teacher empowerment and the PD program for training primary English language teachers in Serbia. The results indicate that there was an impact of the training in *TBI in TEYL* program on all dimensions of teacher empowerment as well as on the participants' willingness to learn, unlearn and relearn (Franklin 2015). A PD program that requires teachers to apply an innovative approach in their teaching contexts indispenibly demands the introduction of a number of changes into regular practice, followed by the process of learning, unlearning and relearning. The effectiveness of *TBI in TEYL* program depended on the participants', i.e., EFL teachers' past experience, their abilities, willingness, institutional support and social context (Day, 1999), which provided opportunities for enhanced decision making, autonomy, and professional growth, and potentially increased the participants' feeling of self-efficacy, status and impact (Bogler & Somach 2004; Short & Rinehart, 1992; Squire-Kelly, 2012). The EFL teachers in our study became empowered through their autonomous decision making about what and how they would learn and how they would use what they had learned (Patton, Parker, Tannehill, 2015), and through a reflective approach to the innovation they applied in their classrooms. What is more, the teamwork and the communities of practice the participants managed to establish contributed to the EFL teachers' sense of self-efficacy, status and impact. These communities also assisted the participants in meeting the immediate professional needs caused by the demands of a PD program, like the lack of ICT skills, insufficient subject content knowledge, or the requirement to provide multimedia teaching materials.

The implications of the study relate to teacher education programs, both preservice and inservice ones, to provide opportunities for student teachers and practising teachers for enhanced decision making, autonomy and reflection on what happens in the classroom. Since "curricula reforms suffer from time lags between recognition, decision making, implementation and impact"

(OECD, 2018: 6), empowering teachers to embrace changes can contribute to shortening the period between the introduction of a new curriculum and learning outcomes. Policy-makers should be aware of the significance of teacher empowerment for the success of changes needed to be introduced in education. Moreover, considering the recent changes introduced by the new primary curriculum in Serbia, and the requirement for enhanced cross-curricular approach to teaching, the need for PD in the area of TBI in teaching languages to young learners will constantly be rising, calling for more inservice programs in content-based language teaching.

Limitations of the study refer to self-reporting of all changes introduced into the participants' teaching practice. Observation of changes in attitudes, abilities and practices of teachers is needed to verify the self-reported data, and future studies should include both observation and interviews with EFL teachers for deeper understanding of changes introduced. Also, a survey of empowerment components through collection of quantitative data would be needed for further comparison and correlational analyses, especially when compared to learner achievement.

To sum up, empowerment stresses a key role of teachers in making professional decisions, and has in our study been linked to the PD program with the capacity to make a change in the professional career of teachers. A distinguished feature of *TBI in TEYL* inservice PD program was the opportunity for EFL teachers to try out the newly acquired knowledge and skills and to reflect on the program's success in terms of student engagement and their own growth. It is believed that such PD experience will have a lasting positive effect on the EFL teachers' attitudes to introducing changes and innovation into their regular practice, and further contribute to their lifelong learning practice and professional growth.

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Chapter XVIII

ADOPTING EXPLORATORY PRACTICE IN A COLLEGE EFL CLASS: TOWARD RECIPROCAL COLLABORATION AND REFLECTION

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Abstract: As globalization is progressing, English has become an important subject in Japan. Although developing higher-order thinking skills through debates and presentations are emphasized, entrance examinations still require rote-learning and detailed grammatical points. Even in college EFL, many universities designate course syllabus and teaching materials in often traditional ways of teaching. Along with long years of teaching in both liberal arts and science fields, the author has realized the importance of teacher beliefs and how to reflect them in assigned classes. Applying a holistic way of teaching is one example, which includes reaction papers, discussion, presentation, and a group-project to raise learners' awareness and knowledge. This paper begins with a brief explanation of English teaching in Japan. Then, what exploratory practice means and why it is necessary in professional development is discussed. Next, how the presenter's teacher beliefs have reflected to actual teaching will be demonstrated with several concrete examples. Finally, it will be discussed that collaboration and reflection in exploratory practice works reciprocally; one way is for teacher's reflection on teaching, and for learners, it will be reflection on their own learning and hopefully their sustainable learning styles. Students' actual comments on reflection will be introduced. Thus teachers can learn from learners and eventually both can collaborate toward a better 'quality of life'.

Keywords: *teacher belief, collaboration and reflection, holistic way of teaching, exploratory practice (EP).*

Present situations of English education in Japan

The tough competition for entrance exams in Japan is often referred to as "examination hell" though it has been easing recently because of the decreasing number of children and increase of schools. Competition seems to become most severe at three different phrases: one in the beginning of first grade, which determines whether a child goes to a public school or a prestigious private elementary school; another at the end of 9th grade, which determines whether a student goes to a vocational school, a first-rate public college-preparatory high

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school, a second rate high school, or an expensive private school; and finally at the end of the 12th grade to gain entrance to university (Hayes 2013).

Also, the rapid progress of globalization has alerted Japanese people to the need to master English since globalization is often taken to mean Americanization in Japan and therefore the use of English. Consequently, English language education is emphasized so much so that English will be implemented as a subject in elementary schools, and the nationwide entrance examination system, i.e., the National Center Test for University Admissions, will include private sector organizations which examine skills such as speaking abilities. As a result, English competence has become a marker to widen the gap among students' abilities.

On one hand, more and more speaking abilities are emphasized and eager parents do send their children to tutoring or crammer schools or to overseas programs to enhance their communicative competence, but on the other hand, a large number of high schools prepare students for university entrance examinations that require long hours of rote-learning and studying translation and detailed grammatical points because there are still a number of universities that require examinees to have that kind of knowledge.

Even in college EFL (English as a Foreign Language), many universities designate the course syllabus and teaching materials in often traditional ways of teaching for students who are required to take English for one or two years in college without any special motivation or purposes. At many universities, they offer courses only to prepare for standardized tests, which they believe are helpful in job hunting.

Overall, whether students are geared toward learning speaking English or to pass competitive entrance exams with rote-learning for vocabulary building and detailed grammatical points, students most often enter universities without having a chance to develop higher-order thinking skills through debates and presentations.

In the following section, to help teachers teach holistically with teacher beliefs, what exploratory practice means and why it is necessary in professional development is first demonstrated. Then how teacher beliefs can be reflected to actual teaching will be demonstrated from questionnaire results. Finally, I will show a case study from my class, with students' actual comments.

Exploratory practice in professional development

Earlier in the 1960s, research on teaching focused on the search for effective teaching behaviors and in the 1970s, this view of teaching started to be questioned because it missed the concept that teachers' mental lives played a role in their instructional choices. Also criticized was Scientific Research (SR),

which sometimes seemed to detach from teachers' needs. Subsequently, Action Research (AR) prevailed, which was expected to nurture teachers' development through practical research activities, yet it was still considered to be traditional classroom-based research with a hypothesis.

According to Hanks (2015), Exploratory Practice (EP) is a form of practitioner research in language education which aims to integrate research, learning, and teaching. Answering the needs of newer forms of conventional classroom-based research, EP promotes the idea of teachers (and learners) puzzling about their language teaching/learning experiences, using "normal pedagogic practices as investigative tools" (Allwright 2003: 127).

By incorporating itself into pedagogy, EP seeks to address the issue of the demands of research pulling practitioners away from their teaching and learning responsibilities (Hanks 2015: 2). 'Quality of life' for language teachers and learners is the most appropriate central concern for practitioner research in the field of EP (Hanks 2015: 3).

Table 1: Comparisons of SR, AR and EP made by Yanase (2008)

	Scientific Research	Action Research	Exploratory Practice
Period prospering	1980s	1990s	2000s
Primary Goal	generate rules	problem solving	deepen understanding
Method	Experimental	Quasi-experimental	Open-ended
Central concern	Preciseness	Cyclical nature of self-inquiry	Quality of Life
Starting with	hypothesis	task	puzzlement
Work needs to be conducted	Prescription	Description	Mutual development
Concept of Learning	Cognitive behavioral	task	Life
Research period	Cross-sectional,	Longitudinal	Sustainable
Leaner	Participant	'Problem' solver	Co-practitioner
Researcher	3 rd person, neutral	1 st person, singular	1 st person, plural
Relationship Researcher/	Researcher leads practitioner	Practitioner becomes researcher	Practitioner becomes explorer
Demerits	Too much focus on data collection	Intervene actual teaching	May end up in self-satisfaction

Note: Original is in Japanese.

Overall, Yanase (2008) recommends EP as he explains, EP sees learners not as participants or 'problem' but co practitioner with whom teacher-researcher are involved in the work for mutual understanding.

Along with long years of teaching in both liberal arts and science fields, the author has realized the importance of teacher beliefs and how to reflect them in assigned classes, which will be mentioned in the following section.

Teacher beliefs and how to reflect on teaching

According to Borg (2009), teacher cognition research is concerned with understanding what teachers think, know, and believe. Its primary concern, therefore, lies with the unobservable dimension of teaching – teachers' mental lives (p. 1). For educational researchers, the questions being addressed now were not simply 'what do teachers do?' but also 'what do they think?', 'what decisions do they make?' and 'why?' (Borg 2009: 1).

Beliefs are one of the essential points of all fields in education and they deal with human behaviours and learning (Ajzen 1988). Teachers' beliefs influence their consciousness, teaching attitudes, teaching methods, teaching policies, teaching behaviors and finally, learners' development (Dogruer et al. 2010).

(OECD 2009: 89)

Teachers' beliefs, practices and attitudes are important for understanding and improving educational processes. They are closely linked to teachers' strategies for coping with challenges in their daily professional life and to their general well-being, and they shape students' learning environment and influence student motivation and achievement. Furthermore they can be expected to mediate the effects of job-related policies- such as changes in curricula for teachers' initial [undergraduate] education or professional development – on student learning.

Although it does not explain student achievement or changes in achievement, it highlights one of the factors which is related to their motivation and outcomes, and vice versa, teaching and teachers' life.

Aim of the research

As mentioned earlier, English seems to have gained in importance in universities in Japan so much so that many universities offer courses only to prepare for standardized tests and/or many universities designate course syllabus and teaching materials and procedures accordingly. In the previous study by

Sugino, Ueda, and Abe (2018), we investigated how college English teachers reflect their teacher beliefs and how much they reflect them in their actual teaching, within the limitation of designated teaching materials and approaches in liberal arts education curricula, trying to answer the following research questions.

- What are the background experiences or reason to form such beliefs?
- How do teachers reflect their beliefs within the limitation of designated teaching materials and approaches in liberal arts education curricula?

Methodology

Participants

Through the grape-vine of our colleagues, 13 participants agreed to participate in 2018.

Table 2: Participants' Background Information.

	sex	age	L1	level	class type	years	Employment type	Class size
1. A.	M	50up	J	Univ.	2	11~	Full tenured	21-30
2. B	F	50up	J	Univ.	1	11~	Part time	31-40
3. C	F	50up	J	Univ.	1	11~	Part time	21-30-40
4. D	F	50up	J	Univ.	1	11~	Full, fixed-term	21-30
5. E	F	50up	J	Univ.	1	11~	Full, tenured	11-20
6. F	M	50up	J	Univ.	1	11~	Full, tenured	11-20
7. G	M	30s	J	Univ.	4	11~	Part-time	11-20
8. H	M	40s	J	Univ.	2	6-10	Full, tenured	21-30
9. I	F	40s	J	Univ.	1	11~	Part time	21-30-40
10. J	F	50up	J	Univ.	1	11~	Full, tenured	31-40
11. K	F	50up	J	Univ.	1	11~	Part time	21-30
12. L	M	40	J	VocTec	1	11~	Full, tenured	11-20-40
13. M	F	50up	J	Univ.	1	11~	Part-time	21-31-40

Instrument

A questionnaire with two sections was used. The design of the instrument was done by the researchers. The first section was to investigate participants' background information such as their genders, ages, mother tongues, years of experiences, type of employment, and class sizes. The second section was composed of four questions: 1. What are your teaching philosophies/beliefs? 2. What are the reasons and/or experiences that have influenced you to have them? 3. How and how much do you apply them to your actual teaching?; 4. Please tell me your teaching philosophies/beliefs that are non-negotiable, if any.

Procedure

The questionnaires were distributed to the participants, who are colleagues of the three researchers. It started with a brief explanation stating the aim of the research. Through e-mail, 13 questionnaires were answered and collected. The questionnaire data was analyzed qualitatively. After all the data was put on the spread-sheet, the three researchers selected the salient answers to each question.

Results

All of the participants are college teachers except one (works at Vocational Tech).

Table 3: Results of Open-ended questions on Teacher beliefs

	a) What kind of teacher beliefs do you have?	b) What are the background experiences to form such beliefs?	c) How/ how much do you apply them to your actual teaching?
Mr. A 50+ fulltime	To keep a balance between Communicative Approach and the traditional approach.	When I studied TESOL In the 1970s, this was the newest.	I spend much time on discussion.
Ms. B 50+ part-time	Do not pre-judge students and/or have stereotypical images toward them.	When I taught at public junior high, I realized it's important to be trusted by learners even before I started teaching.	At each class, I ask students to tell me the problems or questions to be solved beforehand, and if we feel we need to, then try to spare time for discussing further.

Ms. C 50+ part-time	Help students' self-study.	I've had students having little motivation to study English because of wrong way or not knowing how to study.	Students are given opportunities to do group project with presentations once a semester.
Ms. E 50+ full-time	First of all, I always teach students hoping that everyone can participate in the class enjoyably and interestingly.	It is due to learning about SLA in my graduate school and study groups.	I use collaborative learning for one third of my lesson.
Mr. G 30s part-time	I would like to be a starter who can offer learners to get interested in learning and enjoy it.	I myself do not want to do things I am not interested in.	For the first 10 minutes, I try to introduce topics to attract learners' interests or about recent popular events.
Mr. H 40s full time	It's balance. I teach 'language skills (cognitive development)' and 'world view (human development)	The most influential factor is 'middle way' in Buddhism.	In class, language use and for homework, more emphasis is put on skill based learning.
Ms. I 40s part-	To teach & learn everything with joy. Do not give up.	I would like to share happiness of knowing things.	Active learning approach

For the question 4 [Please tell me your teaching philosophies/beliefs that are non-negotiable, if any],

Ms. C: I want to help students decrease resistance toward English learning.

Ms. C: I make it a rule to prepare well for a class because I do not just go and finish the class. That may be my non-negotiable point. I'd like students not to care too much about the points and find something interesting more through English. Because English is one language that is not static, I'd like them to enjoy learning without concentrating too much on the right answers.

Ms. E: Students change year by year, and so are teaching methodologies that are based on research that are changing (developing) constantly. I feel it is important to catch up the changes and I will try hard to keep up learning more and better teaching.

Mr. H: I feel strongly that the present condition of universities is "microcosm of the future world". The idea that our present condition of universities will decide our future makes me think how to improve the present situations.

For the research question 1, “What are the background experiences or reason to form such beliefs?” the answers in column b) match. For the research question 2, “How do teachers reflect their beliefs within the limitation of designated teaching materials and approaches in liberal arts education curricula?” the answers in column c) match.

To summarize, from the results of this study, we can say that to become aware of teacher beliefs can be beneficial for both teachers and students because the answers to RQ 1 (shown in column b) seemed to connect with the answers to RQ 2 (shown in column c) based on column a), that is “teacher beliefs”.

Collaboration and reflection in EP through actual classroom teaching

Class background

Now I will refer to the class I taught in the Fall Semester (Sept. 2018 – Feb. 2019). The class was taught at a mediocre private university in Tokyo known for Liberal Arts including Law, History, Japanese & Chinese History and Economics. Prior to 2016, the courses were loosely set and teachers (70% were hired part-time) were allowed to choose their textbooks according to their syllabi. However, starting 2017, teachers were to use designated textbooks and follow the set syllabus. Below is the description of this course with bold letters to highlight the salient points.

Type of Class:	Compulsory Freshman English. Once a week, one period (90”)
Students:	25 students (14 male, 11 female) majoring in Law. Pre-intermediate (assigned).
Textbook:	Japan Goes Global (designated to Japan/Japanese culture)
Course Theme:	(Assigned) Make sure to master English basic vocabulary and grammatical points.
Attainment Target:	(Assigned) 1. As far as the phrases and expressions you learned in class, you should be able to explain them in Japanese, and to use them correctly in the future course. 2. Related to what you’ve learned in class, you should be able to explain or express your opinions in English about your daily lives, Japanese society and events , whether written or spoken.
Grading:	(Required) Covering 15 chapters in 15 weeks, students are given a chapter test (vocabulary, expressions, grammar points , reports), which accounts for 70%. No exams. Participation, class assignments account for 30%.

My teacher beliefs

All the students in the class had six years of English education, three years in junior and 3 years in senior high school. Most of them had learned English by rote-learning and studying translation and detailed grammatical points. Upon entering college, they hope to learn communicative English though many of them who have entered this university dislike English or feel that they are not good at English. As mentioned earlier, students most often enter this university without having had a chance to develop higher-order thinking skills through debates and presentations in English.

My answer to Question 1: "What are your teaching philosophies/beliefs?"

Applying holistic teaching is one example, which includes (offering chances to the students to engage in) reactions papers, discussion, presentations, and group-project in order to deepen students' awareness and knowledge. In my case, I also try to teach about racism, sexism, linguicism every time related words or concepts are introduced in a designated textbook.

I also tell students the concepts of world Englishes and tell them we should not feel inferior because of limited English abilities. I try to raise awareness of mother tongue, minority languages, and finally why Japanese students need to learn English and to what extent and which Englishes we should aim at.

My answer to Question 2: "What are the reasons and/or experiences that have influenced you to have them?"

My deep interests in history, geography and literature and experiences of studying abroad, have taught me the importance of knowing about those concepts. Though English is promoted strongly in Japan as a part of globalization, I feel students need to know knowledge of not having any 'isms' if they want to become true global citizens.

How and how much do you apply them to your actual teaching?

Unlike the class that I used to teach directly about language policies using the book I had written, "Ten Chapters to know the American Views toward Language: Through the Language Policies against Native Americans, African Americans and Hispanics", you could easily assume how difficult it would be to reflect my teacher beliefs because of designated syllabus and textbook.

In English classes in core education, therefore, every time we come across the words or concepts related to racism, sexism, linguicism in the designated textbook, I try to mention or explain them. For example, we came across the words, salarymen, OLS, and glass ceilings, in the chapter of 'Japan's Company

Culture: The Misery behind the Miracle'. About the word, 'salarymen', I introduced PC (Political Correctness) such as policemen, chairmen, and fireman. Then about OLs, I first explained that it's a Japanese-English word for 'Office Lady', and since it can be interpreted as sexist word, I advise the students to simply use 'office worker'. As for 'glass ceiling', as homework, I ask students to check it, and then ask those who had done the homework to explain the phrase in class.

Because time is limited time and course syllabus is set, I cannot assign students presentations directly on the concepts of '-isms'. As for the presentation, I asked the students to introduce Japanese or foreign cultures or ideas to the world. I assigned the group members in an alphabetical order, and in the group of three members, they first decided the theme. Their first choices were, for example, Valentine's Day (because it's very popular in Japan), fireworks (because Japanese fireworks are beautiful), Halloween, Christmas (because they are popular events in Japan), Tanabata festival (we like the star festival), kimono (because kimono is pretty), and rugby (because one member plays rugby).

Then in the next class, I asked them to examine the topics closely and critically. After discussing among groups in class or outside of class, they decided on the following themes.

Table 4: How the students' themes changed from the 1st group talk to the 4th

First theme	reason	Final theme	reason
Valentine's Day	Popular in Japan	White Day	To think why a day to return gifts 'White Day' is not exercised abroad
Fireworks	Japanese fireworks are beautiful.	Compare Fireworks	Japanese can take it for granted that we can buy fireworks in the store. Consider restrictions overseas.
Halloween Christmas	Popular events in Japan		Realized they are brought from overseas.
Star Festival	We like it.	Star Festival	As it's originally from China, we'd like to improve relationship with China.
Kimono	Because it's pretty	kimono	Should know about our own culture. Compare the present role of China dress.
Rugby	Play rugby	Maori in NZ	Found out Rugby's Haka dance is Maori's. This leads to respect Japanese ethnic minority groups.

My answer to Question 4: “Please tell me your teaching philosophies/beliefs that are non-negotiable, if any”

Linguistic skills are basic but not all. I myself enjoy classes that can help students learn holistically and develop higher order skills, and also the classes where I can learn from the students.

Indeed, with a little suggestion, students can come up with better ideas, and their presentations are insightful to me, too.

Students’ comments

At the end of the semester, with a longer version of a test, I asked the following three questions about their learning.

1. What did you think of this class? (part 1) What did you learn, what was most helpful, and what developed most? What about presentation? (part 2) Reflection points, future goal.
2. Which activities in class were the most helpful and which would you like to continue by yourself? (presentation, reading aloud, writing down the words the teacher read, TOEIC listening, vocabulary test, writing lyrics, and other).

The first question is for the students to reflect their learning. The second part is to help them learn by themselves with sustainability. This will help them continue their learning outside of school and for the future course. In the Table 5, I will show some of the examples.

Table 5: Selected Answers for the Reflection Sheet

1. (part 1)What did you learn, what was most helpful, and what developed most? What about presentation?	
Mr. E	Since the entrance exam, I have forgotten many words. Vocab. Tests remind me of them. As I had never done presentation in English, I was very nervous but gave me a good opportunity paying attention to pronunciation, too.
Mr. S	This class was most difficult of all college English classes because of lots of listening practices which I had not done. Listening over and over helped me listen better. I tried to use simple words for other students to hear easier for my presentation.
Ms. O	Pronunciation and listening practice was good. I learned things from actually attending the class instead of just translating over and over like last semester.
Ms. T	As for presentation, I felt it was very difficult because group members had to make sentences from scratch, and memorize them.

Mr. K	As it was the first time to make presentation all in English, it was a very good experience. As a leader, through deciding a topic & roles, I felt I got matured. Listening was also helpful.
Ms. M	I had never done a presentation in a conversation style. It was more difficult than I had thought while communicating in group, which I felt very important.
1. (part 2) Reflection points, future goal	
Mr. E & S	Could not do well TOEIC listening. Will study for TOEIC in the future.
Ms. O	Reviewing. In the beginning I did both preparation and reviewing but soon I was too busy reviewing.
Ms. T	We paid too much attention to just finishing presentations. Next time, if we have a chance, I'd like to pay more attention to the audience-friendly presentation.
Mr. K	I need to increase vocabulary. When we had a chance to write, I often could not find appropriate words. I need more words for successful communication.
Ms. M	I only knew English that was taught in school, I never thought of communicating with foreign people that the teacher encouraged. Bear this in mind; I'm going to learn English further.
2. Which activities in class was the most helpful and you would like to continue by yourself? (Presentation, reading aloud, writing down the words the teacher read, TOEIC listening, vocabulary test, writing lyrics etc.)	
Mr. E	I'm very bad at listening. Listening and pronouncing confusing words was very helpful. It was good to have a rare experience of getting information and changing it to English and doing presentation.
Mr. S	Writing down English words while listening was the best for long-term memory.
Ms. O	Read aloud was most helpful. It keeps me motivated and good for pronunciation.
Ms. T	Writing down English words while listening was most helpful.
Mr. K	Presentation was most helpful. When we were making a draft, we could learn not only words or grammar but also commonsense in the society.

What is important is not what the students answered but rather that students have to think and reflect on their learning.

Conclusion

In this paper, I first mentioned English language education in Japan. Though communicative competence is called for, it is clear that most students have spent their learning time on preparing for entrance exams with memorizing vocabulary and grammatical points.

It is also clear that teachers have their own philosophy and beliefs about teaching, and try to reflect them in their actual teaching. Teacher beliefs, we believe, will help teachers or future teachers to become reflective practitioners as well as develop learners' cognitive abilities to become active members of this multicultural and multilingual world.

As I mentioned before, collaboration and reflection in exploratory practice works reciprocally. When teachers ask students to reflect their own learning, it will be beneficial for teacher's reflection on teaching, too. By employing many teaching activities, teachers can offer activities suitable for students' learning styles, and for learners, they can reflect their own learning and learning styles, and hopefully can find a sustainable way of learning. Instead of a class evaluation form that is given by school, in this way, teachers can learn from students' actual comments reflecting the class and their learning, and thus teachers can learn from learners and eventually to have a "quality of life" as a teacher, researcher and learner as EP (Exploratory Practice) suggests.

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Chapter XIX

**FROM TEACHING TO LEARNING: TUNE INTO GOOGLE
IN THE ENGLISH CLASSROOM**

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Abstract: According to research, 92% of 2 year-olds have made some kind of digital footprints, 54% of children aged 3–5 (and this data is true for Europe) use a tablet fairly well, while only 4% can tie their shoes. The coming generation of New Millennials expects to use digital resources at school and to be trained in their use. As technologies grow increasingly sophisticated we have to learn more about how students learn and what pedagogical methods work best. Educators are looking for new ways to integrate virtual worlds into the curriculum, including games, whether they be text or game based. This means that education and educators (especially teacher trainers) are faced with serious changes, a lot more serious than we have ever thought. The task is nothing less than to give adequate answers to the challenges of the digital economy. Practically speaking, the endeavor is integrating virtual worlds into the curricula. Failure to do so may result in irreparable consequences: the educational system designed in the 19th century will not help students thrive in the 21st. The paper – which gives examples of primary resources prepared by trainees for classroom use – also relies on secondary sources such as PISA results and international findings. It attempts to address the challenges educators meet and raises the question of whether “anything digital would work”. Examples of practical use are supported by the latest theories and literature on teaching and learning in the new digital environment.

Keywords: *technologies, digital, changes, methods, PISA.*

Introduction

Children’s digital footprints are now taking shape from a very young age. Parents and grandparents upload videos of children, write blogs, or post photos (sometimes even ultrasound scans) about babies who may not have even been born. An introduction study commissioned by AVG found that in the US 92% of children have an online presence by the time they are two compared to 73% of children in the EU. 7% of babies and toddlers have an email address

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created for them by their parents and 5% have a social network profile¹. Research by the NPD Group shows that 82 % of children ages 2 to 5 play games on video-game consoles. Only 4% of the children aged 3–5 (and this data is true for Europe) can tie their shoes whereas 54% use a tablet fairly well². In Hungary today the internet penetration in households is about 74%, mobile penetration is relatively high 118%³, and a Speak Up 2008 report concluded that today's secondary school students see their educational futures built almost entirely around technology. It also suggested that elementary school kids are restless with traditional forms of learning and so schools are eager to incorporate into their educations the electronic tools that have become omnipresent in children's everyday lives: their smartphones, laptops, computers, iPods, or MP3 players (Daly 2008: 7). The vision of a 21st-century learner (back in 2008) has become reality. Classrooms are becoming digital, with students using the computer to play mathematics-learning games and reading interactive e-textbooks. Educators might criticize but cannot afford to dismiss the overflow of computers and social media into students' daily lives. This study will cover two issues: it discusses the challenges of integrating virtual worlds into curricula while shedding light on the latest PISA results and questioning the long-prevailing supposition based on the euphoria from the dot-com frenzy era that "anything that is digital would work".

The demand for good education is on the rise

It is common knowledge that technology is moving so fast that we don't know what jobs will be available in the future. According to the *Insider*, among the jobs that will disappear within 20 years from now will be the cashier, the fast food worker, the retail jeweler, the mail carrier, or the telemarketer.⁴ On the other hand, the *World Economic Forum* gives an account of the 10 top jobs that did not exist 10 years ago, such as app developer, social media manager, uber driver, cloud computing specialist, or YouTube content creator.⁵ The most commonly cited statistics come from a 2013 Oxford study that says that 47% of US jobs are at high risk of automation in the next few decades⁶, while an OECD study points out that 9% of jobs in the organizations' 21 member countries are

¹ <https://www.cnet.com/news/study-92-of-u-s-2-year-olds-have-online-record/>

² <https://www.gameskinny.com/s2x4c/the-top-25-baby-names-inspired-by-video-game-characters>

³ https://www.ksh.hu/stadat_eves_4_7

⁴ <https://www.thisisinsider.com/jobs-going-extinct-2018-5>

⁵ <https://www.weforum.org/agenda/2016/06/10-jobs-that-didn-t-exist-10-years-ago/>

⁶ https://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf

automatable.⁷ Consequently, university students sitting in brick-and-mortar classrooms are being prepared for jobs that might not even exist by the time they graduate.

According to some predictions, our school system will completely change in 10–50 years⁸ More prognoses have rarely been related to other fields than to education, and in relation to the new digital world with robots. The skills that will save us from full digitalization (automation) will be the ability of critical thinking, active listening, and emotional intelligence. The generation of New Millennials, along with others of their generation, will expect to use digital resources, and to be trained in their use. And as technologies grow increasingly sophisticated we learn more about how students learn and what pedagogical methods work best, and in the end, all institutions will use technologies to improve students' learning. Experts are stressing different opinions on reforms addressing traditional versus online teaching but most agree that the current education system designed in the 19th century will not help students thrive in the 21st. It means that education and educators are faced with serious challenges, a lot more serious than we have ever thought of.

“Competencies” are the new skills

The task is no less than to give adequate answers to the challenges of the digital economy while keeping up or improving the quality of education. The committee on defining deeper learning and 21st-century skills in their report on *Education for life and work* promote the importance of “deeper learning”, that is the blending of both knowledge and skills called “21st-century competencies”. The end product is “transferable knowledge” (which often involves shared learning) and that makes the students able to take what was learned in one situation and apply it to new ones (“Front Matter” 2002: 70). Levy and Murnane (2004) argue that demand is growing for non-routine problem solving and complex communication competencies since it is predicted that jobs requiring low or moderate levels of competence will continue to decline in the future. Thus the authors recommend that schools teach complex communication and problem-solving competencies. When it comes to the importance of problem-solving, the University of Stanford is breaking with traditions by immersing faculty and students in interdisciplinary work and learn through problem-solving. They see their success in their robust “liberal-arts environment” and collaboration across schools and disciplines (McMurtrie 2015).

We are expected to change. Old terms have been modified and renamed: “skills” have become “competencies”, teachers are being transformed into

⁷ https://www.oecd.org/els/emp/wcms_556984.pdf

⁸ <http://library.cotr.bc.ca/Documents/NewClassroomChronicle2010.pdf>

coaches, tutors or facilitators, who are to report back to “helicopter parents”⁹, while the buzz-words are *LMS*, *web apps*, and *mobile computing* technologies.

As a result of the ed-tech boom in the '90s, huge amounts of money have been injected into education projects labeled “digital”. In Hungary in 2016 Internet access at school was above the OECD average (95.6% of the students had access to computers at school, while the OECD average was 93.1%); 63.3% of students actually used computers and 69.5% used the Internet. Educators are trying hard to keep up with the rapid changes in technology and experiment with the new blessing (and/or curse) devices and applications. According to 2005/2006 statistics, 494 teachers were reported to use the Internet regularly in the classroom, and this number had more than doubled by 2015/2016.¹⁰

The advocates of digital education and dedicated users of digital material put the emphasis on its flexibility, and facilitate the “learning anytime, anywhere”, “learn on the go” option whilst meeting the demand of the tech-savvy generation. Besides, they say, it supports teamwork, informal peer learning, practical experimentation, and develops information literacy skills. Digital experts highlight the potential of problem-solving through a combination of contexts, activities, and actions, and call attention to the “fun” part, which is about transforming learning into an enjoyable experience.

Digital know-how in education

Several teaching resources with practical advice are available for educators who want to turn the use of the Internet to their own advantage and want to educate “digitally literate” students. Any primary school teacher, even a trainee, knows that digital literacy involves mastering many different skills, from analysing how texts are organized to understanding the writer’s reasons for writing. Similarly, *digital literacy* should be understood as a range of separate sub-skills, or *literacies*. Literacy is more than just the ability to read and write. The quantity of literature on 21st-century learning frameworks on digital literacies is endless¹¹. The issue here is not a lack of essential reading skills or foreign language skills, but new digital skills or “digital literacies”, vital for the 21st -century learner. These skills include – as well as knowing the right search terms to find exactly what they need on Google – managing information overload and being able to discern critically whether learning tools are effective or not. Without these skills, both learners and teachers might get very frustrated, despite their best intentions.

⁹ Overprotective parent who discourages a child’s independence by being too involved in the child’s life (based on <http://www.dictionary.com/browse/helicopter--parent>)

¹⁰http://www.kormany.hu/download/0/83/f0000/Koznevelesi_statistikai_evkonyv_2015_2016.pdf

¹¹ <http://www.p21.org/our-work/p21-framework>

In the end, information-communication technology has revolutionized education, and modified teachers' roles and instruction methods. Hence, an integral part of teacher training is to prepare students on how to use IT in the English classroom. Bell and Biott (1997) give an insight into their observation of trainees' pre-service school practice where students are placed with supervisors who avoid using computers in their own classes, and who are concurrently under extraordinary pressures that are stimulated, in part, by new technologies themselves. Not all teachers would say that they are particularly "digitally literate". Moreover, it is quite a challenge for educators to follow rapid IT changes and keep pace with the latest gadgets their students comfortably use. Technology development should stop for some years so that teachers could take time to learn and catch up. This raises the question: how can a teacher teach something he/she lacks confidence in? Most certainly, teaching an online course without the basic knowledge of IT behind it is a predisposition to failure, but it must be remembered that digital literacy is only partially about technical know-how. Howard Rheingold (2010) points out that instructors should not keep up with the latest technologies but "keep up with the literacies that the technology makes possible". Nicky Hockley (2012) argues that a lot of the skills involve critically evaluating material found online and taking a step back to question accepted opinions.

Compulsory computer use for some teachers of English can easily be experienced as an extra burden rather than a potential aid. Others realize the importance of having their language lessons accompanied by multimedia and look for opportunities within in-service training for professional development. Teacher trainees are often in a better position than experienced teachers to adopt new methods of teaching and learning. They do not have established routines, nor do they have to take sole responsibility for their classroom at first. They are also exposed, during their training, to a range of opinions and contexts, therefore, more and more often they use different Internet sites and platforms to stimulate students thinking, motivation and interest, or simply, for the fun part. In spite of being trained for the methodical use of computers without proper guidance from the class teacher, most trainees would experiment with software on an ad hoc basis since the use of IT is not a cornerstone of the curriculum they are expected to follow. Bell and Biott also emphasise that teachers should not see the use of IT in class as an "exotic extra", but "as a responsive and integral element in a classroom curriculum that has been rethought to include a view of what computers might do" (p. 130).

The 2015 PISA paradox: the more input the less output?

While most university administrators are applying austerity measures to reduce costs in research and development and make calculations concerning

information technology development plans, education policymakers together with venture capitalists see education as one of the most promising investment opportunities. The supporters of the ed-tech boom are happy to find that digital apps can provide students with a virtual arena that can support the acquisition of many of the necessary literary skills. Computer-assisted teaching is on the go and appears to be ready to answer the challenges of 21st-century global education. The Hungarian Government has launched its “Digital Well-being Program 2017” according to which 170,000 teachers will be provided with 70,000 IT devices, 45,000 laptops, i-pads, smart TV-s, and projectors worth 24.5 billion HUF¹². Unfortunately, this latter issue of meeting the global requirement of education did not live up to the expectations of either the public, or the governments in many countries when the PISA results were released in 2015¹³. It seems that there is a paradox between computer and Internet access and the PISA results, which is not exclusively a Hungarian phenomenon. Spending more on computers and classroom technology does not improve pupils’ performance, says a global study from the OECD. OECD’s report *Students, Computers and Learning: Making the Connection* (2015) examines the impact of school technology on international test results and concludes that education systems which have invested heavily in information and communications technology have seen “no noticeable improvement” in PISA test results for reading, mathematics or science.

Although PISA cannot identify a clear cause and effective relationship between the use of digital material, computers and students outcomes, it can give educators, education policymakers, and the taxpayers a picture about the position of their education system compared to other countries. Test results for 2015 indicate that the performance of students in many OECD countries shows a steady decline in core subjects.¹⁴ Asian countries topped the rankings across all subjects, and Singapore was the top performing country across all three core subjects (see Table 1).

¹² <http://www.kormany.hu/download/6/6d/21000/DJP20%20Strat%C3%A9giai%20Tanulm%C3%A1ny.pdf>. 74 million €

¹³ PISA test is administered by OECD and taken in more than 70 countries every three consecutive year

¹⁴ Only in Canada, Estonia, Finland, Hong Kong (China), Japan, Macao (China) and Singapore could students master the baseline level of proficiency in science, reading and maths.

Table 1: PISA results

	Science		Reading	
	Mean score in PISA 2015	Average three-year trend	Mean score in PISA 2015	Average three-year trend
	Mean	Score dif.	Mean	Score dif.
OECD average	493	-1	493	-1
Singapore	556	7	535	5
Japan	538	3	516	-2
Estonia	534	2	519	9
Chinese Taipei	532	0	497	1
Finland	531	-11	526	-5
Macao (China)	529	6	509	11
Canada	528	-2	527	1
Viet Nam	525	-4	487	-21
Hong Kong (China)	523	-5	527	-3
B-S-J-G (China)	518	m	494	m
Korea	516	-2	517	-11
New Zealand	513	-7	509	-6
Slovenia	513	-2	505	11
Australia	510	-6	503	-6
United Kingdom	509	-1	498	2
Germany	509	-2	509	6
Netherlands	509	-5	503	-3
Switzerland	506	-2	492	-4
Ireland	503	0	521	13
Belgium	502	-3	499	-4
Denmark	502	2	500	3
Poland	501	3	506	3
Portugal	501	8	498	4
Norway	498	3	513	5
United States	496	2	497	-1
Austria	495	-5	485	-5
France	495	0	499	2
Sweden	493	-4	500	1
Czech Republic	493	-5	487	5
Spain	493	2	496	7
Latvia	490	1	488	2
Russia	487	3	495	17
Luxembourg	483	0	481	5
Italy	481	2	485	0
Hungary	477	-9	470	-12
Lithuania	475	-3	472	2
Croatia	475	-5	487	5
CABA (Argentina)	475	51	475	46
Iceland	473	-7	482	-9
Israel	467	5	479	2
Malta	465	2	447	3
Slovak Republic	461	-10	453	-12
Greece	455	-6	467	-8
Chile	447	2	459	5
Bulgaria	446	4	432	1
United Arab Emirates	437	-12	434	-8
Uruguay	435	1	437	5
Romania	435	6	434	4
Cyprus ¹	433	-5	443	-6
Moldova	428	9	416	17
Albania	427	18	405	10
Turkey	425	2	428	-18
Trinidad and Tobago	425	7	427	5
Thailand	421	2	409	-6
Costa Rica	420	-7	427	-9
Qatar	418	21	402	15
Colombia	416	8	425	6
Mexico	416	2	423	-1
Montenegro	411	1	427	10
Georgia	411	23	401	16
Jordan	409	-5	408	2
Indonesia	403	3	397	-2
Brazil	401	3	407	-2
Peru	397	14	398	14
Lebanon	386	m	347	m
Tunisia	386	0	361	-21
FYROM	384	m	352	m
Kosovo	378	m	347	m
Algeria	376	m	350	m
Dominican Republic	332	m	358	m

Source: https://read.oecd-ilibrary.org/education/pisa-2015-results-volume-i/snapshot-of-performance-in-science-reading-and-mathematics_9789264266490-graph1-en#page1

Quality and quantity in PISA test results

In 2015 the OECD moved from paper-based evaluation to computer-based evaluation, which raised the issue of comparability based on country differences with computer use. The 2015 test featured a computer-based reading section, which differed from the typical “paper-and-pencil” PISA reading exam in that it simulated situations students would come across in an online setting, including “navigat[ing] through and across texts by using such tools as hyperlinks, browser button, or scrolling”. As read in the OECD summary “students with good reading skills, regardless of their background, scored better at the tests since they have a much easier time finding their way around the Internet”. It is worth noting that top performers in this section show proficiency in certain digital literacy skills, such as “evaluat[ing] information from several sources, assessing the credibility and utility of what they read using criteria that they have generated themselves, [...] [and] solv[ing] tasks that require the reader to locate information, related to an unfamiliar context, in the presence of ambiguity and without explicit directions” (Song 2016). Apparently, it is more difficult to build digital literacy if students do not have the foundational reading skills necessary to evaluate source quality or draw inferences from multiple web pages. Correlational analyses published by OECD revealed that changes in the mode of delivery were not responsible for the weaker performance of students.

Different approaches – different findings

Elena C. Papanastasiou examines the relationship between computer use and students’ science achievement and highlights that it is not computer use itself that has a positive or negative effect on the science achievement of students, but the way in which computers are used (Papanastasiou et al. 2003).

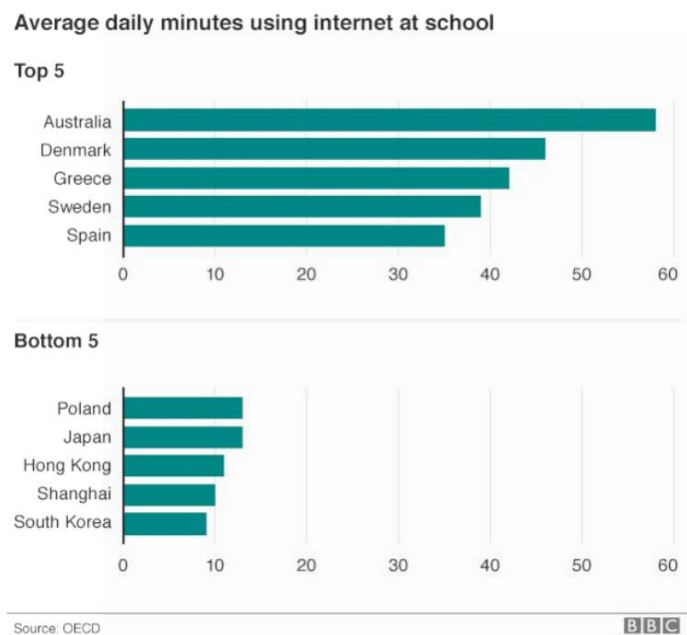
Lei and Zhao (2007) concluded earlier that students who used computers for more than three hours per day experienced a decrease in achievement while students who spent 1 to 3 hours per day with computers experienced an increase. They also found that not all types of tasks enhance achievements. A recent body of literature, however, has begun to suggest that entertainment-oriented ICT tasks, even when such tasks are not specifically designed to be educational, can have a significant effect on overall learning, which then indirectly contributes to general knowledge and achievement (Lei 2010). There is also evidence that proficiency in skills acquired in virtual worlds may pay off in the physical world. Educators are looking for new ways to integrate virtual worlds, including games, into the curriculum.¹⁵ Meanwhile, Iowa State University released a study and found that children who played video games and watched

¹⁵ <http://www.mozaweb.com/hu>

TV faced “greater attention problems” while in school. Research claims that there is a correlation between high-volume gameplay and Attention Deficit Disorder. The findings reveal that exposure to screen media and video games was associated with greater attention problems in middle childhood or late adolescent (Swing et al. 2010).

The PISA 2015 results do indicate that there is a connection between computer use in the classroom and students’ achievement. Those students who use tablets and computers very often tend to do worse than those who use them moderately. The best-performing East Asian countries have been very cautious about using technology in their classrooms (See Table 2). Finland, that has been one of the top performers in PISA for much of the 21st century, started to slide in 2012, and dropped scores in all three categories in 2015. They identify the reason for a decline in reading comprehension with the excessive use of handful of technologies such as smartphones and the rapidly increased “screen time” (*The Washington Post* 2016).

Table 2. Average daily minutes using internet at school.



Source: <http://www.bbc.com/news/business-34174796>

Conclusion

The labour market demand for a highly qualified workforce with transferable skills and competencies has risen over the past two decades. There is

some bare evidence that employers value and reward a rather diffused mix of cognitive, intrapersonal, and interpersonal competencies. The committee of the National Research Council in “Front Matter” (2012) mentioned earlier comes to the conclusion that 21st-century skills are “[...] dimensions of human competence that have been valuable for many centuries, rather than skills that are suddenly new, unique, and valuable today” (p. 20). They point out two differences between the past and the present competencies: one lies in high levels of mastery of special skills and knowledge, the other is attributed to the “pervasive spread of digital technologies to communicate and share information”. It is stressed that although the underlying communication and information-processing competencies have not changed much, they are spreading at an increasing pace and used in different life contexts, both in public and private spheres, with special emphasis on social networks (p. 21). With reference to recent press reports, 16–21 year-olds spend 3.4 hours daily on the internet, and 93% of them have a Facebook account.¹⁶ Pasi Sahlberg, a leading Finnish education-policy expert blamed the excessive use of the Internet for Finland’s slipping performance in the PISA tests. The experience of “reading for pleasure” that used to be exemplary for children has decreased while the number of smartphones among school-aged pupils has increased tremendously. According to Sahlberg most teenagers in Finland spend more than 4 hours a day on the Internet, and as a result, there is an increased amount of “screen time” to the detriment of “study time” or “reading time”. He added that a numerous amount of research investigating the effect of the internet on the brain outlines three principal consequences: shallower information processing, increased distractibility, and altered self-control mechanisms.¹⁷

In 2015 BBC News quoted a global study from the OECD when the evaluation of PISA results were highlighted: “Investigating heavily in school computers and classroom technology does not improve pupils’ performance” and consulted OECD education director Andreas Schleider, who summed up his standing on the topic by saying that “Making sure all children have a good grasp of reading and maths is a more effective way to close the gap than an”access to hi-tech devices”.¹⁸

Software developers are exploring the potential of virtual worlds for educational purposes, but there are experts and scholars who are skeptical. There is not enough research available for educators to better understand and fully

¹⁶ https://www.napi.hu/tech/elgondolkodtato_adatok_a_fiatalok_nethasznalatarol.647999.html

¹⁷ https://www.washingtonpost.com/local/education/finlands-schools-were-once-the-envy-of-the-world-now-theyre-slipping/2016/12/08/dcf0f56-bd60-11e6-91ee-1addfe36cbe_story.html?utm_term=.95a5ca975f0b

¹⁸ <https://www.bbc.com/news/business-34174796>

utilize those virtual spaces. The most common criticism towards new learning platforms is lack of hard evidence: e.g. small sample size, no control groups, no estimates of cost savings. While opinions differ regarding the T/L outcomes the fears that technology alone will not save education are well-established. In a debate in the *Economist* about whether new technology and media can add to the quality of education, Sir John Daniel, president, and CEO of the Commonwealth of Learning noted,

“[T]here is the quest for the magic medium, the ultimate technology that will revolutionize education. Yesterday it was the Internet; today it is Open Educational Resources. But there is no magic medium and never will be. Each technology has its strengths. The task is to use them to create a world where education of quality is abundantly available” (Daniel 2007).

It concludes from the above that we have done something wrong. We made a priority to IT devices, we have spent a lot on technology, installed multimedia in every space, and now we are facing the situation that we do not know, we cannot decide what went wrong when we prioritized the virtual world instead of the real. Incidentally, media teaching skills are still not a mandatory part of teacher training in all parts of the country. It seems obvious that the information superhighway alone is not a remedy for poor education achievement on PISA tests. Not by itself. But it can be part of an answer. Marc Prensky, a writer well-known for his ideas about digital learning says that when people talk about technology, they are often referring to the ‘nouns’ of technology: apps, devices, digital tools, email. In other words, the specific pieces of software and hardware we hear about, and which are constantly changing. He argues that it is more important that we focus on the ‘verbs’ of technology. These include “thinking critically, presenting logically, communicating, making decisions, being rigorous, understanding content and context, and persuading” (Prensky 2016,) Although the nouns have changed, the verbs have remained the same. In the end, digital education may not completely replace educational activities that take place in real life, but educators with technology-based institutions may find that virtual worlds enable them to move away from the 19th- century rote learning. Thus the question is not whether we are on the information superhighway, but rather, whether it is the right direction.

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IMPACT OF ENGLISH TEACHERS' COMPETENCIES ON STUDENTS' LEARNING AND ACHIEVEMENT: TEACHERS' AND STUDENTS' PERSPECTIVES IN PRIVATE SECONDARY SCHOOL (OBERSTUFE) EDUCATION IN THE FEDERAL STATE OF SCHLESWIG HOLSTEIN, GERMANY¹

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Abstract: The paper aims to research how secondary school (German: Oberstufe) students perceive the quality of English teachers' competencies in terms of their effect on students' learning. Four major categories of teacher competencies (prescribed by the Ministry of Schleswig Holstein) were examined to discover the quality of teachers' competencies as perceived by teachers on the one hand, and the effect of these competencies on students' overall English language knowledge on the other. The ratings of teacher and student perceptions were quantitatively gathered in a survey using a five point Likert scale. Students' responses were qualitatively collated and analysed as well. The findings show that more than half of the participating English teachers have negative opinion about the contribution of the related competencies to their professional identity and overall students' knowledge, which was confirmed by the group of examined students. However, teacher training programs could benefit from the practical experiences of teachers and their suggestions while making adaptations in teacher training both at pre-service and in-service level.

Keywords: *teacher competencies, students' knowledge, English as a foreign language, upper grades of secondary school (German: Oberstufe).*

Introduction

Efficient teaching and learning has become a significant field of research in various countries and domains over the last decade. The teacher has a very

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important position in any school system, therefore, teacher quality is an important educational issue, and teacher qualifications have become an important component of teacher quality (Okpala & Ellis, 2005).

According to Whitty (1996: 89–90) there are two sets of qualities that characterize a successful professional teacher: professional characteristics and professional competencies. Professional characteristics comprise professional values, personal and professional development, communication and relationships as well as synthesis and application (Ibid.). Professional competencies include knowledge and understanding of students and their learning, subject knowledge, curriculum, the education system, and the teacher's role (Ibid.).

Medley & Shannon (1994: 213) have a different attitude so they state that there are three dimensions of teacher quality instead of two: teacher effectiveness, teacher performance, and teacher competency. **Teacher effectiveness** as a teacher competence includes three main components: interpersonal skills, classroom procedures, and subject knowledge. This component can be related to social competence because it is about a teacher's ability to communicate with the student, understand his/her learning difficulties and create a positive atmosphere. **Teacher performance**, as a second component, explains teachers' subject knowledge and their ability to plan and structure the content. The third component, **teacher competence**, is related to teachers' teaching skills and teaching methods. Well-developed teaching skills and effective teaching methods can lead to positive individual student development. In contrast, incompetent teacher can affect students' motivation for language learning and lower their self-esteem (Ćirković-Miladinović, 2017).

All three components are equally important, but this paper will be focused on teacher competencies which, in more general terms, are called teaching skills, i.e. the ability to organize and teach in interesting and flexible ways, using good teaching methods. In order to explain this concept, Sultan and Shafi (2014: 10) point out that competencies are specific and self-evident qualities or properties a teacher should possess in order to make a persuasive and student-favourable climate. Further, competencies are concerned with three areas of learner's behaviour in which the teacher helps students to create a basis and investigative disposition, to predict progression in all areas of life and its effect on the social order, and to help learners with moderating and transmitting qualities supported by the social order (Ibid.).

Being a competent teacher means showing a high degree of professionalism inside and outside the classroom. Certainly, it is difficult for a teacher to have all competencies and capabilities in perfect amalgam. However, developing skills and taking into account the acquired experience may lead a teacher towards gaining competency (Dorman, 2001). Teacher competence needs to be very high in order for meaningful teaching and learning processes to take place (Segun, 1986). In Germany, at the secondary school level, where a

distinction is made between **Junior Secondary School** (from 5th to 9th grade) and **Senior Secondary School** (from 10th to 12th grade – Oberstufe) curricula, teacher competencies for each level, and appropriate subjects would vary as well. These competencies must therefore be adequate and appropriate in terms of the school level and relate to academic and professional preparation, professional growth, classroom interaction and evaluation (Macaulay, 1986).

Unlike Medley and Shannon (1994: 213) who relate teacher competence to teachers' teaching skills and teaching methods, Akpan (2002) believes that teachers' professional competencies are both academic and pedagogical. Academic competency includes the teachers' knowledge of his subject while pedagogical competency is the art of teaching the subject, observing such principles as teaching from known to unknown, concrete to abstract, and from simple to complex (Akpan 2002). The English language teacher's success in the classroom depends very much on his preparation for the instruction process. Other competencies required of teachers include knowledge of subject matter, pedagogy, skill processes, resourcefulness, behaviour, motivation and evaluation (Ivowi, 1986). A competent foreign language teacher attends conferences, workshops and seminars, has good classroom control, effective communicative skills, adequate knowledge of the subject, utilizes a variety of teaching methods or strategies, and shows enthusiasm for teaching (Akinbobola, 2004).

It is well known that teaching and learning have a causal relationship. Former research discoveries linked with teacher competencies have identified that there is a solid relationship between teacher's ability and feasible learning outcomes (Allen, Fraser 2007). Wade and Moor (1992) indicate that teachers need to learn teaching methods and to be prepared to shape themselves into proficient teachers, certain of their own capabilities and confident of the students' potential. One of the essential concerns of educational research is to see how classroom settings impact students' education and achievements (Bouffard, Roy, Vezeau, 2005).

A few studies have demonstrated that teaching in the classroom may have either positive or negative impact on students' performance and accomplishments (Pianta et al. 2008; Aikens, Barbarin, 2008). Student performance is impacted by many school variables, for example, school poverty (Aikens, Barbarin 2008) or the school environment (Pianta et al. 2008), competent teachers, students' and teachers' motivation and ambition, school management, learning resources, parents' involvement in school life and many other elements. According to the previously mentioned studies, teacher's competence and warmth were the two most significant elements connected with successful scholarly performance in elementary school (Birch, Ladd, 1997). Pianta's study represented longitudinal research on classroom atmosphere as a correspondence of accomplishment of development (Pianta et al. 2008). Perception of the classroom environment reported by students has additionally been analysed

in connection with academic accomplishment (Bennacer 2000; Crosnoe, Johnson, Edler 2004). All these studies have shown that students' perception of the teacher is a fundamental element of teacher's performance in the classroom, so it may be said that teaching and learning processes cannot be separated. Teachers and students are associates and it is very important how they perceive each other.

Even though most students in school have a clear notion of their teachers' different capacities, we still lack information regarding the importance of teacher competence for student development. This has been difficult to find out owing to the many different factors of influence concerned and due to a lack of necessary methods of analysis to distinguish between different sources of variation among teachers (Malm, Lofgren 2006: 62). This paper will, therefore, try to establish whether there is a dependence between teacher competencies and students' knowledge of the English language from the example of a German private school.

Chancellor Gerhard Schröder voiced a widely shared view in education policy when he asked for English to become a compulsory foreign language from the first years of primary school (see "Stellungnahmen: Englisch ab der 1. Klasse", Die Woche 17, April 21, 2000). Subsequently, the use of the target language English became one of the top tasks of teachers in Germany (Weskamp 2011). Thus, the shift towards English as *lingua franca* (ELF) has affected the spread of English in education. But has it also affected the substance and the objectives of English language teaching?

Research problem

According to the Joint Declaration of the Conference of Ministers of Education and the Chair of the Teacher' Associations (October 2000), standards for teacher education and competencies were grouped into four categories: A) **Teaching** – competence 1: teachers plan and evaluate lessons in a professional and appropriate manner and carry them out objectively and professionally; competence 2: teachers support the learning of students through the design of learning situations, they motivate students and enable them to establish connections and to use what they have learned; competence 3: teachers promote students' ability to learn and work independently. B) **Education** – competence 1: teachers carry out their educational task; competence 2: teachers have a role model, they know the social and cultural living conditions of pupils and influence their individual development within the school; competence 3: teachers communicate values and norms and support self-determined judgments and actions of pupils. C) **Judging** – competence 1: teachers exercise their assessment task fairly and responsibly; competency 2: teachers diagnose learning

prerequisites and learning processes of pupils; they promote pupils in a targeted and differentiated way and advise learners and their parents; competence 3: teachers record students' achievement on the basis of transparent assessment criteria. D) **Innovation** – competence 1: teachers are constantly developing their skills; competence 2: teachers are aware of the special requirements of the teaching profession, they understand their profession as a public office with special responsibility and obligation; competency 3: teachers see their profession as a continuous learning task; competence 4: teachers participate in the planning and implementation of school projects.

Method

Purpose of the study

The study aims at achieving the following objectives: 1) to investigate English teachers' opinion about the contribution of the related competencies (prescribed by the Ministry of Schleswig Holstein) to their professional identity and overall students' English language knowledge. 2) to determine students' attitude towards the influence of teachers' qualification and competencies on the school performance of students in English.

Participants

The research was conducted in one private secondary school in the federal state of Schleswig- Holstein, Germany. All the participants, students $N = 130$, were at the Gymnasium upper level (Oberstufe) which is three-year education comprising class levels 10 to 12. In this institution students prepare for the German Abitur (after class 12) as the final examination for university access. The school offers the following secondary level profiles: 1) Mathematics and natural science profile with possible profile subjects: biology or physics. Profile enhancement subjects are biology, physics and chemistry; 2) Linguistic profile with the profile subject: Spanish. Profile enhancement subjects are French, Russian and History; 3) Socio-economic profile with the possible profile subjects: Economy and Politics, History or Geography. The two non-selected social sciences are then also profiled as enhanced subjects; 4) Sports profile contains Sports and Health science. Profile enhancement subjects are Biology and History. Examined students aged between 16 and 17. These pupils were mainly German (67%), Turkish (13%), Dutch (7%), Polish (5%), Russian (4%) and other (4%). They studied English as a foreign language in school. To those students who were not German, the German language was their first foreign language and English the second one.

Total number of teachers who participated in this survey was 21. Examined teachers, N = 21, were teaching in the same private international school and they were teaching English as a foreign language. The school is situated in two nearby cities in Germany and has 1460 students overall.

Results and discussion

Teachers were asked to rate four categories of competencies according to Schleswig- Holstein standards for teacher education in terms of how much each of the competencies contributed to their own preparedness to teach, assess, and innovate as well as in terms of their professional development and identity. This means that teachers were surveyed to rate each item according to their personal feeling on whether they possessed certain competency or not. The results are presented in Table 1. below where the numbers represent an average values of 5-point Likert scale (1 – Not at all satisfied, 2 – Slightly satisfied, 3 – Neutral, 4 – Very satisfied, 5 – Extremely satisfied) for each category A, B, C or D and each item 1, 2, 3 or 4 as explained previously.

Table 1: Four categories of teacher competencies

Average values for each item												
A) Teaching			B) Education			C) Judging			D) Innovation			
1	2	3	1	2	3	1	2	3	1	2	3	4
4.14	3.23	3.57	4.55	3.07	2.96	3.44	3.13	4.34	2.98	3.00	2.89	2.83

The highest level of competency for teachers (4.55) was given to category B – *Education* and item number 1: *Teachers carry out their educational task*. The second most important item was number 3 from category C – *Judging* (4.34): *Teachers record students' achievement on the basis of transparent assessment criteria*, followed by item number 1 from category A – *Teaching* (4.14): *Teachers plan and evaluate lessons in a professional and appropriate manner and carry them out objectively and professionally*. These results could be explained on the basis of the concrete situation in the surveyed school and the demands that the school owner poses to teachers. Namely, the most important activity for teachers in this school is to carry out the educational task and to prepare the materials for individual students' work. Teachers spend most of their time preparing the materials and making copies because students are not allowed to use workbooks in English classes. Furthermore, teachers believe that their core task is targeted planning and organization of lessons while they lack time for the reflection on teaching and learning processes. Teachers were

also not satisfied with having no time for individual and systemic evaluation. In addition, teachers are expected to cooperate very closely with parents because parents pay the school fees for their children and in return they demand the best education for that money. Both sides, parents and teachers, need to communicate and agree in order to find constructive solutions when it comes to educational problems or when learning process fails.

If we take into consideration that the professional quality of teachers depends on the quality of their teaching and their own satisfaction with their teaching skills, it is not surprising that teachers rated all four items from the category D as the least important items (explanation is given in the section Research problem); The reason for this could be very high demands in the field of teaching and education (category A and B) so teachers after 5 to 8 lessons a day and 9 working hours overall do not have additional motivation to develop their competencies or to take account of the new developments and scientific findings in their professional activities. Continuing education and training is usually done after long working hours of a school day and it is focused only on lesson management without leaving space for innovation and teachers' creativity.

Also, each category was analysed according to teachers' view on how much their competencies contribute to a better quality of students' English language knowledge. The statements were rated in series from 1 to 5 where 1 was considered very poor, 2 – poor, 3 – acceptable, 4 – good, 5 – very good. The results are given in Table 2. below.

Table 2: Average values of competencies' contribution to overall student's English knowledge rated by teachers and students' ratings of their own skills

Language skills		Average values given by teachers	Average values given by students	Matching and non-matching values
READING	Skimming and scanning	4.01	4.09	+
	Reading to learn from texts	3.79	3.71	+
	Reading to write	3.82	3.80	+
	Reading to critique texts	4.57	3.67	-
WRITING	Creative writing	4.44	3.24	-
	Summary writing	4.38	4.30	-
	Essay	4.12	4.08	+
	Formal/informal letter	3.99	3.90	+
LISTENING	Talk, lecture, speech	3.74	3.72	+
	Telephone conversation	3.75	3.71	+
	Discussion, debate	3.66	4.42	-
	Conversation	3.76	3.74	+
SPEAKING	Giving a presentation	3.77	3.73	+
	Project work in group	3.69	4.32	-
	Taking part in a conversation	3.70	4.00	-
	Discussion, debate	3.66	4.11	-

Note: The activities analysed for the purpose of this research were taken from the Schleswig Holstein curricula prescribed for this level of the English language knowledge.

According to the results in Table 2, teachers believe that the most practiced skills are reading and writing because these are believed to be the most important skills for the university studying and academic research. Since the focus of the research was on senior secondary school students (from 10th to 12th grade) and their teachers, results like these were expected. Teachers think that their competencies mostly contribute to students' reading and writing skills – *reading to critique texts* (4.57), followed by *creative writing* (4.44) *summary writing* (4.38) and *essay* (4.12). This might be due to the fact that students are mainly left to work individually because the intellectual competence of a student is considered to be the primary asset in the quality of learning the students acquire in German schools. On the other hand, teachers believe that

their competencies least contribute to listening and speaking skills, specifically, *discussion and debate* (3.66), *project work in group* (3.69) and *taking part in a conversation* (3.70). This might be due to the fact that the focus on specific skills and the quality of instruction depends on the curricula arrangement of the resources at the disposal of a teacher, not necessarily on their competencies. Also, if we take into consideration test results of these students, we may notice that spelling and grammar are the most difficult areas of English for German students (the overall grade for the questioned students in the mentioned tests was 3.15 where 1 is the best grade and 5 is the lowest passing grade). Thus, we may also point out that students in this school struggle a lot with spelling even in their mother tongue, so, for this reason, the focus is on writing skills both in German as L1 and in English too.

One of the aims of this paper was to research how Secondary school (upper level) students perceive the teaching quality of English teachers in terms of the effect these qualities (competencies) have on students' L2 learning. The average values in Table 2. represent teachers' satisfaction with their own competencies in terms of contribution to overall student's English knowledge and students' responses on how they themselves perceive and rate their own English language skills. Correspondingly, the last column represents comparison of (non)matching values of teachers' and students' responses.

The majority of students rate *summary writing* (4.30), *discussion and debate* (4.32), and *project work in group* (4.32) as the language skills they possess at the highest level. The only match between teachers' and students' responses we may notice is regarding *summary writing*. The least practiced skills according to students were *reading to critique texts* (3.67) and *creative writing* (3.24) although the teachers thought that these were the ones at the very high level, thanks to the teaching skills and lesson activities teachers provide in English lessons. Non-matching values were found in terms of *taking part in a conversation* (4.00 according to students and only 3.70 according to teachers). Discrepancy was also found concerning *discussion and debate* where students think that their skill is at (4.32) level while teachers think that students are very poor in these skills (3.66). In rating these skills, 1 was considered very poor and 5 – very good.

In comparing teachers' and students' ratings of the same language skills, it can be seen that the surveyed students feel that they do not have the level of skill their teachers expect them to have on one hand, and on the other hand, students feel that they have certain skills at higher level while their teachers think that these skills are fairly poor.

In order to explain these results, students were asked to give answers to questions in the survey and to rate teacher competencies in terms of the quality of the English language lessons.

Namely, all students' ratings on how they perceive the quality of English teachers' competencies in terms of the effect these have on students' learning outcomes, were collated and analysed. The data is of the collective experience and is equally valid whether stated by one person or more (Akerlind, 2005: 323 in Penn-Edwards, 2010). The results are presented in Table 3.

Table 3: Four categories of teacher competencies rated by students

Average values for each item												
A) Teaching			B) Education			C) Judging			D) Innovation			
1	2	3	1	2	3	1	2	3	1	2	3	4
4.55	3.07	4.47	4.23	2.89	2.84	3.00	3.11	2.87	NA	NA	NA	2.76

The highest level of competency for teachers (4.55) was given to the category of teaching (*teachers plan and evaluate lessons in a professional and appropriate manner and carry them out objectively and professionally*). This item was rated higher by more students (86.33%) than any of the other competencies. Students then rated the following items *teachers promote students' ability to learn and work independently* (4.47) and *teachers carry out their educational task* (4.23), as the next highest expected teacher skills. These are evidently seen as important teaching skills for students in this school which students explained in comments given in the survey: *Teachers of English in my school teach in a professional way, they are always prepared for the lesson* (86.33% of students gave such a comment); *Our English teachers insist on writing tasks and individual work* (81.23%) and *they follow the curriculum no matter what* (80.57%). Students were least satisfied with items number 2 (*Teachers know the social and cultural living conditions of pupils and influence their individual development within the school*) and 3 (*Teachers communicate values and norms and support self-determined judgments and actions of pupils*) in Education category. In order to explain their perceptions, students gave the following comments: *It is not usual to talk to teachers about our everyday life and living conditions, only the class teacher is allowed to know this* (75.15%); *Teachers pay attention only to those who are very good students and support them, the rest of us are left behind* (71.37%). Given answers were followed by the items from the category *Judging* (3.00, 3.11, and 2.87). These low scores were explained by the following students' comments: *Teachers are only concerned to record test grades* (68.88%); *In judging our knowledge, teachers rely only on written assignments and do not practice oral evaluation* (64%); *We work really hard during the whole year to master summary writing and to analyse texts but in the end it turns out that we are not well prepared* (62.21%); *Teachers do not pay attention to our feelings* (62.07%). For the category *Innovation*, students could only

give answers for the item number 4 (*Teachers participate in the planning and implementation of school projects*) explaining that students are also included in these projects, especially in Erasmus mobility programme where English is in demand. Many students (59.43%) said that they would like to have the chance to go abroad and to practice English outside the school.

The findings in research task one showed that teachers are not satisfied with the contribution of the prescribed competencies to their professional identity and overall students' English language knowledge. Teachers believe that they need more time to practice speaking with students, especially discussion and debate while writing skills are thought to be practiced the most. Also, teachers were not pleased with the allocated time for their professional development and according to their comments, these sessions were not useful for the improvement of their teaching skills. This is in line with the finding of Ivowi (1986) that there is significant relationship between teachers' competence and students' performance.

The results of research task two showed that students are mainly not satisfied with teachers' judging competencies and they pointed out that speaking skills and creative writing tasks are the ones least practiced in the classroom. This might be due to the fact that in this examined school the quality of English lessons depends on both teacher's motivation and the flexibility in teaching given by the school owner. This is in agreement with the results of Inyang (1997), that teaching is effective when the teacher makes use of instructional materials. In addition, Pianta et al. (2008) found that all teachers need depth in subjects they teach, including the understanding of the new knowledge and this calls for high professional development.

Conclusion and pedagogical implications

Although students' self-confidence and self-conceptions are dependent on many background conditions as well as on earlier school experiences, our understanding is that high teacher competence can lead to positive individual student development.

However, the affective side is thought to be the most important quality teachers should have. Students accept that they are responsible when they fail but believe that if teachers give them enough encouragement and positive feedback, this would increase their motivation to study harder (Ćirković-Miladinović 2017).

Based on the results of the study the following recommendations could be made: private schools should give more freedom to teachers in order to get more benefits from their teaching; educational process would work better if there was enough time given to teachers in order to develop professionally

during working hours, not after long working hours; teachers' satisfaction with their own competencies is closely connected to students' satisfaction with their own English knowledge and overall language performance; adequate attention should be paid to teaching qualification as a pre-condition for entry into the teaching profession.

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Chapter XXI

**PROFESSIONAL COMPETENCIES OF FOREIGN LANGUAGE
TEACHERS IN ELEMENTARY AND SECONDARY SCHOOLS**

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Abstract: The process of globalization and the development of a knowledge-based society has greatly influenced all spheres of social life, especially in the area of education that has a primary task, which is to enable an individual to live and work under these new conditions. This also requires new competencies and new, demanding tasks are being set before teachers on a daily basis, which is expanding their freedom of actions. They are required to improve the quality of the teaching process constantly by introducing various innovations in teaching and to undergo continuous professional development that needs to be a dynamic and durable process. In this respect, foreign language teachers have a particularly important role in trends related to the improvement of the quality of education and teaching. Through their work, they create a teaching environment that supports the development of competencies necessary for life and work in the 21st century. There is no doubt that the need for continuous professional training of all those involved in the educational process is a necessity and obligation. So, this topic is certainly up-to-date and so far not many studies have been carried out about it, especially in Herzegovina-Neretva Canton elementary and secondary schools. Therefore, the purpose of this paper was to clearly highlight the professional competence and professional development of foreign language teachers, their attitudes and assessments related to the possibilities for continuous professional development and adopting new learning strategies. The main aim of the research was to gain insight into the attitudes of foreign language teachers towards the importance of continuous professional development and its impact on improving professional competencies.¹ The research was conducted in elementary and secondary schools in Herzegovina-Neretva Canton, Bosnia and Herzegovina, on a sample of 91 foreign language teachers (English,

¹ In effect, *competence* and *competency* (from Latin *competentia* which meant an agreement, a conjunction, and possibly expertise) are interchangeable, though *competence* is more often used to describe a person's general ability, while *competency* is more often used to describe a person's ability to perform a certain task (<https://grammarist.com/words/competence-and-competency/>).

German, Turkish, and French). The following methods were used: descriptive method and survey method. After conducting the research and the obtained data, analysis and interpretation of the results were performed.

Key words: *professional competence, professional development, foreign language, foreign language teacher.*

Introduction

The traditional system of education functioned on the basis of syllabi and curricula that represented summaries of the content the teachers were supposed to adhere to, and the focus was on the transfer of knowledge and the contents of what would be taught. For the past decades, there has been a significant departure from such an approach and a turning point that, instead of a uniform transfer of knowledge, implies the development of competencies. There are different interpretations and meanings of the word *competence*, and it is easiest to say that it is the ability someone has. It comes from a Latin verb *to compete*, which means *to achieve, to be better* (Anić 2001: 710), and may indicate recognized expertise in some field, competence (Čedić et al. 2007: 299). Greene (1999) defines competencies as measurable working habits and personal skills used to achieve work goals, while Mijatović (1999) understands competence as a personal ability to function, perform, manage, or operate at the level of specific knowledge, skills and abilities a person can prove in his work.

The focus is on teaching concentrated on students, and on determining teaching goals as measurable learning outcomes². This approach implies the design of competence-based curriculum as a new paradigm in education (Previšić 2007). For this reason new, demanding tasks are being set before all teachers on a daily basis, which is expanding their freedom of actions, and their competencies are growing. They are required to improve the quality of the teaching process constantly by introducing various innovations in it, and by continuous professional development that needs to be a dynamic and durable process. Along with the development of technology and science, the knowledge about newer and more effective teaching methods is being developed, and therefore professional qualification and training are a constant, as well as the legal obligation of each educator.

Professional training of employees in education as an integral part of professional competencies has become an indispensable segment of lifelong learning and the improvement of the quality of work of all educators, professional associates and headmasters. The professional qualifications, which implies

² Learning outcomes state what a learner is expected to know, be able to do and understand at the end of a learning process or sequence (http://www.cedefop.europa.eu/files/4156_en.pdf).

both school and out-of-school activities, must be taken into account by every educator who wants to improve his/her work, make it more quality, more creative, more receptive to today's students.

Theoretical framework of research

It is obvious that education and training for quality life in the 21st century is focused on building competencies different from those that were dominant in the past. (Vrkić Dimić 2013). Contemporary access to teaching is based on outcomes and the key is the ability to show what is learned. Strengthening the inner potential of the school is achieved through the professional development of teachers and other associates. The quality and continuous professional training of teachers is regulated differently by different institutions, depending on the country. Educators, teachers, associates, and the headmasters of educational institutions and their deputies have the right and obligation to their permanent professional development and training, as prescribed by the law. Regardless of the complex educational policy in Bosnia and Herzegovina, all applicable laws on primary, secondary and higher education at the state, entity and cantonal level require mandatory continuous professional training of teachers. Thus, in Article 90, the Law on Primary Education of the Herzegovina-Neretva Canton states that "Teachers and associates and other employees have the right and obligation to continuous professional and pedagogical training" (Law on Primary Education of HNK, *Official Gazette of HNK*, No. 5/00, 4/04, 5/04), and in the Law on Secondary Education of the Herzegovina-Neretva Canton, Article 100 states the same (Law on Secondary Education of HNK, *Official Gazette of HNK*, No. 8/00, 4/04, 5/04 I 8/06).

In Croatia, Serbia and Slovenia there is a certification and scoring of teachers and they are obliged to complete a certain number of educational trainings during the school year in order to collect scores for promotion and increase of salaries. Although in Bosnia and Herzegovina such practice does not exist, everything is going in that direction, and all teachers are involved in different types of activities which support their professional competences.

Professional development and training

Professional development is a complex process characterized by permanence in adopting, enriching and monitoring new knowledge, and acquiring and strengthening the skills and attitudes necessary for a wide range of teaching roles. Because of the key role teachers play in students' achievements, the advancement of professional training of teachers is of high importance in all changes within the whole education system.

Governments, educational institutions and international organizations manage the process of continuing professional training of teachers. In education, the term *professional development* may be used in reference to a wide variety of specialized training, formal education, or advanced professional learning intended to help administrators, teachers and other educators improve their professional knowledge, competence, skill, and effectiveness (www.edglossary.org/professional-development/).

Professional development is defined as “the process of improving staff skills and competencies needed to produce outstanding educational results for students” (Hassel 1999) and educating teachers is usually accomplished in the form of continuous professional training that begins on the first day and ends on the last day of their professional practice (Craft 2000: 47).

Many types of research, therefore, emphasize the importance of the continuous professional development of teachers of all profiles. In his research, Burcar (2005) identified the needs for professional teacher training for elementary school teachers, from which it can be concluded that the need for professional training exists and that teachers want professional training to exchange experiences from practice; they think that the organization of work should be in small groups by the method of workshops; the content should be determined according to the actual needs of the teacher; the lack of resources should not be an obstacle to professional improvement, especially outside the place of residence; any form of organized education is welcome; they do not have special remarks on the quality of the lecturers; they want written training materials; reporting on improvement is good at all levels; and there seems to be insufficient training with the topic of evaluation.

Many authors have dealt with the topic of professional development of foreign language teachers who are more than ever faced with the constant need for professional training. Thus, Thornbury (2006) states that professional development of teachers can be of a formal nature (during a teacher’s work experience, and is characterized by attendance at shorter or longer courses, or professional conferences). However, it is more connected to informal, school and apprenticeship programs that incorporate cycles of teaching practice and reflection (i.e. reflection on their own teaching).

In addition to setting new standards for teaching and learning foreign languages, new methods, approaches and techniques, the main objective of foreign language learning is also set up - the acquisition of students’ communicative competences (Kitić 2007). Richards and Farrell (2009) explain the reasons for constant professional development of foreign language teachers, pointing out that they are expected to keep up with new developments in the profession and reconsider their skills regularly. In addition to the definition of better ways to prepare teachers for the challenges of their profession, there is also the explicit agreement that college preparation is not enough. When we

talk about improving the quality of education of educators, teachers, associates and headmasters, we not only focus on their initial higher education, but their professional training and permanent professional development are also very important. Both forms of education aim at lifelong training and renewal of the knowledge and skills of educators, naturally in the function of encouraging lifelong learning for students. In addition to the definition of better ways to prepare teachers for the challenges of the profession, there is also the explicit agreement that college preparation is not enough. Holdsworth (Holdsworth, in Scheerens 2010: 12) argues that even though we go from the assumption that the initial [undergraduate] education of teachers is at the highest level and is of high quality, it cannot provide the teachers with the knowledge and skills they need throughout their lifetime.

The professional development of teachers begins with the acquisition of higher education knowledge for practice, continues during the teaching work by acquiring knowledge in practice, and it is upgraded by acquiring knowledge about practice based on personal reflection of one's own experience. Because of the importance of the professional development of teachers to raise the level of quality in schools, it is necessary to continuously improve the teacher's competences acquired during the initial [undergraduate] education and internships (Kostović Vranješ 2014: 111). Ivanek (2016: 5) claims that previous research papers, related to professional teacher training, are mostly based on teacher assessment frequency, need, content, forms, organization, motivation factors and difficulties of professional development.

In their study *Effective Teacher Professional Development*, Darling-Hammond, Hyler and Gardner (2017) claim that sophisticated forms of teaching are needed to develop student competencies such as deep mastery of challenging content, critical thinking, complex problem solving, effective communication and collaboration, and self-direction. In turn, effective *professional development* (PD) is needed to help teachers learn and refine the instructional strategies required to teach these skills. They also claim that the research has noted that many professional development initiatives appear ineffective in supporting changes in teachers' practices and student learning. They established seven widely shared features of effective professional development. According to them, there are seven elements of effective professional development:

1. They are content focused.
2. They incorporate active learning strategies.
3. They engage teachers in collaboration.
4. They use models and/or modelling.
5. They provide coaching and expert support.
6. They include opportunities for feedback and reflection.
7. They are of sustained duration.

They define effective professional development as structured professional learning that results in changes to teacher knowledge and practices, and improvements in student learning outcomes. This paper offers rich descriptions of the combined characteristics of professional development that research has found to positively relate to student outcomes. The authors state that even the best-designed professional development may fail to produce desired outcomes if it is poorly implemented. At the same time, a growing number of rigorous studies establish that well-designed PD can, when effectively implemented, lead to desirable changes in teacher practice and student outcomes.

A well-designed and implemented PD should be considered an essential component of a comprehensive system of teaching and learning that supports students in developing the knowledge, skills, and competencies they need to thrive in the 21st century. So, the continuous professional development of teachers in the education system implies attending a certain number of seminars as well as various forms of organized and planned transfers of knowledge or exchanges of professional experiences within or between educational institutions.

Professional competencies

Competence and teacher competence have become the central theme of pedagogy because it is trying to explore, perceive and reach to the fullest competency the profile of a contemporary teacher to maximize his/her role in the upbringing and education of children and young people. The literature mentions three dimensions of teachers' competencies: professional, pedagogical-didactic-methodical and work competence. Professional competencies include:

- the level of general knowledge
- planning capability
- ability to perform tasks
- participation in projects
- self-evaluation and evaluation
- professional development.

Jurčić (2012) considers that the pedagogical competencies of a modern teacher are personal, subject, communicative, didactic-methodical, reflexive, social, emotional, intercultural, and civic competencies. In the document *Tuning Educational Structures in Europe: Summary of Outcomes – Education*, the following specific competencies for teachers are listed: dedication to promoting achievement and students' progress, competencies in the development and promotion of learning strategies, competencies in student and parent counselling, knowledge of subjects and areas of teaching, ability to apply learning,

ability to manage time effectively, ability to analyse and self-evaluate one's own work, awareness of the need for continuous professional development, ability to assess learning outcomes and learner achievements, competences for collaborative problem solving, ability to respond to different students' needs, ability to improve the learning environment, and ability to adapt the curriculum to the specific context of education (Lončarić Pejić, Papak 2009).

Professional competences, development, and training have become an area of interest in scientific research and educational policy interventions everywhere in the world and interest in it is growing. Education is the basis of progress, and numerous studies, monographs and documents, particularly the EU, seek to further the goals of education policy in the future. The European and national standards, guidelines and forecasts of the competencies needed for the student and European citizen of the 21st century have been recorded in many documents³ which are later used to design a competency profile of teachers and educators. In Croatia also, in an attempt to define the most relevant set of foreign language teacher competences, the document *Competencies of Primary School Foreign language Teacher in the Republic of Croatia* was drawn up. According to that document, there are two basic areas of competencies: subject-specific and educational competencies. Subject-specific competencies include competencies related to language and culture, whereas educational competencies relate to foreign language teaching (Drakulić 2013: 161). It is a very important document, which systematically defines areas of competencies within which foreign language teachers should professionally evolve. In Bosnia and Herzegovina, there isn't yet such a valuable document in the field of foreign language learning, but the Centre for Policy and Governance (CPU) made an analysis of the Bosnian educational system and published the document called *Initial Teacher Competencies* (2015), which implies complex knowledge and skills originated from initial [undergraduate] teacher education. So, the professional development of teachers and foreign language teachers is a constant issue in the research agenda of the profession.

³ Common European Principles for Teacher Competences and Qualifications (European Commission 2005)

Improving the Quality of Teacher Education (Commission of the European Communities 2007)

Tuning educational structures in Europe: Summary of Outcomes – Education (2005)

Teacher Education in Europe: An ETUCE Policy Paper (European Trade Union Committee For Education 2008)

Key Competences for Lifelong Learning — A European Reference Framework (The European Parliament and the Council of The European Union 2006)

Improving competences for the 21st Century: An Agenda for European Cooperation on Schools (Commission of the European Communities 2008).

Research methodology

The problem of the research is related to the theme of professional development of foreign language teachers and its influence on their professional competences. Therefore, we have defined the aim of the research, which is to examine attitudes and appraisals of foreign language teachers related to professional development and training, as well as the impact of continuous education and training on their professional competencies. The main objective of the research, as seen from its subject, was to gain insight into the attitudes of foreign language teachers towards the importance of continuous professional training, and its impact on their daily work and the improvement of their professional competencies. Based on the determined objectives, the following tasks were set:

1. To examine the attitudes of the respondents related to the importance of professional trainings for their further professional development.
2. To examine the attitudes of the respondents related to motivation for professional development and training and continuous advancement in the profession.
3. To identify which aspects of professional education teachers think are the most or the least useful.
4. To examine whether there is a statistically significant difference in the attitudes of the respondents with regard to the independent variable defined as *the foreign language they teach*.

Based on these tasks, we put forward the following hypothesis:

1. Foreign language teachers have a positive attitude related to professional development and training because it contributes to the development of their professional competences.
2. Teachers are motivated for the continuous professional development.
3. Foreign language teachers believe that a study stay abroad is the most useful for their professional development.
4. There is no statistically significant difference in the attitudes of the respondents related to professional development with regard to the independent variable defined as *years of service*.

In the research, we used the descriptive method, survey method, and the scaling technique. For the purpose of this research, as an instrument a self-made questionnaire for foreign language teachers was used. The questionnaire was composed of 21 statements that respondents had to answer by rounding one number on a Likert five-degree scale and so expressing their degree of agreement or disagreement with the proposed statements. The second part consisted of twelve terms which should be ranked on a scale from 1 to 5. A

suitable sample was selected for the purposes of this research – foreign language teachers (English, German, Turkish and French) who are teaching in elementary and secondary schools in Herzegovina-Neretva Canton, the area of Mostar municipality (N = 91).

Table 1: Population and sample of respondents

<i>Type of school</i>	<i>Frequency</i>	<i>Percent</i>
Elementary school	52	57.1
Secondary school	39	42.9
Total	91	100.0

<i>Foreign language</i>	<i>Frequency</i>	<i>Percent</i>
English	63	69.2
German	19	20.9
Turkish	8	8.8
French	1	1.1
Total	91	100.0

The research was conducted in late March and early April 2019. The respondents filled out the questionnaire by a paper-pencil method, completely anonymous and voluntary, and could at any time give up on completing the survey questionnaire. After conducting the survey, the obtained data are operationalized in the form of variables and inserted into a statistical program Statistical Package for Social Sciences (SPSS 22.0).

Interpretation and research results

Attitudes of foreign language teachers related to professional development

In this section we will show the most significant research results and make a short analysis. The first task of the research was to determine and examine attitudes of respondents about opportunities for professional development and its effects on the development of professional competencies of foreign language teachers. Based on this we put forward the first hypothesis which is worded as follows: *Foreign language teachers have a positive attitude toward professional development and training because it contributes to the development of their professional competencies.*

Figure 1 shows the attitudes of foreign language teachers related to professional development and training and its effects on teachers' professional competences.

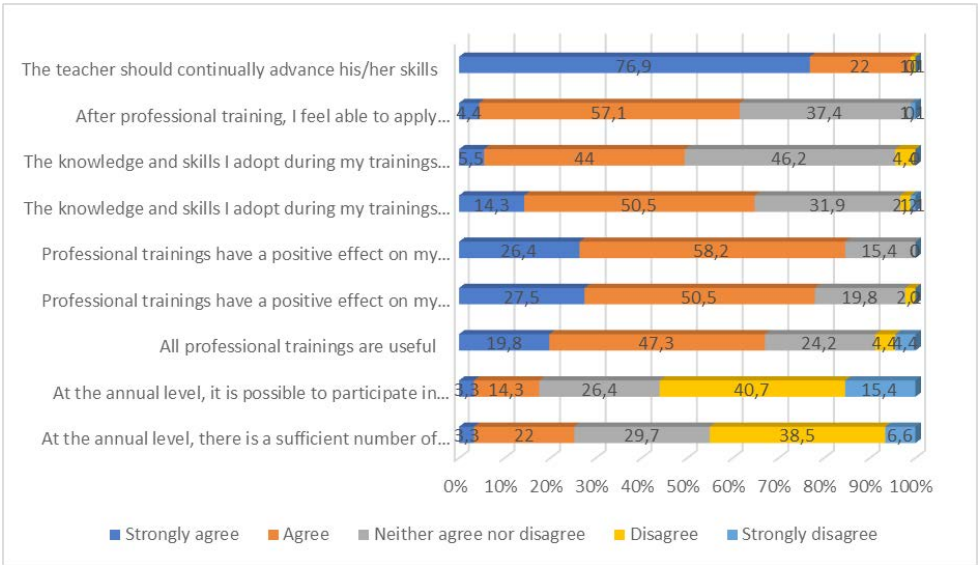


Figure 1. Attitudes of the respondents related to professional development and its effects on professional competences

The descriptive indicators in Figure 1 show that the majority of foreign language teachers had a positive attitude related to professional development, so 47.3% of them agreed with the statement that professional training is useful, while only 4.4% disagreed with the following statement. Most of the respondents, 50.5% of them agreed that the knowledge they'd adopted during their training had made their daily work easier, and only 1.1% of respondents disagreed with this. Even 46.2% of them had a neutral attitude as to whether the knowledge and skills they acquired during professional training could be applied daily to their work, while 44.0% of the respondents agreed with the statement that they applied this knowledge and skills on a daily basis. Most of them, 57.1%, agreed with the statement that after the professional training they felt capable of applying contemporary strategies and methods in their work, and even 76.9% of respondents strongly agreed with the statement that teachers needed to improve their skills continuously. Not one of the respondents chose the answer "strongly disagree" for this statement. As for the opportunities for professional training of foreign language teachers at the annual level, most respondents disagreed with the statement that a sufficient number of professional seminars and workshops are organized annually; actually 38.5% of them,

and 40.7% of respondents disagreed with the statement that they had enough opportunities to participate in various projects related to teaching foreign languages. According to this analysis we can conclude that foreign language teachers want to improve their professional skills continuously.

Based on the analysis of the results and the obtained values, we can confirm our first hypothesis which is worded as follows: *Foreign language teachers have a positive attitude toward professional development and training because it contributes to the development of their professional competencies.*

Motivation of foreign language teachers related to professional development

The second task of the research was to examine teachers' attitudes regarding their motivation for professional development and continuous advancement in the profession. Based on this we put forward the second hypothesis which is worded as follows: *Teachers are motivated for continuous professional development.*

Figure 2 shows attitudes of foreign language teachers regarding their motivation for professional development and continuous advancement in the profession.

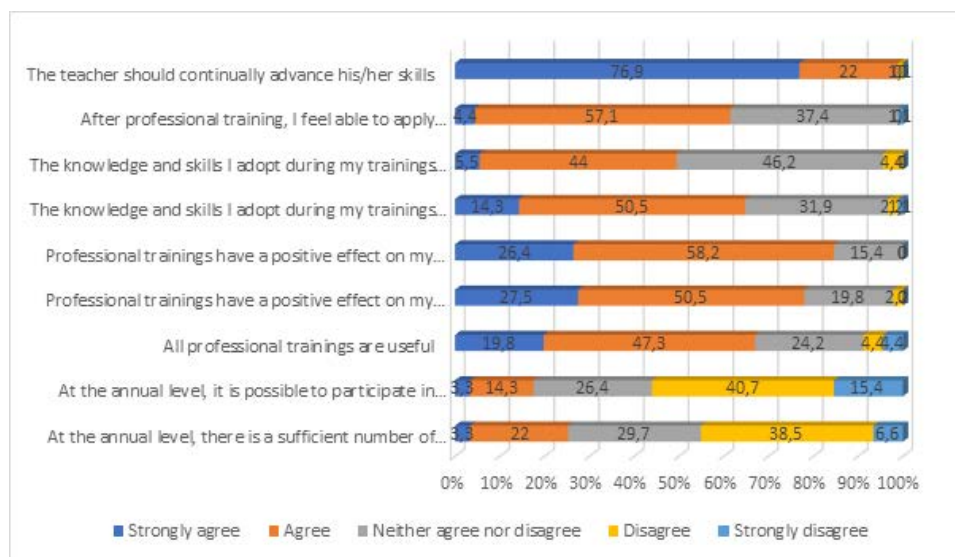


Figure 2: Attitudes of respondents related to the motivation for professional development

As for the motivation of foreign language teachers for continuous professional training, their attitudes are mostly positive. We can see from the above graph that 61.5% of them stated that they had *often* attended workshops and

seminars related to professional development, and for this indicator, *I regularly attend professional development trainings* none of them had chosen the answers *rarely* or *never*. Even 53.8% of teachers think that the topics of professional development are *often* interesting, and for this indicator *The topics of professional training are interesting*, none of the teachers chose the answers *rarely* and *never*. Regarding professional training participation, 47.3% of teachers are *often* motivated to participate in various professional training activities, and only 1.1% of respondents stated that they are *never* motivated for professional development. Teachers stated that school headmasters *often* encourage them to attend professional training sessions, even 50.5% of them, and none of the teachers chose the answer *never* for this statement. Regarding the active involvement of teachers in various aspects of preparation and implementation of professional training, only 6.5% of them stated that they are *often* engaged in this, and 36.3% are *rarely* engaged in such activities. Our research showed that teachers are *rarely* able to choose the topics of professional development sessions, 44.0% of them said that, and only 19.8% of teachers *often* have the opportunity to choose the topic of professional trainings. A positive culture in school also *often* affects the desire of teachers for professional development, and 48.4% of teachers stated this.

Unfortunately, attending professional training does not necessarily mean advancement in the profession in terms of a better workplace or higher salary, and 39.6% of teachers selected the answer *rarely* for this statement. Even 42.9% of teachers said that they are *always* open to the possibility of further education, and for this statement, none of the teachers chose the answer *never*. Even 58.2% of teachers agreed to follow new scientific ideas and achievements in their profession, and for this statement none of the teachers chose the answer *never*. Most of the teachers *often* attend various types of professional training on their own initiative, 49.5% of them, and only 2.2% of teachers said they never do that. Schools are more and more initiators and organizers of various aspects of professional trainings, so 41% of teachers said that their schools *sometimes* organize some aspects of professional trainings.

Based on the analysis of results and obtained values, we can confirm our second hypothesis which was worded as follows: *Teachers are motivated for continuous professional development*.

Attitudes of respondents related to different types of professional development

The third task of the research was to identify the types of professional development teachers think are the most, and the least useful. Based on this we have put forward the third hypothesis which was worded as follows: *Teachers believe that a study stay abroad is the most useful for their professional development*.

Therefore, we tried to identify the most and least useful types of professional development that our foreign language teachers usually attend during their work in school. In literature, there are a wide variety of theories about what kinds of professional development are most effective as well as divergent research findings.

Attitudes of respondents related to the most and least useful types of professional development are shown in Figure 3.

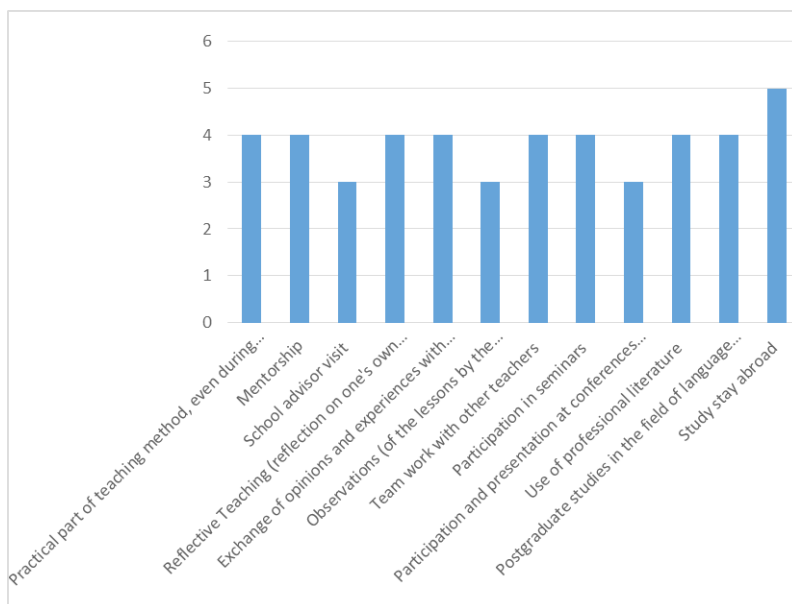


Figure 3 Attitudes related to different types of professional development

The type of professional development most often mentioned was “study stay abroad” (study trip). The respondents chose this as the most useful type of professional development, probably because there are not many opportunities for such useful teacher training, especially for foreign language teachers. Other forms of professional development are also quite well ranked and teachers consider them useful for their professional development. Teachers think that a school advisor visit is the least useful for their professional development.

Based on the analysis of the results and the obtained values, we can confirm our third hypothesis which is worded as follows: *Teachers believe that a study stay abroad is the most useful for their professional development.*

Attitudes of respondents related to professional development and its contribution to the development of professional competences

The fourth task of the research was to examine whether there is a statistically significant difference between the respondents regarding their attitude toward professional development and its contribution to the development of professional competencies with regard to the foreign language they teach. Based on this, we put forwards the fourth hypothesis which is worded as follows: *There is no statistically significant difference between respondents regarding their attitudes related to professional development and its contribution to the development of the professional competencies with respect to the years of service.* The distribution of respondents' answers are shown in Table 2.

Table 2: Attitudes of foreign language teachers related to the professional development

Indicators	Values χ^2	df
At the annual level, there is a good level of vocational training related to the foreign language (seminars, workshops, lectures etc.)	4,68	8
At the annual level, it is possible to participate in various projects related to foreign language teaching	2,62	8
All professional trainings are useful	12,24	8
Professional trainings have a positive effect on my professional competences	4,81	6
Professional trainings have a positive effect on my pedagogical, didactic and methodical competences	1,20	4
The knowledge and skills I adopt during my trainings make my daily work easier	4,80	8
The knowledge and skills I adopt during my trainings are applied daily in my classroom	2,95	6
After professional training, I feel able to apply contemporary teaching strategies and teaching methods	5,27	6
The teacher should continually advance his/her skills	2,27	4

The obtained value χ^2 for each indicator is lower than the boundary values at the significance level of 0.05 and 0.01 for the corresponding *df*, which indicates that there is no statistically significant difference in the teacher's estimates of professional development and its contribution to the development of professional competencies with respect to the years of service.

Based on the obtained values, we can confirm the fourth hypothesis which is worded as follows: *There is no statistically significant difference between respondents regarding their attitudes related to professional development and its contribution to the development of the professional competencies with respect to the years of service.*

Conclusion

In this paper, we addressed the issue of foreign language teachers' professional development, since teacher professional learning and development is of increasing interest as one way to support the highly complex skills students need in order to succeed in the global market of the 21st century. Thus, teachers from all around the world should have constant access to opportunities for quality professional training to enhance their skills and the success of their students. Professional development should actually be the change and upgrading of the teacher's personality and his/her work, all in accordance with his/her own needs, the needs of science, and the profession.

The research has shown that foreign language teachers both in elementary and secondary schools are very much interested and motivated in continuous professional development and thus shows that they want to advance further in their profession. The school climate is mostly friendly and the teachers are also supported by the school they work in and by the headmaster. But they rarely have the opportunity to be actively engaged in the preparation and presentation of professional training topics, and that should be changed as soon as possible. Unfortunately, the research confirms that attending various seminars does not mean that the teachers will make some significant advances in the profession or get a higher salary due to that fact.

Foreign language teachers regarded almost all aspects of professional development as useful and recognized the benefits of continuous professional development. A study stay abroad is a kind of professional development that our foreign language teachers really want/need, mostly in order to improve their communicative skills. Due to this fact, all institutions responsible for organizing and conducting professional teacher training should move toward more effective and more engaging professional development models. It cannot, therefore, be reduced to occasional seminars and professional gatherings.

As we mentioned before, the contemporary understanding of the educational process redefines the traditional role of the teacher: s/he no longer plays the role of a person who not only possesses and transmits knowledge, but also needs to possess and establish positive interpersonal and intrapersonal relationships in the classroom. The quality of the teaching process therefore depends entirely on the teacher's professional competences as well as on his/her personal characteristics (Drakulić 2013: 158).

This paper is only a small contribution to the study of attitudes of foreign language teachers in Herzegovina-Neretva Canton related to their continuous professional development and gained competences, therefore, it should be the starting point for further research and overview of this important issue.

In order for educational staff to be competent to develop the competencies of the students needed in the global labour market of the 21st century, they need to develop their own lifelong professional skills. If a teacher gains basic teaching competence during his/her initial [undergraduate] education, and if s/he expands and improves them during her/his professional training, then s/he is certainly the cornerstone of effective education.

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Chapter XXII

POSITIVE ASPECTS OF PLURILINGUAL COMPETENCE OF THE FOREIGN LANGUAGE TEACHER

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Abstract: The focus of this article is the multilingual approach to foreign language teaching, in this case German language. In order to find out in which way the mother tongue and the first foreign language affect the learning process of second foreign language, a questionnaire was applied with students from Serbia, whose mother tongue is Serbian, L2 is English, while German represents L3. The research was done with first year students (N = 120) from the departments class teacher, pre-school teacher and boarding school teacher at the Faculty of Education in Jagodina, which can be one of the practical solutions for integrating plurilingualism and interculturalism into the school system.

Keywords: *plurilingual competence, mother tongue, first foreign language, second foreign language.*

Introduction

This work will examine the influence of the mother tongue and the first foreign language knowledge, in this case English, on the second foreign language teaching and learning, that is, German language teaching and learning, offered by the Faculty of Education in Jagodina, which began in 2015.

The questionnaire was conducted with students of the same faculty in order to find out on which language levels a plurilingual approach has a direct and positive influence.

A number of authors (Cenoz, 2001; De Angelis, 2007; Hall & Ecke, 2003; Jarvis & Pavlenko, 2007; Odlin 1989) point out that there are several factors that influence the acquisition of a second foreign language L3, in our case German. The existence of similarities and differences between two foreign languages can occur on more than one level (*ibid.*). These may be, on one hand, at the level of lexis, orthography and phonology – the levels that have been studied more extensively according to Balla (2013) – and, on other hand, at

the level of syntax, semantics, grammar, and morphology – the levels that have been studied to a lesser degree. Having this in mind, we wanted to examine how the similarities and differences between mother tongue, English as L2 and German as L3 can be used in teaching of lexis, grammar, and set phrases or idioms. Hence, the research will be used to signal cases where the influence of a language acquired previously is visible in the target language, that is, the paper will deal with the cross-linguistic influence of the Serbian, English, and German languages.

Concept and aims

Our study from the aspects of education and of foreign language didactics has shown that the plurilingual competence of teachers has a decisive influence on the quality of students' learning processes, which suggests some qualification for foreign language teacher training, as plurilingualism.

Through such an training module, students are supposed to acquire foreign language and communication skills, to make a difference between two foreign languages, and to recognize cultural similarities and differences.

In order to meet the needs of specific linguistic diversity, educational institutions have to be open for a multilingual approach in order to promote intercultural relations. The Council of Europe has opened the question of plurilingualism beginning at an early age, advocated to have to at least two more languages adopted, in addition to the mother tongue.

A foreign language teacher presents in a certain way, a dominant figure in the process of learning a foreign language because s/he is the one who decides which activities will be represented in the classroom, how long it will take, and to whom s/he will give a word.

Based on the research results about the foreign language teachers training, the European Union had a need for one document such as the European Profile for Language Teacher Education, which is structured in four areas: Structure, Knowledge and Understanding, Strategies and Skills, and Values (Suvakovic 2017: 45–46).

Structure is the part that relates to the practical experience of teaching, European – level evaluation framework.

Knowledge and Understanding area offers advice on how to develop their own knowledge and research skills in the field of Didactics, Glotodidactics and Pedagogical work.

The third area, Strategies and Skills, predicts the promotion of training in ways of adapting teaching approaches to the educational context and individual needs of learners, training in methods of learning to learn.

The Values part describes the way of encouraging the sensitivity of teachers to convey social and cultural knowledge through teaching language to their pupils. It refers to training in social and cultural values, training in the diversity of languages and cultures, training in the importance of teaching and learning about foreign languages and cultures, training in teaching European citizenship, training in team-working, collaboration and networking, inside and outside the immediate school context, training in the importance of life-long learning (Kelly & Grenfell, 2004: 3–5).

The essence of our study is the part about the values, that is, about plurilingual approach as a way of training in the diversity of languages.

Mother tongue, the first foreign language and the second foreign language

The determination to mark the mother tongue as L1 implies that it is, chronologically seen, the primary language learned by the child. However, the dominant language certainly does not have to be the first language, but the language that eventually becomes the most developed by the individual (Durbaba, 2011: 60–63). Second language that is labeled as L2 is the language of the social community in which the child is located and the language is not his mother tongue.

Although in the literature today, the term of L2 (Second Language) refers to a foreign language, it is still important to make the difference between them for two reasons: the second language acquisition input is richer and the motivation is bigger because adoption of the second language is spontaneous and on a daily basis in order to integrate a individual into the society and the culture (Suvakovic, 2017: 16).

According to Durbaba (2011: 63) a foreign language is a language that is taught outside the country and society that speaks it daily. Prerequisites for learning a foreign language are the knowledge of the mother tongue and enrollment in a social institution (school) where the foreign language is taught. Students meet with a foreign language where they usually have some knowledge (movies, series, music, Internet) but the only direct link between them and the foreign language is the teacher, who is most often not a native speaker.

Plurinligualism

Teachers should be aware of the central notions of plurilingual competence and pluricultural competence set out in the CEF, especially in order to maintain linguistic diversity in Europe, given the impact of English as an emerging global lingua franca. It is clear that the language we teach is influenced by other

languages and is spoken in a number of different ways, contexts and countries. A teacher should employ teaching materials from as wide a range of linguistic contexts as possible which reflect social and linguistic diversity (Kelly & Grenfell 2004: 40).

The plurilingual approach is based on one of the key concepts of the foreign language learning process, that is the notion of the language transfer. The heart of the idea is that any new learned activity will be more successfully used if it finds a hold in already learned models, in the mother tongue and the foreign language **acquisition**. Transfer is an influence that comes from similarities and differences between the target language and all other languages previously adopted, so the transfer could be positive or negative (Suvakovic, 2017: 21–25).

In addition to the principles of the Bilingual method¹ of foreign language teaching, the plurilingual approach makes use not only of the mother tongue but of the first foreign language, English, in order to make the understanding of words and sentences in German easier. There is no need to create artificial situations for explaining the meaning of words and sentences of the target language.

There are many advantages of this method of teaching German, such as:

1. In the competence and the confidence of the teacher as he moves from L1 to L2 to L3 and back again students can recognize the aim of this kind of language learning and that is to become multilingual.
2. The mother tongue of the students is very important in the sense of the resources in the language learning process. This method allows easy understanding of difficult words and efficient explanations of grammar.
3. While English and German belong to the Anglo-Saxon Culture many phrases and word formations can be explained on the basis of similarities, so that this method ensures accessibility.

The students' native language and the first foreign language are used strategically when it would be futile to explain things in the target language, so L1 and L2 support can be part of students' overall language development.

There are plenty of reasons why the plurilingual method should be implemented and applied, and one of them is certainly the kind of preparation for multilingualism and interculturalism.

Globalization makes new challenges for foreign language teaching. In addition to linguistic qualifications, a teacher must also be prepared for ever-growing exchange with other cultures, that is, a teacher has to have multilingual and intercultural competencies. The language is not the only thing that a teacher

¹ The method was developed as a counterpart of the audiovisual method. Using this method students find a level of familiarity between the languages so that the process of learning is ensured. This method was developed in the 1960s and 1970s in order to make improvements to the audio-visual method (which has much in common with the direct method). The bilingual method makes use of the traditional three P's: presentation, practice, production (Saparbaevna 2016)

seeks to get closer to pupils, but also the culture of the language, which makes the language more accessible and closer. The contact between two languages and between the two cultural communities contributes to intercultural bonding and understanding. In this way, the teachers motivate students to enrich their personality and improve cognitive abilities (Kelly & Grenfell, 2004: 39).

Methodology

This report will examine the influence of the first foreign language, English, and the mother tongue on second foreign language learning, German, offered by the Faculty of Education, which began in 2015.

The author started this study in order to research in which way or how and on what language levels the plurilingual approach influences German Language Teaching and Learning. The instrument that was used in the study was a questionnaire consisting of three parts that referred to lexis, grammar, and phrases.

The paper will focus more on qualitative data because these can provide more in-depth answers such as why and how a student uses a certain learning strategy to solve a language task, not just 'what', 'where' or 'when' data presented in numbers. The analysis of the qualitative data were grouped for each specific language category: lexis, grammar and set phrases or idioms. For the purpose of this research we chose three types of tasks that refers to these three language categories to make it possible to provide a better understanding of the plurilingual approach. Qualitative data consists of open-ended information that the researcher gathered through questionnaires or interviews with participants. In general, open-ended questions in the questionnaire allow the participants to supply answers in their own words.

Research questions and hypotheses

The main hypothesis for this study is: There is more positive influence in the process of learning German as the second foreign language (L3) when a multilingual approach is used.

The general research question we aimed to answer was – what was the level of positive influence of English as L2 in the process of learning German as L3 in terms of vocabulary, grammar and set phrases or idioms. In the present paper, these were two specific research questions the author wanted to answer: 1) In which way we may use English language knowledge to help students to understand German?; 2) On which languages levels we may notice that the mother tongue knowledge is better to use in order to explain German lexis, grammar and set phrases?

In addition to plurilingual method succes in German teaching, the author started this study in order to research whether Serbian students are aware of the knowledge of English and learning strategies they usually use and the ones they can use when solving tasks in German language. In addition, the purpose of this research was also to suggest possible ways of teaching/learning improvement for university learners who are less successful in learning the second foreign language. In this way it would be possible to suggest some learning strategies for organizing and storing information, learning grammar and vocabulary, and to encourage students to consider which strategies work best for them in learning German as L3.

Questionnaire

The number of respondents was 120 (18 men and 102 women). There were first and second year students at the Faculty of Education in Jagodina from the class teacher, pre-school teacher, and boarding school teacher departments. Students at the Faculty of Education in Jagodina are adult learners (between 19 and 21 years of age) who study English and German as foreign languages and their mother tongue is Serbian. All the participants started learning English from the first grade of primary school (at the age of 7) and then German at the Faculty (at the age of 19) as the second foreign language.

The research was conducted in January and February 2019. Before this research, piloting was conducted with 20 students at the same faculty. After the piloting was done, it was evident that the questionnaire was valid and relevant for this research. This was proved by the positive comments of our students who emphasised that they had not thought about certain actions when learning German as L3 before they had completed this questionnaire. They also said that the questions were clear and made them become aware of the 'connections that can be made between the languages'.

The questionnaire was originally given in Serbian (students' mother tongue) because we wanted to make sure that all the participants understand the questions. The first part was related to the area of vocabulary, that is, phonologically similar words in English and German and a positive or negative transfer in understanding the similarities/differences between the given words. Students were supposed to translate the underlined parts of the sentence into their mother tongue and to give an explanation of how they came to the conclusion based on the similarity with words in English. There were 13 sentences and 53 underlined words that had to be translated overall. We designed this task starting from the hypothesis that use of the mother tongue and use of English has a positive impact on learning and memorizing words in German as L3.

In the second task, we tried to use parallel grammar rules in English, German and in Serbian, which significantly contributes to the understanding and usage of the grammatical rules of the German language. Students were asked to translate sentences into the mother tongue and to explain which of the grammatical rules of the English language helped them in solving the specific task. The task consisted of 13 sentences. Students should have applied knowledge about the comparison of adjectives, the modal verb *can*, particle *too*, making questions by inversion of modal verb and subject of a sentence, construction of the past tense, expressing future actions, the use of the definite article, the position of negation in a sentence, the possessive pronoun.

The third part of the questionnaire was designed to show positive aspects in German language teaching when phrases and idioms are used which are similar in English and German, but with an evident difference compared to the mother tongue – Serbian. Phrases that we used in the questionnaire were fixed sets of words or idioms. These combinations of words are commonly characteristic for all the languages, consequently, we wanted to examine students' awareness of the level of similarity between English and German common set phrases.

Results and discussion

The teacher tried to bring students to the meaning of the words based on their phonological similarities with the words in the English language, so they could make a bridge to this way of learning, to know how to make associations and to use their former language knowledge.

Results have shown that three levels of language are the most accessible when it comes to plurilingual method, there are: lexis, grammar, phraseology.

Lexis

In terms of lexis students came to the solution in the task on the basis of phonological similarity of the mentioned words in the following examples: *Das Haus ist groß* – in case of words *Haus* (German) and *house* (British English), English word is pronounced in the same way but is spelled differently if we look at the orthographic level. The lack of the definite article 'the' in students' translation of this sentence into English can be explained by the specific features of their mother tongue (for example in Serbian: *Kuća je velika*, literally translated into English would be: House is big). All the participants answered this question so we had a 100% positive score in this language task.

In the second sentence, *Auf dem Tisch steht das Buch*, the participants solved the task by taking into account the similarities in pronouncing the

German noun *Buch* and English noun *book* even though there is an evident lack of voice change /h/ into /k/ in *Buch* while the mentioned change happened in English word *book*. This could be explained by the voice changes that happen in the group of Indo-European languages.

In the example, '*Am Sonntag spielen wir oft Handball*' students came to the conclusion based on the morphological and phonological similarity of the words in the sentence such as *die Sonne + der Tag = der Sonntag* – Sun + day = Sunday. In case of the phonological similarity of pronouns *wir* /vi:r/ or *we* /wi:/ used in speaking or writing to refer to the first person in plural, all students (N = 120) solved the task. English uncountable noun *Handball* is the same in orthography as German word *Handball* while there is a change in pronunciation such as British English /'hænd.bɔ:l/ versus German /handbal/.

In the next example '*Du bekommst viele Geschenke*' personal pronouns *du* and *you* point out to the phonological similarity and the similarity in meaning so all the students (100%) recognized this. On the other hand, lexis *bekommen* (here second person singular '*bekommst*') and *become* are often wrongly equated because of the phonological similarity so this example represents the negative transfer commonly known as 'false friends'. 92% of students thought that *bekommen* (meaning to get) means the same as the English word to *become* which is a linking verb meaning to begin to be something or to develop in a particular way (*Longman's dictionary of contemporary English*, (2005: 117).

In the sentence '*Mein Hobby ist Surfen*', students (95%) noticed that determinatives *mein* and 'my' mean the same and could be used by the person who is speaking to show that something belongs to or is connected to himself or herself. German noun *Hobby* is borrowed from the English language and is the same in spelling and pronunciation. In addition, the plural form of this German noun is formed by adding -s in the end such as in many cases of English countable nouns which for this grammatical category in number refer to more than one, for example *tables*, *computers*, *streets*, *girls* etc. (Note: the English word *hobby* in the plural changes /y/ into /i/ and adds -es at the end of the word, i.e. *hobby*→*hobbies*). Correspondingly, students noticed the similarity in meaning and in form of the German noun *das Surfen* and English gerund *surfing* which is also considered as a noun in the form of the present participle of a verb.

Some more examples of the phonological similarities could be seen in cases of cardinal numbers *neun* – nine, *zehn* – ten. The same is with adjectives *gut* – good, *alt* – old, *wundervoll* – wonderful, verbs *singen* – sing, nouns *das Bett* – bed, *das Wetter* – weather or in case of adverbs *dann* – then.

In pairs of adjectives, German *windig* and English *windy*, we may notice the similarity in morphological and phonological level, meaning, both words are formed of the corresponding nouns *der Wind* and *wind*. Using the generative endings -ig and -y for forming adjectives (*Wind+ig=windig* and *wind+y=windy*),

these words still sounded similar and students (98%) recognised that pattern, both in pronunciation and in meaning, so that the way of word formation, derivation, is almost the same.

In contrast to the previous examples, there were examples in the questionnaire where students could not solve the task because of the differences in the meaning but similarities in the ortografical level of the two foreign languages. Namely, in one sentence, students thought that German particle *also* (meaning therefore, accordingly or hence) means the same as English adverb *also* /'ɔ:lsəʊ/ which means too, as well, or either in the negative context. Students explained this misconception because these two words are spelled the same and their pronunciation is similar. Similar to the previous situation, students made a mistake in the example number 10 (*Die Farbe ist hell*) and thought that German adjective *hell*, which means bright, has the same meaning as English uncountable noun *hell*, also *Hell*, the place where the souls of bad people are believed to be punished after death, especially in the Christian and Muslim religions (*Longman Dictionary of Contemporary English* 2005). The pronunciation of the word *hell* in both languages is the same so the negative transfer was more present in this example.

Yet, 8% of students tried to go deeper and analyse this sentence in depth, so they came to the conclusion that German word *hell* is similar in meaning to English noun *night* representing the darkness and misery of *hell*. The next sentence, number 11 (*Wer bist du?*) also represents the negative transfer occurrence. To be precise, all students (100%) made a mistake and thought that German interrogative pronoun *wer* (meaning who) is the same in meaning as English pronoun *where* /weə/ which is the interrogative pronoun used to ask for the particular place (for example, *Where is your house in this street?*). The practice has shown that the emphasis on differences can foster the memorizing the words.

In conclusion of this part of results, we may say that in terms of vocabulary usage of plurilingual approach was successful, that is, students used compensation learning strategies to guess German words by using their vocabulary knowledge of English. Students also used inductive differencing when guessing meaning from key words, structures, or context and deductive reasoning when they had to solve the task. Specifically, students were in the position to compare native and English language to target language (German), to analyse groups of words, and look for rules of co-occurrence (Cirkovic-Miladinovic, 2014: 13).

Grammar

In the next part of the questionnaire, respondents were given the task to translate the given sentences from Serbian into German and to explain which grammatical rule from English helped or mislead them to do it.

In terms of adjective comparison, students reported that the similarity of comparing adjectives in German and English helped them to solve the task. In both languages we form comparative by adding *-er* ending on the specific adjective, for example, in German *neu + er = neuer* and English *new + er = newer*, *alt + er = älter* vs. *old + er = older*, and with some adjectives that have irregular comparison like *gut–besser–am besten* and *good–better–the best*. Attributive use of superlatives in German is similar to the attributive use of superlatives in English and students recognised that in the following examples: *die beste Sängerin* – the best singer.

Even though most of the students solved this task successfully, 75% of students did not use the article before the superlative form, definite article *die* in German and the *in* in English, explaining that they forgot to put it because in their mother tongue, Serbian, there is no such grammar category as article. Further, we noticed that students compared adjectives by using German quantifier *zu* (in 50% of cases and reported that they did it because of the phonological similarity of the mentioned quantifiers to the English quantifier *too*). In the same way, students explained the usage of German phrase *sehr gut* relying on the familiar English phrase ‘very good’.

Taking into account syntax organisation and word order in both languages, we might point out that in German sentences when we use a modal verb we need an infinitive at the end of a sentence, for instance, *Ich kann gut kochen*, while in English infinitive comes right after the modal (I can cook good). Although, the authors expected here the negative transfer occurrence, it was quite opposite: all students put the infinitive in the German sentence in the proper place. In line with the previously said, making questions and taking care of the word order in this task, students answered correctly and put the auxiliary verb in the first place followed by a proper pronoun and then an adjective: *Bist du gut?* vs. Are you good?

If we consider verb tenses now, we may conclude on the results from the questionnaire that examined students used the similarity in the structure of past tense in German and present perfect tense to translate the Serbian sentence *Ja sam napravila tortu*. [transl. I have made a cake] into German.

However, there are some notable differences in the ways each language uses this tense. Both English present perfect and German past tense have in common that they are compound tenses, formed with an auxiliary or helping verb together with the past participle (Ibid.). This auxiliary verb is usually to have (*haben*) and sometimes, in German, to be (*sein*). The main difference, however, is that the English present perfect refers to an action or state that begins in the past and continues into the present, whereas the German *Perfekt* is usually used to speak about completed states and actions, and is therefore rather the direct equivalent of the simple past tense.

In terms of possessive pronouns, we could notice that students made connections with German possessive article on the phonological level and with the mother tongue knowledge in order to make e-ending for female gender, as it follows: *mein Opa* (my grandpa) and *meine Oma* (my grandma).

If we take into account the usage of negative verb forms and negations, we may notice that negations in the German language comes right after the verb (*Ich mag nicht*) and the knowledge of English help them to understand this way of making negation. The explanation lies in since years long use of English so that for the students it was normal to use negation after the verb. Hence, the negative transfer from the mother tongue (in Serbian negation comes before the verb) was reduced. Even so, students were very successful in this task and only 4% of them made a mistake. Therefore, it could be said that 96% of students' knowledge of using the negations in German and English was well-founded.

To sum up, obtained results revealed that in terms of grammar there is plenty of authentic linguistic material that can help in grammar rule explanations. Negative influence (in 75% of answers) occurred in cases where in the German language students had to use the definite article (der, die or das in singular or die in plural) before a noun, then, proper gender use was a problem. On the other hand, positive transfer was evident in cases where students had to translate the sentence from Serbian into German and be careful about word order in a sentence (100% of students solved this task), take care of the preposition usage (55% of students used preposition on properly) and 96% of students were successful in using the negation in verb forms. In order to illustrate this, we would like to mention here students think-aloud answers when they were doing the language tasks. Accordingly, students reported that the grammar category of verb tenses was the most difficult for them in both mother tongue and in English as well and that was the reason why they made these mistakes. Also, using articles in German and taking care of gender issues was the most difficult part in the questionnaire, according to the students' reports.

Phraseology

Phraseology is divided into phraseology in the broad and in the narrow sense. In addition to the various understandings of phraseology, a minimal consensus has been established, according to which phraseology in the broad sense refers to all phrases that consist of more than one word. Phraseology in the narrow sense represents the science of words (minimum two), which build units that cannot be fully explained through the semantic principles and syntax principles of word connection. They can take the function and meaning of individual words in the system and can be partially or completely idiomatized (Burger et al. 1982: 1–6).

Hence, the third part of the questionnaire was created for the purpose of testing students' abilities to use the knowledge of English vocabulary and set phrases and to complete German sentences and German set phrases and idioms. Idioms represent groups of words that have a special meaning that is different from the ordinary meaning of each separate word (*Longman Dictionary of Contemporary English* 2005: 805) and because of this specific structure it is the category that students have to memorize.

In terms of the set phrases students were 100% successful and realized that the English idiom 'to get cold feet' (meaning to be afraid of something) is the same as in German *bekommen kalte Füße*, then English *hardworking [busy] as a bee* (meaning a person that works hard) is the same as German *fleißig sein wie eine Biene*, and also English *to be on/off* (some electrical device to be turned on or turned off) is the same as German *sein an* or *sein aus*.

Beside set phrases, we wanted to show a path to connect collocations both in English and in German that possess usual lexical connections but do not have such strong connections as idioms (Bugarski 2009: 200). The data showed that the knowledge of English collocations were helpful in the questionnaire and the students were very successful and these collocations were the following: I am 20 years old → *Ich bin 20 Jahre alt*; Then take a first street left → *Dann nehmen Sie die erste Straße links*; Take a seat → *Nehmen Sie bitte Platz*.

Conclusion and pedagogical implications

The above findings support the hypothesis that plurilingual method at the university level was successful in German language teaching. Every teacher initially uses the so-called teacher talk which is a simplified way of speaking. Research has shown that, in addition to, according to Suvakovic (2017: 25):

- 1) Slower speech,
- 2) The emphasis on paraphrasing,
- 3) Concrete examples,

it is also important to associate foreign language content with similar contents in English, since English is the first foreign language in Serbia and in a cultural sense it is easier to connect it with the German language.

The data obtained from the questionnaires and the interviews has provided answers related to the students' own perceptions of their L3 learning processes. The interview data (think-aloud students' answers) provides an even more optimistic picture – students reported that they became more aware of the similarities and the differences of the two languages. Furthermore, the analysis of the questionnaire data reveals that the examined students relied on their L2 English rather than L1 Serbian in their own perception.

The conclusion would be that the decision for a combination of more languages in foreign language teaching helps promote social and cultural values such as respect for difference, active communication, a participatory attitude to society, and experience of a range of different cultures and lifestyles.

In addition, the research has shown how foreign languages improve mother tongue competence. Students start to think about their native language in the sense of word formation, phrases, they combine the knowledge adopted in other foreign languages with mother tongue knowledge and use it to learn a new language.

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Chapter XXIII

TEACHING ADOLESCENT STUDENTS: CHALLENGES AND OPPORTUNITIES

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Abstract: Adolescence is a critical period of life and only if teachers understand its dynamic nature, are they able to identify students' needs and to assist them in the process of growing up and learning. Students are motivated to learn when they see the relevance of the content and if they can find a connection between instruction and the demands of modern society. Therefore, instruction needs to provide an academic challenge and develop the life skills that students need in future. This paper presents findings from some small-scale qualitative research that was carried out with adolescent students and their teachers in two different educational institutions in Serbia. The research had two aims: to establish what competencies adolescent students consider important for their future and to discover how teachers attempt to address the needs of their students. In order to understand what young people view as important for the future, in-depth semi-structured interviews were carried out with 14 students. In-depth interviews with the teachers helped establish what steps teachers should take to assist the adolescents to develop life skills. The findings indicate that collaboration, critical thinking, and taking responsibility for learning are identified as areas that students need to develop in order to be successful in school and later in life.

Keywords: *adolescence, affective skills, collaboration, critical thinking.*

Introduction

Globalization has introduced a number of critical changes, and as our society undergoes transformation, so should education. The pace of transformation will cause many jobs to disappear in the near future, and unless young people acquire new competencies, they may not be prepared for the professions that will be in demand. Although there is a common agreement that schools need to equip students with a new set of skills, curriculum does not include teaching these skills. Teaching core academic subjects remains vital, but not enough to ensure that students are ready to participate in the modern world as responsible citizens. In such a rapidly changing world, adolescent students are often left to themselves.

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Adolescence is the period in life characterized by significant cognitive, physical, and social changes: adolescents become cognitively ready for abstract thinking, their body matures, and their social status changes. All these changes make adolescence a turbulent period of life and this age group is often considered difficult to relate to. Adolescent students experience difficulties at school and teachers may label them as rebels. Unlike children, adolescents are not too eager to please the teacher and will not take part in activities to gain teacher approval. They are also not prepared to show the same understanding for a teacher as adults would do. Only if teachers understand the dynamic nature of adolescence, will they be able to help their students in the process of growing up.

Education will be effective for adolescent students if their psychological characteristics are taken into account. Sheppard and Levy (2019: 194) point out that “teachers must have the ability to observe and listen to students’ emotional reactions and allow for ambiguity in learning experience”. Instruction that relies on lectures, abstract concepts, and that is mainly concerned with transferring knowledge will not be very successful. Interactive teaching that enables students to share their views and that is related to students’ experiences will be more appropriate than any attempt to teach from the position of someone who knows everything. The starting point has to be the potential of the young people and what they already know.

Theoretical Background

If education is understood as a process that equips students with required knowledge, understanding, skills, and develops attitudes, then current teaching practices need to be re-examined. Bridgestock (2009) explores qualities that students would need in the future, concluding that they currently do not receive adequate preparation. Building of knowledge capacity is not enough, and students need to develop higher order thinking skills, collaboration, resilience, and affective skills (see for example Miri, David, Zoller 2007). In spite of numerous educational reforms that have an increase in student achievement as their aim, necessary life skills seem not to be taught.

Advancements in technology have changed the nature of education. Socket (2014) points to the relative popularity and use of technological tools, both in and out of the classroom. Indeed, many adolescents spend a great amount of time in online environments. They socialize online, seek help through social networks, and establish their identity in the virtual world. In a case study that explores the ways in which technologies assist literacy development, Black (2009: 695) explains that “youths visited online help sites and forums to find information about how to create and maintain various web pages, forums, and

LiveJournal accounts.” As communication moves online and allows informal learning to take place in the virtual world, students encounter new obstacles. They find the amount of information on the Internet overwhelming and they are unable to evaluate its quality. To help young people, schools should find ways to teach them how to evaluate information from a wide range of sources, that is, to assist students in developing critical thinking skills.

Critical thinking is a cognitive activity that encourages students to discover deeper meaning. The International Baccalaureate Middle Years Programme defines critical thinking as “Specific cognitive skills, such as analyzing and interpreting, used to consider ideas, arguments and points of view, and to reach a conclusion” (MYP Language acquisition guide 2014: 102). Unfortunately, students do not have “much practice applying knowledge to new contexts, communicating in complex ways, using it to solve problems, or using it as a platform to develop creativity” (Rosefsky Savera, Opfer 2012: 9). To help students develop higher-order thinking skills, teachers need to teach those skills explicitly and provide opportunities for students to practice using them. Ustunluoglu (2004:3) points out that teachers can activate critical thinking by prompting students to be “aware of their perceptions, assumptions, prejudices, and values, and can help students break old habits to construct a new point of view.” Tasks that require students to employ more complex thinking would promote discussion and problem solving. Teaching students to think critically is a time consuming process and the results may not be immediately visible. Barahal (2008: 301) maintains that teaching to think “requires a focus on the student and looking for clues as to the current state of their thinking”. Tasks that are designed to employ critical thinking skills require teachers to adjust their syllabus, design additional material, and allow students more time to complete them. Analyzing texts, finding flaws with arguments, and looking for commonalities is worth teaching and learning, but these activities may not be easy for students.

Communication and collaboration are skills that are also valuable for future academic settings and work. Having in mind the importance of social interaction (Vygotsky 1978), the big step forward is the growing emphasis on the dialogue that takes place in the classroom and to its pedagogical value. Socio-cultural theories of learning, like those that originate from Vygotsky’s research emphasize the importance of conversation as a medium of learning and define successful education as a “long dialogue” (Mercer in Thornbury, Slade 2006). Bruner (in Williams, Burden 1997: 29) points out that the dialogue and co-operation with others enable students to develop a sense of individuality. He believes that effective learning takes place when students are assisted during the conversation and when their minds are developed through dialogue with others.

Methodology

Context and participants

This small-scale study was originally designed as second language acquisition research, and was conducted during the 2014–2015 academic year. It had two aims. The first one was to establish what factors contribute to successful foreign or second language learning, and what competencies adolescent students consider important for their future. The second aim was to discover how teachers address the development of competencies identified as important. The data gathered pointed out that both teachers and students would relate language acquisition to the learning process in general, and their contributions emphasized the importance of assisting students in developing critical thinking, communication, and collaboration.

The study was conducted in two educational institutions in Serbia. The first institution was a privately owned high school where English is the language of instruction. The second institution was a high school that follows the national program. The reason for including two schools with such a different background was to establish what both groups identify as successful teaching practices that promote both second language acquisition and learning in general.

The research questions were:

- What skills do adolescent students consider necessary for success in school and in life?
- What skills do teachers consider necessary for their students' success in school and in life?
- How do teachers assist their students in developing those skills?

Data

Qualitative research was a logical choice for achieving the aim of this study. The format of qualitative research enabled the researcher to introduce both students' and teachers' voices into the account. The nature of interaction generated during the interviews allowed students and teachers to explain how they perceived their roles in the educational context. It also prompted them to think about necessary changes. The openness and readiness to talk about their convictions could not have been achieved through other forms of research.

Qualitative interviews and analysis of students work were used for collecting data.

Interviews

Students' opinions were gathered from fourteen students. The first group of six students came from a school where English was the language of instruction (Student 1 – Student 6). The interviews were conducted in English. The interviewed students were learning English as their second language and they were all intermediate level language learners. The second group consisted of eight students from a Serbian (state) high school that followed the national program (Student 7 – Student 14). The students were learning English as a foreign language and the interviews were conducted in Serbian. Two in-depth interviews were conducted with students from the first group and three students took part in each of these interviews. One focus group interview was conducted with students from the second group. Eight students participated in this focus group interview.

Teachers' opinions were gathered from six teachers who taught high school students in the same schools that the interviewed students attended. Three teachers worked in the private high school (Teacher 1 – Teacher 3) and three teachers worked in the Serbian high school (Teacher 4 – Teacher 6). All teachers taught languages: two teachers taught English as a foreign language, one teacher taught English language and literature, one taught French, and one taught Serbian as a foreign language. Four individual interviews were conducted and two teachers were interviewed together. In total, there were four in-depth interviews with teachers.

The in-depth qualitative interviews were conducted to establish aspects related to participants' thoughts and intentions. Through semi-structured interviews, students and teachers answered previously composed questions. The questions were asked in the same order. They were open type questions and participants had the opportunity to express their views on certain problems or occurrences. All participants were asked all questions but during the interviews, additional questions were introduced to clarify participants' views. Semi-structured questions gave an opportunity to teachers to initiate new topics and to discuss possible ways to teach new skills they considered important. After initial interviews were completed, additional interviews with some teachers were requested. In that way, additional data were gathered that were not within the scope of the originally devised research.

All participants were guaranteed anonymity. The interviews were recorded and transcribed with the permission of the teachers and the students, which enabled detailed analysis. The comments that were in English are given verbatim. The comments in Serbian were translated so some of the language nuances might have been lost in the translation. Interviews with students and teachers enabled triangulation.

Analysis of students' work

Throughout the school year, students from the private school were asked to reflect on their work during language acquisition classes. Their tasks were part of the syllabus and were not designed to be part of the research. Students were asked to write about the challenges of the world they live in. Some of their reflections are included in this paper.

Results*Digital literacy and critical thinking skills*

A contemporary society requires educational practices that are different than those used in the past. Both teachers and students identified the use of technology as an important aspect of education. One teacher explained how students know much more than they did in the past.

Teacher 3: When I went to school, there were questions that I could not answer. The students I teach have never experienced this. If my students have a question, they google it and they have an answer. Sometimes they have 30 answers, and they have to figure out the right answer, and that is another of the life skills that we have to teach.

This comment is aligned with Kessler's warning that, "the wealth of information is both impressive and overwhelming [...] we are likely to misunderstand or miss out on some sources" (Kessler 2013:13). Indeed, adolescents embrace technology and use it abundantly, but they still need teachers' assistance to approach it with critical awareness. The access to technology offers students novel ways of gaining knowledge and interaction and they are not afraid of becoming involved in online communities. Teachers see their role as guiding students to become competent users of modern technologies. However, not all teachers consider themselves ready for this task.

Teacher 1: First of all, they need to learn how to use technology, and secondly, we need to teach them not to be too dependent on it.

Teacher 2: I would like to be more competent. Often I do not know what they are talking about. I don't know how to help them.

The interviewed students claim that they know how to use technology and that is aligned with teachers' perspective that technology gives a sense of power to young people. They turn to the Internet to find the information they need and take it as authority rather than consulting their teachers. Teachers are concerned that their students have not developed information literacy.

Teacher 4: My students can rarely tell me what a reliable source is. Often-times, they take for granted that everything they read on the Internet is reliable.

Developing critical thinking is vital if information is to be interpreted accurately. Black (2009: 693) points out that students need the “ability to seek out and critically evaluate information across a range of media”. Kessler (2013:310) emphasizes that “many social media contexts promote reflective discussion about the content” and to benefit from those opportunities, students need to know how to participate appropriately.

Teacher 3: I need to teach students how to put facts together, how to tell what is important, and what is not so important. But, I don’t have time to do that.

Teacher 5: I want to show them that everything is a part of a bigger picture.

Students are aware of the importance of taking into account different perspectives and evaluate situations. They are also aware that they need to learn how to do so.

Student 1: Education [...] affects the way people see the world. If educated enough, people have the ability to think more critically and judge the situation they are in. (Excerpt from the end of unit assessment)

Student 3: A person who is able to critically think all the time while seeing advertisements is more likely to be less affected by them, than a “naïve” person who believes most of the information passed to him through advertisements. (Excerpt from the end of unit assessment)

The lack of critical thinking skills makes it difficult for students to judge the relevance of information. They cannot synthesize information they have and that often leads to misunderstanding. As Teacher 3 pointed out, skills that students need should be incorporated in instruction. When students think critically they become active learners who draw on their previous experience and new information to construct new knowledge.

Overall, teachers recognize that print based literacy is not sufficient for students to access learning since learning process increasingly takes place in a virtual environment. Students use technology, yet they need assistance to succeed academically and not to be lost in the vast array of information. Also, as they spend a great amount of time online they need to be taught how to participate effectively in that environment. Although teachers agree that they should assist the students, they are also concerned that they may not be in the position to do so without additional professional development. This point of view is encouraging because teachers view themselves as life-long learners.

Developing responsibility for learning and reflecting on learning

Adolescent students are transitioning into adulthood and they want to have more control over what happens in their lives, especially over what happens in school. Young people need to become independent learners and they

need to have choices. However, in order to become mature, they need to take responsibility for their choices and learning.

Student involvement during the class depends on their perception of whether they can influence what happens to them. They are prepared to do what is expected of them only if they understand why certain things are expected. Based on students' comments, it appears that those who feel that the teacher takes into account their opinion when decisions are made, and those who feel that the teacher creates a safe atmosphere are more successful than students who feel that the teacher is in control.

Students from the Serbian state school display a desire to be given the possibility to make decisions. However, they do not seem to be ready to take on the responsibility for their choices.

Student 8: It is hard to function in a school that is not serious. There are only ten percent of us who are ready to study and we have to make ourselves study. Teachers should make us study.

Students seem to expect teachers to guide them, motivate them, and tell them what they need to do. On the other hand, they resent teachers who are strict and expect them to meet expectations without questioning.

Student 9: I would not like a teacher to tell me that I must learn this and that.

Student 10: When they tell me that I must, then I do not want to learn.

On the other hand, students from the private school seem to be prepared to take on responsibility for their actions. One student pointed out the importance of having engaging content during the classes. She explained that if she does not like the class, she thinks about something else:

Student 2: I would move my brain to another place. I transfer myself where I want to be. If the teacher calls on me, I am not here. I am there physically, my body is there, but my mind is not."

She also explained that if she did not pay enough attention in class, then she would have more to study at home. "I only blame myself if I do not pay attention at school." As she reflected on the learning process, she demonstrated readiness to take on responsibility for her actions.

Independent learners believe that their learning styles and learning preferences and the process of discovering personal strengths and weaknesses help them to draw their own conclusions, make connections, and make transfers. As stated above, not all adolescents are prepared for such a shift. Although they want to be given freedom, many of the interviewed students expressed their appreciation of "strict" teachers who give non-negotiable directions.

Developing communication skills

Students from both institutions emphasized that the development of linguistic and intercultural competences plays a key role in education. Although they identified the importance of communication, for them communication skills meant speaking two or more languages. The students from the school in which English was the language of instruction pointed out how important it was to speak other modern languages as well as the language of the host country (Serbian). “I don’t understand when people don’t try to learn at least some basics”. Students from the Serbian school stated that English and German were popular foreign languages. Therefore, young people from both institutions understood the value of multilingualism.

Students in the private school identified the importance of mastering English as soon as possible upon their arrival to the new environment. Since English was the language of instruction, students had a dual task before them: they were studying in their second language and at the same time they were learning the language for academic purposes. Their efforts were directed towards their general academic success and towards integration into their school environment. They needed to master English to be accepted by other students and not to be observed as different. All six interviewed students came to the school with insufficient knowledge of English. They talked at great length about the difficulties they had until they had learned enough language so that they could understand basic phrases to engage in short, everyday conversations. Having conversations in English was a daunting experience for them. In all cases, the lack of communication led to a lack of friends.

Student 1: You need to really be smart at the beginning. I had no one to try to talk to. When I learned more, it became better.

Other students expressed their frustration because they were not able to express themselves in the same way that they could in their own languages. They were all very communicative in their own language and it was difficult to accept that they had limited vocabulary in the second language.

Student 2: I know what I want to say, but often I do not say it in a proper way. I decide to keep quiet.

Student 3: When I say something in English, it seems so simple. Back home, my friends would come to ask me for advice, I was clever. I am not anymore.

Both students and teachers identified another problem, and that is the language of instruction becoming their dominant language.

Student 4: Sometimes I do not know how to say something in my language when I talk to my parents. I tell them in English.

Teacher 2: I am sad to see how students forget their mother tongue.

It became evident that students from the English speaking school were experiencing the loss of their mother tongue. Since their learning was in another language, they would use their first language mostly at home and not for academic purposes. Gradually, it became increasingly difficult for them to express complex ideas in their mother tongue. For those students, English would become their strongest language.

Communication skills were understood differently by teachers. Unlike the students who mainly talked about the importance of learning a new language, teachers identified the need to develop negotiating skills.

Teacher 5: My students need to learn how to accept perspectives of other people and to adjust their wishes. They need to explain what they want in an appropriate way.

Teacher 6: Young people do not know how to make a decision together. They need to learn what it means to be a team player. They need to learn how to help others to contribute. One person should not be in charge of deciding.

One student also reflected on a situation when she had to make sacrifices in order to complete the task.

Student 4: There are situations when I need to give up on something so that others would want to finish the project with me. If we do not finish the project, we will all get a bad grade.

This comment shows that young people are also aware that communication and collaboration are tools that would enable them to perform better and achieve results through teamwork.

Communication skills gain prominence in all areas of life and it comes as no surprise that encouraging thoughts and information exchange through class interaction is observed as important. As skills of collaboration and communication are becoming increasingly valued in the workplace, teachers need to guide students and to provide feedback not only on knowledge and understanding, but also on the way they achieve these, bearing in mind that civilized dialogue is vital. Students need to learn how to provide meaningful feedback to their peers but also to learn how to receive feedback from others (see for example, Prolman 2017).

Conclusion

The study has a number of limitations. The data was collected for research that attempted to establish what factors contribute to successful language learning and all interviewed teachers taught a foreign or a second language. The collected data represent the personal opinions of fourteen students and six teachers who live in Serbia. Furthermore, the study was conducted in two

schools that, although very different, do not represent all institutions that educate adolescents. Since this research has not been done on a representative sample, it cannot be generalized. However, the study has shown that mastering a new language could not be considered without addressing the needs of students in general. Although the students were asked to provide insights into second language acquisition, the aspects they identified apply to all disciplines.

The interviewed teachers reflected on student performance in their classes. They all showed a desire to understand the students they taught and to help them develop the social and thinking skills they would need in future. This is aligned with the belief that teachers who know the developmental characteristics of their students and who want to understand them are in a position to create an atmosphere in which independence, creativity, and self-reliance are developed. They also encouraged students to reflect on their actions. By creating a safe environment and encouraging reflection, attention is paid both to the intellectual and emotional needs of the students and content is related to students' interests and previous experience. For teachers, it means that they have to take into account individual differences of their students and design appropriate activities.

The study confirms the curriculum should stay academically challenging, but also include the development of life skills since they facilitate effective disciplinary learning. It is essential to integrate skills "deliberately and systematically into [...] education" (Kay 2009: 45). Teachers need to assist their students in developing the necessary skills, but to do that curriculum should incorporate explicit teaching of those skills. If teachers do not teach students how to go beyond surface meaning, students cannot be expected to practice critical thinking. Tasks that require students to use metacognitive strategies and tasks that demand deep processing of knowledge require students to use higher-order thinking, resulting in more effective learning. For students to think that they are developing their abilities, they need to be encouraged and assisted to choose what and how they learn. Teachers could contribute by directing students in a timely manner.

Responding to these challenges would mean that some teaching practices need to change. Students are aware that a new set of skills is needed and that they need help from their teachers to do so. For that reason, teachers are central for implementing appropriate instruction since they know their students and the learning context. They play an important role in equipping students with the tools they will need. Despite the fact that teachers play a vital role in educational process, they are not necessarily prepared for the task of helping students gain new competencies. To accomplish the task, teachers need to have adequate professional development to improve their teaching repertoire.

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READING STRATEGIES INSTRUCTION IN A GRADUATE PROGRAM FOR ENGLISH IN-SERVICE TEACHERS

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Abstract: A faculty complained that students were not reading as expected to in order to participate in class and to complete their assignments. Master's candidates argued that there was too much content to read. Participants were in-service teachers of a master program for English teachers at a private university. The intervention included asking the faculty to choose the core topics to be read, analyzed, and discussed in class. This is a descriptive study with analysis of quantitative and qualitative data. This study explored to what extent the faculty included reading strategies in class as well as students' perspectives of in-class-reading for different purposes. Data were obtained from the syllabus, and from surveys given to students. Findings reported an increase in reading strategies in class, students evaluated teachers better, and there was a change in their perspectives towards reading. The implications of this study favour supporting students' understandings of academic concepts and raising their motivations through in-class-reading.

Keywords: *in-service teachers, academic reading, reading strategies, graduate program.*

Introduction

Main international institutions recognize reading as a venue for academic success. UNESCO (2014) is currently investigating how books can be accessed through mobile phones, seeing that mobile phones are common in places where texts are scarce. UNESCO values reading for its positive effects in any field of humanlife. Furthermore, reading has been in the curriculum, and it is mentioned as one of the key 21st century skills. Currently, there is a tendency to include 21st century skills into standards and curriculum to prepare students to outperform when they are immersed in the work force (Alismail, McGuire, 2015). In this regard, Scott (2015) made a review of subjects that must be included to reach 21st century skills, and second in her list is reading.

Worldwide, there are several studies that find reading highly correlated to academic success (Oriogu, Subair, Oriogu-Ogbuiyi, Ogbuiyi, 2017; Whitten, Labby & Sullivan, 2016; Horbec, 2012). In Latin-America, researchers have discussed the importance of reading as a tool available from the first years of study to build knowledge and learning. They add that teachers consider this skill as an intrinsic component of learning as well as a basic element used in all formal education stages. It can be optimized to promote continuous and indefinite learning (Carlino, 2006; Márquez & Prat, 2006). Locally, official documents like the academic regulation from the higher education council consider reading as an autonomous learning activity (Consejo de Educación Superior 2015).

The weaknesses of critical reading and its application in academic discussions and assignments were detected in a graduate program of a private university in Guayaquil. It was expected from students at this level to read autonomously the references provided by the faculty. However, there was a feeling of explicit refusal from master's candidates not only to autonomous reading but also to the quantity of references. Thus, in order to improve students' quality of participation in the program, teachers were asked to choose one or two references core to the subject and scaffold reading strategies in the classroom to read, analyze, and discuss.

Literature Review

With regard to reading in higher education, research concludes that students do not read academic articles. There is also a common complaint from professors. They imply that the contact with academic production is reading, and students are not going through these academic papers as they are expected to (Carlino, 2006; Cornejo, Roble, Barrero, Martín, 2012). There are many causes for those difficulties, among them the complexity of the content. Due to this situation, texts have been adapted and simplified to improve students' comprehension. In addition, Horning (2007) implied that there is lack of training and practice of reading strategies. Cartolari and Carlino (2009) added that teachers focus on superficial aspects of reading due to their own limited interaction with texts.

Cornejo et al. (2012) observed that reading activities are limited to close questions made by the teachers and that students have to look for literal answers found in the passages. This practice was also found by Briones and Author (2011) in high school classrooms. It was noted that teachers do not take advantage of the benefits of the passages; most the questions were answered by the best student, or the student that was paying attention; when there was no answer, the teacher provided the correct response.

The authorities of education in Ecuador have adopted international tests that measure knowledge of students in Reading, Science, and Math. Results of these standard examinations indicate that sixth graders are below the mean when compared to regional scores. The institute of statistics and census reported a low rate of reading in the population (27%). Participants' were aged from 16 upwards. Data was gathered in five cities in Ecuador (Instituto Nacional de Estadísticas y Censos 2012). Most of them reported not being interested as the main cause (56.8%), followed by no time (31,7%). When the participants were asked about the place where they read, 5,4% answered that they read in an educational institution. Another important finding was that the participants do not read for professional development. Thus, it seems that optimal reading habits are far from being achieved in Ecuador. Nowadays, local authorities are investing resources to promote reading. In 2017, a campaign to motivate reading named "Yo Leo" [I read] was launched in elementary and high schools (Ministerio de Educación 2017).

Methodology

This is a descriptive study with analysis of quantitative and qualitative data. This innovation was implemented during two terms of a university Master's program for English teachers. Each term lasted six months. During the first term, teachers planned and delivered the lessons without reading in class. They assumed students would read autonomously. After a meeting with the group of teachers for the first term, there was a general observation from teachers that students were not reading academic references to participate in class or to structure their assignments. Thus, teachers from the second semester were advised to add guided reading activities in class.

This study was carried out to answer the following research questions:

- Will the faculty be receptive to recommendations and make adjustments to the syllabus of their classes?
- Will students' perceptions of assigned reading change?

It is important to mention that teachers were asked to include individual and group work. There was a platform to organize the activities. This platform allowed them to upload files, create tests, and write tags to announce or provide more information about tasks. Syllabi were downloaded from the platform.

Data was gathered from these instruments:

- Demographic information from the faculty. This information was selected and organized from the curricula that were uploaded to the platform for each class. From students, they completed a demographic survey.
- Syllabus. There was analysis of syllabi from the first and second terms in order to compare and contrast the use of reading strategies in class.

- Class observations. These were conducted to compare and contrast the syllabus of each class and to observe how teachers set the reading strategies.
- Surveys. The program asked students to complete surveys in order to receive feedback in terms of teaching methodology, content, and activities developed in class. The surveys include a Likert scale ranging from “To a great extent” to “Not at all”. This survey was made up of six questions regarding objectives of the subject, and twelve about the strategies implemented during classes. There were three open questions. From this survey, items that included reading were chosen and analyzed. To achieve reliability of the survey, Cronbach Alpha was run, and the result was 0.962 which means excellent.

Participants

The sample consisted of eight different teachers of the program. Four taught first term subjects, and the rest subjects of the second term. Two of the faculty members hold PhD degrees. There is one PhD candidate. The remaining five hold 3 master’s degrees. They have all evaluated or guided a graduate thesis and have collaborated in research studies. One faculty member had published several articles. There is one male professor. This information was taken from the curricula uploaded to the platform for each class. Sixty-two percent of professors were from the United States. From them, only one had not lived in Ecuador.

In this study, there were also 30 in-service-teacher students. They all hold an undergraduate degree. Table 1 summarizes the fields that the participants had studied. Most of them had studied to be English teachers (57%). Their ages range from 27 to 52. Thirty-three percent of the participants were male.

Table 1: Undegraduate degree

University Degree	Percentage
Teaching English	57%
Engineering	23%
BA in Tourism	10%
High school teacher	3%
Other	7%

Results and Discussion.

Research question 1: Will the faculty be receptive to recommendations and make adjustments to the syllabus of their classes? To answer the first research question, the syllabi were analyzed. Table 2 summarizes the reading activities implemented by teachers of the first and second term. It also shows that during the second term, more reading activities were developed in class. In the second term, there were also individual and group activities that involved reading for different tasks. These results indicate that faculty members of the second term were receptive to the recommendations and included guided reading as part of their sessions.

This implies that teachers in the first term assumed reading as an intrinsic component to learning (Carlino 2006; Márquez, Prat 2006). They expected students to read autonomously in the first term. After the term, they complained that students did not contribute in class (either in oral discussions, or in assignments). Students' understanding of academic sources were not reflected (Carlino 2006; Cornejo, Roble, Barrero, Martín 2012). There were many reasons for neglecting reading. One may be the complexity of the content, and the adaptation of academic content to make it more comprehensible to students. Thus, paying attention to teachers' and students' perceptions, the venue was to require a new faculty to guide students through reading strategies to engage participants with the content of the subjects. At this level, the faculty was receptive and could adapt their syllabus to implement reading for different purposes in class.

Table 2: Syllabi analysis of subjects per term

First term	Reading Strategy	Second Term	Reading Strategy
Subject 1. Area: Epistemic knowledge	Autonomous reading for – A test. – Glossary. – Case study Students do not mention the references in their work.	Subject 1: Area: Epistemic knowledge	In class: – Role-playing – Cooperative work – Jigsaw. Autonomous reading for: – Prepare a class in group. – Participate in Forums (students were asked to quote three authors) 4 – Essay (connect teaching practices to theory).
Subject 2. Area: Professional	Readings were used as samples to: – Compare and summarize two readings. – Define concepts individually or in groups. – Paraphrase. – Quote. – Test – Write an abstract.	Subject 2: Area: Professional.	In class: – Discussion groups (5) – Roleplaying (2) – Reading analysis (3) – Debate (2) – Case study (2) – Group project. Autonomous reading: – Forums (6) – Research proposal.
Subject 3: Area: Professional	Autonomous reading for: – Essay. – Class discussion. – A test. – Diary.	Subject 3: CF: Professional.	Guided reading through self assessment and practice questions to contrast with theory. Use of analogies to generate knowledge. Students read individually, highlighted relevant ideas, shared them with classmates. They responded to peers' ideas. This practice was observed in all sessions. Students read to: – Write immediate, short and long-term learning goals. – Plan a class based on concepts of the subject.
Subject 4: Area: Professional	Autonomous reading for a test and to write an argumentative essay.	Subject 4: Area: Professional.	In class: – Scan. – To write. – To extend the discussion. – Jigsaw Autonomous reading to write: – Logs (4) Group activity: – Infography (1)

In terms of the number of sources assigned in each class, Table 3 indicates that it increased the number of sources students had to refer to.

Table 3: Usage of sources

First term		Second Term	
Books	Articles	Books	Articles
4	4	7	8
3	6	7	7
7	7	4	9
1	3	--	14
Total 15	20	18	38

Results of the survey are presented in table 4. From the second term, an item was added regarding reading in the Likert scale. Comments in the first term indicated that there was too much content to read and not much time. On the other hand, comments in the second term showed that students hadnot only realized the effect of reading in their understandings but this had also impacted their perception of the faculty. The average improved in the second term.

Table 4: Results of survey that evaluated the quality of teaching and reading

First term			Second Term	
Subject	Faculty	Reading	Faculty	Reading
1	4.63	10 comments	4.77	4.87
2	4.35	3 comments	4.84	4.83
3	4.47	4 comments	4.70	4.67
4	4.84	2 comments	4.70	4.78
Media	4.57		4.75	4.79

This survey included open questions. Answers regarding reading were selected. Table 5 includes a review of students' comments, and how they differed from the first and second term. Reading and discussing the texts in class made students not only change their perceptions from negative to positive, but there was a requirement of including more texts. They connected reading to their practice. Their discourse included theoretical frameworks for learning. They felt they understood the contributions of the authors. It is important to mention that the sources increased in the second term. However, this was not perceived by the students; they did not mention reducing the sources.

Table 5: Students' comments towards reading

First term	Second term
<p>Reduce the length and number of readings.</p> <p>Select better sources. Some are interesting but do not support the activities.</p> <p>Select better articles to be analyzed.</p>	<p>Recommend articles to read.</p> <p>More information to read.</p> <p>Readings were fantastic.</p> <p>Connection of readings to practice. Read and follow the format.</p> <p>The theoretical framework helped me learn. The contributions of the authors.</p> <p>Include more theoretical books.</p>

Conclusions

Despite reading being a key element for success, it seems it has been neglected in educational institutions. As reported by the institute of statistics, only 6% of the population mentioned reading in educational institutions (Instituto Ecuatoriano de Estadísticas y Censos 2012). Thus, this perception may reflect the fact that teachers assume autonomous reading that students are not conducting. The same report indicates that only 27% of the population read, but not for professional development.

Teachers assume students can get meaning from texts by themselves. This practice was observed in this graduate program. When following teachers were aware of this situation, they were receptive to the recommendation of including reading activities in class for different purposes, mainly comprehension to later discuss orally or in writing. This study reports that when the faculty is aware of the needs of the participants teachers can adapt their syllabus and design lessons to manage texts in class.

When students read for a purpose, when they comprehend, and when they connect content to practice, they can raise their voices and contribute in class. Even though the sources increased in the second term, students asked for more articles, more information, and more theoretical bases. They graded teachers better. They found readings fantastic. Hence, this study may also deal with the main cause of not reading: "interest" (Instituto Nacional de Estadísticas y Censos 2012).

All in all, reading in class is effective to promote learning. However, teachers need to know how to handle, manage, and select the texts that will be read, discussed, and used in class to raise students' interest. Students come from different backgrounds, thus, reading can easily address different needs. Reading awareness should not be neglected at any educational level.

Recommendations

Future studies may integrate other instruments. Interviews can be added to gain more insights about students' perspectives of practices. Learning logs can be kept to know and compare the different reading activities. Analysis of students' oral and written participation to determine the level of comprehension and appropriateness should also be conducted.

This study can be replicated in other levels of education (elementary, high school, and undergraduate programs). In this case, the reading practices should be observed. Training sessions for teachers can be implemented if required.

The impact of the reading strategies in students' academic success can also be measured. Grades of students for different subjects and how they improve if they become effective readers should also be considered. Another option is to measure to what extent students become independent readers.

Participants of this intervention belong to the master's program for English teachers. It was observed that their proficiency improved. Implications of reading to improve proficiency in English can be also studied.

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Section V

Teaching Competences in ICT Education

Chapter XXV

**EXAMINING THE DIGITAL COMPETENCIES
OF PRE-SERVICE TEACHERS¹**

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Abstract: This study aims to examine the variables that may influence pre-service teachers' digital competencies at the Faculty of Education in Jagodina. If pre-service teachers are expected to integrate information and communication technology (ICT) into future teaching processes, they need to possess a high level of adequate competencies. In this study, digital competencies were identified as: (a) competencies to support pupils for ICT use in the class and (b) competencies to use ICT for instructional design. Four variables (support from teacher training institution (TTI), perceived usefulness, perceived ease of use and attitudes towards ICT use) were hypothesized to have direct and positive influences on digital competencies. This study also investigated whether support from TTI, perceived ease of use, perceived usefulness and digital competencies had any effect on the pre-service teachers' intention to use technology in their future teaching practice. Moreover, the development of pre-service teachers' digital competencies while studying at the Faculty (i.e. differences between freshmen, juniors and master students) were examined. With data gathered from 131 participants, using a survey questionnaire, linear regression analysis revealed positive effects of the strategies, perceived usefulness, attitudes, and perceived ease of use on pre-service teachers' digital competencies. Furthermore, the results revealed a positive impact of pre-service teachers' perceived usefulness, perceived ease of use and digital competencies in their intention to use digital technology in future teaching. On the other hand, the strategies do not affect intention to use ICT. Various contributions to research and implications for teacher training are discussed.

Keywords: *digital competencies, intention to use technology, linear regression, pre-service teachers, teacher training.*

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Introduction

With the rapid development of technology in recent decades, digital competence is increasingly becoming a competence of key importance for all employees and citizens and has been acknowledged as one of the eight key competencies for lifelong learning by the European Union (Ferrari 2012; 2013). Digital competence can be broadly defined as the confident, critical and creative use of ICT to achieve goals related to work, employability, learning, leisure, inclusion and/or participation in society (Ferrari 2012; Janssen et al. 2013).

From the long term aspect, basic digital competencies are generated in the educational system, and students' level of digital competencies depends on the level of digital competencies of teachers. Therefore, teachers are expected to have an adequate level of digital competencies, especially to be familiar with modern concepts, methods and tools in the fields they teach in (*Digital Competence Framework – Teacher for a Digital Age* 2017). However, research indicates that teachers' scarcely use ICT for teaching and learning, or constrainedly to low-level purposes (Davies, Pittard 2008; Teo, Milutinović, Zhou, Banković 2017; Wastiau et al. 2013).

It has been widely recognized that pre-service teachers should be prepared to adequately integrate ICT into their educational practice. A number of studies have addressed the evolving, critical importance of integrating digital technology into pre-service teacher education programs (Angeli, Valanides 2009; Tondeur, Aesaert, Prestridge, Consuegra 2018). Teacher training institutions (TTI) are thus expected to provide pre-service teachers with the necessary competencies to integrate technology in their classrooms (Tondeur, Aesaert, Pynoo, van Braak, Fraeyman, Erstad 2017).

The Faculty of Education in Jagodina is one of the five TTI in Serbia that educates future primary school teachers. In order to prepare future teachers to achieve educational goals, all TTIs in Serbia are required to offer at least one compulsory course for pre-service teachers to acquire necessary basic skills in ICT and the other course for educational technology. However, after continuous efforts to integrate ICT into pre-service teachers' education in Serbia, there is still a gap in the literature about its effectiveness on pre-service teachers' level of digital competencies or their intention to use ICT in future teaching practice.

This study will focus on determining the level of pre-service teachers' digital competencies at the Faculty of Education in Jagodina and a set of factors that could contribute to their development as well as intentions to use ICT in teaching. A key reason for studying this is to better predict future ICT use in teaching (Venkatesh, Morris, Davis, Davis 2003). Furthermore, the process of gaining digital competencies and intention to use ICT in teaching practice throughout the training years of pre-service teachers are examined.

By doing so, we intend to gain insight into the level and progress of development of pre-service teachers' digital competencies and intention to use ICT in educational practice in order to give recommendations for their improvement at TTIs in Serbia.

Literature Review

Pre-service teachers' digital competencies

Different frameworks aim to define various ICT competency skills for (pre-service) teachers in order to enable them to integrate technologies into their teaching and learning process. Some of them are: *UNESCO ICT Competency Framework for Teachers* (2011), *International Society for Technology in Education (ISTE) standards* (2008), *Becta's review of Digital Literacy* (Newman 2008). Serbian Ministry of Education, Science and Technological Development published a *Digital Competence Framework – Teacher for a Digital Age* (2017) in accordance with the *Strategy for the Development of Education in Serbia by 2020*, recognizing the importance and role of new technologies in improving the educational system.

In all these ICT frameworks, different terms are used, such as digital competencies, digital literacy, ICT literacy, ICT competencies, computer literacy, media literacy (Ala-Mutka 2011; Ferrari 2012; Wastiau et al. 2013). These concepts may have different meanings in diverse academic, cultural, historical, social, and educational contexts (Krumsvik 2011). Moreover, it is not recommended to focus on simply specific technological skills, as these may vary according to the hardware and software that is used (Tondeur, van Braak, Valcke 2007). More generic competencies should be fostered, involving different ways of using technology for teaching and learning across technologies and subject domains (Tondeur et al. 2017). For the purpose of this study we accepted concept of digital competencies, developed by Tondeur et al. (2017), as competencies necessary to support pupils for ICT use in class and competencies to use ICT for instructional design. More specifically, they distinguished two types of ICT competencies: (1) the ability to use ICT for facilitating student learning competencies in using ICT (ICTC-PU) and (2) the ability to manage ICT for their own teaching purposes (ICTC-ID).

Factors affecting digital competencies

The importance of ensuring that students coming out of teacher education programs demonstrate competencies in Technological Pedagogical Content Knowledge (TPCK) has been noted by many researchers (Almerich, Orellana,

Suárez-Rodríguez, Díaz-García 2016; Angeli, Valanides 2009; Teo et al. 2017; Tondeur et al. 2018).

Past studies into ICT competencies have emphasized that teachers' attitudes towards ICT play a key role in their development (Tondeur et al. 2018). Venkatesh et al. (2003) defined attitudes towards using technology as an individuals' overall affective reaction to using a system. Tondeur and associates (Tondeur, Siddiq, Scherer, Van Braak 2016) argued that ICT competencies can be strongly affected by specific attitudes, such as "attitudes toward ICT in education" and "usefulness". According to Davis et al. (1989), perceived usefulness is defined as the degree to which a person believes that using a technology will enhance his or her job performance, and perceived ease of use refers to the degree to which a person believes that the use of a technology will be free of effort.

Additionally, Tondeur et al. (2018) investigated the impact of pre-service teachers' background (age and gender) and ICT characteristics (e.g., attitudes towards ICT, perceived ease of use) in combination with the support they receive from their TTI on their ICT competencies. They found positive association between the strategies and pre-service teachers' ICT competencies, as well as the positive impact of pre-service teachers' attitudes towards ICT and ease of use on their ICT competencies for educational practice. Furthermore, the results revealed that gender and age did not affect pre-service teachers' ICT competencies for educational practice. Other studies (Franklin 2007; Røkenes, Krumsvik 2014; Wozney, Venkatesh, Abrami 2006) argued that ICT related training programs and strategies develop teachers' competencies in computer use.

For this reason, in the current study, factors such as attitudes, perceived usefulness, perceived ease of use and strategies were considered to affect pre-service teachers' digital competencies.

Pre-service teachers' intention to use digital technology in teaching practice

Various models and theories have been proposed to examine the key determinants that influence pre-service teachers' intention to use technology (Milutinović 2016a; 2016b; Teo, Milutinović 2015; Teo et al. 2017), such as the theory of planned behaviour (Ajzen 1991) or unified theory of acceptance and use of technology (Venkatesh et al. 2003). Behavioural intention is indicated by the degree of one's willingness to use technology.

There are numerous factors that could influence pre-service teachers' intention to use ICT in teaching such as, on a personal level, feelings, knowledge and attitudes or, on the school level, support, funding, training and facilities (Kreijns, Vermeulen, Kirschner, Buuren, Acker 2013).

Teo et al. (2017) found that the most dominant determinant of behavioural intention to use technology in teaching mathematics in Serbia was pre-service teachers' TPACK competencies, followed by their attitude towards computer use. As discussed in different studies (Bordbar 2010; Buabeng-Andoh 2012; Kreijns, Van Acker, Vermeulen, Van Buuren 2013; Peralta, Costa 2007), teachers' computer competence could be one of the major predictors for integrating technology in instructional activities.

Teachers' professional development is found to be among the key factors to successful integration of ICT into teaching practice (Franklin 2007; Wozney et al. 2006). Sandholtz and Reilly (2004) argued that teachers' technology skills are strong predictors of ICT integration, but they stated that training programs should concentrate on ICT pedagogical training, in order to help teachers accept technologies in teaching and learning.

Research has shown that teachers' attitudes towards technology influence their acceptance and its integration into teaching (Kreijns et al. 2013; Teo, Milutinović 2015; Wong 2015). Milutinović (2016a; 2016b) found that pre-service teachers' intention to use computers in teaching in Serbia is directly and dominantly predicted with their perceived usefulness and perceived ease of use.

Taking reference from the above-mentioned works, this study will explore if factors such as digital competencies, strategies, attitudes, perceived usefulness, and perceived ease of use were considered to affect pre-service teachers' intention to use digital technology in the classroom.

The development of pre-service teachers' digital competencies throughout the training years

Pajares argued that teachers form beliefs about teaching throughout all schooling experience as a student and make decisions regarding 'good' and 'bad' teachers (Pajares, 1992). Early perceptions may raise some difficulties, as once a belief has been held for a long time, it could become extremely difficult to change it (Hoy, Spero 2005). This is the reason why is it important to study pre-service teachers' development of beliefs about ICT integration in education and creation of a firm foundation for their future teaching since they will have an influence on their students.

Woodcock (2011) argued that teachers' judgments in their ability to motivate students and promote learning can play a vital role in determining a student's performance in the classroom. On the other hand, he showed that the training courses for primary school teachers appeared to have no influence on teacher efficacy levels.

It has been claimed that a new generation of students – named Millennials, NetGen, Generation Y, Homo Zappiens, or Digital Natives – is entering

institutions of higher education. This generation, who have grown up with ICT, is argued to have sophisticated technology skills and a whole new set of cognitive capacities (Prensky 2001) and most educational systems are not prepared to accommodate the needs of the new generation of learners. It is reasonable to believe that pre-service teachers in Serbia, as a developing country, did not have the opportunity to create early perceptions concerning the use of ICT in education prior to the training to become a teacher.

For this reason, in this study we examined to what extent pre-service teachers' level of digital competencies and intention to use ICT in educational practice is changing during their teacher training years.

Research method

Aims of the research

The main objective of this study was to examine the variables that have significant influence on digital competencies (DIGCOMP) and the intention (BI) to use digital technology in teaching in elementary schools (i.e., behavioral intention) among pre-service teachers in Serbia. Taking into account the results of numerous studies, we have extracted the key predictors: support (SQD) pre-service teachers receive from their TTI, their perceived usefulness (PU), perceived ease of use (PEU) and attitudes towards ICT use (ATU). This study could serve to inform teacher education instructors and administrators on the variables that directly impact on pre-service teachers' intention to use technology in their future jobs. Being guided by the findings of this study, pre-service teachers could be led to strengthen their digital competencies and the intention to use technology in their capacity as future teachers.

Specifically, this study attempts to answer the following research questions:

1. To what extent do PU, PEU, ATU and SQD influence pre-service teachers' DIGCOMP?
2. To what extent do PU, PEU, ATU, SQD and DIGCOMP influence pre-service teachers' BI?
3. Are there significant differences in the level of digital competencies and intentions to use technology between freshmen, juniors and master students

Context and sample

Participants in this study were 131 pre-service teachers from the University of Kragujevac, Faculty of Education in Jagodina, Serbia. Of these, there were 116 female (88.5%) participants, a representative gender distribution of

the pre-service teachers in Jagodina. The average age was 21.4 years old ($SD = 3.56$). Among the participants, 52 (39.7%) were at the beginning of their study (freshman), 44 (33.6%) in the third year of their study (juniors), and the others were master students.

On average, each participant took about 10 minutes to complete the questionnaire. No course credits or rewards were given to the participants, and participation was voluntary.

Instruments

A survey questionnaire was employed in this study. In addition to the questions on demographics (age, gender, study year), items were compiled to assess participants' responses in order to measure the variables in the research model. These are perceived usefulness, a four-item scale (Cronbach's $\alpha = 0.90$), perceived ease of use, a five-item scale, (Cronbach's $\alpha = 0.88$), attitude towards ICT in education, a four-item scale (Cronbach's $\alpha = 0.85$), and behavioral intention to use ICT in education, a three-item scale (Cronbach's $\alpha = 0.87$). Each item was measured on a 5-point Likert scale with 1 = strongly disagree and 5 = strongly agree. Items were adapted from various published sources (see Appendix) and translated into the Serbian language.

The SQD-scale developed by Tondeur and associates (Tondeur et al. 2016) is a uni-dimensional scale including six effective strategies for the content and delivery methods to prepare pre-service teachers for technology use (1) using teacher educators as role models, (2) reflecting on the role of technology in education, (3) learning how to use technology by design, (4) collaboration with peers, (5) scaffolding authentic technology experiences, and (6) providing continuous feedback (24 items, Cronbach's $\alpha=0.96$). Respondents were asked to rate each statement on a six-point Likert scale, anchored between (1) strongly disagree and (6) strongly agree.

The DIGCOMP scale is an instrument to measure pre-service teachers' ICT competencies developed by Tondeur and associates (Tondeur et al. 2017). It consists of two factors: ICT Competence Pupil Use (ICTC-PU), the ability to use ICT for facilitating student learning competencies in using ICT, and ICT competence Instructional Design (ICTC-ID), the ability to manage ICT for their own teaching purposes (19 items, Cronbach's $\alpha=0.95$). The 11 items on ICTC-PU were designed to measure the extent to which pre-service teachers are competent to educate pupils in the use of ICT for learning processes. The eight items on instructional design (ICTC-ID) measure the degree to which pre-service teachers are competent to use ICT to support and strengthen their instructional practice. Respondents were asked to rate each statement on a five-point Likert scale, anchored between (0) strongly disagrees and (5) strongly agree.

Data Analyses

The data was analyzed using the multiple regression analysis conducted with SPSS Statistics 17.0. The analysis involves testing for data normality, linearity, homoscedasticity, and multicollinearity as well as research models representing the relationships between the variables in this study. In order to obtain reliable results in regression analysis, researchers recommend about 15 subjects per predictor (Stevens 2012). Given that the sample size of this study is 131, multiple regression is regarded as an appropriate technique for data analysis.

Furthermore, univariate ANOVA tests were conducted to explore differences in digital competencies and intention to use technology with participants' background variable (grade).

Results

Descriptive analysis

Using SPSS software, we determined descriptive statistics of items. Aiming to facilitate evaluation of the intention of pre-service teachers towards ICT use and their ICT competencies, we present below the descriptive analysis, organized by constructs. For all of the constructs in the questionnaire we calculated the means, standard deviations, skewness, kurtosis and Cronbach α s, which are given in Table 1. As we can see in Table 1, the scores obtained show the students' inclination towards the use of ICT in their future educational practice and all other measured items, with mean scores above 4, out of a maximum of 5 except for the SQD where maximum is 6, in all of the items indicating positive responses to the constructs. The standard deviations ranged from 0.59 to 0.91, reflecting a fairly narrow spread in participants' responses around the mean. The skewness and kurtosis indices indicated a degree of normality that was acceptable for the purposes of this study because, as a rule of thumb, data may be assumed to be normal if the skew and kurtosis are well within the accepted level of |3| and |10|, respectively (Kline 2011). The internal consistency is judged to be adequate when Cronbach's alpha equals or exceeds 0.7 (De Vellis 2003). The internal consistency (Cronbach's alpha) of all constructs range from 0.85 to 0.96.

Table 1: Descriptive statistics of the constructs and composite reliability

Variable	Mean	Std. Deviation	Skewness	Kurtosis	Cronbach's Alpha (a)
SQD	4.47	0.91	-0.168	-0.628	0.96
DIGCOMP	4.18	0.60	-0.533	-.0504	0.95
PEU	4.24	0.61	-0.420	-0.466	0.88
PU	4.42	0.66	-0.894	-0.213	0.90
ATU	4.43	0.59	-0.932	0.465	0.85
BI	4.36	0.71	-0.862	-0.280	0.87

Note. SQD = strategies for the content and delivery methods; PU = perceived usefulness; PEU = perceived ease of use; ATU = attitude toward ICT use; DIGCOMP = digital competencies; BI = behavioural intention.

Correlation and multiple regression analyses were conducted to examine the relationship between variables. One-Way ANOVA was conducted to find the differences among freshmen, juniors and master students.

Preliminary analysis has shown that the assumptions of normality, linearity, homoscedasticity, and absence of multicollinearity were not disturbed.

*Table 2: Correlation coefficients among the constructs; **p<.01*

	BI	PEU	DIGCOMP	ATU	PU
PEU	0.603**				
DIGCOMP	0.596**	0.665**			
ATU	0.746**	0.707**	0.683**		
PU	0.579**	0.621**	0.688**	0.673**	
SQD	0.416**	0.478**	0.588**	0.462**	0.431**

We can see from Table 2 that all four variables (SQD, PU, ATU and PEU) are correlated with the DIGCOMP and correlations are positive.

Multiple regression analysis was used to test if strategies, perceived usefulness, attitudes and perceived ease of use significantly predicted pre-service teachers' ratings of digital competencies. The results of the regression indicated the four predictors explained 64.4% of the variance ($R^2 = 0.644$, $F(4,126) = 56.87$, $p < 0.001$). It was found that perceived usefulness predicted digital competencies ($\beta = 0.307$, $p < .001$), as did strategies ($\beta = 0.262$, $p < 0.001$), attitudes ($\beta = 0.216$, $p < 0.05$), and perceived ease of use ($\beta = 0.197$, $p < 0.05$).

As can be seen in Table 2, all five variables (DIGCOMP, SQD, PU, ATU and PEU) are correlated with the BIT and correlations are positive. However, the correlation coefficient among ATU and BIT is higher than recommended 0.7, hence we omitted ATU from the regression equation.

Second multiple regression analysis was used to test if strategies, perceived usefulness, perceived ease of use and digital competencies significantly predicted pre-service teachers' intention to use digital technology in the classroom.

The multiple regression model with all four predictors produced $R^2 = 0.459$, $F(4,126) = 26.71$, $p < .001$, indicating that four predictors explained 45.9% of the variance. Predictors perceived usefulness ($\beta = 0.213$, $p < 0.05$), perceived ease of use ($\beta = 0.31$, $p < 0.01$) and digital competencies ($\beta = 0.217$, $p < 0.05$) had significant positive regression weights, indicating students with higher scores on these scales were expected to have higher intentions to use digital technologies in the classroom. The strategies scale did not contribute to the multiple regression model.

*Table 3: Means and standard deviations for freshmen, juniors and master students and multiple comparisons among the groups (ANOVA); * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$*

Dependent Variable	(I) category	N	Mean (M)	Std. Deviation (SD)	(J) category	Mean Difference (I-J)	Sig.
BI	Freshmen	52	4.13	0.76	Juniors	-0.26	0.155
	Juniors	44	4.39	0.67	Master students	-0.25	0.231
	Master students	35	4.65	0.55	Freshmen	0.51**	0.002
	Total	131	4.36	0.71			
DIGCOMP	Freshmen	52	3.94	0.6	Juniors	-0.26	0.056
	Juniors	44	4.20	0.57	Master students	-0.32*	0.033
	Master students	35	4.52	0.45	Freshmen	0.58***	0.000
	Total	131	4.18	0.6			

The differences in digital competencies and intention to use technology among freshmen, juniors and master students are given in Table 3. Prior to conducting the ANOVA, homogeneity of variances was tested. Levene's test revealed that the equal variances assumption of the ANOVA was met ($p < 0.05$). The main effect of year in college was found to be significant for digital competencies $F(2,128) = 11.56$, $p < 0.001$, and behavioral intention $F(2,128) = 6.02$, $p < 0.01$.

Master students ($M = 4.52$, $SD = 0.75$) reported significantly higher levels of digital competencies than did freshmen ($M = 3.94$, $SD = 0.6$) and juniors ($M = 4.2$, $SD = 0.57$). First-year and third-year students did not significantly differ on the reported level of digital competencies and behavioral intention (see Table 3 for means and standard deviations). For behavioral intention, only master students ($M = 4.65$, $SD = 0.55$) reported significantly higher intentions to use digital technology in education than freshmen ($M = 4.13$, $SD = 0.76$). The results did not show significant differences in intention between freshmen and juniors and juniors and master students.

We calculated Partial eta-squared (η^2) in order to measure effect size. As a rule of thumb (Cohen 2013), the effect may be assumed to be small if $\eta^2 \sim 0.01$, medium if $\eta^2 \sim 0.06$, and large if $\eta^2 > 0.14$. For digital competencies eta-squared is 0.15, indicating a large difference between groups. Eta-squared for intention to use ICT in education is 0.9 indicating medium effect size.

Discussion

The aim of this study was to examine the variables that have a significant influence on digital competencies and the intention to use digital technology in elementary school teaching among pre-service teachers in Serbia.

To answers the first research question, regression analysis was conducted, and the results of this study suggest that perceived usefulness, perceived ease of use, attitudes and strategies have a significant direct impact on the level of digital competencies of pre-service teachers. Among these four predictors, the most influential was found to be perceived usefulness followed by strategies, attitudes, and the least influential perceived ease of use. This means that when pre-service teachers find technology useful, they are more positive towards the development of their digital competencies. This was in line with past findings that perceived usefulness significantly predict ICT competencies (Jegede, Dibbu-Ojerinde, Ilori 2007). In addition, the more pre-service teachers perceive the occurrences of the strategies during their teacher education, develop positive feelings towards the use of digital technology, and find technology easy to use, the higher their perceived digital competencies for educational practice. This finding is consistent with a recent study that examined the impact of

pre-service teachers' background and ICT profile in combination with the support they receive from their teacher training institution on their ICT competencies (Tondeur, Aesaert, Prestridge, Consuegra 2018). Jegede et al. (2007: 172) suggested in their study that "findings revealed that attitude bears a significant relationship with and also predicts competence".

Furthermore, for the second research question, the results of this study suggest that digital competencies, together with perceived usefulness, and perceived ease of use, are significant factors that influence pre-service teachers' intention to use digital technology for teaching in the first four grades of elementary school in Serbia. Attitudes were excluded from the regression equation because of the high correlation with behavioral intention. On the other hand, past studies have emphasized that both perceived usefulness and perceived ease of use (Teo et al., 2009a) play a big part in forming the attitudes towards technology (Teo, Milutinović 2015; Teo, Milutinović, Zhou 2016; Wong 2015).

The most dominant determinant of behavioral intention was perceived ease of use, followed by digital competencies and perceived usefulness. These findings are consistent with studies that examined the influence of perceived ease of use and perceived usefulness on intention to use computer among pre-service teachers in Serbia (Milutinović 2016a; 2016b).

The positive influence of digital competencies on intention is consistent with findings of Peralta and Costa (2007) and Buabeng-Andoh (2012) who found that technical competencies influenced teacher's use of technology in teaching. Bordbar (2010) discussed that teachers' computer competence is a major predictor for integrating technology in teaching.

On the other hand, strategies did not affect pre-service teachers' intention to use digital technology in educational practice. The lack of significant influence found for strategies on behavioral intention to use technology in this study was not aligned with research (Franklin 2007; Wozney et al. 2006). It is possible that strategies alone are not a sufficiently strong driver for pre-service teachers to use technology to teach and that the nature of primary school teaching with technology is perceived to be relatively complex so that other variables such as perceived ease of use and perceived usefulness have to be present to have a significant influence on their behavioral intention to use technology.

For the third research question in this study, ANOVA results for the paired samples and effect size indicated that, on average, master students hold stronger digital competencies and intention to use digital technology as compared to freshmen students. There were no significant difference between freshmen and juniors. On the other hand, master students' digital competencies were significantly higher than juniors'.

These results indicate that the study year does influence digital competencies and intentions. This result is not consistent with findings of Woodcock (2011) who showed that training courses for primary school teachers appeared to have no influence on teacher efficacy levels. On the other hand, this result is consistent with findings of Sang and associates (Sang, Valcke, Tondeur, Zhu, Van Braak 2012) who showed significant differences in constructivist teaching beliefs with respect to study year. Students in Serbia probably did not have the opportunity to form and hold for a long time their beliefs about the use of digital technology throughout all schooling experience. This may be due to teachers being “digital immigrants” (Prensky 2001) as well as poor technological equipment of primary and secondary schools in Serbia. Because of that, pre-service teachers’ digital competencies, beliefs and attitudes towards digital technology usage can be significantly changed with good learning strategies during their teacher training courses.

Limitations and recommendations for future research

The data provided empirical support to the selected variables that were capable of explaining 64.4% of the variance in pre-service teachers’ digital competencies and 45.9% in behavioral intention. This leads to the conclusion that possibly some other variables that may significantly impact on the digital competencies and the acceptance of technology in teaching were overlooked or excluded.

Although all methodology precautions were undertaken, one of the limitation of this study is collecting the data through self-reports, which may lead to common method variance and thus may inflate the true relationships between variables. Researchers suggest that subjective self-assessment lacks appropriate validity and is not an accurate stand-alone predictor of digital competence among preservice teachers (Maderick, Zhang, Hartley, Marchand 2016). Future research could include testing of pre-service teachers’ digital competencies and their actual usage of ICT in teaching practice, as soon as they start working, as well as examination of other variables which could be of interest to education in the first four grades of elementary school.

Conclusion

This study examined the variables that influence the development of digital competencies and intention to use digital technology in primary school teaching among pre-service teachers in Serbia.

The results suggested that, of the four variables, perceived usefulness was found to have the most influence on digital competencies, followed by

strategies, attitudes and perceived ease of use. Furthermore, perceived ease of use was found to have the most influence on intention to use technology, followed by digital competencies and perceived usefulness, while strategies did not significantly affect intention. This finding suggests that the pre-service teachers' intention to use technology in this study were driven by their affect and skills more than their perceptions of support. Finally, significant differences were found in the pre-service teachers' digital competencies and intention to use technology, by their year of study, among freshmen and master students.

It is hoped that this study could serve as a starting point in understanding pre-service teachers' development of digital competencies and intention to use digital technology in primary school teaching in Serbia and societies that share a similar level of technological advancement.

Given the dearth of research of this nature in Serbia, this study serves as a starting point in understanding pre-service teachers' intentions to use technology to teach in primary school. From a theoretical perspective, this study contributes to enhancing the debates around digital competencies and technology acceptance for teaching in primary school and among users in cultures that do not have the same level of technological advancements from the studies that are widely reported in the literature.

Implications for theory and practice

This study should help policy makers and managers at teacher training institutions (particularly in Serbia) to pay special attention to factors that have a determining role in improving pre-service teachers' digital competencies and acceptance of technology in primary school teaching.

If teacher educators want to motivate pre-service teachers to use technology in primary school teaching, they need to make sure that students have enough opportunities to acquire digital competencies. There should also be a conscious effort in creating conducive learning environment, applying adequate strategies during courses, from the beginning of their studies, where pre-service teachers can gain successful experiences in harnessing technology for teaching and learning. From this study, perceived usefulness, perceived ease of use, and digital competencies are important constructs that shape pre-service teachers' intention to use technology. It is reasonable to expect that a successful experience with technology, being useful and easy to use, would foster the development of digital competencies and positive intention to use technology among pre-service teachers.

On their part, teacher educators, by modeling the integration of technology through their lesson delivery and assessment design, may act as facilitators to shape pre-service teachers' perceived usefulness and perceived ease of use of technology. Røkenes, and Krumsvik (2016: 17) argued that "if teacher

education programs want to prepare ESL student teachers to teach ESL in innovative ways with ICT, then teacher educators and mentor teachers need to reflect on how they use these digital tools in their own teaching practice". Because of their status in the institutions, these educators act as referent others for their students and help them form and hold for a long time their beliefs about the use of digital technology.

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Appendix:

List of Constructs and Corresponding Items

Perceived ease of use (adapted from Davis et al. 1989; Teo 2009b)

PEU1 Learning how to use ICT in the educational practice would be easy for me;

PEU2 I find it easy to interact with ICT;

PEU3 I find it flexible to interact with mobile devices

PEU4 It would be easy for me to become skillful at using ICT in educational practice

PEU5 In general, I consider ICT to be easy to use.

Perceived usefulness (adapted from Davis et al. 1989; Teo 2009a, b)

PU1 The use of ICT improves the educational practice;

PU2 The use of ICT makes the educational practice more effective;

PU3 The use of ICT makes it easier to carry out educational tasks;

PU4 In general, I consider that ICT are useful in education.

Attitudes towards use of ICT in educational practice (adapted from Venkatesh et al. 2003; Teo 2009b)

ATU1 The use of ICT would make educational practice more interesting.

ATC2 Working with ICT in education would be fun.

ATC3 I would like to use ICT in educational practice.

ATC4 I look forward to those aspects of my job that require me to use ICT.

Behavioral intention (adapted from Teo 2009b)

BI1 I intend to use ICT frequently in my future educational practice.

BI2 I will probably use ICT in my educational practice as soon as I start working.

BI3 I will use ICT in my future educational practice.

Chapter XXVI

USE OF NEW TECHNOLOGIES IN EDUCATION

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Abstract: Preschool education is a very important period in the life of a child. Besides the family, the kindergarten has equivalent importance for the child's social, emotional and intellectual development. Therefore the role of the teacher is very important and requires permanent competency improvement, so that he/she might apply his/her own skills dealing with a child's holistic development. One of the basic competencies that a modern preschool teacher should possess is the use of information and communications technology (ICT). Computer literacy, as well as the ability to use ICT, contributes to the improvement of the practice and better planning in the sphere of education, as well. It leads to stronger cooperation with the family, the municipality, or educational institutions. The study aims to determine the percentage of kindergarten teachers that directly integrate new technologies for educational purposes. Also, it will present the best ways for supporting and improving the ICT competency. We selected a sample of 200 teachers employed in five kindergartens from Moravicki District (Čačak, Gornji Milanovac, Ivanjica, Lucani, Guča). The results of the research show that the competencies of the teachers of the Moravicki District for the use of new technologies is at a high level, and that there is a statistically significant difference in relation of the competence level for the use of modern digital technologies and the age and educational level of kindergarten teachers.

Keywords: *kindergarten teacher, competencies, new technologies.*

Introduction

The family as the basic, narrowest and most natural collective connected with feelings, common aspirations, interests, and perspectives is one of the most powerful educational factors.

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In addition to parents, a preschool institution, as well as an educator, plays an important role in the upbringing and raising of children. Preschool age is a period that provides more opportunities in which a child with a lot of energy, perseverance and enthusiasm masters and develops complex capacities, depending on his future abilities, his personality, and the success of his future life. The educator is also a person who takes care of children during their stay in a preschool institution that nurtures, educates, directs them on the right path from the very beginning of life, by following the overall development of the child.

The profession or the vocation of the educator is, by its very nature, very compound, multidirectional and complex - in itself, it implies a constant need to constantly reinforce beliefs in one's own professional powers by appropriate scientific and professional culture. Being a good educator, in the broadest sense of the word, means mastering pedagogical competencies in which knowledge is only one segment. Continuing education means an organized educational activity through which new knowledge is acquired.

The competence of educators is recognized in the *Strategy for the Development of Education in Serbia*, and in international documents as one of the key dimensions of the quality of education.

Respecting the specifics of educational work with preschool children, as well as the principles and long-term goals in this work, requires a special approach to the introduction of information technology into the preschool education system.

The existing framework of professional competencies of educators in terms of their digital literacy is envisaged in the current Rulebook on standards of competence for the profession of educators and their professional development (*Official Gazette RS*, No. 88/17 and 27/18). The Rulebook highlights the key digital competencies of educators, that is, knowledge about the use of digital technologies: it implements and integrates new technologies in immediate education work; it utilizes benefits, controls the shortcomings and dangers of digital technologies and develops awareness and habits for their use in both children and parents; it uses digital technologies in planning activities and conceiving the necessary materials, in monitoring, evaluating and documenting; it operates in different databases (for record keeping: about children, parents, evaluation, etc.); it applies digital information, sharing technologies with family, colleagues, associates, local community and other interested persons and institutions; it uses digital technologies for professional development.

Intensive changes in society based on the process of informatization have caused changes in educational work, which are reflected in the use of different methods, strategies and media. Informatization, which has affected society itself, carries a whole range of media tools, for which the use of certain

knowledge and skills of preschool teachers is necessary (Stanisavljević Petrović, Pavlović, Soler-Adillon 2016). The question arises: what are the necessary digital competencies of educators, what is the scope of informatics literacy of educators, and what is the representation of the use of digital competences.

Numerous studies in our country show that educators are not using enough modern technical means in educational work; they show certain inertia and fear of using them (Stošić, 2011). This is most frequently due to ignorance and lack of education of educators, since earlier generations of educators were not educated to implement modern technical means, so that their repulsion towards the application and use of modern technical means in preschool institutions is not surprising. Unlike the former education of educators, today's education program for future educators at higher education institutions provides the opportunity for students to acquire computer literacy through several study subjects, to improve and perfect them so that new generations of educators that derive from formal education come up with the knowledge of using computers, and are aware of its benefits for educating children. In other words, in higher education institutions, there is a program within the information technology area that includes acquiring knowledge at user level (operating system, internet, word processor, drawing program, presentation program, sound and video processing, familiarization with ready educational software in the course of one or two courses of study). The use of advanced technologies is important for the development of professional competencies of future educators because they spread general knowledge, integrate theory and practice, and influence the increasing correlation between formal and informal knowledge (Janjic, Petković, Grujic, 2015; Andjelkovic, Stanisavljević Petrović, 2012).

Methodology of research

Objective and tasks of the research

The aim of this research was to examine the extent to which educators from the five preschool institutions of the Morava District apply and integrate new technologies in immediate educational work, as well as how support can be provided in order to improve this competence. The tasks of this research focused on four aspects of the use of digital technologies in educational work and the possibilities of professional development of educators in this field of competence: to examine self-assessments of educators about personal competences for the use of new technologies; to examine what are the domains of work in which the educator mostly uses new technologies; to explore to which extent the educators are familiar with and use software tools; and to establish the level of motivation of educators for additional professional development in the field of digital technology.

Research hypotheses

Based on the research goal and tasks, we also set a general hypothesis: the educational self-assessment of the level of own competencies for the use of modern digital technologies is expected to be at an enviable level with a tendency toward higher values, and a small number of educators will grade the level of competence as low or unsatisfactory. Starting from the basic hypothesis of research, the following specific hypotheses are set: it is assumed that the level of competence of educators for the use of modern digital technologies is statistically significantly conditioned by the age of the educator; it is assumed that the level of competence of educators for the application of modern digital technologies is statistically significantly conditioned by the level of education of educators.

Material and method

In order to examine the current state of the competencies of the teachers of the Morava District for the application of digital technologies in immediate educational work, a survey was conducted on a sample of 200 teachers from five preschool institutions of the Morava District (Čačak, Gornji Milanovac, Ivanjica, Lučani, and Guča). The survey technique was used. The participating teachers responded to eight closed-type questions by circling the offered answers, while one question related to the knowledge and use of software tools (programs) was used in the Likert-type rating scale in which the educators evaluated how much they govern the said software tool (program) on the scale from 1 to 5.

Quantitative data processing included the calculation of frequencies and percentages, as well as the Chi-squared test for determining statistically significant differences with respect to the observed variables, age and level of education of educators.

Starting from the age of the educators, our teachers were classified into five groups: from 20 to 30 years, from 30 to 40, from 40 to 50 years, from 50 to 60 years and over 60 years. The age of the educator is shown in Table 1.

Table 1: Age of educators

Age	f	%
20–30	26	13.00
30–40	64	32.00
40–50	51	25.50
50–60	50	25.00
over 60	9	4.50
Total	200	100.

According to the level of education, we separated the educated teachers into four groups: Two-year post-secondary Degree, College, University and M.A. The level of education of educators is shown in Table 2.

Table 2: The level of education of educators

Level of education	f	%
2-Year Postsecondary Education	78	39.00
College	108	54.00
University	9	4.50
M.A.	5	2.50
Total	200	100

Results of the research with the discussion

Results of the survey in relation to the age of educators

The data on whether the educators use computers in their immediate educational work are shown in Table 3.

Table 3: The use of computers

Age	YES		NO		Total	
	f	%	f	%	f	%
20–30	26	100	0	0.00	26	100
30–40	57	89.06	7	10.94	64	100
40–50	47	92.16	4	7.84	51	100
50–60	34	68.00	16	32.00	50	100
over 60	3	33.33	6	66.66	9	100
Total	167	83.5	33	16.5	200	100

$$\chi^2 = 34.51, df = 4, C_k = 0.38, C_{\max} = 0.89$$

Through the research, we obtained data that a large percentage of educators use the computer in their immediate educational work regardless of age. Thus, 100% of educators of age from 20 to 30 use computers, 89.06% of educators aged 30 to 40 use computers, and 92.16% of educators aged 40 to 50 use computers. A significantly smaller number of educators aged 50 to 60 (68.00%) use the computer. It is interesting that educators over the age of 60 years (33.33%) use a computer in a significantly smaller percentage. Based on the data from Table 3 it is possible to determine the significance of the relation,

the level of relation, and the direction of relation. The calculated value $\chi^2 = 34.51$ compared to the limit value of 13.277, with the corresponding number of degrees of freedom ($df = 4$) at the level of significance of 0.01. Since our $\chi^2 = 34.51$ is higher we conclude that the level of competence of teachers for computer use is statistically very affected by the age of educators. The value of the contingency coefficient of $C_k = 0.38$ in our case is significantly lower than the maximum value of the coefficient of contingency ($C_{max} = 0.89$); this means that the correlation between the observed phenomena is relatively poor.

The readiness of educators to acquire knowledge in the field of digital technologies is shown in Table 4.

Table 4: The readiness of educators to acquire knowledge in the field of digital technologies

Age	YES		NO		Total	
	f	%	f	%	f	%
20-30	26	100	0	0.00	26	100
30-40	57	89.06	7	10.94	64	100
40-50	50	98.04	1	1.96	51	100
50-60	34	68.00	16	32.00	50	100
over 60	3	33.33	6	66.66	9	100
Total	170	85.00	30	15.00	200	100

$$\chi^2 = 34.51, df = 4, C_k = 0.38, C_{max} = 0.89$$

85.00% of teachers regardless of years of service are ready to acquire knowledge in the field of digital technologies, while 15% think they are not ready. Thus, all surveyed educators from 20 to 30 years of age believe that they are fully prepared to acquire knowledge in the field of digital technologies. Also, a large percentage of educators aged 30 to 40 (89.06%), 40 to 50 years (98.04%) and 40 to 50 years (68.00%) are ready to acquire knowledge in the field of digital technologies. By contrast, 33.33% of educators over the age of 60 believe that they are not ready to acquire knowledge in the field of digital technologies. The calculated value $\chi^2 = 34.51$ compared to the limit value of 13.277, with the corresponding number of degrees of freedom ($df = 4$) at the level of significance of 0.01. Since our $\chi^2 = 42.39$ is higher, we conclude that the readiness of educators for acquiring knowledge in the field of digital technologies is statistically largely conditioned by the age of educators. The value of the contingency coefficient $C_k = 0.38$ in our case is significantly lower than the maximum value of the coefficient of contingency ($C_{max} = 0.89$); this means that the correlation between the observed phenomena is relatively poor.

Table 5 shows the assessment of teachers at the five-level Likert-scale on their skills in working with MS Word, MS Excel, MS Power Point, Internet and E-twinning, EPALE.

Table 5: Educators' mastery of certain programs

MS Word														
Age	1		2		3		4		5		Unanswered		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
20–30	0	0.00	0	0.00	0	0.00	8	30.77	18	69.23	0	0.00	26	100
30–40	1	1.56	4	6.25	13	20.31	22	34.37	18	28.12	6	28.12	64	100
40–50	3	5.88	4	7.84	7	13.72	10	19.61	15	29.41	12	23.53	51	100
50–60	5	10.00	3	6.00	8	16.00	4	8.00	1	2.00	29	38.00	50	100
over 60	0	0.00	0	0.00	0	0.00	0	0.00	2	22.22	7	77.77	9	100
Total	9	4.50	11	5.50	28	14.00	44	22.00	54	27.00	54	27.00	200	100

$$\chi^2 = 97.66, df = 20, C_k = 0.57, C_{max} = 0.89$$

MS Excel														
Age	1		2		3		4		5		Unanswered		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
20–30	0	0.00	2	7.69	2	7.69	12	46.15	10	38.46	0	0.00	26	100
30–40	6	6.37	9	14.06	19	29.69	13	20.31	8	12.5	9	14.06	64	100
40–50	10	19.61	3	5.88	13	25.49	5	9.8	1	1.96	19	37.25	51	100
50–60	6	12.00	3	6.00	6	12.00	2	4.00	0	0.00	33	66.00	50	100
over 60	0	0.00	0	0.00	1	11.11	1	11.11	0	0.00	7	77.77	9	100
Total	22	11.00	17	8.5	41	20.5	33	16.5	19	9.5	68	34.00	200	100

$$\chi^2 = 99.74, df = 20, C_k = 0.57, C_{max} = 0.89$$

MS Power Point														
Age	1		2		3		4		5		Unanswered		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
20–30	0	0.00	0	0.00	2	7.69	9	34.61	15	57.7	0	0	26	100
30–40	5	7.81	4	6.25	22	34.37	16	25.00	8	12.00	9	14.06	64	100
40–50	6	11.76	3	5.88	8	1.69	12	23.53	9	17.65	13	25.49	51	100
50–60	5	10.00	5	10.00	1	2.00	5	10.00	1	2.00	33	66.00	50	100
over 60	0	0.00	0	0.00	2	22.22	0	0.00	1	11.11	6	66.66	9	100
Total	16	8.00	12	6.00	35	17.50	42	21.00	34	17.00	61	30.5	200	100

$$\chi^2 = 99.44, df = 20, C_k = 0.58, C_{max} = 0.89$$

Internet														
Age	1		2		3		4		5		Unanswered		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
20–30	0	0.00	0	0.00	0	0.00	6	23.07	19	73.08	1	3.85	26	100
30–40	2	3.12	0	0.00	3	4.69	17	26.56	38	59.37	4	6.25	64	100
40–50	0	0.00	0	0.00	10	19.61	13	25.49	23	45.10	5	9.80	51	100
50–60	3	6.00	4	8.00	6	12.00	19	38.00	9	18.00	9	18.00	50	100
over 60	0	0.00	0	0.00	0	0.00	0	0.00	2	22.22	7	77.77	9	100
Total	5	2,50	4	2.00	19	9.50	55	27,5	91	45.50	26	13.00	200	100

$\chi^2 = 79.82$, $df = 20$ $C_k = 0.53$, $C_{max} = 0.89$

E-twinning, EPALE														
Age	1		2		3		4		5		Unanswered		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
20–30	11	42.30	4	15.38	3	11.54	2	7.69	0	0.00	6	23.08	26	100
30–40	21	32.80	6	9.37	6	9.37	1	1.56	0	0.00	30	46.87	64	100
40–50	12	23.53	1	1.96	3	5.88	1	1.96	1	1.96	33	64.70	51	100
50–60	2	4.00	1	2.00	0	0.00	0	0.00	0	0.00	47	94.00	50	100
over 60	1	11.11	0	0.00	1	11.11	0	0.00	0	0.00	7	77.77	9	100
Total	47	0.24	12	6.00	13	6.50	4	2.00	1	0.50	123	61.5	200	100

$\chi^2 = 66.82$, $df = 20$ $C_k = 0.50$, $C_{max} = 0.89$

According to Table 5, we find that younger teachers gave higher grades (grades 4 and 5) for their expertise in working with MS Word, MS Excel, MS Power Point and the Internet (see the results), as opposed to teachers from 40 to 60 year of age. We can conclude that younger educators often use these programs in the preparation and conducting of activities. The total number of surveyed teachers in relation to age presented the data of the research (summarizing grades 4 and 5): 73% of educators primarily use the Internet, 47% use MS Word, 26% of them use Ms Excel and 38% MS Power Point. Very few educators, regardless of their years of service, have any knowledge of how to use the E-twinning program, EPALE. Therefore, the obtained data shows that older educators use much less modern technology in their work than younger educators do. This data indicates that there is a problem of less motivation for older educators to adopt and implement new technical resources in educational work. By keeping in mind that a large number of teachers did not fully master the use of the above programs, it can be concluded that it would be useful to make at least two types of training for educators: for those who have mastered the basics of digital technology and for those who are yet to be trained.

The calculated value of the χ^2 test (MS Word – $\chi^2 = 97.66$; MS Excel – $\chi^2 = 99.74$; MS PowerPoint – $\chi^2 = 99.44$; Internet $\chi^2 = 79.82$; E-twinning, EPALE $\chi^2 =$

66.82 compared to a limit value of 37.566 with an appropriate number of degrees of freedom ($df = 20$) at a significance level of 0.01. Since our χ^2 in all five cases is greater, we conclude that the assessment of teachers on their mastery of a certain program is statistically significantly conditioned by the age of the educator.

Table 6 shows the results if educators have created their own mail address.

Table 6: Having a personal e-mail address

Age	YES		NO		Total	
	f	%	f	%	f	%
20–30	26	100.00	0	0.00	26	100
30–40	59	92.10	5	7.90	64	100
40–50	47	92.16	4	7.84	51	100
50–60	30	60.00	20	40.00	50	100
over 60	3	33.33	6	66.66	9	100
Total	165	82.50	35	17.50	200	100

$$\chi^2 = 42.49, df = 4, C_k = 0.38, C_{\max} = 0.89$$

82.50% of all surveyed educators have their personal e-mail address, while 17.50% do not have one. All educators aged 20 to 30 have their own e-mail address. Approximately the same percentage of educators aged 30 to 50 have their e-mail address, more precisely over 90% of them. Bearing in mind that 66.66% of educators over 60 years of age do not have their own e-mail address, it can be stated that this group of educators should be trained to use e-mail.

The calculated value $\chi^2 = 42.49$ compared to the limit value of 13.277, with the corresponding number of degrees of freedom ($df = 4$) at the level of significance of 0.01. Since our $\chi^2 = 42.49$ is higher, we conclude that the readiness of teachers to use e-mail is statistically conditioned by the age of educators. The value of the contingency coefficient of $C_k = 0.38$ in our case is significantly lower than the maximum value of the coefficient of contingency ($C_{\max} = 0.89$); this means that the correlation between the observed phenomena is relatively poor.

It is known that digital technology resources in educational work can be used in different ways and in different domains of work. The results of research in the field of the work of educators relating to the use of digital technologies in the exchange of information with family, colleagues and associates are presented in Table 7.

Table 7: Use of digital technologies in the exchange of information

FAMILY								
Age	YES		NO		Unanswered		Total	
	f	%	f	%	f	%	f	%
20-30	19	73.08	7	26.92	0	0.00	26	100
30-40	49	76.56	8	12.50	7	10.94	64	100
40-50	45	88.23	3	5.88	3	5.88	51	100
50-60	37	74.00	3	6.00	10	20.00	50	100
over 60	2	22.22	6	66.66	1	11.11	9	100
Total	152	76.00	27	13,5	21	10.50	200	100

$$\chi^2 = 39.87, df = 8, C_k = 0.23, C_{max} = 0.89$$

COLLEAGUES								
Age	YES		NO		Unanswered		Total	
	f	%	f	%	f	%	f	%
20-30	26	100	0	0.00	0	0.00	26	100
30-40	55	85.64	5	7.80	4	6.25	64	100
40-50	44	86.27	3	5.88	4	7.84	51	100
50-60	30	60.00	4	8.00	16	32.00	50	100
over 60	3	33.33	6	66.66	0	0.00	9	100
Total	158	79.00	18	9.00	24	12.00	200	100

$$\chi^2 = 85.32, df = 8, C_k = 0.23, C_{max} = 0.89$$

ASSOCIATES								
Age	YES		NO		Unanswered		Total	
	f	%	f	%	f	%	f	%
20-30	26	100	0	0.00	0	0.00	26	100
30-40	43	67.19	9	14.06	12	18.75	64	100
40-50	29	56.86	3	5.88	4	7.84	51	100
50-60	18	36.00	5	10.00	27	54.00	50	100
over 60	3	33.33	6	66.66	0	0.00	9	100
Total	119	59.50	23	11.5	43	21.5	200	100

$$\chi^2 = 62.92, df = 8, C_k = 0.23, C_{max} = 0.89$$

Regarding the use of digital technologies in the exchange of information with family, colleagues and associates, it is concluded that 76% of educators exchange information with family, 79% with colleagues and 59.50% with associates, regardless of years of service. Also, we have found that 66.66% of

educators over 60 years of age rarely use digital technologies in sharing information with family, colleagues and professional associates. All 26 (100%) of surveyed teachers have stated that they use digital technologies in their work on a daily basis in the exchange of information with family, colleagues and associates.

The calculated value of the χ^2 test (family – $\chi^2 = 39.87$; colleagues – $\chi^2 = 85.32$ associates – $\chi^2 = 62.92$ compared to a limit value of 20.90, with the corresponding number of degrees of freedom ($df = 8$) at the level of significance of 0.01. Since our $\chi^2 = 11.51$ is higher we conclude that the use of digital technologies in the exchange of information with colleagues, family and associates is statistically conditioned by age of the educator. The value of the coefficient of contingency of $C_k = 0,23$ in this case is much lower than the maximum value of the coefficient of contingency ($C_{max} = 0.89$), which means that the correlation between these phenomena is relatively poor.

The opinion of educators on the contribution of digital literacy to their comprehensive educational work is given in Table 8.

Table 8: Contribution of digital literacy to educators' work

Age	YES		NO		DOESN'T KNOW		Total	
	f	%	f	%	f	%	f	%
20–30	26	100	0	0.00	0	0.00	26	100
30–40	57	89.06	1	1.56	6	9.37	64	100
40–50	48	94.12	0	0.00	3	5.88	51	100
50–60	34	68.00	8	16.00	8	16.00	50	100
over 60	4	44.44	3	33.33	2	22.22	9	100
Total	169	84.50	12	6.00	19	9.50	200	100

$$\chi^2 = 36.93, df = 8 \quad C_k = 0.39, C_{max} = 0.89$$

From the data presented in Table 8, we can conclude that most educators have a clearly developed attitude towards the contribution of digital literacy to their comprehensive educational work, and more precisely, 84.50% of teachers gave a positive answer. All interviewed educators aged from 20 to 30 have a clear view of the contribution of digital literacy to their work. The percentage of teachers aged from 30 to 40 years (89,06) and 40 to 50 years (94,12) is also high. Less than half of the educators (44.44%) have no clear understanding of the contribution of digital literacy to their work.

The calculated value $\chi^2 = 36.93$ compared to the limit value of 20.90, with the corresponding number of degrees of freedom ($df = 8$) at the level of significance of 0.01. Since our $\chi^2 = 36,93$ is greater, we conclude that the contribution

of digital literacy in the work of educators is statistically conditioned by the age of educators. The value of the contingency coefficient $C_k = 0.39$ in our case is significantly lower than the maximum value of the coefficient of contingency ($C_{\max} = 0.89$); this means that the correlation between the observed phenomena is relatively poor.

The results of the research on the domains of computer use in different activities, and in relation to the age of educators, are shown in Table 9.

Table 9: Use of computers in different domains of activities

Age	Preparation of Activity		Conducting of Activity		Keeping records on educational work		Monitoring of child development and progress		Total	
	f	%	f	%	f	%	f	%	f	%
20-30	24	35.29	17	25.00	15	22.06	12	17.65	68	100
30-40	42	32.06	39	29.77	29	22.14	21	16.03	131	100
40-50	27	31.39	26	30.23	19	22.09	14	16.28	86	100
50-60	21	24.14	15	17.24	18	20.69	24	27.59	87	100
over 60	3	25.00	2	16.66	3	25.00	4	33.33	12	100
Total	117	31.20	99	26.40	84	22.40	75	20.00	375	100

$$\chi^2 = 11.51, df = 12, C_k = 0.23, C_{\max} = 0.89$$

With regard to the use of computers in various domains of activity, with our research we have obtained data that 31.20% of teachers use the computer for preparatory activity, 26.40% for conducting of activities, 22.40% for keeping records of EW and 20.00% for monitoring of child development and promotion. We can conclude that approximately the same attitude is observed among educators regardless of their age.

By calculating the Chi-squared test ($\chi^2 = 11.51$) and the significance level of 0.01 with the degree of freedom of $df = 12$ ($\chi^2 = 20.90$) we found that, in relation to the independent variable (age of the respondent), there is no statistically significant difference in relation to the age of educators. Thus, the age of educators is not conditioned by the use of computers in the forefront of non-educated domains of educators' activities.

The results obtained by the survey in relation to the need for additional professional development of educators for the use of digital competences are presented in Table 10.

More than half of the educators (58.00%) gave a positive answer that the use of digital competences requires professional training, while 40.50 %

considers that it is not needed. Based on the data shown in Table 10, we can conclude that among the youngest teachers of the age 20 to 30, there is awareness of the importance of education on the use of digital competencies for additional professional development. More than half of educators aged 30 to 60 recognize the importance of applying modern technologies, as well as the need for greater attention to IT education for educators. It should also be noted that educators are generally not inclined to follow news developments in the field of technology, or they rarely do so. Also, a large number of them are not sure that their competences could be developed by reading professional literature. They agreed that teachers' competences could be somewhat improved by reading literature, but that this should be done through seminars and exchange of experiences with colleagues.

Table 10: Use of digital competencies for continuing training

Age	YES		NO		DOESN'T KNOW		Total	
	f	%	f	%	f	%	f	%
20--30	20	76.92	5	19.23	1	3.85	26	100
30-40	33	51.56	25	39.06	6	9.37	64	100
40-50	28	54.90	20	39.21	3	5.88	51	100
50-60	33	51.56	25	39.06	6	9.37	50	100
over 60	2	44.44	6	33.33	1	22.22	9	100
Total	116	58.00	81	40.50	17	8.50	200	100

$$\chi^2 = 15.507, df = 8, C_k = 0.23, C_{max} = 0.89$$

By calculating the Chi-squared test ($\chi^2 = 15.507$) and the significance level of 0.01 for the degree of freedom $df = 12$ ($\chi^2 = 20.90$), it was found that, in relation to the independent variable (age of the respondents), there was no statistically significant difference in relation to the age of the educator.

A considerable number of surveyed educators do not have a certain experience in attending online seminars (85% of them), regardless of age.

By calculating the Chi-square test ($\chi^2 = 8.16$) and the significance level of 0.01 for the degree of freedom $df = 12$ ($\chi^2 = 20.90$) it was found that, in relation to the independent variable (age of the respondent), there is no statistically significant in relation to the age of the educator when it comes to their experience in attending online seminars.

Results of the research in relation to the level of education of educators

The data on whether educators use the computer in their immediate educational work are shown in Table 11.

Table 11: Use of computers

Age	YES		NO		Unanswered		Total	
	f	%	f	%	f	%	f	%
2-Year Postsecondary Education	51	65.38	27	34.61	0	0.00	78	100%
College	100	92.59	4	3.70	4	3.70	108	100%
University	9	100	0	0.00	0	0.00	9	100%
M.A.	5	100	0	0.00	0	0.00	5	100%
Total	165	82.50	31	15.50	4	2.00	200	100%

$$\chi^2 = 38.28, df = 6, C_k = 0.40, C_{\max} = 0.86$$

The research findings presented in Table 11 show that 82.50% of teachers are self-trained to use computers in relation to the level of education. Educators with a university degree and a master's degree think they are fully trained in the use of computers, while there is an insignificantly smaller number of educators with a 2-Year Postsecondary Education and College degree.

The existence of statistically significant differences in the use of computers was determined on the basis of the Chi-square test ($\chi^2 = 38.28$) and the significance level of 0.01 for the degree of freedom $df = 6$ ($\chi^2 = 16.82$).

The readiness of educators to acquire knowledge in the field of digital technologies is shown in Table 12.

Table 12: Readiness of educators to acquire knowledge in the field of digital technologies

Level of education	YES		NO		Unanswered		Total	
	f	%	f	%	f	%	f	%
2-Year Postsecondary Education	54	69.23	21	26.93	3	3.84	78	100%
College	100	92.59	4	3.70	4	3.70	108	100%
University	8	88.88	0	0.00	1	11.11	9	100%
M.A.	5	100	0	0.00	0	0.00	5	100%
Total	167	83.5	25	12.5	8	4.00	200	100%

$$\chi^2 = 25.94, df = 6, C_k = 0.31, C_{\max} = 0.86$$

When it comes to the readiness of educators to acquire knowledge in the field of digital technologies, 83.50% think that they are ready, 12.50% of teachers are not, and 4% did not answer. A more prominent attitudes about their readiness to acquire knowledge in the field of digital technologies was noticed among educators with M.A. degree (100%) and educators with College degrees (92.59%), while a lower degree of consent was given by a group of teachers with 2-Year Postsecondary Education (69.23%) and University degree (88.88%).

The existence of statistically significant differences on the readiness of educators to acquire knowledge in the field of digital technologies was determined on the basis of the Chi-square test ($\chi^2 = 25.94$) and the significance level 0.01 for the degree of freedom $df = 6$ ($\chi^2 = 16.82$). Therefore, it has been established that, in relation to the independent variable (the level of education) there is a statistically significant difference in the readiness of educators to acquire certain knowledge in the field of digital technologies.

Table 13 shows the assessment of teachers at a five-level Likert scale on their skills in working with MS Word, MS Excel, MS Power Point, Internet and E-twinning, EPALE.

The analysis of the results presented in Table 13 show the assessment of the teachers' own competencies for the use of computer programs in relation to the level of education. By calculating the Chi-square test, it has been established that there is a statistically significant difference in the assessment of teachers on a scale from 1 to 5 in relation to the independent variable (educational level of educators). Statistically significant differences are present in all the above program packages based on the calculated value of the χ^2 test (see the Table), and the significance level of 0.01; it can be noticed that there are differences in the assessment of the educator in relation to the level of education.

Table 13: Mastery of educators in certain programs

MS Word														
Level of education	1		2		3		4		5		Unanswered		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
2-Year Postsecondary Education	5	6.40	3	3.85	10	12.82	13	16.67	6	7.69	41	52.56	78	100
College	3	2.70	8	7.40	19	17.59	27	25.00	37	34.26	16	14.82	108	100
University	0	0.00	0	0.00	0	0.00	4	44.44	5	55.55	0	0.00	9	100
M.A.	0	0.00	0	0.00	0	0.00	2	40.00	3	60.00	0	0.00	5	100
Total	8	4.00	11	5.50	29	14.50	44	22.00	51	25.5	57	28.50	200	100

$$\chi^2 = 56.14, df = 15, C_k = 0.46, C_{max} = 0.86$$

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MS Excel														
Level of education	1		2		3		4		5		Unanswered		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
2-Year Postsecondary Education	9	11.54	5	6.40	12	15.38	4	5.13	3	3.84	41	52.56	78	100
College	12	11.11	10	9.26	29	26.85	23	21.30	9	8.33	25	23.14	108	100
University	0	0.00	1	11.11	3	33.33	5	55.55	0	0.00	0	0.00	9	100
M.A.	1	20.00	1	20.00	0	0.00	2	40.00	1	20.00	0	0.00	5	100
Total	22	11.00	17	8.50	44	22.00	34	17.00	13	6.50	70	35.00	200	100

$$\chi^2 = 48.20, df = 15, C_k = 0.44, C_{max} = 0.86$$

MS Power Point														
Level of education	1		2		3		4		5		Unanswered		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
2-Year Post-secondary Education	10	12.82	5	6.40	4	5.12	10	12.82	5	6.40	44	56.51	78	100
College	7	6.48	6	5.55	27	25.00	25	23.15	21	19.44	22	20.37	108	100
University	1	11.11	0	0.00	2	22.22	2	22.22	4	44.44	0	0.00	9	100
M.A.	0	0.00	0	0.00	0	0.00	2	40.00	3	60.00	0	0.00	5	100
Total	18	9.00	11	5.55	33	16.5	39	19.5	33	16.5	66	0.33	200	100

$$\chi^2 = 57.055, df = 15, C_k = 0.47, C_{max} = 0.86$$

Internet														
Level of education	1		2		3		4		5		Unanswered		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
2-Year Post-secondary Education	4	5.12	3	3.85	7	8.97	22	28.20	24	30.77	18	23.07	78	100
College	2	1.85	2	1.85	9	8.33	30	27.78	57	5.28	8	7.40	108	100
University	0	0.00	0	0.00	0	0.00	3	33.33	6	66.66	0	0.00	9	100
M.A.	0	0.00	0	0.00	1	20.00	1	20.00	3	60.00	0	0.00	5	100
Total	6	3.00	5	2.50	8	4.00	56	28.00	90	45.00	26	13.00	200	100

$$\chi^2 = 33.49, df = 15, C_k = 0.38, C_{max} = 0.86$$

E-twinning, EPALE														
	1		2		3		4		5		Unan- swered		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
2-Year Postsecondary Education	12	15.38	2	2.56	3	3.85	0	0,00	0	0,00	61	78,21	78	100
College	27	25.00	9	8.33	10	9.25	2	18.52	0	0.00	60	55.55	108	100
University	2	22.22	0	0.00	0	0.00	1	11.11	0	0.00	6	66.66	9	100
M.A.	4	80.00	1	20.00	0	0.00	0	0.00	0	0.00	0	0.00	5	100
Total	45	22.50	12	6.00	13	6.50	3	1.50	0	0.00	127	63.50	200	100
² =30.91 , df = 15 C _r =0.36, C _{max} = 0.86														

Table 13 shows that we can find that higher grades (4 and 5) were provided by teachers with university and master degrees, i.e. 80.00% of them think that they have mastered the Internet, 75.00% have mastered by PowerPoint, 55.55% Excel and 90.00% Word, compared to teachers with 2-Year Postsecondary Education and College degrees. Based on the data presented, it can be concluded that regardless of the level of education, most educators did not master the use of E-twinning, EPALE. It can also be noted that educators with university and master degrees show better preparation for the use of modern software tools in work than educators with 2-Year Postsecondary Education and College degrees.

Table 14 shows the results of educators who have created their own mail address.

Table 14: Having a personal e-mail address

Level of education	YES		NO		Unanswered		Total	
	f	%	f	%	f	%	f	%
2-Year Postsecondary Education	50	64.10	23	29.49	5	6.41	78	100%
College	98	90.74	10	9.26	0	0.00	108	100%
University	8	88.88	1	11.11	0	0.00	9	100%
M.A.	5	100	0	0.00	0	0.00	5	100%
Total	161	80.50	34	17.00	5	2.50	200	100%

$\chi^2 = 24.14$, $df = 6$, $C_k = 0.32$, $C_{max} = 0.86$

80.50% of educators declared that they have a personal e-mail address, while 17.00% of them do not possess one. By calculating the Chi-square test, it was found that there is a statistically significant difference in the possession of

a personal e-mail address of educators compared to the independent variable (educational level of the educator). Statistically significant differences are present in all answers of educators, based on the calculated value of χ^2 test ($\chi^2 = 24.14$), and the significance level of 0.01, it can be seen that there are differences in responses of educators if they have an e-mail address. Table 14 gives a conclusion that 100,00% of teachers with a master degree have their own e-mail address, followed by teachers with university degree (90.74%) and educators with college degree (88.88%). A significantly smaller number of teachers with 2-year postsecondary education, i.e. 64.10% of them have an e-mail address.

The results of the research on the domain of work of educators related to the use of digital technologies in the exchange of information with family, colleagues and associates are presented in Table 15.

Table 15: Use of digital technologies in information exchange

FAMILY								
Level of education	YES		NO		Unanswered		Total	
	f	%	f	%	f	%	f	%
2-Year Postsecondary Education	58	74.33	12	15.38	8	10.26	78	100%
College	90	83.33	11	10.18	7	6.48	108	100%
University	6	66.66	2	22.22	1	11.11	9	100%
M.A.	4	80.00	1	20.00	0	0.00	5	100%
Total	158	79.00	26	13.00	16	8.00	200	100%

$$\chi^2 = 3.73, df = 6, C_k = 0.23, C_{max} = 0.89$$

COLLEAGUES								
Level of education	YES		NO		Unanswered		Total	
	f	%	f	%	f	%	f	%
2-Year Postsecondary Education	53	67.95	13	16.67	12	15.38	78	100%
College	94	87.04	3	2.78	11	10.18	108	100%
University	8	88.88	1	11.11	0	0.00	9	100%
M.A.	5	100.00	0	0.00	0	0.00	5	100%
Total	127	63.50	22	11.00	51	25.50	200	100%

$$\chi^2 = 15.99, df = 6, C_k = 0.23, C_{max} = 0.89$$

ASSOCIATES								
Level of education	YES		NO		Unanswered		Total	
	f	%	f	%	f	%	f	%
2-Year Postsecondary Education	53	67.95	13	16.67	12	15.38	78	100%
College	94	87.04	3	2.78	11	10.18	108	100%
University	8	88.88	1	11.11	0	0.00	9	100%
M.A.	5	100	0	0.00	0	0.00	5	100%
Total	127	63,50	22	11.00	51	25.50	200	100%

$$\chi^2 = 20.11, df = 6, C_k = 0.23, C_{max} = 0.89$$

The existence of statistically significant differences in the field of work of educators related to the use of digital technologies in the exchange of information with family, colleagues and associates, in relation to the level of education, based on the Chi-square test ($\chi^2 = 3.73$ – family, $\chi^2 = 15.99$ – colleagues, $\chi^2 = 20.11$ – associates) and the significance level of 0.01, the table value of the χ^2 test ($\chi^2 = 16.812$) shows that there are statistically significant differences in the exchange of information between teachers and associates in relation to the education level of educators. On the other hand, since the calculated value of the χ^2 test is lower than the table values when it comes to sharing information with family and colleagues, it is concluded that there are no statistically significant differences in educators' answers in relation to their level of education.

Namely, on average 65.00% of educators, regardless of the level of education, use digital technologies on a daily basis to exchange information with family, colleagues and associates. A stronger attitude towards information exchange with family is observed among educators with college degrees (83.33%), M.A. degrees (80.00%) and 2-year postsecondary degrees (74.33%), than among educators with university degrees (66.66%). The same percentage of educators with university (100%) and master's degrees (88.88%) have a highly expressed attitude regarding information exchange with colleagues and associates, while the least impressive attitude towards the information exchange is expressed by educators with 2-year postsecondary degrees (colleagues – 67.95%, associates – 47.33%).

The opinion of educators on the contribution of digital literacy to their comprehensive educational work is given in Table 16.

Table 16: Contribution of digital literacy to educators' work

Level of education	YES		NO		Indecisive		No answer		Total	
	f	%	f	%	f	%	f	%	f	%
2-year postsecondary education	53	89.82	11	14.10	8	10.26	6	7.70	78	100%
College	97	89.82	2	1.85	5	4.63	4	3.70	108	100%
University	9	100	0	0.00	0	0.00	0	0.00	9	100%
M.A.	5	100	0	0.00	0	0.00	0	0.00	5	100%
Total:	164	82.00	13	6.50	13	6.50	10	5.00	200	100%

$$\chi^2 = 36.93, df = 9, C_k = 0.39, C_{max} = 0.86$$

A large number of educators, regardless of their level of education, believed that the use of new technologies in educational work contributes to their digital literacy, or more precisely, 82.00% of them. Based on the results shown, it can be concluded that educators with 2-year postsecondary and college degrees (89.82%), with university degree and master degrees (100%), in a high percentage believe that the use of new technologies in educational work contributes to their digital literacy.

Based on the calculated Chi-squared test ($\chi^2 = 20.05$) and the significance level of 0.01, the table value of the χ^2 test with the degree of freedom $df = 9$ is 21.66%, we can conclude that there are no statistically significant differences in the attitudes of educators when it comes to contribution of digital technology to their digital literacy.

The results of the research on the domains of computer use in different activities, in relation to the educational level of educators, are shown in Table 17.

Table 17: Use of computers in different domains of activities

Level of education	Preparation of Activity		Conducting of Activity		Keeping records on educational work		Monitoring of child development and progress		Unanswered		Total	
	f	%	f	%	f	%	f	%	f	%	f	%
2-year post-secondary education	31	24.41	31	24.41	23	18.11	13	10.24	29	22.83	127	100%
College	70	31.53	59	26.58	50	22.52	30	13.51	13	5.85	222	100%
University	8	36.36	5	22.72	7	31.82	2	9.09	0	0.00	22	100%
M.A.	4	28.57	4	28.57	3	21.43	3	21.43	0	0.00	14	100%
Total	113	29.95	99	25.71	83	21.56	48	12.47	42	10.91	385	100%

$$\chi^2 = 31.412, df = 12, C_k = 0.36, C_{max} = 0.86$$

Regarding the use of computers in various domains of activities, we have obtained data from the research that 29.95% of teachers use computer for preparatory activity, 25.71% for conducting activities, 21.56% for keeping records on educational work, and 12.47% for monitoring child development and progress. We can conclude that approximately the same attitude is observed among educators regardless of the level of education of the same.

By calculating the Chi-squared test ($\chi^2 = 31.412$) and the significance level 0.01 for the degree of freedom $df = 12$ ($\chi^2 = 20.90$), it was found that in relation to the independent variable (educational level of educators), there is a statistically significant difference in relation to education of educators. Therefore, it is concluded that educators with university and master degrees are more trained to use computers in the given domains of activity, in relation to educators who have 2-year postsecondary and college degrees.

The results obtained by the survey in relation to the need for additional professional development of educators in the use of digital competences are presented in Table 18.

Table 18: Use of digital competencies for professional development

Level of education	YES		NO		Indecive		Total	
	f	%	f	%	f	%	f	%
2-year postsecondary	23	29.49	40	51.28	15	19.23	78	100
College	64	59.26	34	31.48	10	9.26	108	100
University	3	33.33	5	55.55	1	11.11	9	100
M.A.	4	80.00	1	20.00	0	0.00	5	100
Total	94	47.00	80	40.00	26	13.00	200	100

$$\chi^2 = 19.71, df = 6, C_k = 0.29, C_{max} = 0.86$$

When it comes to the use of digital competencies for the professional development of educators, the research showed that 47.00% of teachers have a believe that the use of digital competencies is necessary for professional development, while 40.00% of them think it is not necessary. Based on the data presented in Table 18, it can be concluded that educators with master degrees possess a clearly developed awareness on the importance of education in the use of digital competencies for additional professional development, followed by educators with college degrees (59.26%). In a significantly lower percentage (average 30%), educators with a level of education of 2-year postsecondary and college level recognize the importance of applying modern technologies, as well as the need for greater attention to IT education for educators.

By calculating the Chi-squared test ($\chi^2 = 19.71$) and the significance level of 0.01 for the degree of freedom $df = 6$ ($\chi^2 = 16.812$), it was found that, in relation to the independent variable (education level of educators), there is a statistically significant difference in relation to their education.

Table 19 represents the results related to the experience of educators in attending online seminars in relation to their level of education.

Table 19: Experience of educators in attending online seminars

Level of education	YES		NO		Unanswered		Total	
	f	%	f	%	f	%	f	%
2-year postsecondary education	7	8.04	65	74.71	5	6.41	78	100
College	6	5.56	97	97.00	5	4.63	108	100
University	0	0.00	9	100	0	0.00	9	100
M.A.	1	20.00	3	80.00	1	20.00	5	100
Total	14	7.00	174	87.00	12	6.00	200	100

$$\chi^2 = 6.28, df = 6, C_k = 0.17, C_{\max} = 0.86$$

A large number of surveyed educators do not possess certain experience in attending online seminars (more precisely, 87%), regardless of their age, while only 7,05 % have declared that they have possess experience in attending online seminars.

By calculating the Hi-square test ($\chi^2 = 6.28$) and the significance level of 0.01 for the degree of freedom $df = 6$ ($\chi^2 = 16.812$), it was found that, in relation to the independent variable (the working environment of educators), there is no statistically significant difference in relation to the level of education, when it comes to their experience in attending online seminars.

Final considerations

In order for educators to be successful in their work, they should follow modern trends and apply modern technology in their immediate educational work. For many years now, information and communication technologies have been the present and not the future. Certainly, in order for the implementation of digital technologies in preschool institutions to be successful, it is important that there is a positive attitude and willingness of teachers to develop their professional competencies during their education and further training throughout their lives, regardless of age, among which, digital competencies in terms of mastering modern information and communication technologies are very important.

Analysis of the results of the survey shows that the level of competencies of the teachers of the Morava District regarding the use of modern digital technologies is at an enviable level, i.e. most educators are qualified to use new technologies in the immediate educational work. Also, the research produced a conclusion that the level of competencies for the use of modern digital technologies is statistically significantly determined by the age of educators, and the level of education of the educators. The research data indicate that educators younger than 50 years of age, and with a higher level of education use computers more in their work than their older colleagues, and colleagues with lower levels of education. While most educators use computers in their work, the results of the self-assessment of educators have shown that younger educators, and those with university and master degrees, gave higher scores for working with Ms Word, Ms Excel, PowerPoint and the Internet.

The research also showed that the attitude of educators towards acquiring knowledge in the field of digital technologies, and the contribution of digital literacy to their comprehensive educational work is correlated with the level of education of educators and their age. The results of the research have shown that younger educators, and those with university and master degrees, are more motivated to acquire knowledge in the field of digital technologies, and they also have a well-developed attitude that the use of new technologies in educational work contributes to their digital literacy. Younger educators with higher levels of education also have a more positive attitude towards additional training in the use of modern technologies, and believe that the computer as one of the means of new technology is the most commonly used for preparing and conducting of activities in relation to records keeping and monitoring of child development and progress.

Based on everything aforementioned, we can conclude that being competent in the use of new technologies means acting professionally, ethically, and creatively, while following modern trends in the use of digital technologies in educational practice. Therefore, it is necessary to use the existing confidence of educators, to introduce new methods of work and to improve existing ones, which are supported by new technologies, in all preschool institutions of the Morava District. This can be achieved through organized training of educators in all preschools in acquiring knowledge and skills necessary for the use of new technologies, as well as by improving the equipment of preschool institutions with new technologies and the quality of content presented with the help of information and communication technologies.

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Chapter XXVII

PROFESSIONAL COMPETENCIES OF TEACHERS IN THE FIELD OF MODERN EDUCATIONAL AND INFORMATION- COMMUNICATION TECHNOLOGIES

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Abstract: Contemporary achievements of pedagogical science and the advancement of information communication technology (ICT), enable new organizational solutions to be applied in teaching, which makes the teaching process more interesting, dynamic and efficient. Modern society and education require an individual teacher who is able to follow changes in society and science. The main goal of this paper is to consider one of the primary question: What teacher competencies are needed and at what level of application should they be for the modernization of teaching?

The empirical part of the paper represents which didactic multimedia teachers use the most in teaching, and what teachers attitudes are towards ability to use educational software in teaching. This study used a descriptive method, and scaling technique with a Likert type assessment scale instrument. The survey involved 209 elementary and secondary school teachers in the region of Nis. In concluding observations, it is noted that classic classrooms are slowly turning towards the use of multimedia, but the current application of educational software is still not satisfactory. Also, the authors draw attention to the need for a wider and more intensive range of professional teacher training courses, primarily in the didactic-methodology field, as well as the field of modern education technology, because this is certainly one of the best ways to meet the necessity of reform of our education and the ever-increasing challenges of modern education for the 21st century.

Keywords: *teacher competences, didactic innovation, ICT, educational technology, educational computer software (ECS).*

Introduction

Getting to know all students and technological teaching aids must be an integral part of each curriculum. Every profession today uses technology in its

own way, and each requires knowledge of the computers and programs that they need, which become inevitable pedagogical tools. By enabling students to work on their own computers, they participate in a controlled environment. In traditional teaching it is not possible for a teacher in the classroom to observe every student involved in an activity, so using technology to exercise control ensures that students move towards the goal of their learning.

Computers can reduce the effort required from teachers as they provide instruction to students through various programs and pre-assignments, and ensure that students stay on track. Thus, experiential learning is increasingly decentralized, each student can learn through his/her computer, and does not have to continually receive instruction from the teacher. Students are no longer passive listeners in a classroom, but each student can participate in a program that is suited to him/her in accordance with his/her needs and interests. The computer's multimedia capabilities make it a very powerful medium for learning and an enriching experience, which is an aspect of the computer that both teachers and students most like, and which, rightly, places it centrally within the ICT system.

Theoretical Orientation

Teacher competences in the field of ICT and education technologies

We cannot dispute that the teacher was and remains irreplaceable and professionally the most responsible factor in the quality, organization, and implementation of all interrelated and conditioned phases of a complex teaching cycle. Understanding the notion and essence of teaching, where the teaching and learning activities simultaneously take place, one can explicitly confirm the thesis that its effectiveness depends mostly on the professional, didactic-methodical, educational, and technological competence of teachers (Miljanović 2017). Educational technology should not be understood only as the application of various technical means, but also as the application of new teaching methods in accordance with new educational techniques, as new organization of teaching and learning achievement, and as a combination of all possible resources in order to improve teaching and learning processes (Danilović 2004).

On the one hand, the use of modern educational and information-communication technology allows for the content to be individualized in regular, additional and supplementary classes, so that each student progresses at his/her own pace, in accordance with a program that is in line with his/her personal potentials. In this context, individual programs, ie programs of different difficulty and levels of complexity, depending on the potential of the student can be made. At the core of this technology, an individualized form of work that particularly favors students is promoted. On the other hand, for a number of teachers

stereotypes and prejudices are often conditioned by insufficient knowledge of the opportunities offered by modern ICT in the process of educational work. In order to understand this problem in more detail, this paper points out some of the possibilities of applying these technologies in the context of the introduction of didactic innovations in the function of individualization of the teaching process.

Today, ICT resources are increasingly used in the educational process not only as complementary resources, but as a means of learning. In these circumstances, the issue of teachers' ability to use media well (in a pedagogical sense), and to understand their place and role in the educational process is crucial. When used appropriately by competent teachers, technology can support, expand and improve learning by opening up new, hitherto unachievable, opportunities (Arsenijević, Andevski 2011; Kariuki et al. 2001; Kirschner et al. 2002).

The teacher should first of all assess students' abilities and set specific tasks for each individual, so that classes are individualized in accordance with the abilities of each student. On the other hand, programmed teaching is also a kind of innovative teaching that enables students to gain knowledge slowly, step by step. Programmed teaching is divided into parts and is applied through innovative means, through a computer that allows teachers to organize work so that students exceed content at a pace that is in accordance with their abilities (Vilotijević, Vilotijević 2016). Programmed teaching is not often applied in pedagogical practice because it has advantages and disadvantages. Advantages are mastering content at a pace that corresponds to the student, but on the other hand, too much divided teaching material loses the essence of continuity. The tendency is to approach forms of teaching as electronic, computerized teaching (Mercer, Scrimshaw 1993).

With regard to ICT in teaching, the use of computers and the Internet has enabled a wide array of different forms of knowledge acquisition. One of the innovative forms of acquiring knowledge in class is everyone doing so through educational software. First of all, it is emphasized that not all content is suitable for computer software development, which requires teachers and professors to be able to create adequate teaching content (Goktas et al. 2008; Mihalca 2005; Radivojević 2016; Stankovic 2005). First and foremost, it is necessary for teachers to know the area from which content is selected and to possess information competencies.

The use of educational software is possible in teaching younger and older grades of school. If it is done with students of lower grades, it is necessary that contents have a more general character, whereas for older students there can be very specific lessons and topic areas. Creation of educational software implies a textual, illustrative, and audio-visual combination of content in order for content to be easily accommodated by students. In addition, the importance of

educational software is realized in that students can quickly check their knowledge and abilities (Milošević 2007; Stanković, Stanojević 2019).

Today, rightly speaking, it is possible to talk about the comprehensive application of computers, and therefore ICT, in education, practically in all parts of this system. The possibilities are enormous, almost unimaginable, but globally the following areas can be mentioned:

- individual learning and teaching;
- Exercise and repetition in the acquisition of knowledge and skills;
- information search and access (expert) databases;
- processing of texts and the creation of schemas, tables, charts...;
- play and simulation of the complex process model;
- group learning and teaching;
- electronic mail communication and video chat (e.g. Skype program);
- multimedia presentations;
- Distance learning (video conferences with remote groups, electronic mentors...);
- Pedagogical documentation – e.g. records (internal student tracking, , for teachers needs or publicly, at the level of electronic diaries), grade, school, etc.;
- Administrative affairs (support to the work of the secretariat, accounting...), etc.

ICT is changing the image of traditional school organization. Today, it is evident that pedagogical changes are inevitably accompanied by investments in ICT 2. The basic goals of computerization of schools are: providing basic information literacy for all (media culture); basic professional and technological training and computerization of schools – a new school.

Methods

The subject of the empirical research presented aimed to examine the self-assessment of teachers' competence for didactic multi-media and teachers' ability to use educational software in teaching. A study of the literature analyzed the characteristics of educational and information-communication technology within the contemporary educational process, with a special emphasis on the importance of developing professional competencies for achievements in this area. The research examined which multi-media teachers most often use in teaching, for what purpose these media are most often used, as well as concrete attitudes about the use of computers, PWP presentations, the Internet, and educational software.

The method used in this research was selected in accordance with the subject, purpose, research tasks, and nature of the research. In the theoretical part of the research, a method of theoretical analysis was used, which enabled theoretical understanding of different methodological approaches in the study of educational and information-communicational technology and professional competences of teachers, as well as the descriptive method used for the empirical - analytical part of the research. In order to collect data on teachers' attitudes towards this problem, a scaling technique was used, and the Likert type (ICT-ORS) scale with 30 statements was used as an instrument. For the purposes of this research, the most significant items on self-assessment of teacher competence for teaching multimedia in teaching were analyzed.

Table 1: Relativity of the scale of the Likert type (ICT-ORS)

Cronbach's alpha	N of Items
.797	30

By measuring the metric characteristics of the instrument using Cronbach's alpha coefficient (Cronbach's alpha is 0.80), we determined that the scale meets the criterion of reliability of the instrument. The Cronbach's alpha coefficient showed us that all respondents measure the same phenomenon, i.e. they are consistent.

The research was conducted in the school year 2018/19. The research involved 209 teachers (105 from Primary and 104 from High schools), from the territory of the south of Serbia.

Statistical data processing was performed using a standard statistical apparatus¹, primarily at the level of the calculation of percentages, arithmetic means, and standard deviation, as well as calculating the statistical significance of differences between arithmetic means.

Results and Interpretation

Within the first research task, we examined teachers' attitudes towards the use of computers in teaching. Computers represent modern media for which teachers need to be trained to apply to innovate teaching activities.

¹ \bar{X} – Arithmetic mean (mean value);
SD (Standard deviation) – deviation of individual results from the arithmetic mean;
N – number of units in the sample (number of respondents);
df – number of degrees of freedom;
p – the degree of significance of the difference;
t – t ratio – the difference between the arithmetic mean;

Table 2: Computer application in teaching

	N	Minimum	Maximum	Mean \bar{O}	Std. Deviation
I use the computer to create presentations needed for classes	209	2.00	5.00	4.0670	.79983
The computer serves me to bring content to students by using pictures.	209	2.00	5.00	3.5072	.93603
My computer does not serve much, I do it all by myself.	209	1.00	3.00	1.8278	.71320
An adequate film encourages children to participate in a discussion.	209	2.00	5.00	4.1148	.99335
I use my computer for personal needs, not just for classes.	209	3.00	5.00	4.4163	.64594
Valid N (listwise)	209				

The results provide interesting as we can conclude that teachers are competent in the application of computers, both on a personal and a professional level. Teachers disagree with the statement that they can do it all by themselves, and therefore do recognize the benefits of using the computer. With high arithmetic environments $M > 4.00$, teachers confirm that they use computers to prepare specific teaching contents, using images, presentations and films, but also using them for personal needs.

Table 3: Differences in computer usage with regard to type of school

	Type of School	N	Mean	Std. Deviation	Std. Error Mean
Computer	Primary	105	17.6000	1.88924	.18437
	High	104	18.2692	1.52793	.14983

$t = -2.81$; $df = 207$; $p = 0.01$

The research has shown that teachers value more highly items for testing the use of computers for teaching in secondary schools ($M = 17.60$) compared to teachers in elementary schools ($M = 18.26$). The results indicate that secondary school teachers use computers to prepare specific teaching content, using images, presentations and films, and for personal needs more than teachers' in primary schools. The difference is statistically significant, at the level of $p < 0.05$; $p = 0.01$

Table 4: Teachers, students and multimedia content

	N	Minimum	Maximum	Mean ()	Std. Deviation
Students use the Internet to supplement what I teach in class.	209	2.00	5.00	3.7368	.96707
Students teach content using Power Point presentations.	209	2.00	5.00	3.9904	.88247
Students learn from presentations.	209	2.00	5.00	3.7847	.99352
Material from the Internet is additionally rewarded when evaluating knowledge	209	2.00	5.00	3.5789	1.03531
I learned from the students information from the Internet that I did not know before.	209	1.00	5.00	3.3971	1.15200
Making presentations is easy and fun for pupils, and they learn faster.	209	2.00	5.00	3.8852	.96388
Valid N (listwise)	209				

Although we noted that teachers use multimedia content in teaching, we wanted to see the other side, ie the use of multimedia content by students and whether there is mutual cooperation in the exchange of experiences between teachers and students. The results shown in Table 4 indicate that the arithmetic meanings of the response range from uncertainty to the scale of estimation $M = 3.00$ to the agreement with the shown items $M = 4.00$. We can conclude that the application of multimedia by students is not unknown, but we cannot safely confirm that multimedia is used in teaching as much as teachers use them for the purpose of the teaching process.

Table 5: Differences in teachers' attitudes about multimedia content compared to type of school

	Type of School	N	Mean	Std. Deviation	Std. Error Mean
Teacher-students and multimedia content	Primary	105	18.5905	2.31921	.22633
	High	104	18.6827	2.52084	.24719

$t = -0.28$; $df = 207$; 0.73

The results presented in Table 4 are confirmed by teachers of both Primary and High schools (Table 5). There are no statistically significant differences in respondents' responses, $p > 0.05$; $p = 0.73$, indicating the homogeneity of the response. Undetermined responses exist regardless of the set variable of the school.

Table 6: Educational software in the classroom

	N	Minimum	Maximum	Mean	Std. Deviation
I am able to use educational software	209	1.00	4.00	2.1053	.94991
I use educational software in classroom.	209	1.00	4.00	1.8182	.73082
I think that the educational software is tailored to every student.	209	1.00	4.00	2.5502	.94493
I have the conditions and the time to create educational software.	209	1.00	3.00	1.8756	.78067
It takes a lot of investment to create educational software.	209	3.00	5.00	3.9904	.79657
The computer can not replace the lively word of a teacher.	209	2.00	5.00	3.9139	.84481
Valid N (listwise)	209				

In Table 6, we received significant data when it comes to the competence of teachers for the application of educational software. Respondents answers show that they are not trained to work on educational software, and therefore it's no wonder that educational software is not used in teaching. Low arithmetic medium on a scale of 1 to 5 indicates that they have no conditions and time to devote themselves to learning and making educational software and feel that the application of education software requires investment. It is not surprising that teachers agree that computer and educational software cannot replace the lively discourse of teachers.

Table 7: Difference in application of educational software in relation to type of school

	Type of School	N	Mean	Std. Deviation	Std. Error Mean
Educational Software	Primary	105	12.2286	2.23717	.21833
	High	104	12.4519	1.80549	.17704

$t = 0.79$; $df = 207$; $p = 0.43$

As we noted in Table 6 that teachers are not trained in the creation of educational software and therefore for its application, it remains to be discovered whether this "state" is the same in Primary and High schools (Table 7). With almost identical arithmetic environments, we estimate homogeneity in the

answers of Primary and High school teachers, i.e. there is no statistical difference in the respondents' responses in relation to the type of school, $p > 0.05$; $p = 0.43$.

The teaching profession has changed over time and become much more complex. Contemporary teaching demands professional development from teachers in many fields (Rosenfeld, Martinez-Pons 2005). It is no longer sufficient for teachers to know only their field, but they need a breadth of knowledge in pedagogical work. In this way, professional development of teachers enables them to improve in many areas of interest or need in their work. One of the new roles of teachers is certainly the role of an innovator in the school.

ICT can be used to intensify a variety of intelligences, provide uniform learning techniques for different types of individuals, and create an environment in which pupils learn, which correspond to different types of intelligence. At a higher level of education, technology, as a means of communication, leads to cooperative learning by allowing learners to work and learn from different locations. This facilitates group learning – students work together on shared goals with peers at school, and out of school, exchanging ideas through e-communication tools (e-mail, chatting, discussion boards, and virtual classrooms). They participate in joint projects and discuss global themes with students around the world. Thus, ICT develops both interpersonal levels and intrapersonal awareness. Teachers should ideally design their instructional methods to fit in adequately with all four learning styles: experience, reflection, conceptualization, and experimentation.

By using these technologies, learning becomes participatory, interactive, decentralized, generally reproducible, global, and involves multimedia. The main problem faced even by those who have a positive attitude is the design of a curriculum model that will correspond to technology. A potential solution to overcome this problem would be to understand that for younger ages, ICT is used not so much for learning content, but primarily for the development of learning skills. Five basic (holistic) skills that modern technology, or any process and subject of learning, must provide to all students are: self-development and empowerment, communication, analysis, creativity, and productivity.

All of these are components of what we have previously called "critical thinking". None of these skills exist independently and all of them are in a dialectical relationship. Behind every reason given against the use of technology, there is a need for new skills that need to be learned. Those who have a positive attitude regarding the development of new technologies, accept them as a challenge they can handle.

Concluding considerations

The basic characteristics of modern society are change and information. If we accept information as identification of something new, then it is in itself a form of notification of change. The computer as a central component of the ICT system is absolutely necessary in the process of information transfer (educational material) and is currently an irreplaceable instrument of modern educational technology. As an imperative of modern teaching, educational technology implies adequate ways of achieving educational goals, as well as different methods and means of successful teaching.

Modern organization of teaching is unimaginable without the introduction of innovations. Didactic-methodical reform and modernization involves the use of new didactic materials and teaching strategies. A multimedia approach in teaching processes not only changes the style and way of work, but also to a great extent the quality of knowledge. This creates the conditions for acquiring more diverse, more dynamic, and complex knowledge. Since the total volume of knowledge is increasing every day, this implies the need for continuous learning and improvement. The new concept of electronic (e-learning) learning gives a new imprint and greatly facilitates this process.

Teachers generally have basic, but not necessarily sufficient knowledge for the functional use of computers in teaching. Some studies (Stankovic, Blazic 2015; Stankovic, Stanojevic 2019) point out that even where the computer is used, it occupies more time in preparation than in teaching itself, the use of educational software is negligible, and teachers are trained independently from the literature or with the help of more experienced colleagues and friends. Furthermore, very few teachers follow innovations in the field of educational technology and a large number of employees in education do not use the Internet at all during their teaching work.

The condition without which progress cannot be made is the professional development of teachers throughout their lives, and in parallel with that, defining the standards for all levels of teaching.

The introduction and application of new educational technology is not only a matter of means, but also a question of attitude towards it. In 1986, P. Mandic (Jugodidakta 1986: 4) emphasized that “resistance to the introduction of new technology often occurs because teachers do not understand enough its significance and its pedagogical abilities; because its introduction assumes the investment of special efforts, adaptation to new forms of work and taking of obligations that require a more complete pedagogical culture; because the introduction of new pedagogical technology requires retraining and permanent professional development of teachers, and these are the obligations that teachers are reluctant to accept in conditions where their material status is not what it should be considering the job and work they perform”.

Although the aims and recommendations of the Government of the Republic of Serbia in the Development Strategy of the Information Society in Serbia (p. 99) have decisively been taken into account, the question is, to what extent is the “state” ready to implement its plans in practice? Considering the fact that data from the Serbian budget in the previous decade foresaw allocations of less than 1% of GDP for education (out of which over 90% of funds go to employees’ salaries), and on average about 0.25% for science, forecasts do not seem so optimistic. In any case, one must first understand the importance and role of education and science in every society. This can also be seen in the example of Germany, which for the same needs take on average about 7% of GDP for education and 3% for science. Or, for example, Japan, which belongs to the ranks of fairly poor countries in terms of natural resources, through continuous large investments in education and science has long since become a world economic power, precisely thanks to professional staff, ie knowledge.

So, it has to start from the top – from the state itself and its relevant institutions. In addition to far greater material allocations and investments, greater mobility of line ministries (education and science, and ministries of international cooperation) is necessary, through the competent regional education communities, to the schools and educational institutions themselves. Also, it is necessary to involve and connect with primary teacher faculties, since, after graduation, teachers are still left to themselves, not to mention the presence of former staff who did not even have the opportunity to study educational technology during their education and vocational training. It is necessary to intensify and accredit as many courses as possible, to organize symposia and seminars, especially research projects in this field, in order to further awaken the awareness of educational workers and adequately popularize the most up-to-date didactic-methodical achievements.

The final step is certainly fieldwork in schools where, after training for the creation and application of educational software, a large number of teachers can easily be mobilized (for example, within one class) for the collection of teaching materials, and then, within the framework of team work, a series of educational software – electronic textbooks (in the function of individualization) for the needs of a larger number of cases. In parallel with this, it is necessary to work on the gradual abandonment of rigid time constraints and go over (e.g. through “block scheduling”) to extremely flexible daily and thematic frameworks of teaching work.

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Chapter XXVIII

INFORMATION AND DIGITAL COMPETENCIES OF TEACHERS IN THE FUNCTION OF PREVENTING ONLINE VIOLENCE

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Abstract: Aggressive violent behavior today, especially peer and online violence, is a common phenomenon in educational institutions. Based on a review of the most relevant literature and research, information and digital literacy, phenomenon and occurrence of online violence as a specific form and type of violence are presented in this paper. The fundamental goal of this research was to provide outcomes on how to raise awareness and levels of knowledge and competencies of educators and children on how virtual reality can affect them and to which extent they can engage in the digital world, provided it is safe and without consequences. For this purpose, in educational institutions in Kosovo and Metohija research has been conducted in order to identify the impact of teachers' information and digital literacy in the function of preventing online violence. The results of this study will elaborate the following: information and digital literacy of teachers as well as the teachers' insight into the activities of students; teachers' control and the identification of the causes of online violence; and ultimately, to provide answers on how students can be protected from online violence.

Keywords: *the Internet, violence, teachers, students.*

Information and Digital Literacy

Information (digital, computer) literacy today is a prerequisite for employment, for retaining a job, and a requirement of continuous training and

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learning. At present, technology has reached such applicability in our lives that every aspect of human life and functioning relies on it. High-speed Internet allows faster access to “online” contents, animated graphics or videos, and thus more online time spent at home (Denić 2016). Famous researchers, Jolls and Thoman (2008), by comparing the former century skills with skills needed for the systematic development of people and society in the 21st century, highlight a set of similar skills including skills needed for lifelong learning, skills for developing abilities through problem solving consisting of task approach, analysis, assessment and problem solving; critical thinking skills and systematic analysis of multimedia information; skills for management of various modern multimedia devices, the use of technologies for communication with people around the world for joint problem solving and knowledge dissemination; project team work; demonstration of knowledge and skills using different multimedia tools and technologies and the use of current modern technologies, with the possibility of independent study and development of new skills required for active, correct and efficient handling of new technologies. This would improve performance, that is, productivity of companies’ operations or save time and money related to personal development of every person. According to the same authors (Jolls, Thoman 2008), all this generates the need for the development of different types of literacy or tools by which such information could be checked relatively quickly. Accordingly, awareness of the existence of needs for use of personal knowledge, experience, critical and analytical thinking for development of our personality and personal competencies for independent life, both at school and later in life at work, is developed. As Jolls and Thomas argue, the effective use of information in society and the need for lifelong learning and personal development is increasingly gaining in importance. Bawden (2008) claims that there is no single literacy, which would be appropriate for all people or for one person over all their lifetime without constantly updating concepts and competences in accordance with the changing circumstances of the information environment. According to some authors, the modern era has brought modern techniques, which in overall size were defined by Gordon Moore in 1960s. He stated that the power of computers would double approximately every 18 to 24 months. This definition more than a half a century ago follows and describes in detail computers and sophisticated information technologies.

Modern society has become tied to technology in all spheres of human life (Denić 2017). Today, for example, it is almost impossible for a doctor to perform any surgery without using a digital device. In addition, it is almost impossible that any industrial machine can operate without some information system or modern information-communication technology managed by computer. In such context, the necessity of information education of the population is emphasized. As pointed out by some authors, it is very important to start the education and information literacy of society in time (Nunally 1978). It is

particularly important to carry out the continuous information education of teachers (Denić 2008). However, although the mandatory professional education of teacher was introduced ten years ago, the results of research imply that the same has not yet been sufficiently and effectively achieved in the educational system of the Republic of Serbia (Denić 2009).

The teaching process based on information-communication technologies is more comprehensive, more interesting and of higher quality than the traditional model of the teaching process. This type of teaching process includes the active and practical participation of students, thus enabling them to attain the necessary teacher's attention. According to well-known researchers (Davis et al. 1989; Chau 1996), the quality of the design and development directly affects the quality of the teaching process and is one of the most important factors for the quality content of the teaching process. We are often witnesses that students of primary, secondary schools and grammar schools which have appropriate equipment, through high quality and content-based information and communication systems, achieve great success at republic and international competitions and knowledge Olympics. Comparatively speaking, the difference in the educational level is imperceptible (Babbie 1998).

It is important to define what is meant by an information literate person, that is, it is necessary to determine the fundamental information knowledge and skills that an "information literate" person should have. According to Filipović (2017), this includes:

- Knowledge of the computer configuration and fundamentals of the use of operational systems;
- Use of text processing programs;
- Use of spreadsheet programs;
- Use of programs for creating presentations with the computer's assistance;
- Knowledge of programming fundamentals;
- Knowledge of the Internet and its services, especially communication using electronic mail and web;
- Web search using search engines and thematic catalogues;
- Content editing using HTML presentations (Filipović 2017).

Regarding digital literacy, it is important to note that the concept of digital literacy to certain extent overlaps with the concept of information literacy, but information literacy is a much wider concept that, apart from information in electronic form, includes all information available in different forms (Demunter 2006).



Figure 1: Levels of digital literacy

In this regard, one of the first definitions and concepts of digital literacy was given by Gilster (1997), as cited in Koltay (2001). He described it as an ability to understand and use information from the different digital sources regardless of the different “lists of competencies” that a person should have in order to be digitally literate, which has been often criticized due to limitations. A couple of years later a similar opinion, was expressed by Martin (2006), also cited in Koltay (2011). He saw digital literacy as “the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process”. There is a common opinion in practice that student-centered teaching is the best teaching practice. Student-centered teaching includes a teaching process where student and teacher, as subjects of the teaching process, are active equally or the student is more active than the teacher (Matijević, Radovanović 2011). Authors like Demunter (2006) argue that digital literacy includes background and critical use of ICT at work, in free time and in communication, and the use of new information and communication tools. There are several more definitions of digital literacy present in the literature. Thus Rosen (2014), as stated in Frank and Castek (2017), claims that digital literacy creates future citizens of the new society who will be able not only to actively use digital tools, but will also be able to solve problems in this area; problems like electronic business, search, and to apply for jobs on the Internet in order to make progress in everyday life, etc.

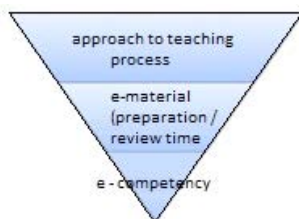


Figure 2: Hierarchical scale of internal factors

Information literacy is defined as the ability to use computers and computer programs (Denić 2010). Specifically, O'Sullivan (2002) states that it is possible to identify the concepts of information literacy in the context of knowledge management, that is, more precisely, in the context of time management related to the identification of needs for the information, determination of its scope, estimation of time required for problem solving. This also implies the time saving through faster decision-making and management of information that indicates the efficient approach to information, classification and storage, data-mining and data analysis.

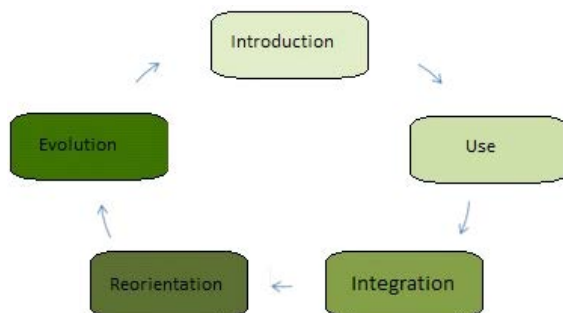


Figure 3: Developmental phases of teachers' e-competencies

Teaching theories can be organized into four categories based on two main parameters: a teacher-centered approach versus a student-centered approach, and the high-tech material use versus low-tech material use.

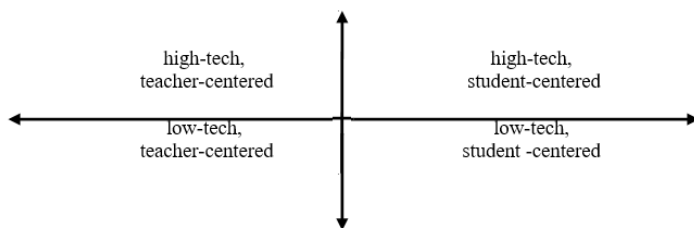


Figure 4: Four categories of teaching theories

Resource: <https://teach.com/what/teachers-know/teaching-methods/>

Thoman and Jolls (2003) define media literacy as “the framework for approach, analysis, estimation and creation of messages in different forms – from the newspapers, videos to the Internet”. By developing teaching styles and integrating them into more efficient management skills, the teachers will learn what is the most suitable for their curriculum (Gill 2013).

Theoretical considerations of violence

Violence and abuse involves any form of once committed, or repeated verbal or non-verbal behavior that results in a real or potential threat to the health, development and dignity of child's, student's, and employee's personality. The research in the domain of peer violence in educational institutions had been conducted earlier; however, a more intense interest in a studious research of this topic was begun about thirty years ago (Denić 2010). The first records date back to the 1990s. The first researcher to become more seriously involved in this matter was Dan Olweus (1995). With the development of society, a new phenomenon known as online violence emerged as a result of the development of new information and communication technology and the Internet (Denić 2011). Violence and abuse can be committed by: an employee against a child, student or other employee; a parent or caretaker; or any other person who is taking care of the child and student; a child or a student against other child or student or employee; parent against his/her own child, or student, and employee. Literature offers various definitions of violence. Kurk and Haller (2001), based on their research, argue that the violence is not a product of society. Others like Fromm (2013), however, give their own concept of violence and confirm that the animals are more aggressive if their lives are in danger, but are not as destructive as man can be.

Violence in society according to Olweus (1995) is caused by aggressive behavior, and can occur due to lack of love, too much independence in childhood, educational methods, and the character of a child. When defining school violence, Ortega-Ruiz and Nunez (2012) in their research indicated that, the school is the environment where interpersonal relationships develop, different from the family environment, and hence has become one of the main institutions for the psycho-educational research. Sullivan (2011) defines peer violence as conscious, deliberate act of aggression or manipulation and/or marginalization of one or more persons by another person or a group of people. Olweus (1995) argues that the peer violence refers to a situation when the student is exposed to aggressive behavior of his/her companions or a group of students for a long period of time.

The definition of the online violence

The occurrence of modern information and communication technology and the Internet has produced new forms of aggressive and inappropriate behavior (Denić 2010). Electronic violence and abuse is the misuse of information technologies that can result in harm to another person and violation of his/her dignity and it is committed by sending electronic mails, SMS, MMS, via website, chatting, joining forums, social networks, etc. Some researchers believe that the Internet, by nature, promotes cyber persecution, reflects the false sense of closeness, and opens up possibilities for misunderstandings regarding the intentions of participants in communication (Finn 2004: 470).

One of the definitions of online violence is that it is a phenomenon emerged as a detriment in the use of mobile phones, computers and other electronic devices. It is the aggressive act of a group or individual to the detriment of a person, who cannot defend himself/herself (Stefgen, Konik 2011). Authors Siegle (2010), Willard (2007), Pšunder (2012) define online violence as cruelty to others, sending or publishing harmful material, including aggression via the Internet or other digital technologies. Ortega-Ruiz and Nunez (2012) emphasize that we should not talk about online violence but about aggression, because this phenomenon occurs as a result of poor interpersonal relationships and abuse.

Types and forms of online violence

Of all types of violence, the one most represented is violence on the Internet. The age of the victim has an important role. Namely, the older the victim, is the sooner he/she will notice the offence and will respond to it faster, thus reducing the chance of becoming a victim of violence (Pšunder 2011). It is well known that online violence can occur in different forms. Authors Siegle (2010), Willard (2007), Pšunder (2012) classify online violence into the eight categories:

1. Brief violent exchange of opinions or insults on the Internet;
2. Harassment, maltreatment (constant sending of malicious and offensive messages) using applications for sending messages;
3. Disrespect of others on the Internet, sending or publishing rumors about a person, jeopardizing a person's reputation or causing damage to others;
4. Taking over the identity of another person, sending or publishing material on his/her behalf, and thus putting that person in danger or damaging his/her reputation. The result of such acts can be exclusion of a victim from society or friends (Pšunder 2012);
5. Publishing of personal data of others (publishing of inappropriate photos, videos or status);

6. Fraud (deceiving people to reveal secrets and personal data that can be used against them) (Pšunder 2012);
7. Exclusion (purposely and constant exclusion from the online group; obvious ignorance, conflict messages, etc., and thus having a negative influence on the person who meets his/her peers on the Internet) (Pšunder 2012);
8. Threats over the Internet (persistent and constant harassment, sending threats to a person and instilling fear).

The specifics of online violence

Online violence has distinctive characteristics compared to traditional violence (Gimenez, Hunter, Durkin, Arnaiz 2004):

1. Anonymity of the attacker;
2. Accessibility;
3. Duration,
4. The responses of the victim are invisible;

Violence framework includes different roles. One of the roles is that of a bully or persecutor. In online violence, the bully does not have to be physically strong; all that he/she needs to possess is an available mobile phone or computer (Simmons, Bynum 2014). In practice, it has been confirmed that victims or bullies often can use online violence as the means for achieving justice or revenge. According to some authors, the need for fitting in is one of the most common reasons of committing online violence (Salus 2012). Given the distribution and the use of the Internet, every person today can be a victim, every child and especially curious children who seem frightened, distant, physically weak, etc. (Van Acker, Gable, 2011; Olweus 2012).

The next role in the process of violence is the role of the observers, whose role is also important. In the literature, there are generally two types of the observers:

- Those who support the bully and motivate him/her, and on the other hand do not defend and protect the victim.
- The second group of the observers is the one who tries to help and protect the victim, to oppose the bully, support the victim and inform adults about it (Willard 2007).

Relevant research show that the victims of violence face different problems. Those may be pulling out from school activities, absence from school, poor physical form and failure in school, bad nutrition, the use of illegal substances, low self-esteem, anxiety, headaches, nausea, depression that may end with suicide or other forms of self-destructive behavior (Notar, Padgett, Roden 2013). In this sense, it is very important that parents have good communication

with their children so that the children could have them first to turn to if they become victims of violence (Donegan 2012). Due to the current economic crisis and constant struggle for survival, parents are forced to work extra hours in order to provide their children with decent living conditions and education. Unfortunately, this leads to the situation where parents spend less time with their children and talk to them less. Parents often try to compensate for the lack of such closeness by buying expensive gifts. However, even though parents believe that mobile devices serve the children's safety, the children can misuse them later in many ways.

It is true that schools cannot assist in online violence if the same occurred outside the school premises, but the school, as an institution, can take certain preventive measures and try to raise awareness among children about the negative impact of violence (Notar, Padgett, Roden 2013).

Simons and Bynum (2014) suggest some concrete activates in this regard:

1. School services can organize training for students and parents;
2. School services can form a group for the development and implementation of programs against online violence with the goal of increasing safety and protecting students;
3. The management of the school can cooperate with local police, and police officers could conduct a lecture or a training for parents and students;
4. School services should create an atmosphere where children would be unrestricted and free and feel confident enough to report online violence.
5. In the case of school authorities noticing the online violence, they are obliged to collect all necessary material evidence, so the case could be legally processed.

Educational institutions in line with rulebooks have special teams for protection against the violence, abuse and negligence. Protection team tasks are to:

1. prepare protection programs
2. activities and the possibility of seeking support and assistance from the protection team;
3. participate in trainins and projects for the development of competencies required for the prevention of violence, abuse, and negligence;
4. propose measures for prevention and protection, organize consultations, and participate in risk assessment and decision making on procedures in the case of suspicion or occurrence of violence, abuse, and negligence;
5. involve parents in the preventive and intervention measures and activities;
6. monitor and assess the effects of measures taken for the protection of children, students and make appropriate proposals to a director;
7. cooperate with experts from other competent authorities, organizations,

services and media to ensure full protection of children and students from the violence, abuse and negligence;

8. keep and maintain records;

9. report to expert and managerial bodies.

The results of studious reviews of representative literature show that it is of great importance that professional services in school organize an online strategy on violence prevention, to educate students and parents how to protect themselves. It is also necessary to organize as many educational programs as possible in educational institutions aimed towards teachers who are dealing with the prevention of online violence. These programs would assist them to better understand and react in the cases of online violence. The results of multiannual implementation of a professional development program created by the author of this paper, on behalf of the Institute for the Improvement of Education of the Republic of Serbia, show that educators/teachers have recognized the importance of this negative phenomena, and despite the enormous problems they encounter in their everyday work, they want to improve their competencies in the field of safe use of the Internet. Eminent authors also confirm that education about online violence should be a part of social skills education, because the understanding of online conversations is very important (Willard 2007). In this sense, Olweus (2012) states that it is necessary to introduce parents, students, and teachers to online safety, ICT, operation of technical devices and different forms of online behavior.

Results of teachers' survey

Recognizing the aforementioned theoretic considerations, the authors have designed and accredited the following programs for the professional development of teachers, which have been implemented in educational institutions in the Republic of Serbia: "The safety of children when using the Internet" – Institute for the improvement of education (IFIE), Republic of Serbia, 2008; "Information and communication technologies and the Internet in the function of the safety of children" – IFIE of the Republic of Serbia, 2009; "The role of teachers in protecting children on the Internet" – Republic of Serbia, 2010; and "Managing the protection and safety of children on the Internet and when using ICT", 2001, Belgrade. Based on the evaluation of the results and obvious needs to confirm the necessity of teachers' education, appropriate research was conducted. The survey covered 200 teachers, divided into equal groups: fifty educators, one hundred elementary school teachers (fifty teacher who teach from first to fourth grade and fifty teachers who teach from fifth to eighth grade), and fifty teachers employed in secondary schools. Groups are gender-balanced (Denić 2008). The questionnaire was composed of 11 questions.

The survey was conducted in the Institution for preschool education in Lip-ljan; in elementary schools “Kralj Milutin” in Gračanica, „Knez Lazar“ in Donja Gušterica, “Miladin Mitić” in Laplje selo. The Secondary Medical School in Gračanica, Economics-trading secondary school, and Grammar school in Laplje selo were also included in the survey. These institutions were selected based on the representative research sample since the largest number of students from the territory of Central Kosovo attend these schools (Denić 2009).

Data collection and processing techniques

The questionnaires used in the research were specially designed for the purpose of this study. Respondents answered anonymously. Data processing included techniques of descriptive statistics, applied to questionnaire designed for the needs of this study (Denić 2010). Since no standardized tests were performed, it was not possible to apply univariate analysis. All significant results are shown on the charts obtained from descriptive analysis, for better transparency, while other data is presented in the tables.

Table I. 1: Level of education

Secondary school	College	Specialist / Master
0.5%	90%	9.5%

The majority of respondents had higher education level (90%); Specialist or Master diploma 9.5% of respondents, while only 0.5% of the respondents had completed only secondary school (two elementary school teachers teaching from first to fourth grade)

Table I. 2: Working experience

Up to 5 years	5-10	10-20	More than 20
5%	45%	38%	12%

When it comes to working experience, the majority of respondents had between 5 and 10 (45%) or 10 and 20 (38%) years of working experience. Only 5% of respondents had less than 5 years of working experience.

Table I. 3: The use of computers

Rarely and unwillingly	Only for the work requirements	Willingly and often
30%	25%	45%

Data from the table is predictable, given the fact that the majority of respondents had longer work experience. This leads to the assumption that they are more unwilling to accept innovations in the teaching process and the use of modern computer technologies, and that they are not hostile towards the use of ICT, the Internet and the application of computers in the teaching process (Denić 2011).

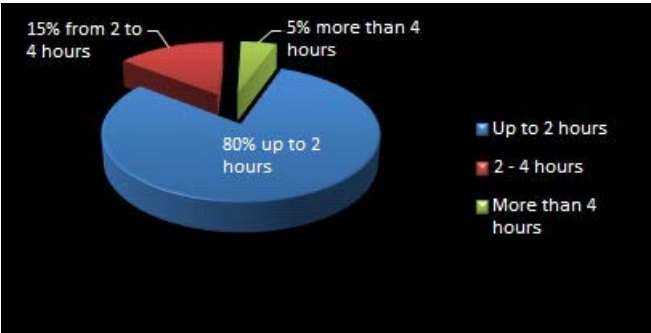


Figure I. 1: Time that teachers spend on the Internet during their free time

When it comes to teachers, 80% of them spend up to two hours on the Internet, 15% from 2 to 4 hours, and only 5% more than 4 hours.

Table I. 4: The use of the Internet in the free time

YES	NO
55%	45%

It is worth mentioning, that 55% of respondents in total use the Internet in their free time, only 110 respondents of the total sample.

Table I. 5: Account on a social network

YES	NO	Has multiple accounts
69%	21%	10%

Quite a large number of respondents have an account at least on one social network, while 10% have multiple accounts. Given that the large proportion of respondents have an account on social networks, it is necessary to explain the ways in which perpetrators can harass and persecute victims on the Internet. Namely, perpetrators can set up a site that can jeopardize the victim or can encourage others to contact, harass and otherwise hurt the victim. These sites

may provide real-time group chat (chat rooms), video or audio interactions, usually organized around specific topics related to politics, religion, entertainment or other. These sites can be public, available to all users or private, with limited access. Perpetrators may send a victim messages with disturbing content visible only to the users of the site or may reveal victim's personal information to other participants, and thereby encourage others to harass others on the Internet, phone or similar (D'Ovidio, Doyle 2003: 16; Denić 2016).

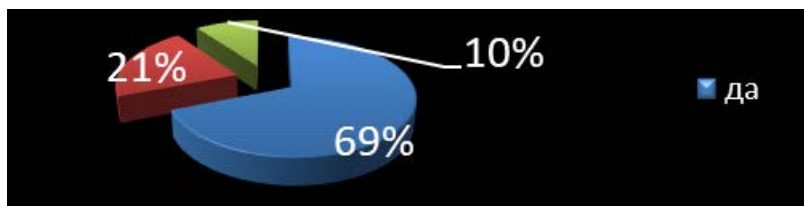


Figure I. 2: An account on some social network (teachers)

Research has shown that 69% of teachers have at least one account, while 10% have multiple accounts. Only those teachers who access the Internet in their free time (110, or 55% of the total sample) answered this question.

Table I. 6: Time spent on the Internet per day

Up to 2 hours	2–4 hours	More than 4 hours
80%	15%	5%

The majority of respondents spend up to two hours on the Internet during the day, while the number of those who spend 2 to 4 hours (15%), that is, more than 4 hours (5%) is considerably lower.

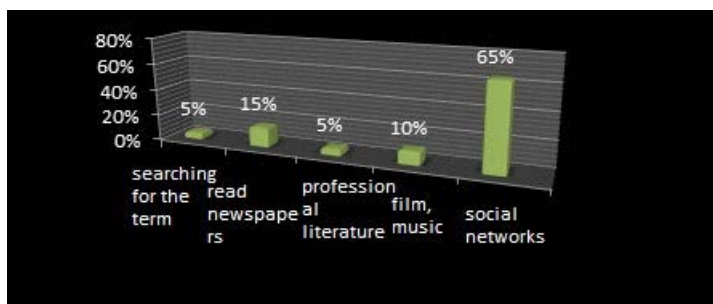


Figure I. 3: Reasons to use the Internet during the free time (teachers)

When it comes to the teachers, most of them use the Internet in their

free time (65%) for social networking. A negligible number read professional literature (5%), while 15% read newspapers and 10% watch movies or listen to music. The fact that the majority of respondents use the Internet in their free time for social networking is rather worrying. It is more than necessary to provide them with appropriate education on online violence, because they can also be unwillingly involved in such actions. Namely, having spent such amount of time on social networks, the perpetrators may steal their identity, act on their behalf and misuse their profile, and thus jeopardize them and other users of the Internet.

Table I.7: Attending computer training

Yes	No, and I don't want to	I didn't, but I would like to
53%	4%	43%

Most of the teachers have attended some computer training (53%). It is worth pointing out that 43% of respondents who never attended any training are willing to attend some of computer training. This shows that the organization of additional training and education in the field of computer literacy for teachers is more than necessary.

Table I.8: Additional information literacy trainings are needed

Yes	No
96%	4%

The given data is in accordance with data obtained on the previous item: 96% of respondents think that they need additional training in the field of information literacy, which indicates that at least the awareness of the need for education exists. However, there is a possibility that respondents replied in the desirable manner.

Table I.9: Informatics should be one of the obligatory subjects in elementary and secondary schools

Yes	No
96%	4%

What is encouraging is the information that even 96% of respondents believe that it is necessary to introduce Informatics as an obligatory subject/course, but there is a possibility that this is also a socially desirable answer.

Table I. 10: Uses modern IC technologies in the teaching process

Only for practical presentation	Occasionally	Often
45%	45%	10%

Only 10% of the respondents regularly use ICT in the teaching process, while others use it occasionally or just for practical presentation.

Conclusion

Information and digital competencies are becoming very important for teachers and others. Fundamental digital competencies, in the long term, are generated in the education system, and the level of digital competencies of the students depends, inter alia, on the level of digital competencies of the teachers. Therefore, teachers are expected to have the appropriate level of information, digital, and media literacy, and to be familiar with modern concepts, methods and tools that presuppose the meaningful use of ICT in the field they teach. Information and digital competency generally includes a set of knowledge, skills, attitudes, abilities and strategies needed for the appropriate use of information and communication technology and digital media, with the aim of thoughtful, flexible and safe improvement of the teaching process and learning and other activities related to the teaching profession in online and offline environments.

If we observe already-conducted research on peer violence, we can notice that the development of peer violence with an emphasis on online violence became more seriously investigated in 1995 with the research study by Olweus (1995). This study shows that every seventh student was a victim of online violence, meaning that over 15% of students reported experienced peer violence. A research conducted by Dekle et al. (1996), shows that 62% of students did not encounter peer violence, 20% occasionally, and 5% weekly. Theoretical considerations and conducted research of the author of this paper confirm the hypothesis that the low level of information literacy of teachers also has a negative impact on the activities of students using the Internet.

The research results of this paper conducted on the representative sample indicate that teachers access the Internet in their free time much less than their students. Approximately 5% access the Internet to read professional literature or to search terms, while as many as 65% prefer to use social networks. On the other hand, only a small percentage of them use ICT in the teaching process (only 10%), but many advocate the need for additional education in this area (96%). Many think that Informatics should be taught in elementary and secondary schools as an obligatory subject (96%). Of course, it is necessary to conduct additional research in this area in order to raise awareness of children and adults, especially teachers, and to influence their behavior.

However, specific conditions in which the participants of this research live imply that these issues, that is, addressing of such processes, require the engagement of institutions that have caused such existential situation of a population. Unfortunately, in the territory of Kosovo and Metohija, except for the authors of this paper who for more than 20 years have organized programs of professional education of teachers in the area of computer application in the teaching process and protection from online violence, there are no other forms of education in this area aimed to teachers. This type of education involves teachers as the holders of the education of children and parents as well. Programs of professional education include lectures, workshops, and professional discussions regarding the application of computers in the teaching process and the safe use of the Internet and are conducted from Dragaš and Štrpce in the south to Lešak in the north of Kosovo and Metohija.

Although there are certain positive and concrete results of this engagement, which definitely additionally motivate us to persist in this pioneering work in this territory, we are still well aware of the situation, facts and environment, and the fact that *una hirundo non facit ver!*

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Chapter XXIX

**FACTORS RELATING TO THE DEVELOPMENT
OF ICT COMPETENCES OF PRESERVICE
PRESCHOOL TEACHERS**

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Abstract: The aim of this study is to investigate factors correlated with the development of ICT competencies of future preschool teachers. There are a lot of factors that can be in correlation with the level of ICT competencies of preschool teachers and their intentions to use ICT in education. Based on different research, we extracted some of these factors, such as perceived usefulness, subjective norm, perceived ease of use, self-efficacy, and attitudes towards computer use. Data were collected from 48 students from the Faculty of Education in Jagodina, using a survey questionnaire during the school year of 2018/2019, from which 15 students were master pre-service preschool teachers (5th year), and others were in the first year of study. Results indicated that there was a significant correlation between the mentioned factors. Also, from the results, the master preschool teacher level of ICT competencies are higher than bachelor preschool teachers' level of ICT competencies, although not significantly. On the other hand, master students' intentions to use ICT in education, perceived usefulness, perceived ease of use, self-efficacy, and attitudes towards computer use were on a significantly higher level, compared with bachelor students. The results of the research can be useful in the development of curriculum at the faculties for future preschool teachers. Improving preschool teachers ICT competencies could be achieved with new elective ICT courses for preschool teacher students, practice in preschool institutions and personal professional development.

Keywords: *ICT competencies, preschool teacher, preschool teachers' education, preschool teachers' competences.*

Introduction

New scientific and technological achievements and the tendency of people towards a better, richer and more humane society, led to the fact that during the second half of the 20th-century society start changing from an industrial to a digital society (Milutinović 2016). Thus, it is important for students to develop learning skills, often called the capacity of "learning to learn" (Anderson

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2008). For learning these skills, appropriate use of technology by teachers in education is important (Teo, Milutinović 2015), and this could also be applied to preschool teachers. Therefore, faculties for preschool teachers are expected to prepare preschool teachers to adequately use technology in education (Brun, Hinostroza 2014).

Studies have shown that despite increasing access, and a potential advantage in teaching information and communication technology (ICT) abilities to strengthen or transform teaching, preschool teachers seldom use computers in education (Barak 2014; Russell, Bebell, O'Dwyer, Duffany 2003). Consequently, faculties for preschool teachers have engaged in various efforts to re-shape their curriculum (Ottenbreit-Leftwich, Glazewski, Newby, Ertmer 2010). More precisely, they are incorporating technology into every aspect of the curriculum, allowing preschool teachers to understand the pedagogical reasons for using technology (Polly, Mims, Shepherd, Inan 2010). Previous research identified various approaches that may develop the ICT competencies that future preschool teachers will require (Chien, Chang, Yeh, Chang 2012). Still, promoting ICT competencies for preschool teachers in an integrated and cross-curricular manner requires multiple strategies (Kay 2006).

The intention of preschool teachers to use computers is directly correlated to the real use of computers by preschool teachers, as shown by several studies (Milutinović 2009; Tondeur, Aesaert, Prestridge, Consuegra 2018). Some studies have aimed at preschool teachers characteristic correlated with their ICT competencies, such as "ease of use" or "subjective norm" (Tondeur, Aesaert, Prestridge, Consuegra 2018; Holland Piper 2016). These correlations are especially important as it has been discovered that preschool teachers' individual ICT characteristic (attitudes, ease of use, subjective norm) have a great effect on their use of technology in education (Teo, Milutinović 2015).

Preschool teachers are faced with numerous problems, from deficiency of resources and time to deficiency of necessary knowledge and experiences for successful integration of computers in education. The extent to which students develop their ICT competencies will depend on how much teachers and preschool teachers use computers and in which way (Milutinović 2016). Because of the reasons mentioned above, research is continuously trying to give an answer to the question of what the variables that have influence in the usage of computers in education are.

The main aim of this study is to explore factors correlated with the development of ICT competencies of future preschool teachers. Based on different research (Teo, Milutinović 2015; Tondeur, Aesaert, Prestridge, Consuegra 2018; Sanchez-Prieto, Olmos-Miguelanez, Garcia-Penalvo 2016), we extracted some of these factors, such as perceived usefulness, subjective norm, perceived ease of use, self-efficacy, and attitudes towards computer use. Research should also explore if there is a difference between the master preschool

teacher level of ICT competencies and bachelor preschool teachers' level of ICT competencies.

Literature review

In the literature, many studies have been conducted to quantitatively measure pre- or in-service teachers' technology competency (Chien, Chang, Yeh, Chang 2012; Sang, Tondeur, Ching, Dong 2015). Due to the increasing importance of ICTs in all human activities, acceptance of technology by an individual is constantly studied and developed with many accepted models (Sanchez-Prieto, Olmos-Miguelanez, Garcia-Penalvo 2016). Some of these models are Theory of Reasoned Action – TRA, Theory of Planned Behavior – TPB, Technology Acceptance Model – TAM and Unified Theory of Acceptance and Use of Technology – UTAUT. Among all of these most commonly used model is TAM (Davis, Bagozzi, Warshaw 1989). However, in this research a model of correlation will be used, due to the small sample.

According to Julie Pallant (2007), correlation describes the strength and direction between two variables. Depending on the level of measurements of variables and nature of the data, there are different statistical indicators. Correlation between variables can be measured by Pearson's coefficient (r) and Spearman's rho coefficient (r_s). Pearson's coefficient is compatible with unitary variables, while Spearman's rho coefficient is compatible with ordinal variable or when variables do not meet the requirements of Pearson's coefficient (Pallant, 2007).

Perceived usefulness, perceived ease of use, attitude towards computer use, subjective norm and self-efficiency are given by using hypotheses and are empirically supported as basic predictors for accepting the given informational system or technology by the user. Perceived usefulness is "defined as the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organizational context", perceived ease of use "refers to the degree to which the prospective user expects the target system to be free of effort" and attitude towards computer use designates "an individual's positive or negative feelings (evaluative affect) about performing the target behavior" (Davis, Bagozzi, Warshaw 1989). Subjective norm is the conviction "the perceived social pressure to perform or not to perform the behavior" in question (Ajzen 1991). In studies about accepting technology, the subjective norm is one person conviction that people important to them think that they should or shouldn't accept technology. In another word, that is the extent to which pre-service teachers and pre-service preschool teachers experience demanding "important" or reference other individuals to use technology, which can relate to their colleagues, professors, and

headmasters university institutions (Milutinović 2016; Wong 2015; Teo, Milutinović 2015). Self-efficacy is a concept from Bandura's social cognitive theory (Bandura 1978). Albert Bandura (1978) defines it as a personal judgment of "how well one can execute courses of action required to deal with prospective situations". This definition of self-efficacy has been adopted as the assessment of one's own ability to use an information system (Compeau, Higgins 1995; Allan, Will 2008). Thus said, self-efficacy could be defined as the preschool teachers' belief in their own skills to produce an improvement in their students' learning (Van Dinther, Dochy, Segers, Braeken 2013).

PU, PEU, and ATCU are variables that were investigated in many studies that showed their correlations (Cheung, Vogel 2013; Motaghian, Hassanzadeh, Moghadam 2013; Teo, Milutinović 2015). Other studies have proven that subjective norm has a direct impact on perceived usefulness and perceived ease of use, and therefore, is correlated with these two variables (Schepers, Wetzels 2007; Venkatesh, Davis 2000; Teo, Milutinović 2015; Wong 2015). The effect that self-efficacy has on technology acceptance has been explored with good results both with teachers and students (Nam, Bahn, Lee 2013; Tarhini, Hone, Liu 2014; Wong, Teo, Russo 2012).

From the above-mentioned literature review, the next research tasks were formulated.

The first task is to investigate the level of pre-service preschool teachers' ICT competence, perceived usefulness, perceived ease of use, attitude towards computer use, subjective norm, self-efficacy and intention to use ICT in their future preschool practice.

The second task is to determine if there is a correlation between pre-service preschool teachers' ICT competence and intentions to use ICT with their perceived usefulness, perceived ease of use, attitude towards computer use, subjective norm and self-efficacy. Also, it should be determined is it positive or negative correlation, a strong or weak one.

The third task is to find if there is a difference between first-year and master students' intentions to use ICT in the future, ICT competence, perceived usefulness, perceived ease of use, attitude towards computer use, subjective norm and self-efficacy.

Method

Purpose of the study

Given the fact that preschool teachers seldom use computers in education, there are already many instruments available to quantitatively measure pre- or in-service teachers' technology competency (Chiena, Changabc, Yehc, Chang

2012; Sang, Tondeur, Ching, Dong 2015) that could be applied on measuring ICT competencies of pre-service preschool teachers. Therefore, the present study aims to investigate variables that are correlated with the development of ICT competencies of future preschool teachers.

Aim of the study

The aim of this study is to research variables that could be correlated with ICT competencies and the intention of future preschool teachers in using computers in education. Based on the literature review, factors that could be correlated with the intention to use computers are extracted. Also, the aim of this study is to compare and to determine if there are any differences between the ICT competencies of master pre-service preschool teachers and the ICT competencies of the first year of pre-service preschool teachers.

Sample

This research is focused on pre-service preschool teachers. Participants were students from the Faculty of Education in Jagodina using a survey questionnaire during the school year of 2018/2019. There was 45 students in total, from whom 15 students were master pre-service preschool teachers, and others were in the first year of study. Undergraduate students had studied and passed the obligatory ICT subject in the first year, while master students had studied and passed one more obligatory ICT subject.

Participants had the right to stand down from the survey at any time, and they were informed of the purpose of the survey. Participation was voluntary, and students did not gain any material benefits from the survey.

Measure

For the purposes of this study, the questionnaire was constructed to measure students' intentions of using computers in education. The entire scale comprised 24 items (see Appendix). Variables PU, PEU, ACTU, SN, SE, and BI that were used in the questionnaire were taken and adapted (translated to the Serbian language) from various sources cited in the Appendix. Respondents were asked to rate each statement on a five-point Likert scale with meaning 1 – totally disagree to 5 – totally agree. Cronbach's Alpha (α) was used as estimates for scale reliability. It is recommended that the value is equal to or greater than 0,70 (Schumacker, Lomax 2010). Composite reliability of the proposed constructs is between 0,71 and 0,95, as shown in Table 1.

Data analysis

The data was analyzed using correlation model in SPSS, consistent with how hypotheses are conceptually and statistically expressed and this is useful for analyzing the relationship between latent and observed variables. This analysis involves testing the first data normality.

The non-parametric Mann–Whitney test was used for determining differences between ICT competencies of bachelor and master students. This test has the great advantage of being used for small samples of subjects (five to 20 participants). It can also be used when the measured variables are of an ordinal type and were recorded with an arbitrary scale (Nachar 2008). The Mann–Whitney U test is one of the most commonly used non-parametric tests in behavioral sciences (Kasuya 2001).

Results

Descriptive analysis

Using SPSS software, we determined descriptive statistics if items. Aiming to facilitate the evaluation of the intention of the Preschool Education Teacher Bachelor's Degree students towards ICT use and their ICT competencies, below we present the descriptive analysis, organized by constructs, in Table 1.

As we can see in Table 1, the scores obtained show the students' inclination towards the use of ICT in their future educational practice and all other measured items, with scores above 4, out of a maximum of 5, for most of the items.

ICTCOMP = ICT Competence (ICTC-PU = the ability to use ICT for facilitating student learning competencies in using ICT; ICTCID = the ability to manage ICT for their own teaching purposes (ICTCID))

Table 1: Descriptive statistics of the items

Item	Minimum	Maximum	Median	Mean	Std. Deviation
ICTC-PU1	2.0	5.0	4.5	4.29	0.85
ICTC-PU2	2.0	5.0	4.0	3.98	0.91
ICTC-PU3	2.0	5.0	4.0	4.21	0.85
ICTC-PU4	2.0	5.0	4.0	4.17	0.78
ICTC-PU5	3.0	5.0	4.0	4.33	0.66
ICTC-PU6	2.0	5.0	4.0	4.21	0.77
ICTC-PU7	2.0	5.0	4.0	4.10	0.78
ICTC-PU8	2.0	5.0	4.5	4.35	0.76
ICTC-PU9	3.0	5.0	4.0	4.29	0.71
ICTC-PU10	3.0	5.0	5.0	4.46	0.71
ICTC-PU11	1.0	5.0	4.5	4.13	1.10
ICTCID1	2.0	5.0	4.0	4.13	0.91
ICTCID2	.0	5.0	4.0	3.69	1.13
ICTCID3	.0	5.0	4.0	4.06	1.02
ICTCID4	.0	5.0	4.0	3.98	1.00
ICTCID5	.0	5.0	4.0	3.90	1.02
ICTCID6	.0	5.0	4.0	4.02	0.96
ICTCID7	.0	5.0	4.0	3.98	1.06
ICTCID8	1.0	5.0	4.0	4.04	1.01
PU1	1.0	5.0	5.0	4.42	0.92
PU2	2.0	5.0	5.0	4.40	0.79
PU3	2.0	5.0	5.0	4.56	0.68
PU4	2.0	5.0	5.0	4.52	0.71
SN1	1.0	5.0	4.5	4.19	1.00
SN2	1.0	5.0	4.0	4.15	1.07
SN3	2.0	5.0	4.0	4.31	0.80
PEU1	2.0	5.0	5.0	4.38	0.76
PEU2	2.0	5.0	4.0	4.23	0.75
PEU3	3.0	5.0	4.5	4.35	0.73
PEU4	2.0	5.0	5.0	4.35	0.84
PEU5	2.0	5.0	5.0	4.31	0.83
SE1	1.0	5.0	4.0	4.08	1.07
SE2	1.0	5.0	4.0	4.21	0.90
SE3	2.0	5.0	4.0	4.33	0.75
ATCU1	2.0	5.0	5.0	4.42	0.74
ATCU2	3.0	5.0	5.0	4.56	0.58
ATCU3	3.0	5.0	5.0	4.54	0.58
ATCU4	3.0	5.0	4.5	4.40	0.68
BI1	2.0	5.0	4.0	4.19	0.89
BI2	2.0	5.0	4.0	4.17	0.78
BI3	2.0	5.0	4.0	4.31	0.78

Descriptive statistics of the variables are given in Table 2. All mean scores were above the midpoint of 2.5, indicating positive responses to the constructs.

Table 2: Descriptive statistics of the constructs and composite reliability.

Variable	Mean	Std. Deviation	Skewness	Kurtosis	Cronbach's Alpha (a)
SN	4.22	0.83	-1.37	2.05	0.82
PU	4.47	0.63	-0.9	-0.39	0.81
PEU	4.32	0.59	-0.52	-0.71	0.82
ATCU	4.48	0.47	-0.55	-0.58	0.71
SE	4.21	0.79	-1.47	2.84	0.84
ICTCOMP	4.12	0.67	-0.88	0.92	0.95
BI	4.22	0.70	-0.86	0.28	0.83

Note. SN = Subjective norm; PU = perceived usefulness; PEU = perceived ease of use; ATCU = attitude toward computer use; SE = Self-efficacy; ICTCOMP = ICT Competence; BI = behavioural intention.

The standard deviations ranged from 0,47 to 0,86, reflecting a fairly narrow spread in participants' responses around the mean. In order for the reliability of the applied measuring scale, ie, the Cronbach Alpha (α) was adequate, value is recommended to be 0,70 or bigger (De Vellis 2003). All reliability (ie. internal consent) of all constructs were between 0,71 and 0,95 as shown in Table 1.

Correlations between variables were measured using Spearman's rank correlation coefficient because preconditions for Pearson's linear correlation were not met. Values are shown in Table 3. Obtained correlation coefficients mostly showed positive relations between seven variables in the study, and all of the relations were significant.

Table 3: Correlations between constructs.

	PU	SN	PEU	SE	ATCU	BI
SN	0.549**					
PEU	0.636**	0.389**				
SE	0.595**	0.352*	0.667**			
ATCU	0.651**	0.431**	0.677**	0.650**		
BI	0.446**	0.424**	0.450**	0.390**	0.562**	
ICTCOMP	0.654**	0.499**	0.658**	0.671**	0.503**	0.451**

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

As testing variables PU, SN, PEU, SE, ACTU, BI has shown that they didn't have a normal distribution, the non-parametric Mann-Whitney test was used to determine differences between answers from the first year bachelor students and master students. All results of Mann-Whitney test are shown in Table 4. There were statistically significant differences between the responses of the first year student and master students at the level of significance $p < 0,05$ for all variables except for SN and ICTCOMP in favor of the master students.

Table 4: Descriptive statistics for all variables and Mann-Whitney test.

						Mann-Whitney u test			
	Group	N	Mean	Std. Dev.	Median	U	z	p	r
PU	OAS	33	4.36	0.65	4.50	151.50	-2.25	0.024	-0.32
	MAS	15	4.73	0.50	5.00				
	Total	48	4.47	0.63	4.75				
SN	OAS	33	4.19	0.83	4.33	231.00	-0.37	0.708	-0.053
	MAS	15	4.27	0.84	4.33				
	Total	48	4.21	0.83	4.33				
PEU	OAS	33	4.20	0.64	4.20	157.00	-2.04	0.041	-0.29
	MAS	15	4.60	0.36	4.60				
	Total	48	4.32	0.59	4.40				
SE	OAS	33	4.03	0.85	4.00	141.00	-2.41	0.016	-0.35
	MAS	15	4.60	0.42	4.67				
	Total	48	4.21	0.79	4.33				
ATCU	OAS	33	4.32	0.47	4.25	54.50	-3.48	0.001	-0.50
	MAS	15	4.82	0.26	5.00				
	Total	48	4.48	0.47	4.50				
BI	OAS	33	4.06	0.67	4.00	124.00	-2.81	0.005	-0.31
	MAS	15	4.58	0.65	5.00				
	Total	48	4.22	0.70	4.33				
ICTCOMP	OAS	33	40.4	0.60	40.5	167.50	-1.78	0.075	-0.26
	MAS	15	4.30	0.76	4.58				
	Total	48	4.12	0.66	4.16				

Discussion

According to educational authorities, ICT is expected to be broadly organized for teaching and learning in schools (Tondeur, Aesaert, Prestridge, Consuegra 2018). Consequently, ICT competencies were implemented for students in school, and have only recently started implementing pre-service preschool teachers (Kennisnet 2012). Promoting ICT competencies is a challenge for most education institutions (Gao, Wong, Choy, Wu 2011; Ottenbreit-Leftwich, Glazewski, Newby, Ertmer 2010) because multiple strategies are demanded in order to be successful. The aim of this study was to investigate pre-service preschool teachers' ICT competencies and answers to three tasks from the literature review, ie, the level of pre-service preschool teachers' ICT competencies, factors that have an impact on pre-service preschool teachers' determination to use ICT in teaching, and also to determinate if there are differences between first-year pre-service preschool teachers' and master pre-service preschool teachers' ICT competencies.

The answers to the first research task are shown in Table 1 and Table 2. Pre-service preschool teachers would use technology in their teaching in the future since almost all scores are above 4. All variables' values were above mean value, which indicates that all answers were positive. However, (re)designing ICT-applications and evaluating pupils with the help of ICT are fields where teachers should work more so that students would be more confident about this.

As far as the second research task is concerned, the results of this study showed that all factors are in strong correlation between each other (see Table 3), except for subjective norm and self-efficacy which are in weaker correlation. Thus, this implies that perceived usefulness, perceived ease of use, attitude toward computer use, subjective norm and self-efficacy are the factors that have an impact on pre-service preschool teachers' ICT competencies and intentions to use computers in education.

Based on the results, ICT competencies is mostly influenced by self-efficacy, which is in strong correlation with perceived ease of use and attitude toward computer use. The results are consistent with the fact that the main barrier for the integration of technology is considered to be lack of preschool teachers' self-confidence (Ertmer 2005; Hermans, Tondeur, van Braak, Valcke 2008).

On the other hand, for the third research task, the Mann-Whitey test (see Table 4) showed that master pre-service preschool teachers have higher ICT competencies than first-year pre-service preschool teachers, although not significantly. This indicates that with more ICT subject during pre-service preschool teachers' education, they would have higher ICT competencies. Although this does not mean that a bigger number of ICT subjects would necessarily be

better, future studies should focus on what is the optimal number of ICT subjects during someone's education. While the subjective norm and ICT competencies didn't show a significant difference between first-year and master students, perceived usefulness, perceived ease of use, self-efficacy, attitude toward computer use, and behavioral intention showed that there is a significant difference between first-year and master students in favor of master students. Since almost all variables are in strong correlation (see Table 3), it's expected that if one variable has a significant difference between first-year and master students, some other variables will have a significant difference. These results show that the people that are students' role models should encourage them to use more technology, and educators should spend more time teaching students about integrating ICT in education.

Implications for practice

The study's results contribute towards showing which factors have an impact on students' ICT competencies and intention of using computers and if there are differences in ICT competencies between first-year students and master students. The obtained results give guidelines and recommendations for further improvement of pre-service preschool teachers' education.

As the subjective norm and attitudes towards computer use have proven to be very important in shaping the intentions of using computers, and their actual application, it is most important that education faculties' curriculum should integrate ICT in all subjects where this is possible. The University's practice should support future preschool teachers' ICT abilities and, with that in mind, various training courses and workshops should be developed. Only with a well-developed ICT application system in all segments of education and the corresponding influence of teachers as role models, can students develop positive attitudes and intentions towards computer use in education, and hence, gain ICT competencies.

Lastly, it should be said that a big factor in gaining higher ICT competencies is personal professional development. Various online courses are available and could help in raising preschool teachers' ICT competencies.

Conclusion

It could be concluded that integration of ICT is an important and complex process and there are a lot of factors that could influence preschool teachers' ICT competencies and intentions to use computers in their teaching.

It's clear that even with good knowledge of using technology, psycho-social aspects of using technology will have a big impact on students. Integration

of ICT is planned in accordance with preschool institutions' needs and has a significant influence on the learning process. As today ICT is present in all spheres of life as well as for all age- groups, it is necessary to start with the correct and timely application and education of the youngest age group. For optimal effect, preschool teachers have to adapt to all changes in technology. Preschool teachers, in addition to making decisions on the use of adequate technology, depending on the type and subject being processed, cannot resist the use of ICT but must accept and apply them in a timely manner. From all of the above, students must be able to practice the use of ICT in the process of education, but also to be provided with good examples and practices in order to better develop the application of the learned in the future work of the preschool teachers. It is necessary to refer them to new achievements and understanding these achievements in order to properly use them in their work. Preschool teachers have an impact on intentions and behavior but that's not enough, given that the vast majority of pre-school institutions are not adequately supplied with appropriate ICT equipment. As a result, preschool teachers during their work are unable to apply and evaluate theoretically acquired knowledge related to the use of ICT in education.

Despite all measures and precautions in our methodology, there are some limits. First, the data is collected by self-reporting, which has its own advantages, but it can lead to a common-method variance, and thus falsely increases the values of the accurate relationships between variables. Second, choosing students, future preschool teachers, seemed like a good solution. On the other hand, the lack of practice in the integration of ICT in real-life educational process could lead to the representation of a false image.

From a theoretical perspective, the study investigated the research task to assess the situation at different levels of use for teaching. The results should be applied in practice and so contribute to the improvement of teaching and learning processes.

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Appendix

List of Constructs and Corresponding Items

ICT competence items (adapted from Davis 1989)

I am able to...

ICTC-PU1: motivate pupils to use ICT in a positive way

ICTC-PU2: stimulate pupils to use ICT in a critical manner

ICTC-PU3: provide pupils with activities to exercise knowledge/skills by means of ICT

ICTC-PU4: provide pupils with activities on subject matters to learn with ICT

ICTC-PU5: offer pupils opportunities to express ideas in a creative way by means of ICT

ICTC-PU6: support pupils in searching for information by means of ICT

ICTC-PU7: support pupils in processing and managing information by means of ICT

ICTC-PU8: support pupils to present information by means of ICT

ICTC-PU9: support pupils to communicate with ICT in a safe, responsible and effective way

ICTC-PU10: support pupils to work together with ICT

ICTC-PU11: educate pupils to use ICT in a conscious way (respecting ergonomics, intellectual property, etc)

ICTCID1: select ICT-applications in view of a specific educational setting

ICTCID2: (re)design ICT-applications in view of a specific educational setting

ICTCID3: use ICT to differentiate learning and instruction

ICTCID4: track the learning progress of pupils in a digital way

ICTCID5: evaluate pupils with the help of ICT

ICTCID6: use ICT appropriately to communicate with pupils

ICTCID7: design a learning environment with the available infrastructure

ICTCID8: select ICT-applications effectively in creating a learning environment (e.g. in view of the group size)

Perceived usefulness (adapted from Davis et al. 1989; Teo 2009a, 2008b, 2010)

PU1 The use of ICT improves the educational practice (PU_01);

PU2 The use of ICT makes the educational practice more effective (PU_02);

PU3 The use of ICT makes it easier to carry out educational tasks (PU_03);

PU4 In general, I consider that ICT is useful in education (PU_04).

Subjective norm (adapted from Taylor, Todd 1995; Venkatesh et al. 2003; Teo 2009a, 2009b, 2010)

SN1 People whose opinions I value will encourage me to use ICT in educational practice.

SN2 People who are important to me will support me to use ICT in educational practice.

SN3 People who influence my behavior think that I should use the ICT in educational practice.

Perceived ease of use (adapted from Davis et al. 1989; Teo 2009b)

PEU1 Learning how to use ICT in the educational practice would be easy for me;

PEU2 I find it easy to interact with ICT;

PEU3 I find it flexible to interact with mobile devices

PEU4 It would be easy for me to become skillful at using ICT in educational practice

PEU5 In general, I consider ICT to be easy to use (PEU_04).

Self-efficacy (adapted from Venkatesh, Bala 2008; Holden, Rada 2011; Van Dinther et al. 2013)

SE1 I know I can use ICT even if I have not used them in an educational setting;

SE2 I am able to design educational activities that make use of ICT;

SE3 I can use ICT in the classroom even if there is nobody to help me.

Attitudes towards the use of ICT in educational practice (adapted from Thompson et al. 1991; Venkatesh et al. 2003; Teo 2009b)

ATCU1 The use of ICT would make educational practice more interesting.

ATCU2 Working with ICT in education would be fun.

ATCU3 I would like to use ICT in educational practice.

ATCU4 I look forward to those aspects of my job that require me to use ICT.

Behavioral Intention (adapted from Teo 2009b)

BI1 I intend to use ICT frequently in my future educational practice.

BI2 I will probably use ICT in my educational practice as soon as I start working.

BI3 I will use ICT in my future educational practice.

Section VI

Teaching Competences in Inclusive
Education

Chapter XXX

BELIEFS OF STUDENT TEACHERS ABOUT THEIR COMPETENCIES FOR INCLUSIVE EDUCATION IN SLOVENIA AND SERBIA

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Abstract: The inclusive education policy requires prospective teachers to develop competencies to promote learning in all pupils. Having in mind that teachers' beliefs are reflected in their practice, the present study aims to explore beliefs of fourth-year student teachers from Slovenia and Serbia about their own competencies relating to inclusive education. Specifically, the research questions are: 1) What are student teachers' beliefs about their own competencies related to inclusive education? 2) Are there any differences in student teachers' beliefs in relation to the country in which they are studying? The sample consisted of 135 student teachers enrolled at the University of Kragujevac, Faculty of Education in Jagodina and the University of Ljubljana, Faculty of Education in Ljubljana. The instrument (questionnaire) contained 26 statements relating to eight areas of teacher expertise: setting the 'learning to learn' goal for all pupils; taking responsibility for the learning of all pupils; personalized learning approaches that support autonomy in learning; identifying and addressing barriers to learning; differentiation of curriculum content, learning process and learning materials; positive classroom management; formative and summative assessment and cooperative learning. Statistical analysis was conducted using SPSS 22.0. The frequencies of each of the responses were calculated for each group of students (Slovenia and Serbia). Differences between the two groups of students were analysed with the χ^2 test. The results of the study suggest that the majority of student teachers participating in the study feel competent in the abovementioned areas of teacher expertise. The self-confident perceptions of competencies of student teachers from both countries are interpreted in the lens of theories of professional development and implications for further development of teacher education for inclusive education are provided.

Keywords: *student teachers, competencies, inclusive education, Slovenia, Serbia.*

Introduction

The inclusive education policy which has been adopted in numerous countries around the globe holds teacher education institutions responsible for developing future teachers' competencies for inclusive education. However, in order to discuss and formulate competencies, one first needs to discuss the meaning and concept of inclusive education. For example, if inclusive education is narrowly understood as overcoming the deficits of some pupils, i.e. including children with disabilities into the regular education system, teacher education for such a concept of inclusion would require specialist knowledge needed for teaching 'special' pupils. Nevertheless, even the most thorough coverage of 'special' issues is not likely to anticipate every type of difficulty teachers might experience in their heterogeneous classrooms (Pantić et al. 2010).

On the other hand, a wider concept of inclusive education would require quite different teacher competencies. This is related to the issues of ethnicity, class, social conditions, health and human rights, and universal access, participation and achievement of pupils (EADSNE 2010). A wider understanding of inclusive education is focused on diversity and how schools respond to the diversity of all pupils (Ainscow et al. 2006). Inclusion in education comprises minimizing barriers for learning and the participation of all pupils, not only those with disabilities (Booth, Ainscow 2002), i.e. it should become policy and practice that is not restricted to specific interventions related to any specific group of pupils. In the influential 'Index for Inclusion' (Booth, Ainscow 2002), inclusion is conceived as a process of promoting the presence, participation and achievement of all learners. Instead of a definition, the European Agency for Special Needs and Inclusive Education (EASNIE) proposes a vision of inclusive education system: The ultimate vision for inclusive education systems is to ensure that all learners of any age are provided with meaningful, high-quality educational opportunities in their local community, alongside their friends and peers (EASNIE 2015).

Teacher competencies for inclusive education

What are competencies and which competencies are needed for teachers in order to successfully implement inclusive education defined in the broad sense? According to Jansma (2011, in EADSNE, 2011) professional competency is like an iceberg, where only the tip (representing teacher action) is visible. Beneath the surface lies the base of personal qualities, professional attitudes and beliefs, and professional repertoire based on knowledge and responsibility. According to Florian and Rouse (2009) teacher competencies for inclusive education should include broad knowledge and generic skills relevant to the improvement of teaching and learning for all. This may involve gaining an

understanding of the socio-cultural factors that produce individual differences, awareness of educational and social issues that can affect pupils' learning, as well as multifaceted pedagogy that recognizes how decisions informing teaching should take into account pupils' individual characteristics, the learning that takes place outside school, and learners' previous knowledge, individual and cultural experiences, and interests.

More specifically, the list of competencies for inclusion provided in *Teachers for the Future* (Pantić et al. 2006) comprise three broad areas: a personalized approach to learning; understanding and respect for diversity; and commitment to values of social inclusion. *Tuning Teacher Education Curricula in the Western Balkans* (Pantić 2008) lists the following areas of teachers' expertise for inclusion: self-evaluation and professional development, subject knowledge, pedagogy and curricula, understanding of the education system and contribution to its development and values and child rearing.

EADSNE, an independent organization that acts as a collaboration platform for ministries of education in EU countries and focuses on improving all learners' achievement at all levels, produced a *Profile of Inclusive Teachers* (EADSNE 2012). The profile is the result of research on teacher education carried out in 24 countries in the EU and it presents information on what essential values and areas of competence should be developed within all teacher education programs for inclusive education. The *Profile of Inclusive Teachers* adopts an approach based on broad 'areas of competence', which are seen as developmental and as spanning both initial [undergraduate] teacher education and early career development.

The four core values proposed in the *Profile of Inclusive Teachers* are: valuing learner diversity (learner difference is a resource and an asset to education), supporting all learners (high expectations for all learners' achievements), working with others (collaboration and teamwork), and personal professional development (teaching is a learning activity and teachers taking responsibility for their lifelong learning). The areas of competence within core value *supporting all learners* relate to: Promoting the academic, practical, social and emotional learning of all learners and Effective teaching approaches in heterogeneous classes. These areas of competence (as all others) are set out in terms of attitudes or beliefs, which rely on certain knowledge or levels of understanding, and require particular skills or abilities to be developed in order to be implemented in practice.

It is important to note that the *Profile of Inclusive Teachers* is a valuable source for developing teacher education programs for at least two reasons. The first reason is related to its broad approach to inclusive education that encompasses diverse learners and is not restricted to those with identified special educational needs. The values and areas of competency send the vital message that inclusive education is an approach for all learners, not just an approach

for a particular group with particular needs (EADSNE 2012). The second one is related to the key objective of the *Profile of Inclusive Teachers*, which is to reinforce the argument that inclusive education is the responsibility of all teachers and that preparing all teachers for work in inclusive settings is the responsibility of all teacher educators working across initial [undergraduate] teacher education programs (EADSNE 2012)

Research questions

The present study is part of a wider longitudinal comparative research which aims to explore the beliefs of students from Slovenia and Serbia about inclusive education. Having in mind that teachers' beliefs are reflected in their practice and their pupils' achievements, the present study aims to explore beliefs of fourth-year student teachers (STs) from Slovenia and Serbia about their own competencies related to inclusive education. Specifically, the research questions are: 1) What are STs' beliefs about their own competencies related to inclusive education? 2) Are there any differences in STs' beliefs in relation to the country in which they are studying?

Method

The context

In the last decade, the field of education in Serbia has been marked by the process of implementing inclusive education. In 2009, the new education legislation (NARS, 2009) established inclusion as a principle and introduced the right to education and access to education without discrimination or segregation for pupils from marginalized social groups and those with developmental disabilities. Pupils with disabilities have the right to individual educational plans, which may include arrangements for lower learning outcomes and the lowering of knowledge standards.

In Slovenia, major systematic changes in this area occurred in 2000 with the *Placement of Children with Special Needs Act* (Ministry of Education, Science and Sport, 2000). Particular educational criteria are applied for shaping individualized programs of assistance, support and interventions for vulnerable pupils. However, support in regular school may be provided only if the child can achieve educational program standards with regard to the type and rate of the deficiency, deficit or disorder. Thus, the key criterion for inclusion is meeting educational standards. The academic achievements of pupils are measured in terms of the knowledge retained by pupils, which highlights the cognitive dimension of pupils' development and rules out other dimensions as insignificant (Kobolt et al. 2010).

The sample

In both countries, primary teachers are studying education at a university that offers four years of undergraduate studies, followed by one year of Master's studies within the Bologna programs. The survey took place at the end of the fourth year of STs' studying. The sample consisted of STs enrolled at the University of Kragujevac, Faculty of Education in Jagodina (Serbia) and the University of Ljubljana, Faculty of Education in Ljubljana (Slovenia) in the full-time education program. These STs are studying to be teachers in grades 1-4 in primary schools in Serbia and grades 1-6 in primary schools in Slovenia. In Slovenia, the questionnaire was completed by 84 STs (representing 91.30% of the total number of fourth-year STs), while in Serbia 51 STs completed the questionnaire (representing 60.1% of the total number of fourth-year STs). Since these programs are strongly dominated by female STs, gender differences in their beliefs could not be analyzed.

The Serbian teacher education program includes the compulsory Inclusion in Education course (60 hours of instruction during one semester, four ECTS) in the third year of studies. The course aims to prepare STs to teach all pupils in classes and to accept pupils' diversity as a challenge that contributes to the development and richness of instruction. In terms of internships, unfortunately, it is not clear whether all STs have an opportunity to observe quality inclusive practices in schools. There is a large gap between lectures, which are intended to shape positive attitudes towards inclusion, and school practices, in which teachers with negative attitudes towards inclusive education and vulnerable pupils might be encountered. This situation further intensifies some STs' prejudices and results in adverse attitudes towards inclusion (Macura-Milovanović et al. 2010).

The teacher education program at the Faculty of Education in Ljubljana includes one compulsory Inclusive Education course in the fourth year of study (60 hours of lectures and 30 of tutorials during one semester, six ECTS). Topics such as theories dealing with diversity, the current situation of educationally disadvantaged pupils in schools, and teaching vulnerable pupils are also included in some other obligatory and optional courses. The content of the courses is based on a broad understanding of inclusive education; however, the focus on teaching children with SEN prevails. Emphasis is placed more on providing knowledge, less on dealing with fears, prejudice and stereotypes, which could be addressed in smaller groups with more active teaching methods (Peček, Lesar 2011). Furthermore, it is not clear whether all STs have internships in classes with quality inclusive practices because some of them become more convinced of the infeasibility of inclusion after their internships (Mlinar, Peček 2014).

Data Collection

We prepared a pilot version of the questionnaire and tested it on a sample of STs from both universities. The final version of the questionnaire was based on their responses and comments.

Instrument

The instrument (questionnaire) contained 26 statements (provided in Table 1) regarding the abovementioned areas of teacher expertise specified in the core value *supporting learning* and related teacher competences within *Effective teaching approaches in heterogeneous classes* (EADSNE 2012). Below we are listing eight competencies from the *Profile of Inclusive Teachers* and related statements (the number in the brackets refers to the number of the statement in the questionnaire):

1. setting the 'learning to learn' goal for all pupils (S2),
2. taking responsibility for learning of all pupils (S1, S7),
3. personalized learning approaches that support autonomy in learning (S3, S4, S6, S8, S9, S10, S11, S25, S26),
4. identifying and addressing barriers to learning (S5, S23),
5. differentiation of curriculum content, learning process and learning materials (S22, S24),
6. positive classroom management (S18, S19, S20, S21),
7. formative and summative assessment (S16, S17) and
8. cooperative learning (S12, S13, S14, S15).

The STs were asked to respond to the following question: Assess the level of your competencies related to the successful realization of the following aspects of teaching in the class. STs provided their responses to each statement by using a five-level Likert scale: I don't have this competence (1), I have slightly developed this competence (2), I have partially developed this competence (3), I developed this competence very well (4), and I developed this competence extremely well (5).

Table 1: Student teachers' beliefs about their own competencies related to inclusive education and differences in relation to the country

Statements	Country	1	2	3	4	5	χ^2	Sig
1. I know how to plan instruction so that all children in the class can learn.	Slovenia Serbia total	0.0 0.0 0.0	6.0 2.0 4.4	26.2 33.3 28.9	61.9 54.9 59.3	6.0 9.8 7.4	2.596	.458
2. I know how to plan instruction which is the support for learning, not just transmission of the curriculum.	Slovenia Serbia Total	0.0 2.0 0.7	0.0 2.0 0.7	20.2 27.5 23.0	65.5 51.0 60.0	14.3 17.6 15.6	5.355	.253
3. I know how to organise contents in such a way that background, experiences and interests of every pupil are taken into account.	Slovenia Serbia Total	0.0 2.0 0.7	6.0 4.0 5.2	35.7 36.0 35.8	48.8 42.0 46.3	9.5 16.0 11.9	3.324	.505
4. I know how to organise instruction so that it encourages independent learning.	Slovenia Serbia Total	0.0 0.0 0.0	4.8 2.0 3.7	29.8 11.8 23.0	56.0 51.0 54.1	9.5 35.3 19.3	16.236	.001
5. While planning instruction, I pay attention to and I know how to diminish difficulties in learning of particular pupils.	Slovenia Serbia Total	0.0 2.0 0.7	4.8 3.9 4.4	36.9 21.6 31.1	53.6 47.1 51.1	4.8 25.5 12.6	15.187	.004
6. I know how to motivate all pupils during instruction.	Slovenia Serbia Total	0.0 0.0 0.0	3.6 0.0 2.2	35.7 10.0 26.1	45.2 54.0 48.5	15.5 36.0 23.1	15.923	.001
7. I can take personal responsibility for learning of every pupil.	Slovenia Serbia Total	1.2 2.0 1.5	15.7 2.0 10.4	57.8 29.4 47.0	21.7 47.1 31.3	3.6 19.6 9.7	26.041	.000
8. I can imagine how each of my pupils experiences instruction.	Slovenia Serbia total	1.2 2.0 1.5	16.7 11.8 14.8	56.0 17.6 41.5	17.9 52.9 31.1	8.3 15.7 11.1	25.966	.000
9. I plan my lessons taking into consideration differences in experience and knowledge of my pupils.	Slovenia Serbia total	0.0 2.1 0.8	3.6 2.1 3.0	35.7 12.5 27.3	47.6 54.2 50.0	13.1 29.2 18.9	12.437	.014
10. I pay attention to the emotional aspects of learning, i.e. I recognize confusion, shame or fear of my pupils.	Slovenia Serbia total	0.0 0.0 0.0	0.0 3.9 1.5	13.1 11.8 12.6	69.0 39.2 57.8	17.9 45.1 28.1	16.592	.001
11. I can recognize physical or cognitive effort that some of the pupils with special needs make in accomplishing assignments and tiredness that it may provoke.	Slovenia Serbia total	0.0 4.0 1.5	4.8 6.0 5.2	27.4 16.0 23.1	53.6 36.0 47.0	14.3 38.0 23.1	14.884	.005
12. I know how to develop pupils 'understanding of diversity during instruction.	Slovenia Serbia total	0.0 0.0 0.0	6.0 4.0 5.2	25.0 28.0 26.1	58.3 32.0 48.5	10.7 36.0 20.1	14.763	.002

13. I know how to create opportunities for pupils' cooperation with those peers who differ in background, ethnicity, nationality disability, gender.	Slovenia Serbia total	0.0 0.0 0.0	9.5 4.0 7.5	26.2 20.0 23.9	50.0 32.0 43.3	14.3 44.0 25.4	15.038	.002
14. I know how to organize learning situations where pupils learn through mutual work.	Slovenia Serbia total	0.0 0.0 0.0	1.2 0.0 0.7	8.3 10.0 9.0	60.7 46.0 55.2	29.8 44.0 35.1	3.733	.292
15. I know how to teach children solidarity: offering and receiving help are regular activities within learning process.	Slovenia Serbia total	0.0 0.0 0.0	3.6 2.0 3.0	13.1 19.6 15.6	66.7 41.2 57.0	16.7 37.3 24.4	10.261	.016
16. I know how to check knowledge and assess it in a way that contributes to the achievements of all pupils.	Slovenia Serbia total	0.0 0.0 0.0	9.5 4.0 7.5	64.3 40.0 55.2	22.6 34.0 26.9	3.6 22.0 10.4	16.329	.001
17. I know how to assess the work of pupils in such a way that my assessment is based on detailed observation and follow-up of every pupil.	Slovenia Serbia total	0.0 3.9 1.5	19.0 7.8 14.8	53.6 19.6 40.7	25.0 43.1 31.9	2.4 25.5 11.1	33.498	.000
18. I know how to create discipline in classroom which is based on mutual respect.	Slovenia Serbia total	0.0 2.0 0.7	3.6 3.9 3.7	34.5 5.9 23.7	41.7 47.1 43.7	20.2 41.2 28.1	17.793	.001
19. I know how to create an approach to discipline that encourages self-discipline.	Slovenia Serbia total	0.0 3.9 1.5	9.5 2.0 6.7	47.6 21.6 37.8	33.3 49.0 39.3	9.5 23.5 14.8	17.908	.001
20. I know how to include pupils in solving discipline problems in classroom.	Slovenia Serbia total	1.2 2.0 1.5	10.8 5.9 9.0	30.1 33.3 31.3	47.0 39.2 44.0	10.8 19.6 14.2	3.238	.519
21. I know how to include pupils in formulating the rules of behaviour in classroom.	Slovenia Serbia total	1.2 2.0 1.5	3.6 3.9 3.7	13.1 11.8 12.6	54.8 45.1 51.1	27.4 37.3 31.1	1.756	.780
22. I know how to create homework assignments in a way that every pupil can work on them without parents' help.	Slovenia Serbia total	1.2 0.0 0.7	3.6 6.0 4.5	26.2 30.0 27.6	52.4 34.0 45.5	16.7 30.0 21.6	6.074	.194
23. I know how to create opportunities so that every pupil can participate in out of school activities (out of school classes, visiting museums, excursion...)	Slovenia Serbia total	3.6 0.0 2.2	13.3 3.9 9.7	26.5 13.7 21.6	44.6 54.9 48.5	12.0 27.5 17.9	11.941	.018
24. I know how to differentiate assignments in relation to previous knowledge and abilities of pupils.	Slovenia Serbia total	0.0 2.0 0.7	7.1 5.9 6.7	20.2 17.6 19.3	52.4 45.1 49.6	20.2 29.4 23.7	3.299	.509
25. On the basis of mistakes that I perceive while checking homework, I know how to offer help in learning so the pupil can understand the contents.	Slovenia Serbia total	0.0 0.0 0.0	6.0 3.9 5.2	22.6 7.8 17.0	48.8 52.9 50.4	22.6 35.3 27.4	6.287	.098
26. I know how to organize classroom teaching to adjust to individual abilities and needs of pupils.	Slovenia Serbia total	0.0 2.0 0.7	7.1 3.9 5.9	44.0 15.7 33.3	38.1 49.0 42.2	10.7 29.4 17.8	16.998	.002

Data Processing

Statistical analysis was conducted using SPSS 22.0. The frequencies of each of the responses were calculated for each group of students (Slovenia and Serbia). Differences between two groups of students were analyzed using the χ^2 test. Differences with $p < 0.05$ were considered to be statistically significant.

Results

Student teachers' beliefs about their own competencies related to inclusive education

According to the results, STs believe that they have developed most of the stated competences very well or extremely well. Let us mention those competencies believed to be developed the most. More than three quarters of STs stated they have developed the following competencies very well or extremely well: how to organize learning in group work (S14), how to take into account the emotional aspect of learning (S10), how to involve children in shaping the rules of behaviour in the classroom (S21), how to teach children solidarity (S15), how to offer a child an appropriate learning aid on the basis of the mistakes they observe in completed homework, (S25), how to plan instruction which is supports learning (S2).

For 22 out of 26 stated competencies, more than half of all STs answered they have developed their competences very well or extremely well. We would like to point out four most extreme exceptions. For competences related to assessment, it has been shown that more than half of STs believe they have only partially developed competency for formative assessment (S16) and 40.7% of STs believe the same related to summative assessment (S17). Nearly half of STs answered they have only partly developed competency on taking responsibility for learning of all students (S7) and that they can imagine how children experience the educational process (S8). Only a few STs answered that they do not have the stated competency or that they have slightly developed the stated competency.

Differences in student teachers' beliefs in relation to the country in which they are studying

There were statistically significant differences between the beliefs of STs from Serbia and Slovenia concerning 17 statements. Significantly more STs from Serbia than from Slovenia believe that they have developed very well or extremely well competencies related to: the responsibility for learning of all pupils (S7); personalized learning approaches that support autonomy in

learning (S4, 6, 8-11, 26); identifying and addressing barriers to learning (S5, 23); and positive classroom management (S18, 19).

The lowest number of STs stated that they have developed competencies related to formative and summative assessment very well or extremely well; however, among those who stated such a belief, STs from Serbia were more frequent.

Statistically significant differences were also found with three out of four statements connected with cooperative learning (S 12, 13, 15). In two statements (S12, 15) more STs from Slovenia stated they have very well or extremely well developed competency and in one (S13) more Serbian STs stated that they have very well or extremely well developed competency.

Discussion

If we look at the answers to the whole questionnaire, we can say that STs in both countries feel quite competent to teach inclusive classes. On the one hand, this is, certainly, a very good result and an optimistic outlook for the further development of the school system towards inclusion in both countries. On the other hand, those results are somewhat surprising, since research in the world, as well as in Slovenia and Serbia, shows that teachers often feel incompetent and fear teaching in inclusive classes, that they believe SEN children hinder instruction and would be better off in special schools; that they transfer the responsibility for inclusion and achieving curricular objectives to the pupils' parents, the pupils themselves and/or experts etc. (see for example de Boera et al. 2011; Florian 2008; Kobolt et al. 2010). Similar attitudes might be found amongst STs too (see for example Jovanović et al. 2013; Macura et al. 2019; O'Toole, Burke 2013; Peček et al. 2015).

That the beliefs of STs might be too optimistic could also be deduced from the models of teachers' professional development. Some models explain that teachers' experience gradually transits from an unrealistic fantasy of teaching to a more realistic perception of the profession. For example, Ryan (Ryan in Razdevšek Pučko 1990; Bullough 1987) divides professional development of teachers into three basic periods. He calls the first stage the fantasy stage. This period is typical for STs and means the transition from a student's role into a teacher's role. It begins when an individual first arrives to an idea of becoming a teacher and usually lasts until his/her first employment in this field. During this time, the individual represents himself/herself as a teacher in the much-idealized image, he/she is very receptive to progressive ideas, which are often under-criticized, he/she represents himself/herself in the best light, as the real opposition to his/her own teachers. This might even be maintained upon the first experiences with teaching (internship) that can bring about any failure and disappointment. Ryan designates the next phase of professional

development as the survival stage. These are the first months (or years) after the first employment in school. Teachers are heavily burdened with work at school and at the same time feel the gap between the beliefs they formed during the fantasy stage and the 'cruel' reality. The idealized idea of teaching is soon blown up (Javrh, Kalin 2011). This period often results in a reduction in the progress of teachers' progressive attitudes, which is strongly dependent on the working environment in which teachers find themselves. Given the fact that this environment might often not be inclusive, optimistic attitudes, developed during the period of study, are in great danger of change.

Our research shows that the fantasy stage is even more strongly represented among STs in Serbia than among STs in Slovenia. This might be explained by differences in teacher education programs and education systems in both countries. For example, as analyzed in our previous research with the same sample of STs (Macura et al. 2019), optimism of Serbian STs might be explained by their belief that supporting vulnerable pupils means offering protection and permissiveness with little effort to actually teach. In contrast to them, Slovenian teachers tend to be more demanding and similar to their older colleagues in schools, they tend to transfer the responsibility for teaching vulnerable pupils to pupils' parents. Besides that, this could be related to the fact that the teaching process and classrooms in western Balkan countries are infrequently observed and are largely unmonitored. Teachers have little incentive to achieve high-quality results in their teaching practices, making their professional duties less demanding (Pantić et al. 2010). In contrast, Slovenian teachers often complain that they are controlled not only by their superiors but also by pupils' parents.

Conclusion

As already mentioned, we can be very satisfied with the results of the research, as the STs state that they have developed most of the stated competencies very well or extremely well. From the sets of competencies we have analyzed, we could highlight those that are related to assessment as the worst developed competencies, which should be given greater emphasis during teacher education. A less developed competency is taking responsibility for the learning of each pupil (S7), which is not surprising for Slovenian STs since similar results might be found with other research on STs and teachers as well (Peček et al. 2012). Another less developed competency is to imagine how children experience the educational process (S8), which might be tackled by giving STs more experience with teaching marginalized students.

Undoubtedly, our research shows that it would be necessary to pay special attention to teachers during their induction, as this is precisely the period when the idealized image created during the course of studying may collapse. Thus,

the induction phase is important for the future professional development of teachers. In this phase, quality support of a novice teacher in his/her efforts to work in school in accordance with his/her own competencies expressed in the questionnaire, especially in schools which are not inclined towards inclusive practices, would be necessary. On the one hand, making the idealized image of STs more realistic could be ensured by giving more attention to the internship STs have during their studies. Internship should necessarily be accompanied by a clear reflection in which STs analyze their own strong and weak points, as well as what works and what does not work with inclusion, and what the discrepancy is between their ideals and reality.

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Chapter XXXI

TEACHER COMPETENCIES FOR INCLUSIVE EDUCATION AND RESOURCES FOR THEIR IMPROVEMENT

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Abstract: Knowing the importance of teachers' competencies for inclusive education and the fact that the vast majority of them have not had the opportunity to develop them in the initial [undergraduate] education, the aim of this work is to determine the competencies of teachers for inclusive education and to examine the possibilities for their improvement. For research requirements a questionnaire was created. The study was carried out in January 2018 and encompassed 70 teachers of primary and secondary schools in Kragujevac. The general findings that teachers have assessed their competencies for inclusive education as low and that they mapped the difficulties they face in inclusive practice, point to a conclusion about the generally developed awareness of the importance of competencies for inclusive education, the need for their improvement and the efforts made by them in that direction. Through suggestions of activities that represent significant resources for inclusive education empowerment, teachers emphasize the importance of exchanging experiences with colleagues and the occasional involvement of mentors in immediate school practice, while the greatest help in school is expected from professional associates. In this regard, the obtained findings, although on a small sample of teachers, which can be considered as a limitation of the research, suggest the importance of creating various programs of school support and developing the competencies of teachers for inclusive education that would be realized, both in the school context and in the wider community.

Keywords: *inclusive education, teacher competencies, inclusive education support programs.*

Introduction

The teacher as the most valuable asset of the school (Day 1999) and the bearer of changes aimed at improving the teaching process is also responsible for the outcomes of each student's education. Some authors (Anderson 2004) point to a strong connection between the personality of teachers and the educational achievements of students, and during times of accelerated social changes and the speed of obsolescence of knowledge, the continuous viewing of the knowledge and skill of teachers, expressed through measurable characteristics and behaviors, has become necessary (Radulović et al. 2010). In order to find an adequate answer to questions about the knowledge and skills that teachers should possess in order to answer the system tasks that are before him, the need for high competence and readiness for dealing with modern social requirements is emphasized, which on the one hand are reflected in the development of the school, and on the other, set requirements for ensuring social development and progress. The analysis of teachers' competences is therefore essentially related to improving the quality of work in the direction of providing education tailored to each student.

Teachers are expected to be flexible, to have a creative approach, directed to learning at school and through individualization of teaching and learning to enable personal development and emancipation of students, to develop competencies and to be trained for self-regulated lifelong learning, instead of transferring it to finished knowledge (Kostović 2008). In this sense, the importance of reviewing competencies and attitudes for the professional performance of everyday tasks is emphasized in order to improve the overall educational process (Fajdetić, Šnidarić 2012).

In a document defining teacher competences, they are defined as "the capacity of an individual shown in performing complex activities in educational work" (*Standards of competences for the profession of teachers and their professional development* 2011: 2). Although the determination of measurable indicators of teacher competencies is significant, some authors (Eliot 2006) show a critical approach towards them. Namely, the author mentioned points out that determining the quality of educational outcomes should be based on values rather than on measurable indicators, which is supported by Lidija Radulović (Radulović et al. 2010), emphasizing that the quality of interactions and transactions between teachers and pupils is most important, which cannot be reduced to measures and indicators. According to this critical understanding, "a competent teacher is the one who is able to recognize educational values in transactions with students" (Radulović et al. 2010: 162), which is particularly important from the aspect of inclusive education. Irrespective of the existence of measurable indicators, the teacher must be open to acceptance and influencing changes, and motivated about lifelong learning and continuous

professional development. Therefore self-assessment and self-regulation of professional development is a necessary condition for attaining the required teaching competencies, lifelong continuous learning and reflective practices in order to achieve the desired learning outcomes in students. In the context of perceiving the competencies of teachers, analysis of those that are in line with the individual approach to each student in order to achieve the planned educational outcomes, not usually measurable with predetermined indicators, is particularly important. These claims further emphasize the importance of self-evaluation of teacher competencies and, accordingly, the planning of professional development in order to empower the teacher for competent action in educational practice, which is an inseparable part of his/her professional development (Jermakov 2011).

In the first part of this paper, the importance of an individual approach for each student and the competencies of teachers for achieving such an approach were considered. Then, further in the manuscript, an analysis of the results of the research relating to the requirements and difficulties arising from them was performed. The research approach was oriented to discovering the perceptions of respondents about factors that could function to empower teachers' competencies for an inclusive approach, in accordance with the nature and specifics of the professional roles they occupy in school. In that sense, the conclusion defines some possibilities for empowering teachers for an inclusive approach in educational work.

Support of the individual needs of children / students in development and learning

Traditional teaching was largely exposed to criticism because it was directed at all students, ignoring the developmental differences and specificities among them that implied the need for different approaches in teaching. The role of teaching was oriented towards providing the same approach in relation to each student, although they have different interests, and ability to perceive, remember, think, learn, and so on. Different ways of meeting students' needs are conditioned by the general and special abilities of students, preferences and interests, different needs, different individual experiences, levels of previous knowledge, the stage of individual progression, the mode of reaction and learning styles, as well as the different possibilities of motivation, which is evident through their physical properties, mental abilities, learning process, and pro-social behavior (Đukić 1995, Jerotijević, Mrše 2010).

Individual differences also implicate different needs for support in pupils' development and learning, which is the imperative of modern school. This has resulted in requests for individualization of overall educational work, that is,

for adapting teaching and extracurricular activities to the abilities and specific characteristics of students in order to achieve their holistic development. A teacher oriented towards an inclusive approach to education contributes to better social and educational achievements, which affects the development of autonomy and creativity among pupils (Jerotijević, Mrše 2010). The principle of individualization is one of the basic pedagogical principles in the planning, realization and evaluation of educational work with pupils. In school practice, however, it often happened that it was neglected, so pupils were integrated into schools, trying to adapt to their demands, which had negative consequences on their development and educational achievements. For this reason, legal provisions were introduced that indicate the obligation to respect the individual abilities of each student, as well as to provide support according to his or her abilities.

In order to meet the educational needs of every child, regardless of developmental specifics, the concept of inclusive education was introduced to the world about two decades ago. The competencies of teachers that are very important for the implementation of inclusive education are embedded in a group of competencies related to their professional roles, and are mostly described through a group of competencies for the development of a student's personality, communication and cooperation. The competencies of teachers for inclusive education are based on their belief that all student teachers can: learn, respect the students as individuals, respect the dignity of each student, and persist in helping each child achieve success in accordance with his/her potential. In addition, it is important to have knowledge in the field of specific characteristics of students, as well as developed methodological competencies for equality in approach to all students, irrespective of socio-emotional status, race, intellectual, or some other specificity. Also student teachers need to know the importance of inclusion, especially for children with disabilities, in regular education, which promotes the reduction of discrimination and prejudice.

The goal of inclusive education is aimed at providing quality education for all students through a process that takes place through the introduction of changes in access to teaching, and the modification or enrichment of educational content depending on the individual needs of students for additional support. The definitions of inclusion by UNESCO (conference in Salamanca, 1994) emphasize that inclusion is a movement that is directly related to the improvement of the education system as a whole: "Inclusion is the process of solving and responding to the diversity of the needs of all students through increasing participation in learning, cultures and communities, and less and less exclusion within and beyond education. It includes modifications and changes in content, approaches, structures and strategies, with a shared vision that includes all children of the appropriate age and with the conviction that a regular education system is responsible for the education of all children" (UNESCO:

according to: http://narip.cep.edu.rs/biblioteka/literatura_na_srpskom_jeziku/prirucnik_za_planiranje_i_pisanje_iop-a.pdf). The competencies of teachers in this regard should be based on beliefs that all children can learn, have the right to education, and learn best in a natural peer group. The most important factor that promotes positive behavior and good support for adjustment of children in school is a good relationship between adults and children. A good relationship involves a high level of closeness and understanding, with warm communication, which ensures creating a supportive climate and developing emotional security for students. Children then feel confident and supportive, interact easier with peers, participate more in school activities, and achieve better learning success. Positive attitudes towards inclusive education and changes in circumstances and programs in regular schools enable the creation of an atmosphere in which any child can be developed regardless of his/her uniqueness. Research on the attitudes of teachers in Serbia (Macura-Milovanović, Vujisić-Živković 2011) shows that students enter professional practice with negative attitudes towards inclusive education and consider that pupils with disabilities should be educated in special schools. Đević (2009) points out that 10% of teachers in the school have the same opinion. The results of the same study show that teachers think that students with disabilities can only attend some classes in regular classes, 80% of teachers support the initiative for inclusion in education, 60% that inclusion of children in need of additional support should be selected selectively depending on the type and degree of disability, while 40% of teachers think that a special school would be a better form of education for children with disabilities. The given data implies the need to develop teachers' awareness of the importance of inclusive education for student achievement through initial [undergraduate] education and professional training of teachers, and on the other hand it is necessary to increase social commitment to this problem, so that the tendency for inclusive education will not only remain at the integration of pupils into regular schools.

Although inclusive practice in the world has been present in various forms for more than twenty years, in Serbia greater attention has only been paid to inclusive education since 2009, through the Law on the Foundations of the System of Education and Upbringing, and in the current Law (Law on the Foundations of the System of Education and upbringing, *Official Gazette of the Republic of Serbia*, No. 88/2017), in which inclusive education is expressed as a general principle of education and upbringing and an area to which special attention has to be paid. The concept of inclusive education is also abstracted through defined goals and outcomes of education in the Law. The Law prescribes an obligation to draw up an Individual Education Plan (IEP) for students requiring additional educational support, promoting equality and access to exercising rights to education based on social justice and the principle of equal opportunities without discrimination. In every educational institution it is mandatory

that a Team for Inclusive Education is formed to undertake activities for ensuring and improving the quality of inclusive education, which involves analyzing the competencies of teachers as well as the difficulties they face. The continuing task of teachers is to ensure that with their competencies they achieve the goals of education and upbringing and standards of achievement, taking into account the principles of education and upbringing, pre-knowledge, needs, interests, and special opportunities of pupils. Inclusive education is understood as a principle, not emphasizing the inclusion of special categories of students, but it implies equality, and the planning of support to pupils according to needs is done through the School Development Plan, the Annual Work Plan of the School, and the School Program, or individual educational plans that are an integral part.

“IEP is a written document of the institution, which plans additional support in the education and upbringing of the child or pupil, if the previous adjustment and elimination of physical and communication barriers did not lead to the realization of general outcomes of education and upbringing, that is, the meeting the educational needs of pupils with exceptional abilities “ (Rulebook on Detailed Instructions for Determining the Right to an Individual Education Plan, Its Application and Evaluation, *Official Gazette of RS* 76/10). A child/pupil who has difficulty in learning, development or has a disability, lives in a socially unstimulative environment, or has exceptional abilities, has the right to IEP. The didactic values of individually planned teaching are reflected in the development of the ability to work independently and apply critical thinking; stimulating students to work according to their own pace to achieve a defined learning goal; encouraging independence; giving feedback on the progress and acquired new knowledge of students, which has the function of encouraging students to participate in independent research and creative work (Đukić 1995a).

In the process of achieving the goals of inclusive education, it is important to emphasize the importance of school partnerships with the local community and the continuous cooperation with the family in order to achieve a unique action by engaging all available resources to contribute to adequate support for students. It is a component that ensures the quality of education and upbringing of every child. The purpose of cooperation with the school is to enable the harmonization and linking of activities in the process of education and upbringing of children in their development, as well as providing assistance and support to the family in order to provide functional education (Zuković, Popović 2011). Also, the director, the pedagogical-psychological service of the school, the school teams in the area of student support, as well as support from peers, make a significant contribution to the process of individualization. Since teachers are mostly instructed to work with students directly, their role can be said to be most significant, as they participate in the process of guiding, directing

and supporting each individual pupil in the learning and development process. In order to examine the main difficulties experienced by teachers and to see the possibilities of their being overcome, research was conducted, whose results are presented and discussed in the next part of this paper.

Methodological framework of the research

Bearing in mind theoretical considerations, as well as the fact that there are many difficulties in supporting individual development and the learning process for children/pupils, the subject of the research is support to the individual needs of children/pupils in development and the competencies of teachers to respond to the challenges of inclusive practice. In this regard, the problem of research consists in identifying the competencies of teachers and the difficulties they face in school practice. Starting from the subject and the set research problem, the research focused on perceiving teachers' perceptions about the current state of support for individual development and learning of students in school practice and anticipating possibilities for its improvement. The established aim of the research was operationalized and hierarchically broken down through groups of research questions that focused on the following research tasks:

1. Identify the competencies of teachers for inclusive education through their self-assessment of competencies.
2. Identify disturbing factors of inclusive education and the most common difficulties teachers face in the process of inclusive education.
3. Identify factors of empowerment of teachers for inclusive education.
4. Systematize the practical implications of the obtained research results in order to identify possibilities for qualitative improvement of inclusive practice.

The survey was conducted in January 2018 on a random sample of 70 primary and secondary school teachers, during an organized panel discussion on inclusive education at the Faculty of Science and Mathematics in Kragujevac, to which teachers from all primary and secondary schools from Kragujevac were invited. The structure of the sample consisted of 62 teachers employed in elementary and 8 teachers employed in high school; 61 teachers teach the course that belongs to natural-mathematical and 8 teachers to the socio-linguistic group of subjects. In terms of years of service, 18 teachers belong to the category of up to 10 years, 35 from 10 to 20 years, 15 teachers had worked in school practice for 20–30 years and 2 teachers had worked for over 30 years. It is interesting that at the panel discussion no male teachers were present, only female. Therefore, the overall sample of research consisted only of female teachers.

In addition to the method of theoretical analysis (in the stage of the theoretical setting of the research problem), a system-structural-functional method was applied (in the stage of perceiving support for individual development and learning), a descriptive method (in the analysis stage and the interpretation of obtained data), and the causal method (in the stage of examination of the cause-and-effect relationships between measured phenomena).

In accordance with the selected methods, while managing the principle of economy, the survey technique was applied, and the data was collected using an instrument designed for research purposes – a Teacher Questionnaire (attachment). After the research, data was processed quantitatively and qualitatively, after which interpretation of the results was performed.

Results and discussion

From the total number of teachers, only four had been learning about inclusive education during initial [undergraduate] education, they belonging to the category of teachers who had worked in school practice for up to 10 years. This is understandable, given the fact that only for the last ten years has there been a legal obligation to include all children in a regular educational system. Listed data highlights the need for enhanced professional development of teachers in this field, in order to develop and continuously strengthen their competencies to provide adequate support to students who need it, especially because when assessing their competencies, respondents evaluated them quite low. On a scale of 1–5, the largest number of teachers classified their competencies for inclusive education into ranks 2 or 3, several in rank 4, while interestingly, not even one teacher considers him/herself fully competent or completely incompetent, so the rankings 1 and 5 were excluded during the self-assessment of the competencies of teachers for inclusive education.

In order to identify resources for empowering teachers' competence for inclusive education, teachers answered the question: "How do you strengthen your competencies for inclusive education?" Regardless of their socio-demographic characteristics, teachers emphasized first and foremost consultations with colleagues who have experience in working with children who need additional educational support, then consultations with departmental heads, pedagogical psychological services, and through their own experience built in situations when faced with the challenge of having students in the classroom with whom they have had to work on some type of IEP. Teachers also point out that various forms of professional training help them to improve their inclusive approach to education, but this is most often internal in-service training, because the vocational training program has very little or no resources for their realization at school.

Lack of opportunities for professional development through accredited programs is a factor that is recognized as hindering in the process of implementation of inclusive education and the difficulty in writing individual educational plans, which imposes serious systemic thinking in order to gain access to such a type of professional development. Furthermore, disturbing factors and difficulties faced by teachers are intertwined; in addition to insufficient teacher competencies, they are still relevant to a large number of students in departments, lack of necessary teaching resources, lack of time to foster devotion to students who need additional support, and the inability to engage in pedagogical and personal assistance. Further, hindering factors and difficulties that teachers face are interwoven, in addition to lack of competence of teachers, they are: a large number of students in classes, a lack of appropriate teaching materials, lack of time for better dedication to students who need additional support, and inability to engage in pedagogical and personal assistance. As aggravating circumstances, and often obstructive factors, inadequate cooperation with the family is recognized, accompanied by the subjectivity and insufficient participation of parents in the realization of activities that are in the best interests of students. On the other hand, there are great expectations from teachers and the school, although there is insufficient support for teachers being required to adequately achieve their goals regarding inclusive education. Finally, teachers assess unjustified burden of extensive pedagogical documentation, which is at the expense of greater direct devotion to students.

It is interesting to note teachers expect least support from the Ministry of Education and Special Schools, which should in fact be required to be centers for improving the competencies of teachers for inclusive education. They see insignificant support in professional development programs and professional literature, and rely heavily on help from colleagues with experience, then from professional associates at school. In that direction, their answers to the question: – “From whom in school do you get the most support and in what way?” were that teachers recognized the activities of departmental heads/senior colleagues as significant support in school. Regardless from whom they receive it, support is reflected in direct counseling, sharing experiences, the common perception of the pedagogical profile and, accordingly, determining students’ opportunities and activities that will be in the best interest of the students and be accomplished through IEP. Since the emphasis of support from the school in which teachers are employed is most prominent, it would be beneficial to disseminate knowledge and experience among all teachers, not only those who are working with students who need additional educational support at that moment. From the listed forms of support that would be useful in the process of inclusive education, teachers ranked them in the following way: Lectures on the specifics of working with children who need additional educational support; providing mentors to impart teachers with the necessary

help in working with children who need additional educational support; the formation of a network of teachers at the school administration level in order to exchange experiences; then visits to schools in which inclusive education is successfully implemented; and eventually training in writing IEPs. It could be concluded that teachers need essential help and support in concrete situations in providing adequate support to students. It is therefore understandable that the training for writing IOPs has been recognized as the least significant type of support, since the steps outlined in the manuals can be followed in this part, but difficulties may be encountered in the development of a pedagogical profile and in the implementation of IEP itself.

Conclusion

A responsible approach to the individualized learning of all school actors and the families of students contributes to the development of student's competencies for lifelong learning, involving and engaging in knowledge, skills and attitudes relevant to each student for personal fulfillment and development, as well as involvement in social life, employment, entrepreneurship, and active realization of civic roles.

The results show that female teachers, who form a large majority in the total number of teachers in the school system, are more inclined towards additional teacher education, which may be an indication that they are important actors for changing the educational system. Despite their motivation to responsibly implement inclusive education, they also mention a large number of difficulties faced in school practice. Difficulties are most often recognized as the large number of students in classes, lack of pedagogical and personal assistants, inadequate cooperation with parents, regardless of whether they are students who need additional support or students who are with them in the classes. Given that the mentioned difficulties are of a systemic nature, under current conditions, teachers receive the greatest support in their work at the internal level – through working together with colleagues. As a significant resource for empowering competencies for inclusive education, teachers highlighted lectures on the specifics of work with children, but when faced with difficulties they do not expect this type of support from colleagues from special schools; they obtain help from colleagues who have had similar experiences in the regular educational system. The above statement can be interpreted as teachers' assumption that regular and special schools are two contexts with different working conditions, so pupils in special schools cannot be approached in the same way as children who require additional support in regular schools. In that sense, the ability to have a mentor to help them with their work with students is also recognized as a possible contribution to better achieving the goals of inclusive education. In addition, a significant resource for empowering teachers'

competencies for inclusive education could be the formation of networks of teachers that would share positive experiences and be a significant support to each other.

Due to the large number of difficulties that inhibit teachers from providing maximum support to students in meeting their individual needs in developing learning, it is also necessary to continue professional development through vocational training programs and lectures in order to implement the latest scientific knowledge on the most effective methods of work that function to provide adequate support to pupils attending regular schools, but need additional educational support. In addition to external education, continuous internal training at the level of the their educational institution, or self-education, is necessary, so that inclusive education becomes constantly present at all stages of education, in order to apply goals based on a diversity that includes all groups of students that do not belong to the dominant group. Since teachers are primary implementers of educational policies, the purpose of their role is recognized through providing learning opportunities and reviewing some aspects of the school system that reflect inequalities.

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Chapter XXXII

SOCIAL, EMOTIONAL AND PEDAGOGICAL COMPETENCE OF A TEACHER AS A PREREQUISITE FOR THE PRO-SOCIAL BEHAVIOR OF A STUDENT

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Abstract: Social, emotional and pedagogical competencies are an important segment in the pedagogical work of teachers and are crucial for the formation and cultivation of pro-social behaviour of pupils. The imperative of modern education is not only reflected in the possession of professional knowledge of teachers, but also in managing emotional and social relations in the classroom. The aim of this research relates to the importance of teachers' social, emotional and pedagogical competencies for the pro-social behaviour of students. The sample and population were teachers of ten elementary schools on the territory of the City of Niš who were of different gender and length of work experience. The paper used a descriptive survey research method, scaling technique, and Likert type scale designed for research purposes. The results of the research show that there is a statistically significant difference in the possession of teachers' social, emotional and pedagogical competencies in relation to gender, whereas such differences are not determined in relation to the length of the teacher's working experience. The obtained results led us to the conclusion that higher levels of social, emotional, and pedagogical competencies of teachers are needed to develop and nurture the prosocial behaviour of students. According to the above, several pedagogical implications have been imposed: reform changes in the educational system as a whole, continuous professional support of educational authorities for teaching staff in the field of stimulating their interest in adopting and applying strategies and skills directed towards education of pro-socially oriented individuals, and the implementation of teachers' programs which will include socio-emotional aspects of work in schools.

Keywords: *competence, teacher, pro-social behaviour, student.*

Introduction

The contemporary social context is characterized by an explosion of knowledge, technical and technological innovations, competitiveness in the

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labour market accompanied by numerous challenges, increasing demands, and fast and constant changes in all spheres of the society. This trend is directly reflected in the school itself, which, besides the family, plays a primary role in the development of children's personality. Unlike the traditional school, which based its work on the discourse of mere transfer of knowledge and reproduction of the learned, the modern school is required to be open, flexible and able to follow numerous scientific technological, social and other changes, while teachers are required to possess, besides professional knowledge and skills, the entire range of other competencies, among which pedagogical and socio-emotional competences are particularly emphasized. The theoretical framework of work is based on clarifying the basic concepts of the research, the importance of possessing social, emotional and pedagogical competencies of teachers for the formation and encouragement of positive social behaviour of pupils, and presenting programs for their learning. In the empirical part of the paper, we wanted to determine if there is a statistically significant difference in the possession of teachers' social, emotional and pedagogical competencies in relation to gender and length of work experience with the new SEPKN-PPU instrument designed for research purposes. We expected that the results would confirm the general hypothesis that there is a statistically significant difference in the possession of teachers' social, emotional and pedagogical competencies in terms of gender and length of work experience. The results obtained can prompt numerous suggestions and proposals in the field of professional strengthening of teachers. Bearing in mind that there is little work and research dealing with socio-emotional aspects of work in schools, the theoretical and empirical approach of this paper gives a valuable contribution to the improvement of existing pedagogical knowledge in this field and the basis of the new research in the following period.

Theoretical framework of the research

In recent years, thanks to European Union standards, the concept of competence has experienced particular expansion in scientific circles and it provokes contradictory opinions among theoreticians in terms of its definition. Studying the relevant literature, this term has a fairly long history, as evidenced by the fact that it was first used in Plato's work 380 years BC. It is also mentioned in Latin as the term *competens* which is understood as "being able and being allowed in accordance with the law" and as the term *competia*, which represents the ability, possibility, permission. In our colloquial speech and academic circles the term was brought from western European countries from the word *competence* and implies "ability, affluence, authority, the need of a man to master the environment". Competence is actually a combination of knowledge, skills, attitudes, values, and habits that enable an individual to act actively and

efficiently in a particular specific situation, i.e. profession (Jurčić 2014). Observing this concept from the perspective of modern schools and contemporary teachers as creators and implementers of the contemporary educational process, we can distinguish several categories of professional competencies. In relation to the problem of the research, the model of twenty-eight competencies for the 21st century is significant. Prof. Suzić has classified these into four areas: cognitive competencies, emotional competencies, social competencies, and work-action competences (Suzić 2005: 70).

Pedagogical competencies in the contemporary concept of education represent an inherent characteristic of teaching and working. It is an integrated set of personal characteristics, knowledge, skills, and attitudes necessary for the effective delivery of teaching in different teaching contexts. Together with professional knowledge and skills, pedagogical competences can be seen through several dimensions: personal, communicational, analytical, i.e. reflexive, social, emotional, intercultural, developmental and through problem solving skills (Jurčić 2014). Only a pedagogically competent teacher can be a successful organizer, leader, guide, mediator, social integrator and a reflective practitioner who can respond to the challenges posed by a modern school and, based on the results achieved, further develop their competencies (Brust, Velki 2015). In the light of the complexity of interpersonal relationships, a teacher with pedagogical competencies can work not only with students, colleagues and other partners in education (with technology, knowledge) but also with society at local, regional, national, European, and global levels (Ibid).

Looking at social and emotional competencies, first of all, as two separate constructs, we can say that emotional competence is “the ability or willingness of the person to understand one’s own emotions as well as the emotions of others, to control their emotions and to upgrade or perfect them in social and life situations” (Suzić 2005: 77), while social competence includes various emotional, social and cognitive abilities and behaviours that are necessary for successful social interaction (Brust, Nemet 2005). This is according to Goleman (2010) the ability of good management of bad moods and the ability to control instincts. Socio-emotional competence is a broad construction that is viewed as the outcome of social and emotional learning (SEL) (Jennings 2011; Dorman 2005) and contributes to teachers’ ability to respond to stressful situations. The Association for Academic, Social and Emotional Learning sets the five required competencies for teachers as a necessity: self-awareness, self-regulation of emotions, social awareness, interpersonal skills, and responsible decision-making (Collie 2017).

The social and emotional competencies of teachers as a necessity in forming and encouraging the pro-social behaviour of students

The possession of social and emotional competencies of teachers firstly involves possession of social and emotional awareness. This means that teachers are able to recognize and understand the emotions of others, they know how to generate and use emotions such as joy, enthusiasm, to motivate to learn both themselves and others, they recognize their emotional strengths and weaknesses, and are able to manage their behaviour even in challenging situations. Hosotani and Matsumura-Imai (2011), in their Japanese study of high-quality teachers, found that the successful use of emotional competence and the recognition of this skill as a specific one is related to the high effectiveness of teachers (Forcina 2012). A longitudinal study conducted by Philipp and Schüpbach (2010) on a sample of over 100 teachers revealed the role of emotional work in teaching and showed that teachers who were able to recognize and manage their emotions in challenging situations reported a significantly lower level of emotional exhaustion (Ibid.).

Teachers who possess socio-emotional competencies are able to build strong relationships and support through mutual understanding and cooperation, but at the same time accept and respect cultural differences in relation to parents and students (Jennings, Greenberg 2009). Finally, social and emotional competencies enable the expression of pro-social values and making responsible decisions affecting pupils first and then teachers themselves. Teachers foster deep respect for their colleagues, students and students' families, and care about how their decisions affect the well-being of others (Schonert-Reichl 2017).

The aforementioned competencies of teachers are a precondition for an optimal classroom climate, since they give it the tone by developing support and encouraging their relationships with students, "by designing lessons that strengthen the strengths and abilities of students, establishing and applying behavioral guidelines in ways that promote internal motivation, counseling students in conflict situations, encouraging their cooperation and acting as a model for proper communication with mutual respect and an example of pro-social behavior" (Jennings, Greenberg 2009: 495). The application of social and emotional teachers' competencies can be represented by an intermediary model of the pro-social class that establishes social teachers' competence (SEC) and well-being as an organizational framework. The model of the pro-social class, in addition to good quality relationships on the student-teacher relation, classroom management and climate, also implements the model of effective social and emotional learning (SEL), which is defined as "the process of acquiring the ability to recognize and manage emotions, develop attention and care for others, responsible decisions, establishing positive relationships and effectively

addressing challenging situations“ (Ibid. 2009: 504). The basic characteristics of the pro-social class model are:

1. teacher's understanding the emotions of each student and cognitive assessments that may be associated with these emotions;
2. teachers with higher SEC will show greater efficiency in class management because they possess a higher level of social and emotional awareness, are more proactive, skillfully use their emotional expressions, and at the same time understand the dynamics of the situation in a conflict class;
3. teachers with higher SEC are valid models of the desired social and emotional behaviour, which results in the students' social, emotional and academic results“ (ibid. 2009, 493).

Pro-social behaviour, i.e. positive social behaviour, is a complex and multidimensional phenomenon. In the broadest sense, pro-social behaviour involves “a wide range of behaviour that contribute to the well-being of others, such as providing assistance in performing certain activities, giving and sharing material goods, assisting in a job, providing physical assistance and protection, various forms of psychosocial support (encouragement, providing comfort, showing understanding and compassion)” (Joksimović, Gašić-Pavišić 2007: 174), while Vispe claims that they are pro-social ones that have positive social consequences such as: altruism, affinity, co-operation, help and donation” (Ševkušić 1994: 149). Pro-social behaviour is important for achieving an individual's competence in various spheres of life: academic, social, family, professional. It relates to related terms such as altruism, empathy, and Prometheus activism.

Learning programs for teachers' socio-emotional competences

Numerous programs provide curricula and programs that facilitate SEL in a classroom environment. Programs are based on learning emotional literacy, self-control, social competence, and positive peer relationships. One of these is the “Community of the caring school” (Jennings, Greenberg 2009: 504) which includes role-play activities for taking emotional and social perspectives in order to promote empathy and social cohesion. It is designed to improve pro-social development by providing opportunities for students to collaborate and help others, to learn from the experiences and needs of others, promote empathy, reflect on their behaviour and the behaviour of others, and learn how to participate in joint decision-making. The program is based on the assumption that students have a basic need for belonging and contributing to the community, which, as a solidarity group, becomes related to the school community, and they act in accordance with the values of the school and its rules. The results have shown that the application of this program leads to increased warmth and support of teachers, emphasizing pro-social values, encouraging cooperation,

thinking and expressing students' ideas, improving student academic engagement, positive interpersonal behaviour, and enhancing communal feelings that are associated with altruistic values and care for others.

Teachers can develop and improve their competencies by using a knowledge base that can enhance the social and emotional awareness of teachers, such as "Emotional Intelligence Training", designed to enhance teachers' emotional skills and emotional awareness and their application in the school environment, "Mindfulness – Basic Interventions", "Training for the social and emotional development of pupils", and "Strengthening the commitment to teaching" (Ibid. 2009: 510–513).

Methodological approach to the problem

The socio-emotional and pedagogical competences of teachers are a prerequisite for the development of all aspects of the child's personality and for the achievement of the set goals and tasks of upbringing and education. The subject of this research is the reflection and self-reflection of teachers on social and emotional competencies as predictors of the pro-social behaviour of students. The aim of the paper is focused on the importance of teachers' social and emotional competencies for the pro-social behaviour of students and is in line with the research tasks aimed at determining statistically significant differences in the possession of teachers' social, emotional and pedagogical competences in relation to gender and in relation to the length of work experience. In accordance with the tasks set, a general hypothesis was formulated: It is assumed that there is a statistically significant difference in the possession of teachers' social, emotional and pedagogical competencies in terms of gender and length of work experience. In accordance with the tasks, the following specific hypotheses were set: It is assumed that there is a statistically significant difference in the possession of teachers' social, emotional and pedagogical competences in relation to gender. It is assumed that there is a statistically significant difference in the possession of teachers' social, emotional and pedagogical competencies in relation to the length of work experience. For the purpose of this research used a descriptive, survey research method, a scaling technique that we wanted to determine the level of agreement/disagreement of teachers with respect to the proposed assertions that relate to the influence of teachers' social and emotional competencies on the pro-social behaviour of students. As a research instrument the Likert Type scale for Teachers (SEPKN-PPU) was used, consisting of 25 items, which was designed for research purposes. The sample and population consisted of 366 teachers of different educational profiles in ten elementary schools on the territory of the City of Niš.

Table 1: Structure of the sample in relation to gender

Gender	Number of respondents	Percentage
Male	78	21,3%
Female	288	78,8%

This table shows the structure of the sample by gender. As expected, in the population of elementary school teachers on the territory of the City of Niš, there are significantly more women (78.7%) than men (21.3%), so the sample is not uniform in terms of gender.

Table 2: Structure of the sample in relation to work experience

Years of work experience Number of respondents	Frequency	Percentage
from 1 to 10 years	122	33,3%
from 11 to 20 years	137	37,4%
from 21 to 30 years	80	21,6%
from 31 to 40 years	27	7,3%

When dividing the respondents by years of work experience into groups, we see that the highest number of respondents is with 11–20 years of work experience in education (37.7%), while the smallest number is of those with 31–40 years of work experience (7.2%).

Research results

In the conducted research, guided by a statistical analysis of the Chi-squared test (by which each thread is crossed with variable – gender of teachers) in order to test the first hypothesis and determine whether there is a statistically significant difference in the possession of teachers' social, emotional and pedagogical competences in relation to gender, we obtained the results presented in Table 3.

Table 3: Displaying the cross-section of teachers' attitudes about social, emotional and pedagogical competences in relation to gender variable

Items			percentage					p
			1	2	3	4	5	
1. While studying I attended courses aimed at getting to know the characteristics of emotional and social development of students	gender	male	3,8%	7,7%	19,2%	34,6%	34,6%	,512
		female	3,1%	6,3%	12,5%	35,4%	42,7%	
2. I regularly attend seminars that allow me to better understand the emotional and social needs of my students and that develop my social and emotional skills in my professional work	gender	male	7,7%	7,7%	30,8%	19,2%	34,6%	,038
		female	3,1%	7,3%	19,8%	32,3%	37,5%	
3. I am familiar with what is meant by pro-social behaviour	gender	male	3,8%	15,4%	19,2%	30,8%	30,8%	,034
		female	2,1%	5,2%	21,9%	34,4%	36,5%	
4. The most important thing for me is that in class I teach students the contents they need to learn and for which they will be evaluated	gender	male	7,7%	3,8%	19,2%	30,8%	38,5%	,115
		female	2,1%	4,2%	26,0%	27,1%	40,6%	
5. Through my work and acting in the teaching process, I try to teach students how to control their emotions	gender	male	3,8%	3,8%	23,1%	19,2%	50,0%	,000
		female	,0%	1,0%	7,3%	29,2%	62,5%	
6. In class, I encourage social skills (friendship among students, helping and sharing, sacrificing for others)	gender	male	3,8%	7,7%	11,5%	26,9%	50,0%	,000
		female	,0%	,0%	7,3%	16,7%	76,0%	
7. I think that I am a role model for my students in pro-social behaviour	gender	male	3,8%	3,8%	19,2%	30,8%	42,3%	,001
		female	1,0%	,0%	10,4%	34,4%	54,2%	
8. In class I foster tolerance among students regardless of their psycho-physical abilities, racial and ethnic affiliation	gender	male	3,8%	3,8%	3,9%	30,8%	57,7%	,000
		female	,0%	,0%	3,1%	10,4%	86,5%	
9. I try to develop solidarity with students who have less success in learning and who are of lower material status	gender	male	3,8%	3,8%	15,4%	15,4%	61,5%	,000
		female	,0%	,0%	4,2%	13,5%	82,3%	

10. I think it is important to teach students to clearly verbalize their needs and understand the needs of others	gender	male	3,8%	3,8%	7,7%	11,5%	73,1%	,000
		female	,0%	,0%	3,1%	14,6%	82,3%	
11. Students who are facing problems at school (peer rejection, family problems) have appropriate support from us as teachers	gender	male	3,8%	3,8%	26,9%	15,4%	50,0%	,000
		female	,0%	1,0%	9,4%	24,0%	65,6%	
12. Showing willingness to cooperate, acceptance and respect for students has a positive effect on the development of pro-social behaviour	gender	male	7,7%	3,8%	11,5%	26,9%	50,0%	,000
		female	,0%	,0%	7,3%	35,4%	57,3%	
13. I do not tolerate aggressive students' outbursts against other students	gender	male	3.8%	3.8%	7.8%	15.4%	69.2%	,021
		female	.0%	1,0%	4,2%	14,6%	80,2%	

Table 3 shows the results of the first thirteen items of the SEPKN-PPU instrument that show that there is no statistically significant difference in the attitude of teachers in the possession of social, emotional and pedagogical competences with respect to the variable of gender, compared to the first item ($p = 0.512$) and in relation to the fourth item ($p = 0.115$). A statistically significant difference in the attitudes of teachers in the possession of social, emotional and pedagogical competences in terms of gender was found in relation to other constructed items.

Table 4: Displaying a cross-section of teachers' attitudes about social, emotional and pedagogical competences in relation to the gender variable

Items			percentage					p
			1	2	3	4	5	
14. I give students the opportunity to show in class their concern for others	gender	male	3.8%	/	15.4%	26.9%	53.8%	,000
		female	,0%	/	2.1%	26.04%	71.9%	
15. It is important for me to build responsibility in students for their actions	gender	male	3.8%	3.8%	3.8%	15.4%	73.1%	,000
		female	,0%	,0%	3.1%	13.5%	83.3%	
16. A teacher must have a set of positive qualities and skills to develop the need in students to help others and to understand others	gender	male	3.8%	/	11.5%	23.1%	61,5%	,000
		female	,0%	/	4.2%	10.7%	79.2%	

17. I often practice with my students different ways of responding to challenging situations	gender	male	7,7%	19,2%	23,1%	30,8%	19,2%	,000
		female	1,0%	6,3%	25,0%	37,5%	30,2%	
18. In the teaching process, I try to develop an altruistic and empathic relationship among students, but also in their relation with other people	gender	male	3,8%	/	11,5%	38,5%	46,2%	,000
		female	,0%	/	7,3%	24,0%	68,8%	
19. I consider myself a teacher who is responsible for developing positive social behaviour among students	gender	male	3,8%	7,7%	11,5%	34,6%	42,3	,000
		female	,0%	,0%	6,3%	27,1%	66,7%	
20. In communicating with students, I nurture open communication (freedom of thought and attitudes about teaching content)	gender	male	3,8%	/	15,4%	15,4%	65,4%	,000
		female	,0%	/	4,2%	18,8%	77,1%	
21. One of the primary tasks of a modern school is to develop skills with students for solving conflict situations	gender	male	3,8%	7,7%	11,5%	30,8%	46,2%	,000
		female	,0%	,0%	10,4%	27,1%	62,5%	
22. By fostering positive emotions in students, I contribute to strengthening their self-esteem	gender	male	3,8%	3,8%	7,7%	30,8%	53,8%	,000
		female	,0%	,0%	7,3%	24,0%	68,8%	
23. I do not allow the uncontrolled reaction of students and their negative feelings to hinder work in class	gender	male	3,8%	/	23,1%	11,5%	61,5%	,000
		female	,0%	/	5,2%	26,0%	68,8%	
24. In this school, students learn how to communicate and collaborate with other people culturally and in a good way	gender	male	3,8%	3,8%	15,4%	26,9%	50,0%	,001
		female	1,0%	1,0%	5,2%	24,0%	68,8%	
25. My good relationship with my students is based on building mutual trust and respect	gender	male	3,8%	3,8%	3,8%	23,1%	65,4%	,000
		female	,0%	,0%	3,1%	15,6%	81,3%	

Table 4 shows the results of the remaining twelve items of the SEPKN-PPU instrument showing that there is a statistically significant difference in the attitude of teachers in the possession of social, emotional and pedagogical competences with respect to the gender variable in relation to all constructed items.

After determining the differences in having social, emotional and pedagogical competencies of teachers in relation to gender, we considered it important

to examine whether there are statistically significant differences in the possession of the aforementioned competencies in relation to the length of the teacher's work experience, by the same statistical procedure, Chi-squared test (by which each item was crossed with the variable of the teacher's work experience), which tested the second hypothesis.

Table 5: Presentation of a cross-section of teachers' attitudes about social, emotional and pedagogical competences of teachers in relation to length of work experience variable

Items			percentage					p
			1	2	3	4	5	
1. While studying I attended courses aimed at getting to know the characteristics of emotional and social development of students	work experience	1-10	5,7%	3,3%	12,3%	37,7%	41,0%	,169
		11-20	2,2%	7,3%	13,9%	29,9%	46,7%	
		21-30	1,3%	11,3%	18,8%	36,3%	32,5%	
		31-40	3,7%	3,7%	7,4%	48,1%	37,0%	
2. I regularly attend seminars that allow me to better understand the emotional and social needs of my students and that develop my social and emotional skills in my professional work	work experience	1-10	4,9%	6,6%	23,0%	28,7%	36,9%	,506
		11-20	2,9%	5,8%	24,8%	30,7%	35,8%	
		21-30	6,3%	7,5%	15,0%	31,3%	40,0%	
		31-40	,0%	18,5%	25,9%	22,2%	33,3%	
3. I am familiar with what is meant by pro-social behaviour	work experience	1-10	3,3%	7,4%	22,1%	30,3%	36,9%	,489
		11-20	2,9%	5,8%	19,0%	30,7%	41,6%	
		21-30	1,3%	10,0%	21,3%	42,5%	25,0%	
		31-40	,0%	7,4%	29,6%	37,0%	25,9%	
4. The most important thing for me is that in class I teach students the contents they need to learn and for which they will be evaluated	work experience	1-10	4,1%	4,1%	27,0%	36,1%	28,7%	,028
		11-20	3,6%	3,6%	16,1%	26,3%	50,4%	
		21-30	2,5%	3,8%	35,0%	20,0%	38,8%	
		31-40	,0%	7,4%	25,9%	22,2%	44,4%	
5. Through my work and acting in the teaching process, I try to teach students how to control their emotions	work experience	1-10	1,6%	,8%	11,5%	35,2%	50,8%	,284
		11-20	,7%	2,2%	8,0%	24,1%	65,0%	
		21-30	,0%	1,3%	15,0%	18,8%	65,0%	
		31-40	,0%	3,7%	7,4%	29,6%	59,3%	
6. In class, I encourage social skills (friendship among students, helping and sharing, sacrificing for others)	work experience	1-10	1,6%	1,6%	9,0%	18,9%	68,9%	,787
		11-20	,7%	,7%	8,8%	19,7%	70,1%	
		21-30	,0%	2,5%	7,5%	13,8%	76,3%	
		31-40	,0%	3,7%	3,7%	29,6%	63,0%	

7. I think that I am a role model for my students in pro-social behaviour	work experience	1-10	2,5%	,0%	12,3%	35,2%	50,0%	,990
		11-20	1,5%	1,5%	12,4%	32,1%	52,6%	
		21-30	1,3%	1,3%	12,5%	32,5%	52,5%	
		31-40	,0%	,0%	11,1%	37,0%	51,9%	
8. In class I foster tolerance among students regardless of their psycho-physical abilities, racial and ethnic affiliation	work experience	1-10	1,6%	/	3,3%	13,9%	81,1%	,850
		11-20	,7%	/	3,6%	15,3%	80,3%	
		21-30	,0%	/	5,0%	12,5%	82,5%	
		31-40	,0%	/	7,4%	22,2%	70,4%	
9. I try to develop solidarity with students who have less success in learning and who are of lower material status.	work experience	1-10	1,6%	,0%	7,4%	15,6%	75,4%	,691
		11-20	,7%	1,5%	5,8%	14,6%	77,4%	
		21-30	,0%	1,3%	7,5%	7,5%	83,8%	
		31-40	,0%	,0%	3,7%	22,2%	74,1%	
10. I think it is important to teach students to clearly verbalize their needs and understand the needs of others	work experience	1-10	1,6%	,0%	4,1%	12,3%	82,0%	,225
		11-20	,7%	1,5%	2,9%	11,7%	83,2%	
		21-30	,0%	,0%	7,5%	16,3%	76,3%	
		31-40	,0%	3,7%	,0%	25,9%	70,4%	
11. Students who are facing problems at school (peer rejection, family problems) have appropriate support from us as teachers	work experience	1-10	1,6%	1,6%	12,3%	29,5%	54,9%	,194
		11-20	,7%	1,5%	13,9%	13,9%	70,1%	
		21-30	,0%	2,5%	13,8%	20,0%	63,8%	
		31-40	,0%	,0%	11,1%	37,0%	51,9%	
12. Showing willingness to cooperate, acceptance and respect for students give a positive effect on the development of pro-social behaviour	work experience	1-10	1,6%	,8%	8,2%	27,0%	62,3%	,392
		11-20	1,5%	,0%	6,6%	40,9%	51,1%	
		21-30	2,5%	1,3%	11,3%	28,8%	56,3%	
		31-40	,0%	3,7%	7,4%	40,7%	48,1%	
13. I do not tolerate aggressive students' outbursts against other students	work experience	1-10	2,5%	/	4,1%	15,6%	77,9%	,274
		11-20	1,5%	/	4,4%	15,3%	78,8%	
		21-30	1,3%	/	11,3%	8,8%	78,8%	
		31-40	,0%	/	3,7%	25,9%	70,4%	

Table 5 shows the results for the first thirteen items of the SEPKN-PPU instrument that shows that there is no statistically significant difference in the attitude of teachers in the possession of social, emotional and pedagogical competences with regard to the length of their work experience, compared to the first item ($p = 0.512$) and the item number 4 ($p = 0.115$). Also, the results show that there is a statistically significant difference in the attitudes of teachers in the possession of social, emotional and pedagogical competences with regard to the length of their work experience in relation to other constructed items.

Table 6: Presentation of a cross-section of teachers' attitudes about social, emotional and pedagogical competences of teachers in relation to the length of their work experience variable

Items			percentage					p
			1	2	3	4	5	
14. I give students the opportunity to show in class their concern for others	work experience	1-10	1,6%	/	3,3%	24,6%	70,5%	,533
		11-20	0,7%	/	6,6%	28,5%	64,2%	
		21-30	,0%	/	6,3%	21,3%	72,5%	
		31-40	,0%	/	,0%	37,0%	63,0%	
15. It is important for me to build responsibility in students for their action	work experience	1-10	1,6%	,0%	3,3%	11,5%	83,6%	,253
		11-20	,7%	1,5%	2,2%	13,1%	82,5%	
		21-30	,0%	,0%	5,0%	13,8%	81,3%	
		31-40	,0%	3,7%	3,7%	29,6%	63,0%	
16. A teacher must have a set of positive qualities and skills to develop the need in students to help others and to understand others	work experience	1-10	1,6%	/	4,9%	14,8%	78,7%	,680
		11-20	,7%	/	5,1%	20,4%	73,7%	
		21-30	,0%	/	6,3%	16,3	77,5%	
		31-40	,0%	/	11,1%	25,9%	63,0%	
17. I often practice with my students' different ways of responding to challenging situations	work experience	1-10	5,7%	11,5%	24,6%	38,5%	19,7%	,100
		11-20	,7%	10,2%	21,9%	33,6%	33,6%	
		21-30	1,3%	5,0%	26,3%	38,8%	28,8%	
		31-40	,0%	3,7%	33,3%	29,6%	33,3%	
18. In the teaching process, I try to develop an altruistic and empathic relationship among students, but also in their relation with other people	work experience	1-10	1,6%	/	9,0%	31,1%	58,2%	,335
		11-20	,7%	/	8,0%	24,8%	66,4%	
		21-30	,0%	/	10,0%	20,0%	70,0%	
		31-40	,0%	/	,0%	40,7%	59,3%	
19. I consider myself a teacher who is responsible for developing positive social behaviour among students	work experience	1-10	1,6%	,8%	9,0%	30,7%	61,3/%	,928
		11-20	,7%	1,5%	5,8%	24,8%	66,4%	
		21-30	,0%	2,5%	6,3%	27,5%	63,8%	
		31-40	,0%	3,7	11,1%	22,2%	63,0%	
20. In communicating with students, I nurture open communication (freedom of thought and attitudes about teaching content)	work experience	1-10	1,6%	/	4,9%	18,9%	74,6/%	,677
		11-20	,7%	/	5,1%	17,5%	73,8%	
		21-30	,0%	/	8,8%	17,5%	73,8%	
		31-40	,0%	/	14,8%	18,5%	66,7%	

21. One of the primary tasks of a modern school is to develop skills with students for solving conflict situations	work experience	1–10	1,6%	,0%	15,6%	27,9%	54,9/%	,271
		11–20	,7%	2,2%	5,1%	29,9%	62,0%	
		21–30	,0%	2,5%	12,5%	22,5%	62,5%	
		31–40	,0%	3,7%	11,1%	33,3%	51,9%	
22. By fostering positive emotions in students, I contribute to strengthening their self-esteem	work experience	1–10	1,6%	,8%	7,4%	23,0%	67,2/%	,578
		11–20	,0%	1,3%	10,0%	27,5%	61,3%	
		21–30	,0%	2,5%	12,5%	22,5%	62,5%	
		31–40	,8%	,8%	7,4%	25,4%	65,6%	
23. I do not allow the uncontrolled reaction of students and their negative feelings to hinder work in class	work experience	1–10	1,6%	/	7,4%	23,8%	67,2/%	,188
		11–20	,7%	/	8,0%	19,7%	71,5%	
		21–30	,0%	/	12,5%	20,0%	67,5%	
		31–40	,0%	/	11,1%	44,4%	44,4%	
24. In this school, students learn how to communicate and collaborate with other people culturally and in a good way	work experience	1–10	2,5%	1,6%	8,2%	30,3%	57,4/%	,796
		11–20	1,5%	,7	5,8%	21,2%	70,8%	
		21–30	1,3%	2,5%	8,8%	22,5%	65,0%	
		31–40	,0%	16,7%	7,4%	6,7%	7,6%	
25. My good relationship with my students is based on building mutual trust and respect	work experience	1–10	1,6%	,0%	4,1%	13,9%	80,3/%	,333
		11–20	,7%	1,5%	1,5%	19,7%	76,6%	
		21–30	,0%	,0%	6,3%	16,3%	77,5%	
		31–40	,0%	3,7%	0%	22,2%	74,1%	

Table 6 shows the results for the remaining twelve items of the SEPKN-PPU instrument, which show that there is no statistically significant difference in the attitude of teachers in the possession of social, emotional and pedagogical competences in relation to the length of their work experience.

Discussion of results

In this paper, we tried to determine the importance of teachers' social, emotional and pedagogical competencies for the pro-social behaviour of students, which is actually the goal of this research. On the basis of the general hypothesis, specific hypotheses were set, which are further elaborated in the following text.

The first hypothesis assuming that there is a statistically significant difference in the possession of teachers' social, emotional and pedagogical competences in relation to gender is confirmed. The results obtained were as expected, given that the structure of teaching staff in schools is mostly female, and in agreement with the previously conducted research (Stojiljković 1997) that the empathic ability and care for others is higher in the female than in the male

population. Empathic sensitivity, the tendency towards altruism, is an inherent feature of female members, most commonly manifested through a humanitarian value orientation and a humanitarian interest that can be interpreted by the process of upbringing and stereotypes related to gender roles.

Another hypothesis that assumed there is a statistically significant difference in the possession of teachers' social, emotional and pedagogical competencies in relation to the length of their work experience is not confirmed. Such results have confirmed our assumptions that teachers continue to acquire only professional knowledge through the formal educational process, while subjects or courses aimed at acquainting them with the characteristics of emotional and social development of students at elementary school age and improving the social, emotional and pedagogical competencies of teachers are very few or not at all represented. Such a trend continues through the process of professional development of teachers, which is confirmed by the analysis of the Catalog of Continuing Professional Development Program for Teachers, Educators and Professional Associates for the School Year 2016/17, 2017/2018 (2016), which shows that programs that deal with the emotional competencies of teachers or students are negligible. The impression is that there are individual, sporadic teachers' attempts to develop and encourage some dimensions of pro-social behaviour, such as responsibility, tolerance, understanding of the needs of others, solidarity, building mutual trust and respect, developing and fostering good interpersonal relationships.

Finally, on the basis of the obtained results we can conclude that the general hypothesis by which we assumed that there is a statistically significant difference in the possession of teachers' social, emotional and pedagogical competencies in relation to gender and length of work experience is partially confirmed.

Conclusion

The results of this research have undoubtedly shown that social, emotional and pedagogical competencies of teachers, regardless of the needs and demands of contemporary society and educational micro-systems, are still insufficiently represented in the education and training of teachers. This is supported by the current concept of education and the orientation of education policy towards the acquisition of knowledge that is set up as the backbone of the school system, while in the background are activities aimed at developing social, emotional and pedagogical competences and teachers' skills, and thus developing positive social behaviour of students. This research pointed out the need to raise awareness and sensitivity of teachers about the role and importance of possessing social, emotional and pedagogical competences for

personal and professional work and operation. The aim of this research is also to point out the need for a structured and systematic approach of educational authorities that will enable teachers' education for the 21st century. The pedagogical significance of this paper is reflected in the systematization and enhancement of scientific knowledge about the social and emotional competences of teachers, and consequently in the possibilities of applying these findings to the improvement of educational practice.

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Chapter XXXIII

PREDICTORS OF ATTITUDES TOWARDS INCLUSIVE EDUCATION AMONG STUDENTS OF THE FACULTY OF EDUCATION¹

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Abstract: Simultaneously with the development of inclusive education worldwide, studies aiming to reveal and refine understanding of teachers' attitudes towards work with children with additional support needs are being conducted. Previous research of teacher-related variables, such as their education and practice, resulted in obtaining only a small number of consistently significant determinants of attitudes towards inclusive education. Unlike most of the previous research, this study is concerned with a different category of plausible determinants – psychological dispositions which may form attitudes towards work with children with additional support needs. The variables from emotional and cognitive realm were selected: emotional self-efficacy, belief in a just world, and cognitive rigidity. The importance of these predictors was examined in a sample of 166 students of the Faculty of Education. During the first phase, students responded to an emotional intelligence scale, belief in a just world scale, and to a non-verbal test of cognitive rigidity. In the second phase they responded to a scale of attitudes towards inclusive education of children with disabilities. The results revealed relatively complex and significant relationships between named predictors and attitudes. The emotional self-efficacy had a positive and non-moderated influence on students' attitudes ($\beta = 24, p = .004$). The relation between belief in a just world and attitudes was moderated by the cognitive rigidity. When cognitive rigidity of the respondents was low, belief in a just world had no influence, but in a case of high cognitive rigidity, this belief became the strongest predictor of attitudes ($\beta = 35, p = .001$). The relatively high proportion of attitudes' variance was explained by examined models of predictors ($16.9 \leq R^2 \leq 17.4$). Pedagogical implications of the obtained findings are discussed.

Keywords: *inclusive education, emotional self-efficacy, belief in a just world, cognitive rigidity, students of faculty of education.*

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Introduction

Internationally-agreed commitments and efforts to provide inclusive education became more vivid in the new millennium but remained unfulfilled to a large degree (e.g., Mizunoya, Mitra, Yamasaki 2016). Developing a school system to become a place for learning and the social participation of every child implies a multidimensional strategy, ranging from official educational policy to the level of classroom practice (Booth, Ainscow 2002). The complexity and pervasiveness of this development do not, however, conceal the crucial role of teachers. Teaching in a heterogeneous group, including children with additional support needs, presupposes the use of various methods and materials, arrangement of different learning settings, a different pace of children's activities and other individualized instructional strategies. As teachers' effectiveness increases, lower achieving pupils are the first to benefit (Sanders, Rivers 1996). Furthermore, not only the way teachers work but also what they believe should be addressed in the implementation of inclusive education (e.g. Macura-Milovanović, Gera, Kovačević 2010). Jordan, Lindsay and Stanovich (1997) found that teachers' amount and type of interaction with pupils who are exceptional and at risk of academic failure, as well as teachers' use of quality instructional techniques and adaptation to the pupils' level of understanding are all delivered as a function of teachers' views on or beliefs about inclusion.

Teachers' attitudes towards inclusive education were the subject of numerous studies. The attitude can be defined as an evaluative integration of cognitions and affects experienced in relation to work (or an idea of work) with children with additional support needs (cf. attitude definition by Prislin, Crano 2008).

The focus of empirical investigations was mainly on measuring teachers' attitudes and determining the factors which have an influence on those attitudes. Avramidis and Norwich (2002) categorized possible factors into three groups: child-related, teacher-related and educational environment-related. By child-related variables, researchers usually subsume the type and severity of impairments. We do believe, however, that each of the child-related variables can and should be viewed from the perspective of both the educational system and its readiness for inclusion as well as the readiness of teachers specifically. It is about consistency with the concept of inclusive education and it is about acknowledging that, for much of the time, the priority remains to analyse and succeed in dealing with social barriers (Shakespeare & Watson, 2001).

The focus of this study is on teacher-related variables. Previous research resulted in obtaining only a small number of consistently significant teacher-related factors which have an influence on attitudes towards inclusive education. A review of studies in the last two decades of the 20th century led to the conclusion that none of the teacher-related variables alone could be regarded

as a strong predictor of educator attitudes (Avramidis, Norwich 2002). The following review revealed three variables which were associated with teachers' attitudes: years of teaching experience (in a negative direction), experience in inclusive education, and training in special needs education (in a positive direction) (de Boer, Pijl, Minnaert 2011). However, later studies did not support the significance of these correlates. Rajović and Jovanović (2010) stated it was teachers' private experience with children with special education needs which made a difference in attitudes, not their professional experience. In a similar vein, Galović, Brojčin, and Glumbić (2014) concluded that attitudes were not moulded by the quantity of the experience in an inclusive setting, but by the quality of experience (positive or negative). Several studies revealed that self-perceived abilities were important for the implementation of inclusion: teacher self-efficacy and self-perceived expertise were positively associated with more favourable attitudes towards inclusion (Soodak, Podell, Lehman 1998; Starčević, Macura, Topalović 2018; Wilkins, Nietfeld 2004).

Studies on a sample of pre-service teachers were even more inconclusive. Hastings et al. (Hastings, Hewes, Lock, Witting 1996) found that students with higher levels of previous contact with children with severe learning difficulties had generally more positive perceptions than those with little or no previous experience. However, a few years later Hastings and Oakford (2003) inferred there was little support for the effects of previous experience with children with special needs (i.e., additional support needs) on student teachers' attitudes. Others found minimal effects for a range of variables (Tait, Purdie 2000) or rather small correlations with the attitudes (up to .23) (Loreman, Forlin, Sharma 2007). In a recent study, Orlić et al. (Orlić, Pejčić, Lazarević, Milanović 2016) found that self-assessment of professional competence was a relatively strong predictor of students' attitudes ($\beta = .29, p = .00$). At the same time, this study is one of the rare ones which expanded the usual set of examined predictors to include a personality trait – openness to experience – and it proved to be a significant predictor ($\beta = .14, p = .04$). Similarly, Openness as a basic personality dimension was positively correlated with the attitudes towards inclusive education ($r = .32, p = .001$) in a sample of teachers (Todorović, Stojiljković, Ristanić, Djigić 2011).

At present, there are few convincing teacher-related factors as predictors of attitudes towards working with children with additional support needs except perhaps self-perception of competencies. However, self-perception of competencies is sometimes regarded as an element of attitudes (e.g., Sideridis, Chandler 1997). Thus, it seems reasonable to move beyond the variables which were typically regarded as plausible determinants of attitude. The findings indeed suggested a certain predictive value of personality traits (Orlić et al. 2014; Todorović et al. 2011). This study goes further in the investigation of psychological dispositions which may influence the formation of teachers' attitudes.

Having in mind that attitude presents an evaluative integration of cognitions and affects, the selected variables are from the emotional and cognitive realm: emotional self-efficacy, belief in a just world, and cognitive rigidity. These variables and their plausible role will be briefly discussed below.

Emotional self-efficacy

The emotional dimension of teaching had been largely underestimated and it started to gain more attention in the 21st century (e.g. Demetriou, Wilson 2009). Teaching is emotionally demanding and inability to understand and manage emotions can lead to burnout in the case of novice teachers (e.g., Blomberg, Knight 2015) or impedes the implementation of educational reforms (e.g., Bahia, Freire, Amaral, Estrela 2013). Emotional intelligence is a relatively new construct which may contribute to understanding teachers' professional competencies from the emotional perspective.

It is important, however, to make a distinction between models of emotional intelligence (EI) predicated by the way of their operationalization – by achievement measures or by self-reports. This distinction implies their conceptual differentiation as well (Petrides, Furnham 2000, 2001). In other words, there are two types of EI constructs: EI as ability and EI as a trait. The former is operationalized by achievement measures and the later by self-reports. Self-report assessments are inextricably bound with the conceptualization of EI as a personality trait or as a group of personality characteristics presumably located at the lower levels of personality hierarchies (Pérez, Petrides, Furnham 2005). Emotional self-efficacy is another name for EI as a trait. In this study, it represents original Salovey and Mayer's model of EI operationalized by self-report measure. Emotional self-efficacy thus comprises self-perceived abilities regarding appraisal, expression, regulation, and utilization of emotions (Schutte et al. 1998).

Considering that higher self-estimations of professional competencies were associated with positive attitudes towards inclusion (e.g., Orlić et al. 2016; Soodak et al. 1998; Starčević et al. 2018; Wilkins, Nietfeld 2004) the influence of emotional self-efficacy on pre-service teachers' attitudes towards inclusion seems worth investigating. A positive influence of trait EI is expected.

Belief in a just world

Individuals' need to believe in a just world where people generally get what they deserve has been the subject of continuous research interest since the 1970s (e.g., Furnham 2003; Hafer, Sutton 2016). Lerner and Miller (as cited by Furnham 2003) indicated that people are very reluctant to give up this belief and employ different mechanisms to maintain it. Early studies were

concentrated on the negative side of this phenomenon, such as victim derogation, but after that a string of investigations of belief in a just world were included (BJW) as a healthy coping mechanism with psychological benefits (e.g., Furnham 2003). For example, high BJW was associated with efficient coping with stressful situations and higher achievement (Tomaka, Blascovich 1994). Brown and Grover (1998) later discovered that BJW moderated the influence of low stressor exposer but had no influence under conditions of higher stress.

The studies of attitudes towards people with illnesses or disabilities exposed the negative side of BJW. Some of them reported direct (e.g., Furnham 1995; Keller, Siegrist 2010) and others reported indirect influence of BJW (e.g., Bizer, Hart, Jekogian 2012). BJW predicted negative attitudes towards people with physical disabilities ($\beta = .14$) beyond socio-demographic variables and personality (Keller, Siegrist 2010). Bizer et al. (2012) showed that negative attitudes about people with mental illness and intentions to discriminate were distally rooted in BJW, which predisposed people towards higher social dominance orientation. Others did not find a significant influence of just-world beliefs (Rüsch, Todd, Bodenhausen, Corrigan 2010).

While the above empirical findings suggest that BJW would probably have a negative impact on teachers' attitudes towards work with children with additional support needs, others cast some doubt on this conclusion. Dalbert (as cited by Furnham 2003) stated that if a person can help substantially, those who believe in a just world are more likely to help and further to expect "good fate" as a reward. In line with this Bierhoff, Klein, and Kramp (1991) found that first aiders are characterized by BJW more than people who did not help in an accident. They explained that a strong BJW leads to an increase in helpfulness when the perceived injustice created by another person's plight can be alleviated by one's own efforts. Besides, the above findings are concerned with the attitudes towards adults with additional support needs. BJW role in pre-service teachers' perceptions of work with children that are vulnerable in a similar way has yet to be explored.

Cognitive rigidity

The notion of cognitive rigidity has been discussed from a variety of theoretical positions and is usually connected to cognitive style, creativity or social-psychology constructs (Proroković 2002). It is opposed to cognitive flexibility and as such refers to unawareness or a narrow perception of the available alternatives in a given situation, as well as the lack of willingness to be flexible and adapt to the situation (cf. Martin, Rubin 1995). Similarly, it can be regarded as a limited ability to switch or restructure cognitive sets to adapt to the changing environment (e.g., Dennis, Van der Wal 2010). Rigid persons are typically

dogmatic, ethnocentric, conservative, inflexible, and have a lack of tolerance for ambiguity (Proroković 2002).

In the field of education, cognitive rigidity – or its opposite, cognitive flexibility – was mainly examined in relation to pupils' learning and the ways teachers can scaffold this process. There were only a few studies of related phenomena regarding teachers' thinking, such as cognitive processing of complex school-based scenarios (Kim, Klassen 2018). As Kim and Klassen (2018) stated, it is important to research and develop teachers' cognitive flexibility because they encounter challenging school situations every day. It could be even more important when changes in education and school reforms take place. Specifically, teaching in a heterogeneous group presupposes a great deal of flexibility. These were the main reasons why cognitive rigidity was included as a conceivable predictor of teachers' attitudes towards inclusion. It is expected that cognitive rigidity will exert a negative influence on attitudes.

Method

Participants and procedure

This study was conducted on a sample of 166 students of the Faculty of Education in Jagodina. The sample consisted of 146 female (88%) and 20 male (12%) respondents. About half of the participants were future teachers ($n = 79$) and the others were future preschool teachers ($n=64$) and boarding school teachers ($n = 23$). The mean age of participants was $M = 21.92$ ($SD = 2.64$).

At the beginning, potential examinees were informed that the aim of the study was to determine relations between several variables regarding their cognition and emotions. In order to avoid having an influence on the responses they were not informed about other specifics of the variables. Examinees were tested at the faculty premises, during regular classroom hours, and were compensated for their efforts by being granted extra course credits. Participation in the research was organized in a way which ensured that examinees were anonymous.

In the first step, students responded to the emotional intelligence scale, belief in a just world scale, and to the non-verbal test of cognitive rigidity. In the second step, they responded to the scale of attitudes towards inclusive education of children with disabilities.

Instruments

The Schutte Self Report Emotional Intelligence Test (SSEIT) (Schutte et al. 1998)

Emotional self-efficacy was measured by a translated and adapted SSEIT with 33-items. Items represent dimensions of the original EI model of Salovey and Mayer: a) appraisal and expression of emotion in the self and others ((e.g., "I can tell how people are feeling by listening to the tone of their voice"), b) regulation of emotion in the self and others ("I help other people feel better when they are down") and c) utilization of emotions in solving problems (e.g., "I use good moods to help myself keep trying in the face of obstacles"). Five-point rating scales (endpoints: strongly disagree/strongly agree) accompany each item. This instrument has been used extensively in research. Its internal consistency ranged from .70 to .85 (Pérez et al. 2005).

The Belief in a Just World Scale (BJW-S) (Ćubela 2002)

The 13-items Croatian version of the scale was adapted for use in this study. Six items belong to the general BJW (the world is generally just) and the rest of the items represent personal BJW (the world is just towards me). Responses are given on a 6-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree). Ćubela (2002) reported Cronbach Alphas beyond .70 and stated the convergent-discriminative validity of the scale.

Breskin's Test of Rigidity (BRT) (Breskin, 1968)

Test items are 15 pairs of visual stimuli differing with respect to the gestalt law of simplicity. Each of the pairs consists of one stimulus in accordance with the law of simplicity and the other stimulus disobeying it. Respondents are directed to express their preference for one visual stimulus among two elements of each pair. Higher scores reflect greater rigidity. Proroković (2002) reported good test-retest reliability ($r = .82$) on a sample of Croatian students and lower but still satisfying internal consistency ($\alpha = .70$).

Teachers' Attitudes towards Inclusion of Children with Difficulties Scale (Mihčić, Vulić-Prtorić 2002)

The scale used in this study was an adapted Croatian version of the original scale (constructed by Sideridis, Chandler 1997). Four items were excluded in order to adjust the scale for use on a sample of pre-service teachers. Each of the remaining eight items is used for attitudes assessment towards the inclusion of children with five types of difficulties: physical, intellectual, behavioural, hearing impairment, and autism. Thus, the scale has a total of 40-items. Items

concern teachers' confidence about their own knowledge and skills and teachers' perception of potential benefits and risks inclusive education may bring. Responses are given on a 4-point Likert scale, ranging from 1 (strongly disagree) to 4 (strongly agree).

Results

Internal consistency and correlations of measures

Table 1 presents correlation coefficients between four main variables and Cronbach's alphas of their measures which are in parentheses on the diagonal of the table. All but the test of rigidity had high Alphas (above 0.80). In order to improve the internal consistency of BTR three items were omitted from the test. The second value in the parenthesis presents internal consistency of reduced BTR. This version of BTR was used in further data analysis.

Attitudes towards inclusion had a positive and moderate correlation with trait EI and belief in a just world. Attitudes were not associated with cognitive rigidity.

Table 1: Study measures: Coefficients of internal consistency and bivariate correlations

Variables	SSEIT	BJW-S	BTR	ATI
Emotional self-efficacy (SSEIT)	(.85)			
Belief in a just world (BJW-S)	.34**	(.82)		
Cognitive rigidity (BTR)	.01	.08	(.50)/(.60)	
Attitudes towards inclusion (ATI)	.33**	.29**	.06	(.90)

Notes: ** $p < .01$; * $p < .05$.

Regression analyses

To determine the proportion of variance of teachers' attitudes which could be explained by chosen predictors a series of hierarchical multiple regressions were computed. The main findings are presented in Table 2. The direct influence was examined in the case of emotional self-efficacy and BJW because these two variables were associated with teachers' attitudes. Both variables were significant predictors as well (Model 1).

Additional analyses were aimed to test if cognitive rigidity had a moderating role in the prediction model. It turned out that cognitive rigidity indeed was a significant moderator of the influence of BJW on attitudes towards inclusion (Model 2). The model encompassing the moderating effect of BJW led

to an increased proportion of explained variance of attitudes (from 14.4% to 16.9%). Further, when cognitive rigidity of the respondents was low (Model 3), just-world beliefs had no influence and the proportion of explained variance of attitudes was the highest ($R^2 = 17.4\%$). In contrast, in the case of high cognitive rigidity (Model 4), just-world beliefs became the strongest predictor of teachers' attitudes ($\beta = .35, p = .001$).

Table 2: Results of hierarchical multiple regression analyses in predicting attitudes

Models	β	t (p)	R^2
Model 1			
Step 1			
Trait EI	.32	.000	.107
Step 2			
Trait EI	.25	.003	
Belief in a just world (BJW)	.22	.008	.144
Model 2			
Trait EI	.24	.004	
Belief in a just world (BJW)	.19	.021	
Cognitive rigidity (CR)	.07	.395	
CR x BJW	.16	.035	.169
Model 3			
Trait EI	.23	.005	
Belief in a just world (BJW)	.01	.903	
Low cognitive rigidity (CR)	.07	.378	
Low CR x BJW	.26	.023	.174
Model 4			
Trait EI	.24	.003	
Belief in a just world (BJW)	.35	.001	
High cognitive rigidity (CR)	.07	.388	
High CR x BJW	.23	.030	.171

Notes: β = standardized regression coefficient; t(p) = significance of the predictor; R^2 = coefficient of multiple determination

Discussion

The aim of this study was to examine a new set of predictors of teachers' attitudes towards working with children with additional support needs. As previous research of teacher-related variables, such as their education and practice, resulted in obtaining a limited number of significant determinants, it seemed reasonable to explore the predictive potential of a different category of teacher-related variables—psychological dispositions. Bearing in mind that attitude presents an evaluative integration of cognitions and affects, the selected variables were from the emotional and cognitive realm: emotional self-efficacy, belief in a just world, and cognitive rigidity.

The results revealed relatively complex and significant relationships between the named predictors and attitudes. Emotional self-efficacy had a positive and non-moderated influence on students' attitudes. This was expected partly because self-perceived competence as a predictor of teachers' attitudes towards inclusion gained substantial empirical support (Orlić et al. 2016; Soodak et al. 1998; Starčević et al. 2018; Wilkins, Nietfeld 2004). More importantly, in this study, self-estimated abilities belong to the domain of emotions. It is known that fulfillment of a teaching role requires emotional labor from a teacher (e.g., Bahia et al. 2013). Teachers are faced day-to-day with demanding relational situations which presuppose a range of socio-emotional skills and abilities. Teachers' emotional vulnerability may be particularly vivid during the first year of employment (e.g., Blomberg, Knight 2015) and during the implementation of education reform (e.g., Bahia et al., 2013). Their receptivity for change – as inclusive education regularly demands – depends on how they perceive their own capacities to overcome challenges. If they doubt their own competence, anxiety and hostility towards inclusion will increase (e.g., Soodak et al. 1998).

At first glance, just-world beliefs had a positive influence on teachers' attitudes and cognitive rigidity had no influence. More detailed analyses revealed, however, that the influence of BJW was moderated by cognitive rigidity. In the case of students low on cognitive rigidity, just-world beliefs had no influence on attitudes. That is to say, it was unimportant if students believed that a world is just or not, the only significant predictor of attitudes was emotional self-efficacy. In the case of students high on cognitive rigidity, just-world beliefs were the strongest predictor of attitudes.

A review didn't reveal any studies regarding the relation of just-world beliefs and attitudes towards children with additional support needs. In this study BJW exposed its positive side (except in the case of low cognitive rigidity) unlike the previous findings considering attitudes towards adults. Further, uncovering the moderating role of cognitive rigidity in the relation between BJW and attitudes may be important for two reasons. To begin with, the moderating

role of cognitive rigidity could help to explain inconsistent results regarding the influence (e.g., Keller, Siegrist 2010) or the lack of influence (Rüsch et al. 2010) of BJW on attitudes towards people with disabilities. It could be argued that the presence of influence is determined by the level of cognitive rigidity. Secondly, it was expected that cognitive rigidity itself would have a negative impact on attitudes towards work with children with disabilities. Separate education streams still represent a compelling idea for some educational stakeholders, hence implementation of inclusive education requires a cognitive shift from past practices. In addition, teaching in a heterogeneous group entails advanced flexibility of the teacher. It is worth knowing that even if pre-service teachers are rigid and more inclined to simplicity, they may have more positive attitudes towards working with children with disabilities, presuming that they believe in a just world. However, before the final conclusion about the desirability of BJW it would be necessary to examine its impact on the idea of working with Roma children or with comparably disadvantaged social groups. Being aware of the plausible BJW negative consequence in the form of victim derogation (e.g., Furnham 2003) it is imperative to investigate whether the issues of poverty and marginalisation would be justified by blaming Roma children and their parents.

Conclusion

This study confirmed basic expectations that psychological dispositions are important for inclusive education, i.e. for accepting and teaching children with disabilities. In a way, the findings of the study go along with an old idea that not everyone can be a teacher.

The study implicates it is important that students perceive themselves as the ones who have the abilities to appraise and express emotions adequately, to regulate emotions in the self and others and also to succeed in the utilization of emotions in solving problems. This finding can inform the selection process for university enrolment but also initial education programs. Bahia et al. (2013) concluded that institutions responsible for the initial [undergraduate] training of teachers must be more proactive in preparing students to address their own issues as well as the emotions of others.

Cognizant of the inconsistencies of the impact of BJW (positive and negative, towards adults and towards children) future research on its influence on attitudes towards Roma children is recommended. It could shed some light on the best way to deal with just world beliefs of students and thus advise strategies in initial education programs.

The study also gave some support for the development of cognitive flexibility (i.e., enrichment of cognitive rigidity) although not in expected intensity. Perhaps it would be more salient if cognitive flexibility (not its opposite) was

examined. It is encouraging that cognitive processes are malleable and can increase in less than three months on a teacher education program (Hennissen, Beckers, Moerkerke 2017).

For more reliable conclusions about the chosen predictors, they should be further investigated on new and bigger samples.

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**INTERNATIONAL Conference “Professional Competences for Teaching in the 21st Century”
(2019 ; Jagodina)**

Professional competences for teaching in the 21st century [Elektronski izvor] : proceedings of the International Conference “Professional Competences for Teaching in the 21st Century” / organised by the Faculty of Education in Jagodina on May 23-25, 2019 ; editors Vera Savić, Olivera Cekić-Jovanović. - Jagodina : Faculty of Education, University of Kragujevac, 2020 (Jagodina : Faculty of Education, University of Kragujevac). - 1 elektronski optički disk (CD-ROM) ; 12 cm

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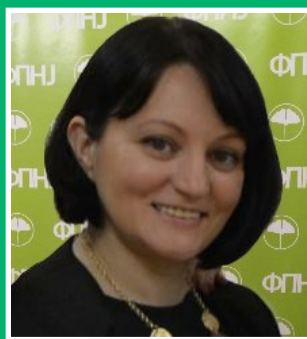
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Vera Savić



Olivera Cekić-Jovanović

The monograph *Professional Competences for Teaching in the 21st Century* is a broad-based and thorough view of education presented through conceptual, terminological and epistemological challenges, possibilities, traps and perspectives. The authors seek answers to a number of questions related to educational policy and practice, drawing attention to gaps, and suggesting improvements in the legislative field and pedagogical practice. At the same time, the authors contribute to the development of education as a science by coming up with original proposals based on empirical evidence, strengthening and justifying education and development. Individual chapters represent significant and original contributions to the development and understanding of education. The book will be a valuable resource not only for researchers, but also for practitioners, such as school principals, educators and teachers, in shaping the school strategy and introducing new teaching approaches, methods and techniques. It will also be a useful reference material to university professors and students of pedagogical, social, humanistic and other educational sciences.

**Dr. Jurka Lepičnik Vodopivec, University of Primorska,
Faculty of Education, Koper, Slovenia**

The scientific monograph *Professional Competencies for Teaching in the 21st Century* presents an in-depth scientific view of professional competencies of teachers and educators, shedding light on the issue from various perspectives. The chapters represent a meaningfully rounded whole, and at the same time each of them is a complete whole with an important and original contribution to the understanding of modern views on education at the preschool and primary school levels. A special value of the monograph lies in the breadth of topics and the depth of individual studies, making it a useful reference material for researchers, teacher educators, preservice and inservice teachers, and other professionals involved in education.

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