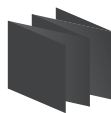


Emina Kopas-Vukašinić
Jurka Lepičnik-Vodopivec

**INNOVATIVE TEACHING MODELS IN THE
SYSTEM OF UNIVERSITY EDUCATION:
OPPORTUNITIES, CHALLENGES AND
DILEMMAS**



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INNOVATIVE TEACHING MODELS IN THE SYSTEM OF UNIVERSITY
EDUCATION: OPPORTUNITIES, CHALLENGES AND DILEMMAS

Published by

Prof. Voleta Jovanović, PhD, University of Kragujevac, Faculty of Education, Jagodina
(Serbia)

Prof. Mara Cotič, PhD, University of Primorska, Faculty of Education, Koper (Slovenia)

Editors

Prof. Emina Kopas-Vukašinović, PhD, University of Kragujevac, Faculty of Education,
Jagodina, (Serbia)

Prof. Jurka Lepičnik-Vodopivec, PhD, University of Primorska, Faculty of Education,
Koper, (Slovenia)

Reviewed by

Prof. Nevenka Tatković, PhD, "Juraj Dobrila" University of Pula,
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Faculty of Education, Jagodina (Serbia)

Proofread by

Beth Wendt

Nenad Miladinović

Marija Đorđević

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PREFACE

The scientific research of the quality of university education and its outcomes/results are based on a) the current research of the field, b) the current state of this sector of institutional education in Serbia and Slovenia, c) the development goals included in the Strategy for Education Development in Serbia until 2020 and in the Resolution on the National Higher Education Programme in Slovenia until 2020. Regarding the organisation of university education in the Republic of Serbia, the above-mentioned strategy underlines that the teaching staff preserves the traditional approaches and that changes have been implemented, which implies the preservation of the status quo. Active learning and experience-based learning are still not being implemented sufficiently. The transfer of knowledge from the academic sector to the broader context of the community is still poor. There is an emphasis on the need to innovate the education system, particularly university education, which will contribute to the development of the individual's entire potential and of the individual's creativity, as well as to a more competitive knowledge in the national market and in foreign markets. In the Republic of Serbia, higher education is especially important, and it is part of an international, particularly the European education, scientific and art sector. The mission of higher education is to constantly promote the creation and transfer of scientific findings and professional competences through organised studies and research which allow the social, cultural, economic and innovative progress of the citizens and of the entire community. Since Slovenia became an independent state, higher education has undergone major changes. There have been new circumstances, such as globalisation, remarkable technological progress, transnational decision-making, demands for a better quality of higher education, the increasing costs of education and other political, social, environmental, as well as economic changes. During this period, Slovenia has actively participated in the Bologna process and as a member of the European Union it has committed itself to the goals of the Lisbon Strategy (Resolution on the National Higher Education Programme 2011–2020). In order to fulfil its vision, the internationalisation strategy of the Slovenian higher education sector has been focused on five key areas: mobility as a key element of the Slovenian higher education community which is connected to the international environment; a high quality international scientific-research and development cooperation; the promotion of the development of intercultural competences; the strategic focus on priority regions and states, and the promotion, support and monitoring of the Strategy for the Internationalisation of the Slovenian Higher Education. All of this leads to the constant search for

modern approaches to learning within university education and to the innovation of existent practices.

The quality of higher education is one of the priorities of national and international policies, strategies and debates. While research in the field of higher education learning and teaching, which addresses all academic disciplines, has become increasingly interdisciplinary, in practice traditional teaching methods and approaches that are focused primarily on the teacher and not on the student are still often preserved. In contrast to the well-established, often non-reflective traditional academic paradigms, putting students at the heart of the higher education system is a major change. As the modern student population has been growing and becoming increasingly diverse, the development and implementation of more flexible methods and approaches to learning and teaching that are based on modern research findings and learning processes are inevitable. Modern digital technology and the direct (virtual) involvement in the broader international environment also play an important role in achieving quality and reaching the increasingly complex goals of higher education.

This monograph has been written as part of the bilateral research project *”Assumptions and possibilities of developing innovative models of teaching in the function of accomplishing transparency of university education and raising the competitiveness in the national and international market of knowledge”* (DimoT) which was carried out by the Faculty of Education in Jagodina of the University of Kragujevac (Serbia) and the Faculty of Education of the University of Primorska (Slovenia). The coordinators of the project are Prof. Dr. Emina Kopas-Vukašinović (for the Faculty of Education in Jagodina of the University of Kragujevac, Serbia) and Prof. Dr. Jurka Lepičnik Vodopivec (for the Faculty of Education of the University of Primorska, Slovenia). The general goal of the project was to develop the quality of a university education system that will contribute to the promotion of competitiveness on a national and international level with its innovative models. The specific goals of the project are to present the philosophical, sociological and psychological-pedagogical scientific aspects and elements of quality within university education in the context of the comparability of existent knowledge and abilities, and to develop innovative models of teaching and instruments for the evaluation of the models and assessments. In line with this, one of the goals of the project was the publication of a monograph in which higher education teachers and associates of both faculties involved in the project could present the research and education work they carried out within the project. The articles prove that in both faculties the pedagogical paradigm is moving towards a more active, dynamic and constructivist pedagogical process, in which the focus is put on a more active role of the students, while teachers and information and communications technology take on a guiding role. The co-creation and enrichment of the

education and research process in faculties requires the creation of an efficient learning environment and a shift in the role of all participants (students develop their own knowledge, generic and specific competences, skills and abilities: teachers learn and/or undertake further training and take on new roles (the role of the facilitator, coordinator, guide, motivator,...)).

The editors

Tomaž Grušovnik
University of Primorska, Faculty of Education
Koper, Slovenija

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QUALITY IN HIGHER EDUCATION – A PHILOSOPHICAL PERSPECTIVE

Abstract: From a philosophical perspective the question of quality in higher education can be linked to two subsequent issues: aims and goals of universities and teaching and learning excellence. Main goals of contemporary university education are Socratic education and employability of graduates. However, there are also important latent functions of the university which importantly contribute to developed democratic societies: social mobility, keeping young talented minds engaged with interesting subjects, and the development of youngsters' culture. As the chapter shows, some of these aims contradict each other: especially the labor market pressure and Socratic aims. Ideas about excellence in teaching and learning have – despite perhaps prevalent views – changed little over past three centuries. The concluding section shows that the history of university was turbulent since its inception and that this institution was always a battleground for various political, economic, and personal interests. However, since the impacts of university culture on society are variegated, a more holistic view is needed to understand its goals, whereby it can be shown that universities flourished in periods of relative freedom and autonomy.

Keywords: philosophy of education, aims of higher education, university, teaching excellence, Socratic education.

INTRODUCTION

The question of quality in higher education is closely related to two other questions: 1) the question of the aims and goals of higher education and 2) the question of teaching and learning excellence. The “quality” of teaching can namely only be assessed if one knows *what to assess* and if, consequently, the goals and methods of teaching are taken into account. Both subsequent questions are, to be sure, closely related: a certain type of answer to the aims and goals question determines the answer to the teaching excellence question and vice versa. If, for instance, one advocates the idea that graduates should be initiative-taking proactive employees, then teaching based on active learning and student interaction is likely to be emphasized as the most important and productive learning method. However, the two questions can nonetheless be handled relatively independently:

the aims and goals question is obviously related to broader socio-economic and political issues, while the teaching excellence question ties in more with psychological, pedagogical and didactical factors of good learning. For this reason, the present chapter will explore the two questions separately, focusing first on a philosophical analysis of aims and goals in higher education and then proceeding to the question of excellence in teaching and learning.

Before taking up this challenge, a short explanation of the role of philosophical analysis of educational issues is in place. The simplest question that might arise in this context is what has philosophy to do with all these problems? And the simplest answer to this question is: *a lot!* As Amélie Oksenberg Rorty emphasizes in her chapter on “The Ruling History of Education,” “The disputes at the heart of contemporary discussion of educational policy [...] reenact the controversies that mark the history of philosophy from Plato to social epistemology” (Oksenberg Rorty, 1998, p. 1). Indeed, as Oksenberg Rorty is quick to point out, “philosophers have always intended to transform the way we see and think, act and interact; they have always taken themselves to be the ultimate educators of mankind” (Ibid.). Educational interests are thus inherent to philosophical reflection and its final aim to improve the lives of individuals and society. It is thus not surprising to find out that the two points at which philosophical and educational efforts make the closest approach – ethics and epistemology – are also closely related to the two initial questions. As Eva D. Bahovec points out, “the concept of education encompasses two basic, closely related issues: transfer of knowledge and shaping of subjectivity” (Bahovec, 1992, p. 7). These issues are, however, present also in ethics and epistemology – indeed, they are *the central* issues of these two disciplines. Ethics as a discipline that explores good life and righteous society is primarily interested in “shaping of subjectivity,” in producing a virtuous and just character, or – to put it simply – the making of good personality. In turn, the primary concern of epistemology or theory of knowledge is the possibility of knowledge transfer. The question of whether we want initiative-taking graduates thus boils down to the question of whether self-confident, assertive personality is a good educational aim; similarly, the issue of active learning reduces to the question of the most promising method of attaining knowledge (cf. Curren, 2006, p. 2). Thus the role of philosophical reflection in education is not only an important part of educational science but also implicit in *every* educational theory and practical educational day-to-day decisions, since “they involve the very questions philosophers have been asking about education throughout the centuries” (Amiran, 2006, p. 553).

The first part of the present chapter thus provides an examination of different – often even antagonistic – aims and goals in higher education. The first explored aim, described by Minda R. Amiran, is to foster critical inquiry and independent thinking (2006, p. 551), a so-called “Socratic aim”. However, this aim in practice

often collides with the dictates of the market. Indeed, future employment of graduates is often seen as the most important function of higher education institutions (European Commission, 2017), and eagerness to attract large numbers of students often sacrifices small-scale learning environment for packed lecturing halls. In addition to these two explicitly stated aims, higher education institutions also have at least three “latent” functions (Stone, 2005): keeping young talented minds out of mischief by occupying them with appropriate and interesting contents, development of vibrant young culture, and providing opportunities for those less privileged to climb up social ladder. It will be argued that these last, often neglected, social aims play a vital role in contemporary societies since they significantly contribute to the shaping of engaged and interested personalities that are indispensable for well-functioning democratic societies.

The second part of the chapter deals with excellence in teaching and learning, focusing first on the elements of “Socratic education” with its emphasis on “student-centered learning” as one of the most favored method in contemporary higher education. As this section will try to show, Socratic education – similar to Socratic aims – often comes in conflict with economic realities of contemporary universities. Secondly, the idea of “experiential education,” together with the emphasis on “practice” will be explored in this section together with John Locke’s educational ideal. As the analysis will show, “experiential education” again stumbles on economic hurdles, since it demands small-scale learning environment where tutors can work with students individually. Moreover, in the framework of the discussion of “more practice” in higher education curricula one should not overlook the fact that the attitude between theory and practice is varied and complicated: thus “more practice” on its own does not yet guarantee sound education; instead, what is needed is theory-informed practice.

The concluding section will try to shed light on the university culture from a more historical viewpoint. It will try to show that universities were almost always in a state of crisis, since they represented the battlefield of various political, economic, and personal interests. Indeed, since its inception “university” was an institution dependent on economic frameworks and mustered on a typical “guild,” meaning that it was never independent of broader social and economic phenomena. As will be shown, periods in which universities flourished were followed with periods of knowledge-crisis and stagnation. Consequently, one should understand the current situation in higher education as a part of this fluctuating history of an institution that is more than 800 years old and has managed to survive through major social changes. The direction in which future universities will develop will thus be inevitably linked to upcoming global developments. The conclusion thus highlights the idea that the issue of “quality” in higher education should be approached carefully and holistically, and it should not be reduced

only to the numbers of graduates produced or their employability. To the contrary, history teaches us that the periods in which knowledge production flourished was marked with relative freedom and independence of universities. Rather than stimulating suitable learning environments at the universities, new administrative pressures can thus sooner hinder the development of higher education.

AIMS AND GOALS OF HIGHER EDUCATION

In a chapter that analyses aims and goals of American higher education institutions, Minda R. Amiran (2006) points out critical inquiry as the prime goal of higher learning. This goal can even be deduced from college brochures that often feature pictures of small groups of engaged students, exchanging ideas and communicating personally with their professors. Spacious lecture halls, packed with students, are seldom portrayed on such advertisements, giving us clues as to how exactly academia wants to see itself. According to Minda R. Amiran:

“The academy, then, as it most often presents itself, aims to foster free and open inquiry guided by Socrates’ values, or the values of free speech and action [...] It would thus act as an ethical agent for its students, helping them examine themselves and their place in the world, helping them develop their powers of reasoning and acting through intellectual discipline and self-government, getting them to question their society and its values independently.” (Amiran, 2006, p. 551-2)

Looking at the European higher education institutions soon reveals that this goal is shared also across the Atlantic: introductory remarks of the Slovenian National Program of Higher Education 2011-2020 explicitly refer to both Horace as well as Kant and their *sapere aude* – dare to know – parole that underlines pretty much the same goals of higher education: critical inquiry, autonomy, and creativity (Ministrstvo za visoko šolstvo, znanost in tehnologijo [Ministry of Higher Education, Science, and Technology], 2011).

However, as Amiran points out, this goal is sometimes difficult to achieve because of the market and economic pressures on higher education institutions. Too often these realities take a heavy toll on critical inquiry and student autonomy. Amiran thus points out several points of conflict between “Socratic and economic aims” of higher education (Amiran, 2006, p. 553–7):

1. Limited access to higher education: even though in theory every hard-working student should have an opportunity to access higher education, merit-based scholarships nonetheless favor well-to-do students, as those (because

- of their favorable demographic background) are more likely to score high in tests and be competitive.
2. Faculty recruitment and student/faculty ratio: even though research and experience show that learning works best in small groups, colleges and universities are under pressure to hire “academic stars” in order to attract a large number of students. Universities and colleges thus rather employ a small number of reputed scholars instead of a larger number of well qualified teachers. In turn, this leads to packed lecturing halls instead of small groups of students, thus lowering the quality of teaching and minimizing the opportunity of students to actively and critically engage in the pedagogical process.
 3. Choice of a curriculum: liberal arts – mathematics, music, astronomy, literature, and philosophy – were and still are conceived as “essential to the education of wise, civic-minded leaders” (Amiran, 2006, p. 556). However, higher education institutions are under heavy pressure to introduce “applied” sciences like engineering, accounting, and finance. Since these study programs often require substantial investment (laboratory equipment etc.), their introduction comes at a considerable cost to liberal arts: normally, funds are cut in the liberal arts and humanities departments in order to finance currently popular and financially more demanding programs. This results in the loss of basic science research and teaching in favor of supposedly more “applicable” skills and competences which can have detrimental long-term effects on progress and development (Grušovnik, 2015).

Critical and autonomous thinking is thus often joined with another aim of contemporary university: the economic success. Indeed, while European Commission’s higher education policy does favor Socratic ideal, it nonetheless strongly emphasizes this latter aim – the “success” of graduates after finishing university programs: “High quality and relevant higher education is able to equip students with the knowledge, skills and core transferable competences they need to succeed after graduation, within a high quality learning environment which recognizes and supports good teaching” (European Commission, 2017). The “success” is here seen as success in labor market, the ability to find high-paying jobs in good working environment that fosters personal career development. The “employability,” then, can be seen as another important aim of higher education, often conflicting – as we have seen above – with the Socratic ideal.

The quality of higher education institutions is, however, much more easily assessed according to this economic aim: employability of students in a certain period after graduation can be measured much more easily than “critical” or “autonomous” thinking, and perhaps this is also one of the reasons why economic goals of universities gained in their importance in our increasingly quantitatively oriented societies, where quality is often seen as correlated with measurable figures.

Needless to say, such orientation has a detrimental impact on more qualitative results of teaching and learning in higher education institutions, since the later are much more difficult to assess and are consequently at risk of being overlooked.

In addition to these two central and often very explicitly – even officially – stated aims of higher education institutions, Lawrence Stone's (2005) chapter on the history of Oxbridge and Edinburg university culture provides fascinating insight into the aims and goals of higher learning that are not so often mentioned, even though they have a tremendous impact on student life. Reminiscent of both Aristotle (Pol. 1337^b 35)¹ and Komensky (DM, VI, 7),² Stone sees an important – even the central – latent function of the university in “the difficult task of keeping adolescents out of mischief at their most impossible age, when they are most likely to run wild” (Stone, 2005, p. 16). In this sense, then, an important goal of higher education is simply to occupy young, curious minds with subjects deemed suitable for them by society. The idea that higher education also has such *moral aim* is expressive of Herbart's and Humboldt's vision of university's *Bildung*³ as ultimately moral education – the education for the highest aim of humanity (cf. Bowen, 2003b, p. 233). In addition to that, universities also provide young people with vibrant cultural life: “Another enduring latent function of the university has been to provide the undergraduate with access to a luxuriant and an exciting adolescent subculture” (Stone, 2005, p. 17). Moreover, universities also have an important latent aim connected with social control and/or mobility. In this sense, their goal is:

“to provide a new generation of elite with those skills and values deemed necessary for future leadership roles, and to allow these elite to make influential friends and contacts who will come in very useful in later life. In this respect, great universities are instruments of hierarchy and social stasis. On the other hand, they also serve to open up channels of upward social mobility for bright and ambitious sons of the poor, supported by scholarships; and also a shelter for the germination and fruition of new and possibly subversive ideas” (Stone, 2005, p. 16).

Needless to say, higher education policy should emphasize the role of universities in stimulating social mobility while preventing them to become elite institutions that protect the privileges of well-to-do citizens. This, in turn, means

1 Aristotle's *Politics* is cited in accordance with traditional method, referring to Bekker's pagination.

2 *Didactica Magna – The Great Didactic*, chapter VI., paragraph 7. (Comenius, 1907, p. 55)

3 “*Bildung*” is traditional German concept meaning foremost “the education of humanity” (Beiser, 1998, p. 284). The English word “education” itself comes from Latin proposition “*e*” (meaning “from”) and verb “*duco, ducere*” (meaning “to guide”): the “moral” dimension is thus always implicit in education, which can be etymologically understood as the process by which an individual is shaped, “guided” from his/her undeveloped to the developed state.

that higher education should become or remain free for all, or at least that merit-based scholarships should indeed go into the right hands and be granted to those that are less privileged.

Besides nourishing critical thinking and preparing students for their professional careers (and thus contributing to economical goals of society), universities then also have important social goals – keeping young minds busy and thus preventing talented people to waste their intellectual potential by directing their attention to worthy subjects, providing young adults with creative culture, and helping those that are economically and demographically deprived to attain a better social position on the basis of their skills and abilities (and thereby contributing to social equality and justice). These goals are especially important if we keep in mind that society is a holistic complex of various interrelated factors, and that properly functioning democratic states are unimaginable without cultured, informed, engaged, and interested citizens. The assessment of the quality of higher education should, then, take into account all these aims and functions of higher education: focusing only on explicitly stated goals would be too reductionist and would not do justice to a complex of effects that higher education has on our social lives and our societal wellbeing. Finally, if mentioned social goals are taken into account when the quality of higher education is under assessment, it can turn out that universities are better in accomplishing these than in achieving Socratic ideals and economic aims.

EXCELLENCE IN TEACHING AND LEARNING IN HIGHER EDUCATION

As said in the Introduction, the questions about good teaching and learning practice relate closely to the question of aims and goals in education. Thus, for instance, Socratic aim of striving towards critical inquisitive minds relates to “Socratic education,” emphasizing what we today fashionably call “student-centered learning”. The idea that students should be active in pedagogical process, that they should discover important truths by themselves – indeed that the *only way* one can learn something is by her- or himself – thus dates back almost two and a half millennia.

One of the traditional places where this idea can be found in its articulated form is Plato’s *Republic*. This Plato’s view – expressive of Socrates’ own ideas – can be found immediately after the famous “Allegory of the cave”. Engaged in a traditional Platonic dialogue with Glaucon, Socrates criticizes the Sophists’ idea of education as knowledge transmission and develops his own vision of education as “the art of turning around” in the following way:

“Then, if this is true,’ I said, ‘we must hold the following about these things: education is not what the professions of certain men assert it to be. They presumably assert that they put into the soul the knowledge that isn’t in it, as though they were putting sight into blind eyes.’

‘Yes,’ he said, ‘they do indeed assert that.’

‘But the present argument, on the other hand,’ I said, ‘indicates that this power is in the soul of each, and that the instrument with which each learns – just as an eye is not able to turn toward the light from the dark without the whole body – must be turned around from that which *is coming into being* together with the whole soul until it is able to endure looking at that which *is* and the brightest part of that which *is*. And we affirm that this is the good, don’t we?’

‘Yes.’

‘There would, therefore,’ I said, ‘be an art of this turning around, concerned with the way in which this power can most easily and efficiently be turned around, not an art of producing sight in it. Rather, this art takes as given that sight is there, but not rightly turned nor looking at what it ought to look at, and accomplishes this object” (Rep. 518 b–d).⁴

As Paul Woodruff points thus out, the “Socratic education puts the responsibility for learning on the learner” (Woodruff, 1998, p. 14). Indeed, “Nothing is more important to this kind of education than the resources that learners bring to it: their experience, their conceptual and logical abilities, and their desire to know the truth.” (Ibid.) The Socratic education, then, has three interrelated features, connected with “1. an emphasis on critical and consistent thinking; 2. a unique concept of teacherless education, contrasted with teaching both as it occurs in Athens and as it would occur in ideal circumstances; 3. the hope that education in philosophy has the potential to transform people’s lives for the better” (Woodruff, 1998, p. 14).

We have seen in the previous section that Socratic aim often comes in conflict with economic interests and consequent pressure put on the higher education institutions to produce large numbers of degrees. Since Socratic education favors a learning community in a small-scale environment and sufficient time to reflect critically on educational topics, it often has to be abandoned in large lecturing halls, packed with students under time pressure. Indeed, Socratic education is rare outside elite institutions, and average faculties usually submit to the socio-economic imperative of “knowledge production,” thus resembling Sophist education. Nonetheless, progress is made in this area as well, partly also because many institutions require their faculty to have an educational certificate and because educational science took interest in university didactics.

⁴ Plato’s *Republic* is cited according to the traditional method – the Stephanus pagination. The quote can also be found in Plato, 1968, p. 197.

Another ideal of learning and teaching excellence is undoubtedly connected with the idea of “experiential learning,” i.e. learning based on “concrete” experience and practice, and not on “abstract” rules or ideas. The idea that the “abstract” knowledge has its basis in “concrete” experience comes ultimately from Aristotle, but was reinterpreted by Comenius and Locke and finally found its way into curricula where it dominates to this day. Again, we deal with an ideal that is – contrary to common perception – nothing new. Indeed, its history can be traced back more than 300 years to Locke and his famous *Some Thoughts concerning Education*. There Locke envisioned practice-based education for young children, but its precepts can easily be applied to all teaching and learning situations, including higher education. Locke’s emphasis on “practical” education is explicated in the following way:

“But pray remember, children are not to be taught by rules, which will be always slipping out of their memories. What you think necessary for them to do, settle in them by an indispensable practice, as often as the occasion returns; and, if it be possible, make occasions” (Locke, 1824 [1690], § 66, p. 46).

As Locke sees it, one should, for instance, teach language by “talking it into children in constant conversation, and not by grammatical rules.” (Ibid., § 162, p. 152)

While experiential education is rightly widely considered as the most promising method of teaching and learning, it nonetheless has two problems when it is applied to higher education. The first problem is connected with high costs of such education, thus resembling the conflict between Socratic aims and economic goals. Similar to Socratic education, experiential education demands that teachers pay close attention to *individual* students: “The centrality given by Locke to particulars in his metaphysical system is reflected in his account of persons and in his work on education. Each child is to be dealt with individually” (Yolton, 1998, p. 174). This is, however, nearly impossible in modern higher education settings with packed lecturing halls and limited resources. The idea of “practical” education is thus under pressure from imperative to produce as many graduates as possible, practically compromising the ideal of learning by practice with the teacher’s guidance.

While this first problem of Lockean experiential education in higher education could, at least in theory, be solved with more funds and faculty, the second problem is more profound and touches on problematic ontological and epistemological aspects of Lockean empiricism. For Locke, experience is namely “simple” and the attitude between sense data and ideas is a one-way relation: from experience to theory. However, since Kant, Hegel, Dewey, Wittgenstein, and Kuhn

– to name only a few great thinkers – we know that “theory” informs “experience” and even that there is no such thing as theory-independent, objective sense data. As John Dewey showed, “experience” always unfolds in “experiential continuum” where past and future experience determine the quality of current experience (Dewey, 1963, p. 35). To put it simply: what we experience right now is a consequence of what we already know – thus, if one for instance knows that Newton’s law of universal gravitation applies to *all objects*, one will *experience* Moon’s motion around Earth as identical to an apple’s falling to the Earth’s ground. Thus, teaching *theory* can be very *practical* indeed, since it transforms the way we see and think about the world and the phenomena; also, it would be very time-consuming to count on students to deduce all theory that is relevant for their field from their own experience, since this process took several hundred years and for a long time employed some of the greatest minds that ever existed. Indeed, it would be irresponsible not to teach theory to students and count only on “practice”. Thus the calls for more “practice” in higher education should be properly contextualized; one should not simply understand them as “more practice” and “less theory” but sooner as “more theory-informed” practice, for bad practice is equally detrimental to good education. Such theory-informed practice can, for instance, operate in such a way that experience is correlated with theory, and that theory is taught on the basis of “examples” from concrete settings. Similarly, calls for more “applicability” should also be taken *cum grano salis*: since the economy is changing quickly, what *seems* applicable today can soon become outdated. Thus teaching students only what looks applicable in this moment and neglecting a more broader education can actually rob students of knowledge that is more long-lasting and could be used in future and unpredictable situations (cf. Grušovnik, 2015).

As shown in this section, excellence in teaching and learning in higher education can be understood as a proper implementation of Socratic education and experiential learning: the outcomes of both are engaged students that are able to critically and autonomously reflect on issues that they encounter. Quality assessment of higher education should thus take into account these elements, but it should also remain realistic (give the economic pressures on universities) and it should not fall prey to the idea of “more practice” and even economy-driven demand for “applicability,” since these two – if not properly implemented – can have detrimental long-term effects on university education.

CONCLUDING REMARKS: A HISTORICAL APPROACH TO THE SOCIAL RELEVANCE OF HIGHER EDUCATION

Since its inception university as an institution of higher education was influenced by social, political, and economic factors. First universities – such as those in Paris and Bologna – developed out of so called “cathedral schools”. The latter, as their name suggests, were schools attached to cathedrals where bishops normally had their seat. The primary goal of these schools, which flourished around tenth century, was education of clergy. The overarching educational ideal of that period – connected also with Alcuin’s (c. 730/735 – 804) educational strivings and Charlemagne’s *renovatio* and *schola palatina* – was “*pietas literata*”, or “educated devotion”. Primary subject was instruction in grammar and rhetoric; however, Alcuin also worked hard to provide standardized Latin version of Vulgate, as well as other manuscripts deemed necessary by his vision of well-educated *Imperium Christianum*, together with a standardized book hand, now known as Carolingian minuscule. As the church developed and as the economy of the middle ages improved, the need for cadres – especially lawyers, theologians, and teachers – increased, thus giving rise to the *studium generale* which later became known as the “university”:

“The task of providing a wider secular education in the eleventh and twelfth centuries had been taken up by the cathedral schools, which, from their embryonic form in the sixth and seventh centuries, had expanded rapidly to accommodate the needs of learning and scholarship in the period of intellectual and economic activity after the European revival of the tenth century. As the twelfth century progressed into its later decades, concern with the classification and content of studies, with a view to increasing their relevance to human affairs, had become a greater preoccupation of scholars in the cathedral schools. In that period some of those schools began to assume a more corporate character and in the relatively short period of a century they developed into the new institution of the university, or *stadium generale* as it was first called, which emerged to meet the overwhelming need to provide for the training of lawyers, schoolmasters and clerics to fill the ranks of the increasingly sophisticated administration of both church and state” (Bowen, 2003a, p. 105).

First universities tried to provide cadres for emerging needs as a result of social and societal development and progress. As the name – *universitas* – itself suggests, these institutions were foremost guilds of craftsmen (i.e. schoolmasters) and were organized according to the principles of the economy of the middle ages. This is very important to bear in mind, since it indicates that the production and

transmission of knowledge in universities was from the very beginning connected with the stately and/or papal power – the idyllic notion of old universities as removed from real life, almost other-worldly institutions, dedicated only to contemplation of universal truths and transmission of transcendent knowledge, is simply poorly informed. Indeed, since its inception university was an institution of crisis: maybe the most explicit example of this fact is the so-called “university of Paris strike of 1229” which lasted more than two years. Moreover, the introduction of Aristotle’s works (mostly from developed Islamic cultures) challenged the ideas and ideology of church (which was at that time mostly Neoplatonic), thus triggering major knowledge-crisis and social upheaval. The university, then, was never a stable institution; to the contrary, since it represented the battle ground for various political interests, it was almost always in crisis, and periods of its flourishing alternated with periods of general degradation and decay of university culture over the centuries. This fluctuation can, for instance, be traced back to the history of Cambridge, Oxford, and Edinburgh Universities:

“Thus over the centuries the self-image of the university has fluctuated wildly between that of an authoritarian dictator of established wisdom in religion, politics, philosophy, morals and all academic topics, to that of an intellectual liberator which has deliberately set out to encourage a spirit of free enquiry. The latter periods have, however, historically been few and fairly short” (Stone, 2005, p. 16).

Indeed, even the famous “Humboldt university” fluctuated between periods of openness and progress on the one side and conservative reaction on the other side, as its primary aim was *moral education* (cf. Bowen, 2003b, p. 233). It would thus be incorrect to think that our times are special in the sense that we live in a “special” age of academic degradation (even if this degradation would be a well-proven fact).

What can be learned out of these historical remarks? First of all, university was always immersed in broader socio-economic events in the society: keeping this in mind – together with the fact that university culture has a much more broader impact on society than only knowledge-transmission (as has been shown in the first section of the present chapter) – one should always tend toward a holistic approach to the problem of higher education. Foremost this means that it is nearly impossible to take into account both, all of the impacts that university culture has on society and social development as well as economic and political factors that determine the fate of higher education. The issue of “quality” in higher education should thus be approached carefully and holistically, and it should not be reduced only to the numbers of graduates or their employability. Moreover, as Stone (2005) shows, the periods in which universities flourished were marked by

relative independence and freedom; putting additional administrative constraints on universities (with bureaucracy, changing economic visions, constant revisions of curricula etc.) can thus sooner hinder the development of the productive learning environment on these institutions rather than improve their functionality.

REFERENCES

- Amiran, R. M. (2006). Ethics and the Aims of American Higher Education. In R. Curren (ed.), *A Companion to the Philosophy of Education* (pp. 551–560). Oxford: Blackwell.
- Aristotle. (1998). *Politics*. Translated by Reeve, C. D. C. Cambridge: Hackett Publishing Company.
- Bahovec, E. (1992). Avtoriteta in vzgoja [Authority and Education]. In E. Bahovec (ed.), *Vzgoja med gospostvom in analizo* (pp. 7–21). Ljubljana: Krtina.
- Beiser, F. C. (1998). A Romantic Education – The concept of *Bildung* in early German romanticism. In A. Oksenberg Rorty (ed.), *Philosophers on Education: New Historical Perspectives* (pp. 284–299). London: Routledge.
- Bowen, J. (2003a). *A History of Western Education – Volume II – Civilization of Europe: Sixth to Sixteenth Century*. London: Routledge.
- Bowen, J. (2003b). *A History of Western Education – Volume III – The Modern west: Europe and the New World*. London: Routledge.
- Comenius, J. A. (1907). *The Great Didactic*. Translated by Keatinge, M. W. London: Adam and Charles Black.
- Curren, R. (2006). Introduction. In R. Curren (ed.), *A Companion to the Philosophy of Education* (pp. 1–4). Oxford: Blackwell.
- Dewey, J. (1963). *Experience and Education*. New York: MacMillan.
- European Commission (2017). *Quality and relevance in higher education. Education and training: supporting education and training in Europe and beyond*. Last updated: December 26, 2017. https://ec.europa.eu/education/policy/higher-education/quality-relevance_en
- Grušovnik, T. (2015). Problem uporabnega znanja v vzgojno-izobraževalnem sistemu [The Problem of Applied Knowledge in Educational System]. In T. Grušovnik (ed.), *Obzorja učenja: vzgojno-izobraževalne perspektive*. Koper: Annales.
- Locke, J. (1824 [1690]). Some Thoughts concerning Education. In *The Works of John Locke in Nine Volumes*, vol. VII (twelfth edition), pp. 1–205. London: Rivington.
- Ministrstvo za visoko šolstvo, znanost in tehnologijo [Ministry of Higher Education, Science, and Technology] (2011). *Nacionalni program visokega šolstva 2011–2020 ter raziskovalna in inovacijska strategija Slovenije 2011–2020*. Published: June 2011. <http://www.drznaslovenija.mvzt.gov.si/pr01.html>
- Oksenberg Rorty, A. (1998). The Ruling History of Education. In A. Oksenberg Rorty (ed.), *Philosophers on Education – New Historical Perspectives* (pp. 1–13). Oxon: Routledge.
- Plato (1968). *The Republic of Plato*. Translated by Bloom, A. New York: Basic Books.
- Stone, L. (2005). Social Control and Intellectual Excellence – Oxbridge and Edinburgh (1560–1983). In McCulloch, G. (ed.), *The Routledge Falmer Reader in History of Education* (pp. 15–32). Oxon: Routledge.

Yolton, J. W. (1998). Locke: Education for Virtue. In A. Oksenberg Rorty (ed.), *Philosophers on Education – New Historical Perspectives* (pp. 173–189). Oxon: Routledge.

Woodruff, P. (1998). Socratic Education. In A. Oksenberg Rorty (ed.), *Philosophers on Education – New Historical Perspectives* (pp. 14–31). Oxon: Routledge.

Emina Kopas-Vukašinić
University of Kragujevac, Faculty of Education
Jagodina, Serbia

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Jurka Lepičnik-Vodopivec
University of Primorska, Faculty of Education
Koper, Slovenia

TEACHER AS A CONCEPTION OF ENHANCING THE QUALITY OF UNIVERSITY EDUCATION¹

Abstract: The quality of university education defines creating of scientific knowledge and development of professional competencies for the members of the social community. In the era of the continuous scientific, technical, technological development and changes which emerge in these conditions, the quality of a university education, at the same time, means a continuous changing of pedagogical acting in work with students, which defines the accomplishments of those who are taught. The objective of the current researchers was to determine whether and in which way students of faculties of education from Slovenia and Serbia, who are educated for the future pedagogical work with children of preschool and school age, recognize and define a teacher as a component of enhancing the quality of a university education. For the needs of this research the five-grade rating scale was prepared. The sample consisted of the students of faculties of education from Kopar (Slovenia) and Jagodina (Serbia) (N = 258 for rating the indicators of quality of a university teaching, N = 253 for rating the indicators which define the students' interests in engaging into learning activities, N = 170 for rating the indicators which define work responsibility of the teacher. The results of the research confirm that students recognize the readiness of teachers to implement diverse teaching methods and work forms, the quality of teachers' class preparation and regular organizing of lectures as prior indicators of the quality of university teaching and teachers' activities. Such results define further steps in the direction of research and enhancing the quality of university education which refers to teachers' competencies for teaching, encouraging students, communication and cooperation with them.

Keywords: quality of university education, teaching competences, organizing of teaching activities, work responsibility of a teacher, accomplishments of students.

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INTRODUCTION

The actuality of the issues regarding the quality of university education within European frameworks is indicated by the strategic direction of the development of education in Serbia and Slovenia, until 2020. It has been pointed out that the activity of higher education is of a special significance and it represents a part of international educational, scientific and artistic sector. The mission of higher education is possible to review through organized research studies. In this way, it has contributed to creating and transfer of scientific knowledge and expert competences, which define economic, social and cultural development of an individual and the community to which they belong (*Strategija razvoja obrazovanja u Srbiji ...*, 2012). It has been emphasized that higher education will adjust its work and development to the principles on which the European Higher Education Area (EHEA) and the European Research Area (ERA) are based, and therefore it is necessary to put the learning outcomes, knowledge, skills and students' competences into the focus of the implementation of the Bologna process. Promoting the paradigm "Student-centred learning and Lifelong learning" (*Strategija razvoja obrazovanja u Srbiji...*, 2012: 87). For university teachers the European standards for internal ensuring quality in high schools are of a great significance. These standards indicate that there is a clear policy and procedure for ensuring the quality of teaching programs. It means the possibility for periodical revision of these programs and their accordance (Spasić and associates, 2002). The quality of contemporary education involves its context of openness in: 1) *open teaching program* which is defined and adjusted to the needs, abilities and interests of those taught; 2) *open learning* which is defined by new ideas and conceptions of all participants in learning and teaching; 3) *open accomplishment evaluation* in which those who learn and those who teach (educators) participate; 4) *open platforms* which assume and support dynamic and interactive educational community in which the information and the data significant for those who learn and those who teach are interchanged, and which can be beneficial for the development of standards for ensuring the quality of education (Yuan and Powell, 2013).

Since 1999 we have been witness to great changes in the field of higher education in Slovenia. The number of students has increased. In 1991 there were 64.000 students in Slovenia, in 2009 there were 114.873. In the period from 1999 to 2008 the mobility of students, teachers and associates in higher education within Erasmus projects increased too. In that period Slovenia participated in the Bologna process actively and constructively, as a member of the European Union it was obligated to use the Lisbon strategy (Rezolucija 2011–2020. Nacionalni program za visoko obrazovanje). The strategy of internationalization of Slovenian higher education includes the vision in five key areas: mobility as a key part of a

higher education society, an open international environment, quality international scientific research and development cooperation, promoting the development of intercultural competencies, support and monitoring of the strategy of internationalization of Slovenian higher education. All these result in continuous search for contemporary approaches to teaching at university level and improving the present practice.

THEORETICAL APPROACH TO THE PROBLEM

Interest in the research of university education is found as early as the works of J. Dewey, in 1960s and the real interest in research of the phenomenon appears by the end of the twentieth century (O'Sullivan, 2004). Kranjec (1982) and Marentič Požarnik (1980) note that in Slovenia they begin with research of university education and studying the phenomenon of students' motivation for learning and education, and the research of their satisfaction with the studies. They found out that the most important factors of student motivation were the purpose and success in learning, feedback on learning advancement, interests in certain subjects, praises and possibilities for competition (Cvetek, 2015).

Besides strategic indicators for the development of higher education and the initial research issues, it is important to review the possibilities of improving its quality in the context of teachers' competencies. According to *Standardi kompetencija za profesiju nastavnika i njihovog profesionalnog razvoja*, these competencies are defined in relation to the learning objectives and outcomes and they contribute to developing professional standards for successful teaching. In the mentioned document, teachers' competencies are classified into four basic groups: 1) competencies for teaching area, subject and methods of teaching; 2) competencies for teaching and learning; 3) competencies for encouraging the development of students' personality and 4) competencies for communication and cooperation (*Standardi kompetencija za ...*, 2011). The research has confirmed that the professional competences of teachers define their feeling of contentment in their job, as well as their personal confidence and self-efficiency in the situations when they recognize the accomplishments of those they teach in the context of strategic directions for mutual learning (Boud, Cohen & Sampson, 2013; Florian & Pantić, 2013). Also, as reflexive practitioners, teachers are ready to continually introduce changes and make the teaching activities more complex, in accordance with abilities and interests of the learners/students, and also in accordance to material-technical and spatial conditions, to give the students help, encouragement and support. Professional development and acquired experiences in teachers' work, identification of possible problems and finding possible solutions define

the direction of their further professional engagement and development (Kadum, Lepičnik-Vodopivec and Hmelak, 2017).

The synonym for the quality of higher education can be found in *Student-centred learning*, (2010) which in the first place emphasizes the transparent methods for the students: timely feedback on the quality of educational process, asking for students' opinion on the content, teaching plan and program, methods of teaching and evaluation, including students into elaboration of the program of quality, equal participation of students in commissions, organized procedures by which students can complain about the decisions on their academic accomplishments or advancement, creating learning outcomes, representatives of teachers and students as full members of the boards which examine the assurance of quality etc.

High quality university education includes learning through problem solving, group project work, active learning, learning from diverse resources, case study, role playing, workshops, team work, presentations, using the web conference environment – especially in education with small groups. In this way, the students learn to work in a team, they recognize and enhance their knowledge and abilities. Also, it is important that students, after the task has been accomplished, give their comments on the accomplished task, get the feedback on their accomplishments, suggest grades for themselves and they agree on the grades.

Marinko (2016) concludes that in a traditional system of education the important elements of a study program are: knowledge and the teaching process. European Credit Transfer and Accumulation System (ECTS) is a tool for development, description and implementation of study programs, as well as for the competencies in university education. ECTS is a students' oriented system of obtaining and transfer of credit, on the basis of vivid study results and learning processes. The goal is to facilitate the process of planning and performing the teaching units, implementation of teaching and learning, assessment, accreditation and validation of the results, and also the possibility of students' mobility. ECTS is a system which is focused on students, since it helps the faculties to recognize the needs and expectations of the students. Contemporary studies imply the interdisciplinary and multidisciplinary approach to teaching, as well as the active individual teaching methods. Experiential learning is significant because it connects theoretical knowledge with practical activities and learning in real life situations. Therefore, a university teacher should be able to synthesize knowledge from diverse areas and to be capable of teaching in multicultural circumstances. This way of teaching focuses on students and it includes teaching methods that shift focus from the teacher to the student. The students become active and responsible participants in their own learning and they gradually develop their autonomy and independence.

By examining the students' initiatives in teaching, which is determined as the indicator of the quality of a higher education, it has been confirmed that the students recognize the quality of contemporary teaching and the quality of teachers' work. Their attitudes on the quality of teaching to a great extent match with the theoretically confirmed and expected strategic outcomes in the system of higher education. It has also been confirmed that in teaching activities, which are stimulating for students, there is the evident consistency, objectivity, transparency and preciseness of the teachers' work, as well as the quality of the teachers' work is defined by their multifunctional roles in the teaching process (Kopas-Vukašinović and Jovanović, 2018).

When discussing the quality of higher education, we present a part of the research results which were published in 2017 by the Faculty of Education of the University of Kragujevac (Jagodina). One of the research tasks was to determine how certain roles of a teacher are significant for the innovation of teaching process, in relation to the strategic directions of development and improving the university education. It was concluded that the strategic directions of the education development determined the roles of a teacher for the innovation of teaching process and indicators for ensuring quality (*Standardi i smjernice za...*, 2005; *Strategija razvoja obrazovanja...*, 2012). These roles imply providing resources for quality education, but also the efficient communication of those who teach and those who learn. In their scientific and specific fields, teachers are expected to continually align their teaching practices with current innovative approaches in education, and also with the requirements of contemporary education (Kopas-Vukašinović, 2017).

The presented theoretical conceptions of the quality of university teaching, as well as the presented research results, confirm our initial statement in this paper, that the teachers' competencies, as well as their work in teaching activities and their relationships with students significantly define the quality of a university education. In accordance to that, the methodological approach to the problem is further developed in this paper.

THE RESEARCH METHODOLOGY

The goal of the research was to find out whether and in which way the students of faculties of education from Slovenia and Serbia, who are educated for the future pedagogical work with preschool and school aged children, recognize and conceive the teacher as a component of improving the quality of university education. This goal was achieved through the research tasks which refer to: 1) components of the quality of university teaching; 2) components of students' interests in engagement of the teaching activities and 3) components which determine the teachers' work responsibility.

In this research the descriptive method and the scaling procedure were used. The rating scale was prepared for the needs of this research. The random sample consisted of students of Faculty of Education of the University of Primorsko, Kopar (Slovenia) (N = 205 students for rating the components of the quality of university teaching, 200 students for rating the components which determine students' interests in engaging into teaching activities and 117 students for rating the teachers' work responsibility) and students of the Faculty of Education of the University of Kragujevac, Jagodina (Serbia) (N = 53 students for rating all the three categories).

THE RESEARCH RESULTS WITH DISCUSSION

The components of the quality of university teaching

The first research task was to define how students of pedagogical faculties from Slovenia and Serbia rate the presented components of the quality of the university teaching, which had been presented in the rating scale as requirements and tasks for teachers. In the rating scale the following components were offered to them: 1) organizing of teaching at the Faculty; 2) clearly defined class objectives, the significance of the content and the possibilities of their implication into practice; 3) the application of various teaching methods and forms; 4) the application of up-to-date technology; 5) regular evaluation of students' accomplishment.

According to the data presented in *Table 1* we can conclude the following:

- Among the offered statements which were assumed to be the significant indicators of the quality of university teaching, the largest number of the interviewed students both from Slovenia (35,61%) and from Serbia (41,58%), *as the prior component recognized the implementation of various teaching methods and forms of teaching performance*. The current researchers had expected the high rating of this component, bearing in mind that the diversity of teaching forms and methods of work, on the condition they are planned and used in teaching adequately, can stimulate students for a greater activity and thinking, make them more interested in teaching contents and stimulate the development of their ability of linking and implementing the acquired knowledge in new teaching and practical situations.
- An interesting fact is that *the implementation of up-to-date technology, as a component of the high quality university teaching* was rated badly by the students both from Slovenia and Serbia. The greatest number of students from Serbia (49,06%) put this component as low as on the fourth position, out of

the possible five positions in the scale, while the greatest number of students from Slovenia (39,51%) put it on the last, the fifth position. These indicators confirm the assumption that the application of up-to-date technology does not include the quality of teachers' work in all situations, since it is important when, how and why we use certain teaching aids. Effectiveness and efficiency of the application of up-to-date technology define its significance in the organizing of teaching activities.

- *Clearly defined class objectives, the significance of the contents and the possibilities of their implementation into practice*, as a component of university teaching, was also highly rated by the students from Slovenia and the greatest number of them positioned it to the second place (27,80%), while the greatest number of students from Serbia rated it to the third place (41,51%). That definitely means this component is also the significant indicator of the quality of teaching, since the results confirm that totally 81,18% students from Serbia and 68,78% of students from Slovenia rated it from the first to the third place.
- Discussing *the organizing of teaching in faculties*, it was explained to the students that this component assumes that teaching is organized in smaller groups, that there are not too many breaks, i.e. gaps between lectures, the realization of the pre-exam obligations is well planned, timely informing students on the organizing of teaching, exams and other teaching obligations. The results confirm that the students from Slovenia (29,27%) and the students from Serbia (33,96%) in the greatest number rated this component to the third place, and totally 82,44% of students from Slovenia and 94,34% of the students from Serbia positioned it from the first to the third place. This justifies the current researchers' assumption that the students recognize the organizing of teaching as the significant component of its quality.
- As a control statement in the rating scale the current researchers determined *the regular accomplishment evaluation of students*, as a component of quality of a university teaching. As the current researchers had assumed, the largest number of students did not recognize this statement as the important component of the quality of a university teaching. The largest number of students both from Slovenia (36,27%) and from Serbia (56,61%) positioned this component to the last, the fifth place on the rating scale. By all means, it does not imply that the regular accomplishment evaluation of students is not important for their advancement, but it is not relevant for the quality of teaching performance.

Table 1. Rating the components of quality of university teaching

The components of quality of university teaching		Rating the components					Σ	
		1.	2.	3.	4.	5.		
SERBIA	Organizing of teaching at the Faculty	16	16	18	1	2	53	
		30,19%	30,19%	33,96%	1,89%	3,77%	100 %	
	Clearly defined class objectives, the significance of the content and the possibilities of their implication into practice	10	11	22	9	1	53	
		18,87%	20,75%	41,51%	16,98%	1,89%	100 %	
	The application of various teaching methods and forms	22	16	5	6	4	53	
		41,51%	30,19%	9,43%	11,32%	7,55%	100 %	
	The application of up-to-date technology	4	4	5	26	14	53	
		7,55%	7,55%	9,43%	49,06%	26,41%	100 %	
	Regular evaluation of students' accomplishment	1	5	5	12	30	53	
		1,89%	9,43%	9,43%	22,64%	56,61%	100 %	
	SLOVENIA	Organizing of teaching in the Faculty	54	55	60	25	11	205
			26,34 %	26,83 %	29,27 %	12,20 %	5,36 %	100 %
Clearly defined class objectives, the significance of the content and the possibilities of their implication into practice		42	57	42	37	27	205	
		20,49 %	27,80 %	20,49 %	18,05%	13,17%	100 %	
The application of various teaching methods and forms		73	47	45	30	10	205	
		35,61%	22,93%	21,95%	14,63%	4,88%	100 %	
The application of up-to-date technology		19	15	34	56	81	205	
		9,27%	7,32%	16,58%	27,32%	39,51%	100%	
Regular evaluation of students' accomplishment		17	31	25	57	74	204	
		8,34%	15,20%	12,25%	27,94%	36,27%	100%	

Students' interest in engagement in teaching activities

The second research task was to find out how students of faculties of education from Slovenia and Serbia rate the presented components which define their interest in teaching activities. In the rating scale the following components were offered: 1) the quality of teacher's class preparation; 2) regular monitoring students' activities and the system of evaluating their accomplishments; 3) a teacher finds the ways to engage students; 4) teacher's consistency in requirements and ways of evaluating students' accomplishments; 5) connecting the previous and the new contents.

On the basis of the data presented in *Table 2* we can conclude:

- When the current researchers discuss the *quality of the teacher's class preparation*, the largest number of students from Serbia (33,96%) and from Slovenia (34,00%) positioned this component to the first place, which confirms the current researchers' assumption that the quality class preparation of the teacher is the indicator of the quality of his work with students and that students can assess the quality of the preparation very well.
- *Regular monitoring students' activities and the system evaluating their accomplishments* we marked as the control statement in the rating scale. Students from Serbia positioned this component equally (24,53%) to the third and the fifth place in the rating scale. The greatest number of students from Slovenia positioned this component to the last, the fifth place (34,00%). Therefore it can be assumed that students appreciate both regular monitoring of their activities by teachers and the clearly defined system of evaluating their accomplishments, but they do not consider this component relevant for encouraging their interest in engaging in teaching activities.
- An interesting fact is that the largest number of students from Serbia (28,30%), as well as the largest number of students from Slovenia (35,50%), positioned *the teacher's ability to find ways of engaging students* to the first place. The relevance of this research outcome confirms the fact which the current researchers had presented in the first task that the largest number of the interviewed students from Slovenia and Serbia as a prior component of the quality of university teaching define the application of various teaching methods and forms of teaching performance.
- *Consistency of a teacher in requirements and ways of evaluating students' accomplishments*, was mostly rated to the fourth place, by the students from Serbia (32,08%), as well as by the students from Slovenia (32,00%). The current researchers were not surprised by this result, since they had supposed that the students would recognize this component as a prior component related to the encouraging of their interests in engaging in teaching. The open

question is why students did not recognize the consistency as a significant component, and it can be used as a starting point for our further research.

- *Connecting the previous to the new teaching contents* was not recognized by the students as a significant component of their interests in teaching activities. Students from Serbia rated it variously and in “a scattered way” and they positioned it to almost identical range, from the first to the fifth place. Students from Slovenia, in the largest number (27,50%), rated it on the last, fifth place. It can be assumed that the students did not recognize the significance of connecting the previous with the new teaching contents that these connections contribute to fostering a higher quality of knowledge and its transfer to new situations. This opened the question whether the reasons for such a rating of this component can be found in the present organization of teaching activities, which do not develop in students, or they do not develop sufficiently, the abilities of the mentioned interconnections of teaching contents.

Table 2. Rating the components of students' interests in engaging in teaching activities

The components of students' interests in engaging into teaching activities		Rating the components					Σ
		1.	2.	3.	4.	5.	
SERBIA	The quality of teacher's class preparation	18	11	13	7	4	53
		33,96%	20,75%	24,53%	13,21%	7,55%	100 %
	Regular monitoring students' activities and the system of evaluating their accomplishments	6	11	13	10	13	53
		11,32%	20,75%	24,53%	18,87%	24,53%	100 %
	A teacher finds the ways to engage students	15	9	10	10	9	53
		28,30%	16,98%	18,87%	18,87%	16,98%	100 %
	Teacher's consistency in requirements and ways of evaluating students' accomplishments	3	12	5	17	16	53
		5,66%	22,64%	9,43%	32,08%	30,19%	100 %
	Connecting the previous and the new contents	11	10	11	10	11	53
		20,75%	18,87%	20,75%	18,87%	20,75%	100 %

SLOVENIA	The quality of teachers class preparation	68	54	39	18	21	200
		34,00%	27,00%	19,50%	9,00%	10,50%	100%
	Regular monitoring students' activities and the system of evaluating their accomplishments	15	28	46	43	68	200
		7,50%	14,00%	23,00%	21,50%	34,00%	100%
	A teacher finds the ways to engage students	71	53	32	26	18	200
		35,50%	26,50%	16,00%	13,00%	9,00%	100%
	Teacher's consistency in requirements and ways of evaluating students' accomplishments	24	34	42	62	38	200
		12,00%	17,00%	21,00%	31,00%	19,00%	100%
	Connecting the previous and the new contents	22	32	41	50	55	200
		11,00%	16,00%	20,50%	25%	27,50%	100%

Work responsibility of a teacher

The third research task was to determine how the students of faculties of education from Slovenia and Serbia, rate the presented components which define teachers' responsibility. In the rating scale the following components were offered to them: 1) a teacher organizes teaching regularly; 2) she/he timely answers students' questions; 3) she/he is available to students in the scheduled time for consultations; 4) she/he is responsible for providing literature for teaching and exam preparations; 5) she/he is available for explaining the grades which the students were given in pre-exams and exams or for independent research work.

According to the data presented in the *Table 3* we conclude the following::

- The students from Slovenia (35,04%) and the students from Serbia (32,08%) in the largest number consider the importance of *regularly organized teaching*. In the rating scale this component was positioned to the first place. As it had been assumed, the students recognized this requirement as one of the basic indicators of teacher's work responsibility. Regular organization of teaching also assumes that a teacher is aware of the significance of his pedagogical impact on students, for whom he should be a model of the positive relation towards work and working duties.

- The students also recognize teachers' tasks *to answer the students' questions timely* as an important component which define the teachers' work responsibility and yet they positioned it a bit lower in the rating scale. The largest number of students from Slovenia (31,63%) rated this component to the second place, while the largest number of students from Serbia (28,31%) positioned it to the third place. A timely acting of a teacher in the educational pedagogical process determines the attitude of students towards their assignments in teaching activities and towards the teacher who responsibly and professionally fulfils her/his duties.
- When talking about the requirement for a teacher to be *available to students in the time scheduled for consultations*, there are no significant differences between the interviewed students from Slovenia and Serbia in their ratings of this component. The largest number of students from Slovenia (32,48%) positions it to the third place, while the largest number of students from Serbia (30,19%) rates this requirement to the second place. It is evident that teacher's timely answering the students' questions, as well as her/his availability to students in the time scheduled for consultations are the significant components according to which the students define the working responsibility of a teacher.
- The results confirm that there is a more significant difference in rating the component *teacher is responsible for providing the literature for teachers' performance and exam preparation*. The largest number of students from Slovenia (70,95%) positions this requirement to the third, fourth and fifth place, while the largest number of students from Serbia (64, 14%) rates it to the first, second and third place. It can be assumed that these differences appeared as a result of differences in students' habits to search for literature they need for the preparation of exam independently.
- The control statement in the rating scale related to the component that *a teacher is available for explaining grades given to students in pre-exams, exams or for independent research work*. The largest number of students from Slovenia (34,19%), as well as the largest number of students from Serbia (37,73%) positioned this component to the last, the fifth place. Such result confirms the current researchers' assumption that students do not recognize this component in the context of the teacher's work responsibility and there is also a possibility that it would be rated better as an indicator for teacher's competence of communication and collaboration. At the same time, there emerges a research question whether students are interested, free and ready to ask the teacher for an explanation of their grades and achievements.

Table 3. Rating the components which define the work responsibility of a teacher

The components which define the work responsibility of a teacher		Rating the components					Σ	
		1.	2.	3.	4.	5.		
SERBIA	A teacher organizes teaching regularly	17	8	6	10	12	53	
		32,08%	15,09%	11,32%	18,87%	22,64%	100 %	
	She/he timely answers students' questions	8	12	15	10	8	53	
		15,09%	22,64%	28,31%	18,87%	15,09%	100 %	
	She/he is available to students in the scheduled time for consultations	13	16	13	8	3	53	
		24,53%	30,19%	24,53%	15,09%	5,66%	100 %	
	She/he is responsible for providing literature for teaching and exam preparations	11	11	12	9	10	53	
		20,75%	20,75%	22,64%	16,99%	18,87%	100 %	
	She/he is available for explaining the grades which the students were given in pre- exams and exams or for independent research work	4	6	7	16	20	53	
		7,55%	11,32%	13,21%	30,19%	37,73%	100 %	
	SLOVENIA	A teacher organizes teaching regularly	41	19	12	18	27	117
			35,04%	16,24%	10,26%	15,38%	23,08%	100%
She/he timely answers students' questions		33	37	21	14	12	117	
		28,21%	31,63%	17,94%	11,96%	10,26%	100%	
She/he is available to students in the scheduled time for consultations		11	33	38	22	13	117	
		9,40%	28,21%	32,48%	18,80%	11,11%	100%	
She/he is responsible for providing literature for teaching and exam preparations		14	20	21	37	25	117	
		11,96%	17,09%	17,95%	31,63%	21,37%	10%	
She/he is available for explaining the grades which the students were given in pre-exams and exams or for independent research work		18	8	25	26	40	117	
		15,38%	6,84%	21,37%	22,22%	34,19%	100%	

CONCLUDING REVIEWS

By the strategic direction of education development, standardization competencies for the profession of teachers, as well as by various theoretical approaches to the problem of enhancing the quality of university education, it has been confirmed that a teacher is the core component of the mentioned quality. The confirmation of this remark can be found in the results of the current research which is presented in this paper, and which had the aim to find out whether and in which way students determine a teacher as a component of promoting university teaching.

Based on the obtained research results, the current researchers conclude that students from the sample consider that the application of various teaching methods and forms of teaching performance, the clearly defined class objective, contents and possibilities for their application into practice are significant components of the quality of university teaching. When discussing the components which define interests of students in engagement into teaching activities, as the most important they recognized the quality of teachers' preparation for class and their capability of finding the ways to engage students. Referring to the requirements and tasks for teachers, which define their work responsibility, first students recognized it in situations when a teacher organizes teaching regularly, when she/he answers the students' questions timely and is available to students in the time scheduled for consultations.

Pedagogical implications of this research are possible to be reviewed in two directions: 1) the obtained results can be a significant starting point for university teachers for further development of their professional competences and promoting their pedagogical practice; 2) the obtained results represent a good basis for new researches on possibilities and effectiveness of application of up-to-date technology, or on the significance of teachers' consistency in requirements and ways of evaluating students' accomplishments.

REFERENCES

- Boud, D., Cohen, R. & J. Sampson (2013). Peer learning and assessment. In Boud, D., Cohen, R. & J. Sampson (edit.), *Peer Learning in Higher Education: Learning from & with Each Other* (67–84). London and New York: Routledge, Taylor & Francis Group.
- Cvetek, S., (2015). *Učenje in poučevanje v visokoškolskem izobraževanju: teorija in praksa*. Ljubljana: Buča.
- Florian, L. and N. Pantić (2013). *Learning to teach*. Heslington: The Higher Education Academy.
- Kadum, S., Lepičnik-Vodopivec, J. and Hmelak M. (2017). Communication, Lectures and the Relationship between Teachers and Students in Higher Education, in Rutar, S., Čotar-Konrad, S., Štemberger, T. and S. Bratož (edit.), *Perspectives of Internationalisation and Quality in Higher Education* (231–242). Koper (Slovenia): University of Primorska.
- Krajnc, A., (1982): *Motivacija za izobraževanje*. Ljubljana: Delavska enotnost.
- Kopas-Vukašinić, E. (2017). Mogućnosti inoviranja nastavnog procesa u sistemu univerzitetskog obrazovanja, *Uzdanica*, Vol. XIV, Br. 1 (7–15).
- Kopas-Vukašinić, E. and Jovanović, V. (2018). Initiative of Students in Teaching as a Determinant of the Quality of Higher Education and its Competitiveness in the Knowledge Market, *Knowledge – International Journal Scientific Papers*, Vol. 22, No.1, pp. 59–64. <http://globalimpactfactor.com/knowledge-international-journal/>
- Marinko, I. et al (2016). *Usposobljanje predavateljev za pristop, osredotočen na študente* (elektronski vir) (raziskava), 1. izd. El. knjiga. Ljubljana: IBS, Mednarodna poslovna šola.
- Marentič Požarnik, B. (1980). *Dejavniki in metode uspešnega učenja*. Ljubljana: Dopolna delavska univerza Univerzum.
- O’Sullivan, M., (2004). The Reconceptualisation of Learner-Centred Approaches: A Namibian Case Study, *International Journal of Educational Development*, vol. 24 (6), pp 585–602.
- Spasić T., Juranić, I., Jelić, M., Bošnjak, S. & Rakonjac, I. (2002). *Podizanje kvaliteta nastave i istraživanja*. Beograd: Zajednica univerziteta Srbije. Retrieved July 27, 2018 from the World Wide Web: <http://www.chem.bg.ac.rs/~ijuranic/QualityEnh.pdf>
- Standardi kompetencija za profesiju nastavnika i njihovog profesionalnog razvoja, *Sl. glasnik RS - Prosvetni glasnik*, Br. 5, 2011. Retrieved July 25, 2018 from the World Wide Web: <http://www.csu-kg.edu.rs/docs/kompetencije-nastavnika-pravilnik.pdf>
- Standardi i smjernice za osiguranje kvaliteta u Evropskom području visokog obrazovanja* (2005). Helsinki: Evropsko udruženje za osiguranje kvaliteta u visokom obrazovanju. Retrieved July 20, 2018 from the World Wide Web: http://www.enqa.eu/indirme/esg/ESG_loc.pdf
- Strategija razvoja obrazovanja u Srbiji do 2020. godine (2012), *Sl. glasnik RS*, br. 107.
- Student-Centred Learning: Toolkit for students, staff and higher education institutions*. (2010). Brussels: The European Students’ Union.
- Yuan L. and S. Powell (2013). *MOOCs and Open Education: Implications for Higher Education*, Greater Manchester: The University of Bolton.

Barbara Horvat
University of Primorska, Faculty of Education
Koper, Slovenija

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ACTIVITY, ACTIVE LEARNING AND THE ROLE OF EPISTEMOLOGY

Abstract: In this article, the current researchers deal with the issue of activities in the classroom through an analysis of the current didactic concept of active learning. The current researchers proceed on the assumption that the didactic principle of activity has been emphasized throughout the entire history of pedagogy, and comprehensions of the authors of the active learning concept on one hand and of the authors and the defenders respectively that are according to the first mentioned authors associated with the so-called traditional lesson on the other hand. As the current researchers show, they all advocate the activity in the classroom through different teaching methods and activities, consideration of students' interests and experiences, but they understand these issues differently. The analysis of the conceptions of the role of teaching methods, students' experiences and interests in order to achieve the activity in the classroom leads the current researchers to the conclusion that the difference between the authors is associated with the understanding of the goal and success of the lesson. According to the authors that are understood as traditional the difference is related to the correspondence of transferable knowledge in society and knowledge of students, while according to the authors of the concept of active learning, it is mostly related to the discussion between the teacher and the students about the tasks of the lesson, seeking goal of the lesson, and to the experience associated with it. Since the highlighted difference in its basic characteristics complies with our knowledge, the current researchers have found out that the difference between the authors' approach to activity and teaching is conditional upon epistemology.

Keywords: the concept of active learning; the understanding of the activity in the classroom according to authors that are associated with the traditional lesson by the proponents of contemporary didactic strategies, and the authors who advocate the concept of active learning as a contemporary didactic concept; epistemology; pedagogy; knowledge.

INTRODUCTION

The concept of *active learning*¹ (Handlungsorientierter Unterricht) is often used in didactics, especially recently. According to some authors (e.g. *Enzyklopädie Erziehungswissenschaft*, 1986, cited in Gudjons, 1987, p. 8), it is the action-oriented lesson that begins with material activities, or to some others (e.g. Gudjons,

1 The term "active learning" is in Didactics about half a century old and is understood in the text as a specific concept, the so-called open lesson, which is a modern didactic concept and a wider term than the concept of the active learning.

1987, 1994; Jank & Meyer, 2006, pp. 230–244; Meyer, 2011a, pp. 214–215; Meyer, 2011b, pp. 157–158) it enables the development of different characteristics or abilities of students, such as: integrated and collaborative learning, expression of interests and experiences and negotiating with the teacher about the performance of lesson or teaching process, respectively². With regard to the present definition of the concept of active learning (Jank & Meyer, 2006, pp. 230–244; Meyer, 2011a, pp. 214–215; Meyer, 2011b, pp. 157–158; see also Glöckel, 2003, pp. 145–148; Gudjons, 1987, 1994; Terhart, 2005, pp. 165–171), the question arises whether the activity in the classroom was not advocated in the past, and what, if anything, is supposedly differently defined with this concept compared with the didactic principle of activity.³

In the current text the current researchers follow the idea that the tendency for activity in the classroom is present throughout the entire history of teaching, while the views on it or, more precisely, on the question of what it is and how to reach it are different. The current researchers will confront the views on the activity according to the group of authors of the concept of active learning, or defenders of the concept (e.g. Jank & Meyer, 2006; Meyer, 2011a, 2011b), and on the other hand, the authors (e.g. Herbart, 1874; Niemeier, cited in *ibid.*), who do not belong to this group and their teaching concept, which the first group considers to be the so-called traditional teaching concept. For this purpose the current researchers will discuss teaching methods, especially classroom discussion and lecturing. The authors of the second group (e.g. Herbart, 1874; Niemeier, cited in *ibid.*) believe that only these methods can promote activity during the lesson, whereas the authors of the first group (e.g. Gudjons, 1994; Meyer, 2011a, 2011b) argue the very opposite. Further, we will look at the role of experience and interest of students in the lesson, since the consideration of both factors will significantly contribute to the activity during the lesson. We will follow the thesis that all of the referenced authors emphasize the importance of active learning, but in the perception of this activity they differ according to the epistemological basis on which they define it.

Although the issue of active learning appears mainly in the context of discussions on primary education (e.g. Terhart, 2005, p. 171; see e.g. Jank & Meyer, 2006, pp. 230–244), it is also relevant in considering innovative methods and approaches to teaching as a prerequisite for quality, modern higher education. Following

2 In the definitions of the concept of active learning, it is written that students discuss with the teacher about the objectives and results or phases, respectively of the learning process, and the activities that would lead to the goal (e.g. Gudjons, 1987, p. 12; Jank & Meyer, 2006, p. 231).

3 According to Mi. and Ma. Cencič (2002), the modern teaching concepts, including active learning (but also for e.g. a problem-based learning, experiential learning, project-based learning, research-based learning), do not deny the validity of didactic principles of classical didactics (i.e. activities, problem teaching conception, or considering the experiences), “but, on the contrary, they rejustify them with their theoretical psychological requirements” (p. 17).

the Medveš (2015) it is not even productive to distinguish between the scientific discussion of primary active learning or teaching, respectively and higher active learning or teaching, respectively as the concept of teaching (p. 13). The problem of activity, as in the current researchers' context, is a general didactic problem, so it will understand it here as such.

In the first part of the article the current researchers will deal with the issue of activity through the treatment of teaching methods. The second part will consider the experiences and interests of students.

DIFFERENT TEACHING METHODS, THE IMPORTANCE OF LECTURING AND CONCEPTION OF SUCCESS IN TEACHING

Integrated activity of students and different teaching methods

According to proponents (Gudjons, 1987, 1994; Jank & Meyer, 2006, p. 231; Meyer, 2011a, p. 214; Meyer, 2011b, pp. 157–158), one of the basic characteristics of the concept of active learning is that it should enable students to engage in so-called integrated activity. In contrast to the traditional lesson, which particularly promotes voice and hearing activities such as lecturing and discussion, they should “be taught not only with the head, but also with the hands and feet, with the heart and with all the senses” (Meyer, 2011b, pp. 157–158). Therefore, as Gudjons (1994) states that active learning is not “a vocabulary and book school” as a traditional school, “but a school in which learning takes place through activities during lesson time” (p. 36)⁴ and where as many senses as possible, head, emotions, hands, feet, ears, eyes etc. are active” (Gudjons, 1987, p. 11).⁵

In this regard, the lesson should open up “to activities that are introduced in such a way that the students agree with the teacher on what tasks they will set out to do and what the end result of the learning phases will be” (Jank & Meyer, 2006, p. 231). Thus, active learning should also be promoted through joint activity between teachers and students, i.e. through joint activities, such as experimenting, modeling, acting and performing (Gudjons, 1987, p. 12; Jank & Meyer, 2006, p. 231; Meyer, 2011b, p. 157). This as well should be otherwise conceived from a traditional approach that should emphasize activities that are characterized by a teacher's direct teaching role (Meyer, 2011b, p. 157; see also Gudjons,

4 In this context, Gudjons (1994) states that the school in which active learning takes place is “not a vocabulary and book school, but a school in which learning takes place through activities during the lesson” (p. 36).

5 Jank and Meyer (2006), on the other hand, define “active” learning within the concept of active learning as “the lesson in which students can learn not only with their head, but also with their hands and feet, with their heart and with all their senses” (p. 231).

1987, p. 12). As Meyer (2011b) writes in the traditional lesson “students are more often involved in mental and orally presented activities than in sensually integral ones [...] they have to listen, read quietly or out loud, talk, discuss, write, count, wait for others, collect or distribute something [...]. It comes from the very structure [...] activity that they have an almost urgent tendency to greater dominance of the teacher” (p. 157).

In other words, the activities concerned relate to the question of teaching methods and forms of teaching, which roughly means the ways of teaching for learning and knowledge of students. As can be seen from the references, traditional teaching is characterized by activities based on listening and speaking skills, such as the lecture method and classroom discussion, and on the form of teaching that involves the whole class directly, as the teacher is supposed to play the dominant, direct teaching role. For active learning there are the teaching methods of experimenting, modeling, acting and performing, also including common activities that are characteristic of the indirect way of teaching that are emphasized (for more see e.g. Blažič, Ivanuš Grmek, Kramar & Strmčnik, 2003, pp. 379–392).

But different activities during a lesson in terms of the teaching methods have been highlighted by some of the authors of the past. Comenius (1927), for example, demanded that the students should activate as many senses as possible during the lesson and to be connected through “hearing with seeing, speaking with hands” (cited in Drews, 1967, p. 233); Diesterweg (1962) pointed out that teachers should ensure that students are active with “hands, speech and head” (cited in *ibid.*, p. 232). Pestalozzi (1890) is also known for his so called trio of heart, mind and body that should be considered in teaching. The emphasis on the diversity of class activities could be found also in certain works of 20th century authors (e.g. Strmčnik, 2001, pp. 312–319; Šilih, 1966). Šilih (1966), for example, stresses activity that “influences the whole student’s personality, his/her emotional sphere and his/her will, his/her motor process [...] and his sensual system that develops and progresses through the activity” (p. 30).

Therefore, the exposed authors supported the use of different teaching methods. However, there is a difference in how everyone understands the activities. The current researchers will therefore focus on activities based on listening and speaking skills, which are particularly exposed above.

LECTURING AND CLASSROOM DISCUSSION AND COMPREHENSION OF THE SUCCESS OF THE LESSON

Jank and Meyer (2011b, p. 157) and Gudjons (1994, p. 36), as the previous chapter shows, critically determine activities based on listening and speaking

activities, while Herbart (1874) and Niemeyer (cited in *ibid.*) understand them differently. The current researchers have found an example of a record in which Herbart (1874) interprets Niemeyer's (cited in *ibid.*) record of how teachers should teach a learning content through classroom discussion or conversation, respectively, that is:

“In conversation, we start from the objects that directly influence the children's senses, and we let the children show and name these objects. Then we move on to objects that are not present, but children have already seen or felt them, and at the same time we stimulate their imagination and language so that they list the objects they remember. The objects involved are: everything in the classroom, everything that is observed on the human body, everything that belongs to food, clothing, comfort, everything that belongs to the fields, gardens, farms, animals, plants, as far as they know them.” (Niemeyer, cited in *ibid.*, p. 271)

As seen, by using the discussion as a teaching method the author (*ibid.*) assumes that the students already have the experience and they already understand it comprehensively or holistically, respectively; at the starting point they refer to the subjective world of students, to various indirect and direct objects, even to tastes and feelings. Discussion as a teaching method (or activity) is therefore not understood in the narrower sense, literally as activity based on listening and speaking skills (e.g. Gudjons, 1994, p. 36; Meyer, 2011b, p. 157). This is no different from the explanation Herbart (1874) gives, with a somewhat longer record of how to present the subject during the lesson or how it should be interpreted to the students, respectively:

“Delivering subject matter should work in such a way that the student has the impression that he can hear and see the topic described at that very moment. That's why he actually has to hear and see a lot; what points out that the experience circle, if too narrow, should be widened by leading the students and demonstrating the subject. [...] All items for illustration must be added to this. Whether this kind of lesson is also successful will be seen in the repetition when the students not only repeat the most important point, but first and foremost use the same expressions, as used by the teacher.” (Herbart, 1874, p. 268).

The lecture must therefore function for the students as the experience of hearing and seeing. If that is not enough, it is necessary to additionally “show” them and to “lead them around”, and use other teaching materials. So, the lecture

cannot be narrowly understood, literally as a vocal–hearing activity (e.g. Gudjons, 1994, p. 36; Meyer, 2011b, p. 157). Moreover, it seems that, according to Herbart (1874), the lesson is successful in that the students repeat the most important points after the teacher; in fact, the more they use the learned expressions, the more they remember, the more successful is the lesson. So, the success of the lesson depends in fact on the activity based on listening and speaking skills, and on the capability of the restatement of the subject matter by the student.

But the role of different activities for the success of the lesson and the definition of success in the concept of active learning are understood differently. The notion itself that the activities based on listening and speaking skills are inadequate, not integrated (e.g. Gudjons, 1994, p. 36; Meyer, 2011b, p. 157), and that the direct role of the teacher encouraging memorization is problematic (*ibid.*), indicates that Gudjons (1994, p. 36) and Meyer (2011b, p. 157) do not perceive the reproduction of the subject matter as a basic medium in achieving success in lesson. According to them, the condition for success lies in a common agreement between the teacher and the students on tasks and results regarding lesson and in finding goals for its performing. As for active learning Gudjons (1987) writes: “This educational concept gives a lot of space [...] first to co-organization and co-responsibility” of the students and it is “less about the operationalization of the learning objectives than it is about finding the action goals that should be achieved” (p. 12). It is in this context that the students should more develop their self-regulated learning and their own responsibility (*ibid.*). The highlighted emphasis can be referred to the Medveš’s (2003) record about the still current theoretical approach of self-regulative learning. According to the author (*ibid.*), the success of this pedagogic concept depends on “whether the student feels attracted to the topic, whether he is included in the situation, above all, whether he/she experiences the goal as realistically achievable” (*ibid.*, p. 27).

So if Herbart has conditioned the success of the lesson with the quantity and quality of repetition or transferable subject matter, then in the concept of active learning success lies in finding the action goals, the feeling of being included in the discussion, in the ability to agree on tasks and outcomes related to the implementation of the educational process and in experience referred to above, as achievable action goals. From the problem of the integrity of learning activities (as the problem of realization of different learning activities) the current researchers have therefore come to the conclusion that a different understanding of learning activities is associated with a different understanding of a successful lesson.

INTEREST AND EXPERIENCE

Conception of interest

Orientation to the interests of students is another feature of active learning according to advocates of active learning (Gudjons, 1994; Jank & Meyer, 2006). As described by Gudjons (1994), active learning “complies with the interests and experiences of students (and teachers as well) [...] promotes, supports and develops them or ensures that they arise at all” (p. 59). More radical are Jank and Meyer (2006, p. 231); according to them active learning “attempts to make the subjective interests of the students into the starting point of educational work. However, it does not stop only there, but also offers the students the opportunity to become aware of their interests while participating actively in new topics and problems, and to evaluate their interests critically and continue to develop them” (ibid.).

But it is recalled that some authors from the past have also highlighted the consideration of the interests of students. According to Herbart (1874), for example, in lesson one should develop the interests of the students to create a versatile personality (Javornik & Šebart, 1991). As the author (ibid.) writes:

“The interest is one’s own activity (Selbsttätigkeit). The student’s interest should be multilateral; therefore, we demand a versatile self-activity [in lesson]. However, it is not every self-activity that is desirable, but only the one that is right and properly oriented; otherwise lively children could simply be left alone; they would not need to be educated or led” (p. 241). Therefore the lesson should “direct the way of thinking and efforts of the students and guide them to the right way” (ibid.).

Thus, the interest is in the function of the activity, which develops into versatility, thinking and effort in the right direction of development. Similarly, Šilih (1966) stresses that conscious adoption of subject matter and cooperation are both essential in order to stimulate interests and abilities (p. 30). The consideration of the interests of the students in the lesson is nothing new that was introduced through the concept of active learning. But there is a difference between the referenced authors in how they perceive the interests.

According to Jank and Meyer (2006), one should therefore, among other things, rely on the subjective interests of students, which should be the basis for the learning process. Yet, according to Herbart (1874), interest is not a (primary) means of education, but it is its intention, the goal to which we first have to bring the students through guiding and teaching. Therefore, according to Herbart (ibid.) the lesson should promote and develop interest, which enables the

development of virtues (p. 236). Similarly, it can be established by Šilih (1966) that interest can therefore be stimulated, first through the acquisition of subject matter.

According to Herbart (1874) and Šilih (1966), forwarding the subject matter is the basic condition for forming interest and personality, while interest according to Jank and Meyer (2006) should be the precursor for developing the personality and forming the lesson or educational process, respectively.

Students' experiences and knowledge

Jank and Meyer (2006) understand interest also as a particular type of students' experience, while both interest and experience, according to Herbart (1874), each has its own meaning. Herbart (ibid.) clearly distinguishes between, on the one hand, the interest that still develops and fundamentally gains, and on the other hand experience that "only" helps to facilitate clarity (and it is essential for that). But experience cannot fully dictate the course of the lesson. As he (ibid.) says:

"Experience, as it is, is not such a teacher who would offer the right lesson. Experience does not follow the law by which one gradually proceeds from the elements to the compositions. Rather, experience talks about things and events at length, often leading to confusing concepts or misunderstanding (verworrene Auffassung), respectively. Because the connections have become individualistic, the lesson's task is to bring this reverse order back to the right one. Experience associates only what it offers itself. If we allow these existing associations to intervene into the very lesson (as it should happen) than that what we have experienced must be consistent with this what we have learned. Hence, in the supply (Vorrath) of experience, the lack of clarity and the corresponding meaning should be complemented by an explanation." (Ibid., pp. 268–269).

It can be seen that, according to Herbart (ibid.), there is a pre-defined set of subject matter that the student has to acquire through experience. Therefore it is in this context that the result of the lesson is "closed" in terms of learning objectives that the students aim to achieve and with this acquire the foreseen knowledge. But this is not the case according to Jank and Meyer (2006), where the supply of subject matter is relatively open, since the content of the lesson is inspired by the students' interest.

CONCLUSION

On the basis of the study of some characteristics of the concept of active learning (diversity of activities, interest and experience) having been outlined here, we found that in the matter of students' activity during the lesson all referenced authors have emphasized different activities or a variety of teaching methods, respectively. For this purpose they all argued for students' experiences and interests being included and the current researchers also found that they have understood the experience, interest and activities differently, as they have recognized the success of the lesson differently.

Regarding the established concepts of contemporary pedagogy faced with the concept of active as an open lesson, the challenge of redefining the teaching that derives from different perspectives on knowing arises. It concerns issues, like sources of knowledge, the possibilities of this, the objective values of knowledge and the very subject of it (see more Ule, 2004). These issues concern mainly the philosophy of knowledge, but the current researchers are also significantly associated with these issues in didactics and pedagogy, with the issue of how to define, in pedagogy and didactics, the knowledge and the cognitive path in relation to students is dealt with. The question is whether it is still reasonable or appropriate to teach and to give lectures according to a knowledge transfer model as we know it through history. Or is it time to think in the direction indicated by the authors of the concept of active as an open lesson, who believe that the lesson is a process where the students' ideas are considered as the development-orientation for teaching and learning the subject matter. What this means for the teacher or lecturer, for the act of teaching, lecturing and learning, remains an open question. Certainly, the effective tracking of this point shows an orientation toward a fundamental change of the established so-called "learning society", but the question is in which one and whether in a more humane one.

REFERENCES

- Blažič, M., Ivanuš Grmek, M., Kramar, M. & Strmčnik, F. (2003). *Didaktika*. Novo mesto: Visokošolsko središče, Inštitut za raziskovalno in razvojno delo.
- Cencič, Mi. & Cencič, Ma. (2002). *Priročnik za spoznavno usmerjen pouk*. Ljubljana: Mladinska knjiga.
- Drews, U. (1976). Unterrichtsprinzipien in der bürgerlichen Didaktik. In U. Drews (Ed.), *Didaktische Prinzipien. Standpunkte, Diskussionsprobleme, Lösungsvorschläge* (pp. 228–256). Berlin: Volk und Wissen Volkseigener Verlag.
- Glöckel (2003). *Vom Unterricht. Lehrbuch der Allgemeinen Didaktik*. Bad Heilbrunn: Klinkhardt.

- Gudjons, H. (1987). Handlungsorientierung als methodisches Prinzip im Unterricht. *Westermanns pädagogische Beiträge*, 39(5), 8–13.
- Gudjons, H. (1994). *Handlungsorientiert lehren und lernen. Schüleraktivierung – Selbsttätigkeit – Projektarbeit*. Bad Heilbrunn: Klinkhardt.
- Herbart, J. F. (1874). *Pädagogische Schriften. Johann Friedrich Herbart. Mit Herbarts Biographie. Von Friedrich Bartolomäi. Bd. 1*. Langensalza: Veher.
- Jank, W. & Meyer, H. (2006). *Didaktični modeli*. Ljubljana: Zavod Republike Slovenije za šolstvo.
- Javornik, M. & Šebart, M. (1991). Herbartov koncept vzgoje. *Sodobna pedagogika*, 42(3/4), 27–37.
- Medveš, Z. (2003). Šola zate in zame. *Sodobna pedagogika*, 54, posebna izdaja, 84–102.
- Medveš, Z. (2015). Spopadi paradigem v razvoju slovenske pedagogike. *Sodobna pedagogika*, 66(3), 10–35.
- Meyer, H. (2011a). *Unterrichtsmethoden. I: Theorieband*. Berlin: Cornelsen-Scriptor.
- Meyer, H. (2011b). *Unterrichtsmethoden. II: Praxisband*. Berlin: Cornelsen-Scriptor.
- Pestalozzi, J. H. (1890). *Wie Gertrud ihre Kinder lehrt. Ein Versuch, den Müttern Anleitung zu geben, ihre Kinder selbst zu unterrichten – in Briefen*. Leipzig: P. Reclam.
- Strmčnik, F. (2001). *Didaktika. Osrednje teoretične teme*. Ljubljana: Znanstveni inštitut Filozofske fakultete.
- Šilih, G. (1966). *Didaktika*. Ljubljana: Državna založba Slovenije.
- Terhart, E. (2005). *Lehr-Lern-Methoden. Eine Einführung in Probleme der methodischen Organisation von Lehren und Lernen*. Weinheim, München: Juventa Verlag.
- Ule, A. (2004). *Dosegljivost resnice*. Ljubljana: Znanstveni inštitut Filozofske fakultete.

Olivera Cekić-Jovanović, Miloš Đorđević and Andrijana Miletić

University of Kragujevac, Faculty of Education

Jagodina, Serbia

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POSSIBILITY OF IMPROVING EDUCATIONAL ACTIVITIES AT UNIVERSITIES BY APPLYING INTEGRATIVE APPROACH WITHIN MULTIMEDIA PROGRAMMED TEACHING

Abstract: The strategic document determinants in the field of education and the results of research on the improvement of teaching using Information and Communications Technology (ICT) integrative approach and programmed instruction were the starting point for the theoretical consideration of the possibilities of raising the quality of university education. In order for the theoretical context of this idea to have a practical dimension, research was conducted to determine how students recognize the possibilities of improving university instruction using modern working models. The sample consisted of 111 BA (Bachelor of Arts) level students of the Faculty of Education. The methods applied in the research were the descriptive method and the scaling technique. The research results confirm that students recognize the need and importance of innovating in the teaching process and recognize the possibilities for raising its quality using ICT and innovative working models. The conclusion implies that multimedia programmed teaching in the context of an integrative approach to curriculum content is a good starting point for ensuring the quality of higher education. The above model has found its place in the modern concept of blended learning, so in this regard, further research could study its impact on the quality of students' knowledge and the possibility of combining with other models of teaching.

Keywords: integrated teaching, quality of higher education, multimedia programmed teaching, educational technology.

INTRODUCTION

In modern society, it is highly important to make the higher education system able to respond to numerous dynamic changes and technological advancement of society. Dobrota and Benković (2014) note that *teaching at higher education institutions in Serbia still relies on traditional 'ex-cathedra' methods* and the repeated use of one and the same approach in a particular subject will discourage students *to participate in the learning process*. The quality of higher education has long been in the focus of reform changes in order to provide more competitive

and efficient education for all and contribute to the development of cooperation among different European institutions. According to the *Standards and Guidelines for Quality Assurance in the European Higher Education Area* (2005), consistency in quality assurance in the European higher education area can be ensured by universal standards. Accordingly, the *Strategy for Education Development in Serbia* recognizes the higher education quality prerequisites in equalizing the training of future teachers, conducting classes in common subjects and mutual cooperation of teachers and students, providing knowledge and skills in accordance with the National Qualifications Framework and key competencies, which includes the ability to innovate, critical thinking, communication skills, the application of modern information technology, etc. (*Strategy for Education Development ...*, 2012).

Recent research on university teaching shows that students recognize the *programmed teaching* model as a possibility to improve the quality of educational activities (Kopas-Vukašinović, Golubović-Ilić & Cekić-Jovanović, 2017). By analyzing the 2020 (2012) Strategy for Education Development in Serbia and the 2017 Digital Competence Framework, the current researchers notice that there is a tendency for university teaching to be innovated using information technology (hereinafter referred to as IT) in order to provide students with the necessary digital competencies to work in the modern society. In accordance with the requirement that higher education curriculum reforms in Europe must be the key processes leading to a higher quality of education and individualized educational approaches (*The Bologna Process 2020 ...*, 2009), programmed teaching finds its place in contemporary university education through integration with modern information technology but also other models of educational work.

The advantage of programmed IT-supported teaching is reflected in that there is a two-way communication with students and a constant feedback on their achievements. Research has shown that most students recognize the importance of *feedback* within university teaching (Kopas-Vukašinović, Golubović-Ilić & Cekić-Jovanović, 2017) and that students, after processing each part of the curriculum, want to know at any time what they have learned, what they have not learned, where they have made a mistake and how to correct it.

If one considers the requirement that contemporary university education should involve students both in the evaluation of courses and *creating teaching processes* (Leisyte & Westerheijden, 2014), the current researchers find that this model allows students not only to choose contents while progressing at their own pace but also to affect them by changing, complementing, critically analyzing and distributing using social networks. In this way, a page of the multimedia programmed material becomes multidirectional and encourages students to determine their own way of learning, how long to stick to a part of the content or learn about it

more if they find it necessary. On that occasion, teaching is focused on a student—*the student is at the centre of learning*, which is one of the prerequisites and main ideas of the Bologna Process and the *Strategy for Education Development* (2012).

Placed in the context of multimedia and integrative approach, by the application of interactive educational and computer software, programmed teaching corresponds to the contemporary determinant of hybrid learning that is current and has been studied in recent years (Wang, Sun & Shi, 2018). It represents a combination of learning via the Internet, multimedia content and direct teaching (integrative approach, team-teaching, cooperative learning, etc.). The new system of programmed teaching based on the use of computers and connection between subjects enables the development of both key and transversal, digital competencies. It aims to make university teaching more progressive, more dynamic, more effective, more creative and more interesting without students being only passive observers and recipients of information.

In addition to this innovating of programmed teaching using IT, the analysis of the primary school curriculum contents that suggest teachers to achieve an integrated, thematic approach when planning and conducting classes by independent selection of coherent and compatible contents (*RS Official Gazette*, 2006, 46) concludes that this innovative model should be innovated and improved also by applying an integrative approach primarily since students, future teachers, need to be trained to implement an integrative approach in order for them to gain the necessary competencies for its successful application in primary schools.

Since curriculum content integration results in a higher quality of acquired knowledge, integrity, mutual (internal or external) connection of its parts which “are not self-sufficient and which function only as elements or subsystems of a unified system” (Spremić-Solaković, 2009: 404), the current researchers integrated and implemented the contents of the Methodology of teaching Science and Social Studies and the Methodology of teaching Fine Arts, thus enabling students to take on a different way to acquire and deepen their knowledge about the method of graphic works. Multimedia programmed teaching with third-year students of the undergraduate study program *Grade teacher* was implemented at the Faculty of Education, University of Kragujevac, Jagodina. On that occasion, through the integration of curriculum contents of the Methodology of teaching Science and Social Studies and the Methodology of teaching Fine Arts, students were allowed to individually study the multimedia programmed material related to the method of graphic works which was one of the common fields of these two subjects.

One of the ways to put the teaching process emphasis on the student is certainly the application of the graphic work method. The coherence characteristic of the graphic method essentially contributes to better understanding of curriculum content i.e. the functionality of teaching. As a highly effective form of transferring

necessary information, in its numerous forms, applicable on almost all curriculum contents, the graphic method enables the intensity of teaching, thus also covering the contents of the Methodology of teaching Science and Social Studies and the Methodology of teaching Fine Arts. The efficiency of the graphic method is reflected in the cost-effectiveness of achieving results which are in line with the core sense of education – to learn something or achieve the necessary level of knowledge with as low effort of teachers and students as possible, through the use of various specific methods.

Considering the degree of autonomy in work, graphic works encourage a high level of activity in the teaching process, especially when applying the direct graphic method of work. In cases when the teacher supports the oral presentation with content visualization (schematic representations, visualization of data or abstraction of laws and rules), drawing is a simple and direct methodical procedure to present the information more fully. In teaching, drawing is manifested as the instructive work of teachers and the independent work of students. The contents of this subject must always be presented as visual occurrences and phenomena (Loose, 2012). Visual subject matter in the focus of the class is directly illustrated or indirectly demonstrated by the teacher using a drawing, diagram or scheme by the method of graphic work and applying generalization so that students can transpose them in their own way in their artistic expression.

Based on previously considered theoretical starting points, we carried out a research focusing on the attitudes of the students of the Faculty of Education towards the ways and possibilities of improving university education.

METHODOLOGICAL FRAMEWORK OF RESEARCH

The objective of the research is *to determine whether and how students recognize the possibilities of improving teaching activities at the faculty using modern work models that would encourage their greater interactivity with curriculum contents, easier learning and adoption of higher-quality knowledge.*

Based on the determined objective of the research, the following research tasks have been concretized:

1. Examine students' attitudes about the characteristics of teaching that dominates the faculty.
2. Determine whether students consider the application of multimedia programmed teaching and integrative approach as a prerequisite for *greater interactivity and quality of acquired knowledge* in the teaching process.
3. Examine whether students recognize the benefits of *learning using multimedia programmed teaching in the context of an integrative approach to teaching.*

4. Determine whether there is a statistically significant difference in the attitudes of the respondents with regard to the independent variable defined as the *year of study* in this research.

Research methods, procedures and instruments:

The research used the descriptive method and the scaling technique. For the purpose of this research, a five-point Likert-type scale of attitudes intended for students was designed. The respondents filled out the scale online through the Google Form which was publicly available through the link published on the website of the Faculty of Education in Jagodina during the 2017/2018 school year.

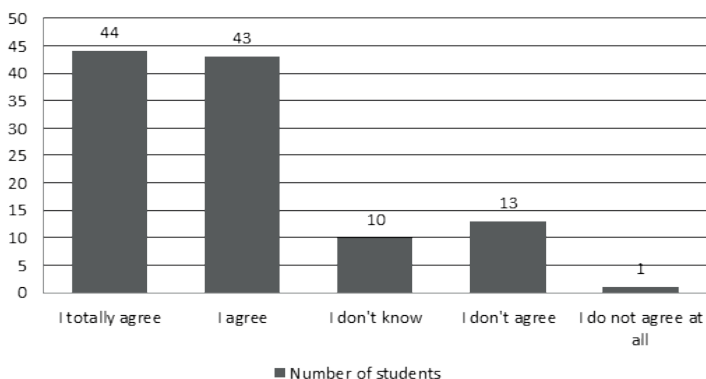
Research sample:

A suitable sample was selected for the purposes of this research – students of the second and third year of undergraduate studies from the Faculty of Education, University of Kragujevac, Grade teacher profile (N = 111).

RESEARCH RESULTS WITH DISCUSSION

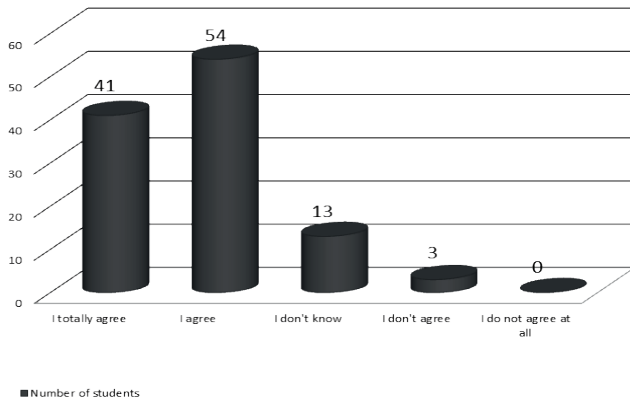
In the first research task, the current researchers tried to learn about the attitudes of students on the characteristics of teaching dominating the faculty. On this occasion, the current researchers started from the statement *When the teacher uses frontal instruction, he/she does not encourage students to act and think about the contents being processed as the students only passively listen*. The answers that were received in this research on this occasion are shown in Graph 1. The descriptive indicators point to the fact that most students, 87 respondents (78.36%), agree with the above statement, 10 respondents have a neutral attitude, and 14 students (12.8%) believe that the frontal form of work can stimulate activity and thinking.

Graph 1. Distribution of respondents' answers to the statement that *frontal instruction does not encourage students to act and think since they only listen passively*.



Since the teaching process needs to be transferred from the teachers and curriculum content to the student and the quality of knowledge and skills acquired during education, frontal instruction can achieve its advantages within university teaching if innovated and combined with other teaching models of work. In order to further substantiate this claim, in the context of the first research task the current researchers also considered the answers of the students regarding the statements that *in the course of university teaching, it is important to put the students in the centre of attention and shift the focus from teaching to learning*. The descriptive indicators in Graph 2 show that 95 respondents (85.58%) have a positive attitude, 2.7% of respondents consider it unnecessary, while 13 students have a neutral attitude on this issue.

Graph 2. Distribution of respondents' answers to the statement that *in the course of university teaching it is important to put the students in the centre of attention*.

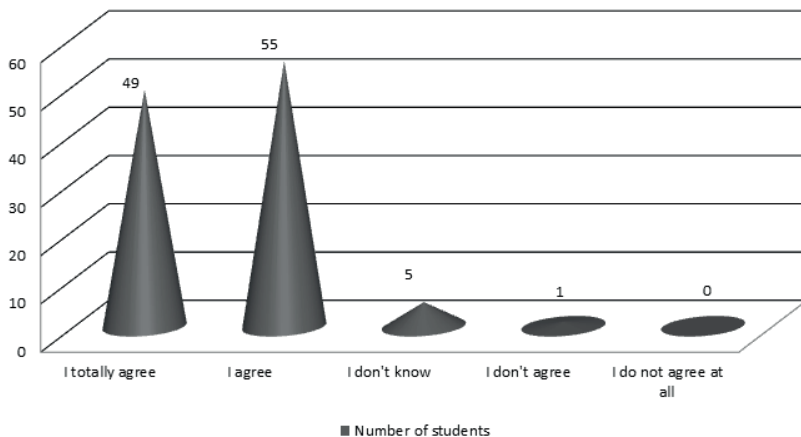


The above-presented results are supported by the median which in this case has a value of 2.50. Student-centred learning is an instructional approach in which students influence the content, activities, materials, and pace of learning. The SCL approach involves such techniques as substituting active learning experiences for lectures, assigning open-ended problems and problems requiring critical or creative thinking that cannot be solved by following text examples, involving students in simulations and role plays, and using self-paced and/or cooperative (team-based) learning (Collins & O'Brien, 2003).

Students should be given the opportunity to work with teachers to plan, create, comment on and distribute curriculum content, and to adopt the material according to their interests, abilities and previous knowledge. The attitude of the students regarding the previous issue corresponds to the idea given in the strategic documents (*Strategy, 2012, Bologna*) that refers to Student-centered learning.

The second research task is performed through several assertions. Based on the answers shown in Graph 3, we note that 104 respondents (93.69%) have a positive attitude, 4.5% of respondents have a neutral attitude, while only one student disagrees with the claim that multimedia within the programmed teaching provides an interactive relationship of students and contents.

Graph 3. Distribution of respondents' answers to the statement *Multimedia within the programmed teaching allows for the interactive role of students.*



Multimedia contributes to a more comprehensive problem examination, which is also important from the aspect of an integrative approach. The role of students becomes interactive as they are active participants in the teaching process who, by their actions, select multimedia sources of knowledge and create their own way and method of acquiring knowledge through the diverse material and joint activities with teachers.

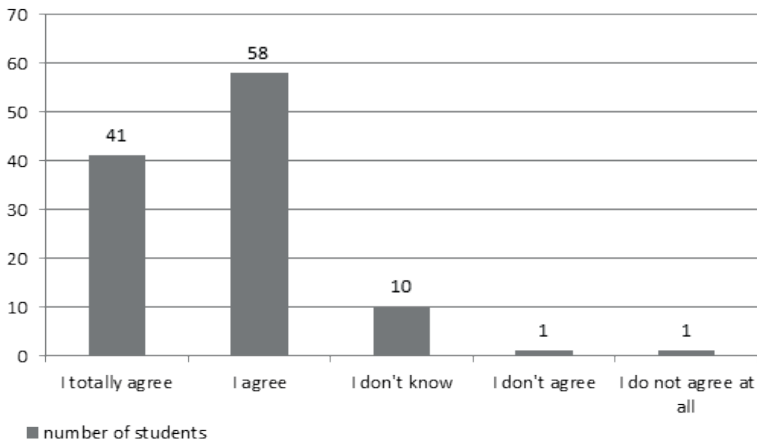
Similarly, Table 1 illustrates students' responses to the statement that *the application of multimedia programmed teaching in the context of an integrative approach contributes to the easier understanding of materials and influences the increase in the acquired knowledge quality.* Descriptive indicators show that the absolute majority of students, 100% of respondents, have a positive attitude and believe that the implementation of this teaching model enables easier understanding of materials and gaining higher-quality knowledge. These results are fully in line with the results of the research that dealt with the programmed teaching and confirmed that this model of work has its advantages and that its application within certain teaching subjects positively affects the quality of the acquired knowledge (Terzić & Miljanović, 2009; Županec, Miljanović & Pribičević, 2013).

Table 1. Distribution of respondents' answers to the statement that the application of integrative teaching affects the quality of acquired knowledge.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I totally agree	62	55.86	55.86	55.86
	I agree	49	44.14	44.14	100.0
	I do not know	0	0.0	0.0	100.0
	I do not agree	0	0.0	0.0	100.0
	I do not agree at all	0	0.0	0.0	100.0
Total		111	100.0	100.0	

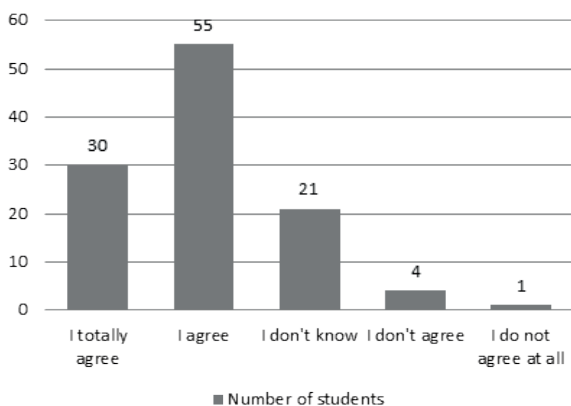
On the other hand, the research results (Corlu, Capraro & Çorlu, 2015; Singh & Gopalkrishnan, 2017, etc.) confirm that the application of an integrative approach to teaching enables better understanding of content, examining problems from different angles and aspects, developing habits to consider the phenomena, processes and relationships in the environment in a deeper and more comprehensive way, and see the world surrounding us in a unique way. In this regard, within the same research task, we asked students whether *Integration of contents of different teaching subjects enables more successful acquisition of high-quality and practically applicable knowledge*. The answers presented in Graph 4 suggest that the vast majority of respondents, 99 (89.18%) of them, have a positive attitude, while the number of students who have opted for a neutral attitude is 10 or 9% of the total sample, and that the results are compatible with the previously mentioned results of the study on integrative teaching and its impact on the quality of knowledge.

Graph 4. Distribution of respondents' answers in relation to the statement that *Content integration enables more successful acquisition of quality knowledge*.



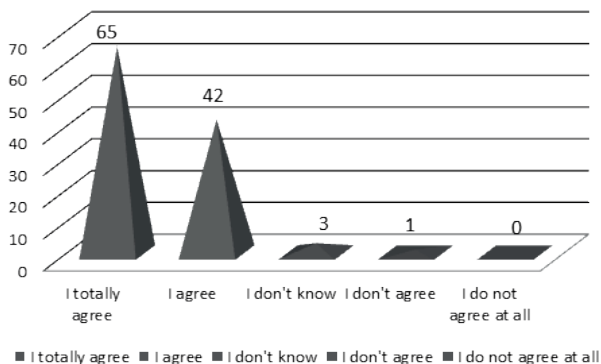
Within the third research task, the advantages of applying multimedia programmed teaching in the context of an integrative model of work were first considered through students' attitudes about whether *the use of IT in teaching has advantages in terms of individualization of teaching*. The answers we have obtained (Graph 5) show that the majority of students 75.54% (85 respondents) has a positive attitude, 21 (18.91%) students do not know the answer to this question and 5 respondents (4.5%) consider that this method of work does not encourage teaching individualization.

Graph 5. Distribution of respondents' answers to the statement *The use of IT in teaching has advantages regarding the individualization of teaching*.



The previous results are also complemented by the data the current researchers obtained within the following question (Graph 6). The results unambiguously show that most students, as many as 96.4% of them, have a positive attitude, 2.7% (3 respondents) have a neutral attitude, and only one student does not agree with the above statement.

Graph 6. Distribution of answers to the question of whether *it is important for students to master the curriculum content at their own pace in the way that best suits them*.



The fact is that the potential of the multimedia programmed material is great, that is, its content, the information it offers, can be used in a manner suitable to individual sensibilities, abilities, previous knowledge and interests of students. What is imposed as another key advantage of this teaching system that could find its place in university education is certainly the adjustment of the learning process to the specific needs of students, that is, greater individualization of teaching.

By calculating the statistical significance of differences in the attitudes of the respondents with respect to the independent variable *year of study* attended by the students at the Faculty, we have come to the following results: Since the research data were gathered according to the model of a five-point Likert scale of attitudes, thus originating from an ordinal measurement scale, and that there were two groups of respondents, we considered that the *Mann–Whitney U test* was the most adequate for testing the zero hypothesis and calculating the statistical significance of differences in the attitudes of the respondents with regard to the independent variable that was defined as the year of study of respondents at the Faculty. Namely, when it comes to the year of study as an independent variable, the value of significance in all assertions, except for one, is greater than 0.05 ($p > 0.05$), which means that the difference is not statistically significant, that is, the zero hypothesis is proven and there is no statistically significant difference in most attitudes with regard to the year of study of the respondents.

The exception is the attitude *The application of multimedia programmed teaching in the context of an integrative approach affects the motivation of students to learn*, in which there is a statistically significant difference. The level of significance in this case is less than 0.05 ($p < 0.05$) and from Table 2 it can be concluded that the difference in the obtained values for the attitude is statistically significant since there is 95% probability that the difference in the attitudes of the respondents in relation to the year of study they attend at the Faculty of Education is statistically significant, and that in 95% of cases there is a systemic factor or some kind of regularity that leads to this difference.

Table 2. Mann-Whitney Test

Test Statistics ^a				
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Application of multimedia programmed teaching in the context of an integrative approach affects the increase in the motivation of students to learn	3110.500	8363.500	-2.019	.043

Given the third-year students had the opportunity to directly use multimedia programmed material for processing the integrated contents of the Methodology of teaching Science and Social Studies and the Methodology of teaching Fine Arts related to the method of graphic works, it is in these direct experiences that we can look for the reasons for the existence of statistically significant differences. Contact with interactive multimedia content influenced students' motivation for learning as they gained certain knowledge and skills through their own activities and problem solving, which increased their motivation. The application of these innovative models in a multimedia environment has certainly increased the level of active participation of students in their own education and learning process. In this way, their subject position has been improved through independent decision-making, curriculum design, taking responsibility for their own education and active participation in teaching through solving specific problems. Objective knowledge of one's own results acts as a motivation.

CONCLUSION

Research has shown that innovative teaching models are one of the basic prerequisites for university education quality. The Bologna process insists on adapting the university to the immediate needs of the society and European higher education institutions face great challenges in understanding the essence of education and its role in the contemporary society (Bodroški Sparios, 2015: 410). The proposed teaching system implies an integrative approach, practical application of knowledge, use of modern IT, as well as adaptation of content and process to the needs of students and society.

In order to check the theoretical findings and further develop professional practices, students' attitudes about the possibilities and conditions for improving teaching activities at universities are important. Their attitudes were examined with the aim of determining whether and *how students recognize the possibilities of improving teaching activities at the faculty using modern work models that would encourage greater interactivity with teaching content, easier learning and acquisition of higher-quality knowledge*. The research results confirm that students recognize the shortcomings of the frontal instruction that dominates the faculty as it does not inspire them to be active in a sufficient manner. Students have a positive attitude in relation to the assertion that the focus of teaching should be put to learning, and that the student should be at the centre of learning. The results further showed that students recognize the importance of multimedia content in terms of their interactivity. Most students also see multimedia programmed teaching and teaching content integration as ways to easily understand the material and adopt high-quality and practically applicable knowledge. Most students

recognize the benefits of applying multimedia programmed teaching in the context of an integrative approach to teaching related to teaching individualization. They agree that it allows them to individualize the pace of progress and to select the source of knowledge and learning flow according to their own interests. It is also significant that the statistically significant difference in the attitudes of the respondents with regard to the independent variable that has been defined herein as the year of study exists only when it comes to students' motivation to learn.

The presented results point to the conclusion that the students' attitudes are at the same time their expectations from teachers in educational activities. In order to improve university education, these issues should be the starting point for further activities of university institutions and open up new dilemmas and opportunities. In this regard, it would be necessary to organize an experimental research with parallel groups in such a way that one group listens to a certain number of lectures in a traditional, usual manner, and the other group participates in lectures organized in a modern way – using an integrated approach within multimedia programmed teaching. In this way, if statistics were confirmed, new opportunities and ideas for further study of this issue and improvement of university education would be opened.

REFERENCES

- Bodroški Spariosu, B. (2015). Univerzitetsko obrazovanje – od Humboltovog modela do Bolonjskog procesa. *Nastava i vaspitanje*, LXIV, 3, 407–420, DOI: 10.5937/nasvas1503407B
- Collins, J. W. & O'Brien, N. P. (Eds.). (2003). *The Greenwood Dictionary of Education*. Westport, CT: Greenwood.
- Corlu, M. S., Capraro R. M. & Corlu, M. A. (2015). Investigating the Mental Readiness of Pre-Service Teachers for Integrated Teaching, *International Online Journal of Educational Sciences*, 2015, 7 (1), 17–28. Retrieved August 6, 2018 from https://www.researchgate.net/publication/276857768_Investigating_the_Mental_Readiness_of_Pre-Service_Teachers_for_Integrated_Teaching
- Dobrota, M. & Benković, S. (2014). Comparison of ex-cathedra and computer-assisted teaching methods and techniques: policy of teaching practice. *Croatian Journal of Education*, 16 (Sp.Ed.3), 91–108. Retrieved August 4, 2018 from <https://hrcak.srce.hr/129528>
- Kopas Vukašinović, E., Golubović-Ilić, I. & O. Cekić-Jovanović (2017). Project Planning of Joint Activities as a Possibility for Improving the Quality of International University Cooperation. In Rutar, S., Čotar-Konrad, S., Štemberger, T. and S. Bratož (eds.), *Perspectives of Internationalisation and Quality in Higher Education*, 29 September, 2017 (pp. 155–170). Koper (Slovenia): University of Primorska.

- Leisyte, L. & Westerheijden, D. F. (2014). Stakeholders and Quality Assurance in Higher Education. In H. Eggins (Ed.), *Drivers and Barriers to Achieving Quality in Higher Education* (pp. 83–98). Rotterdam: Sense Publishers.
- Loose, S. (2012). *Methodology and methodological practice of teaching fine arts in elementary schools, Script*. Mostar: Faculty of Education.
- Okvir digitalnih kompetencija – nastavnik za digitalno doba. 2017. Retrieved December 6, 2017 from <http://www.mpn.gov.rs/wp-content/uploads/2017/04/Okvir-digitalnih-kompetencija-Final-2.pdf>
- Singh, P. & Gopalkrishnan, V. S. (2017). Effect of Gender on Problem Solving Skills Through Integrated Teaching Programme, *Journal of Science and Technology*, 2, 3, 13-18.
- Službeni glasnik Republike Srbije, *Prosvetni glasnik*, br. 10/2004, 20/2004, 1/2005, 3/2006, 15/2006.
- Spremić-Solaković, A. (2009). Integrativna nastava kao sistemski način povezivanja znanja u nastavnom procesu. *Inovacije u osnovnoškolskom obrazovanju – vrednovanje*, Beograd, 400-409.
- Standardi i smjernice za osiguranje kvaliteta u Evropskom području visokog obrazovanja*. 2005. Helsinki: Evropsko udruženje za osiguranje kvaliteta u visokom obrazovanju. Retrieved May 15, 2017 from http://www.enqa.eu/indirme/esg/ESG_loc.pdf
- Strategija razvoja obrazovanja u Srbiji do 2020. godine. 2012. “*Sl. glasnik RS*”, br. 107.
- Terzić, J., & Miljanović, T. (2009). Efikasnost primene multimedije u nastavi biologije u gimnaziji, *Nastava i vaspitanje*, 58 (1), 5–14.
- The Bologna Process 2020 – The European Higher Education Area in the New Decade*. (2009). Communique of the conference of European ministers responsible for higher education, Leuven and Louvain-la-Neuve, 28–29 April 2009. Retrieved August 2, 2018 from http://www.media.ehea.info/file/2009_Leuven_Louvain-la-Neuve/06/1/Leuven_Louvain-la-Neuve_Communique_April_2009_595061.pdf
- Wang Y., Sun G. & Shi H. (2018). Research on Blended Learning Activity and Application. In: Liu S., Glowatz M., Zappatore M., Gao H., Jia B., Bucciero A. (eds.), *e-Learning, e-Education, and Online Training*. June 30, 2018 eLEOT (pp. 266-272). Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, Springer, Cham.
- Županec, B., Miljanović, T. & Pribičević, T. (2013). *Effectiveness of computer-assisted learning in biology teaching in primary schools in Serbia*. Retrieved December 4, 2017 from <http://www.ipisr.org.rs/Upload/Dokumenta/Strane/Vera%20Zupanec,%20Tomka%20Miljanovic,%20Tijana%20Pribicevic.pdf>

Biljana Stojanović, Dušan Ristanović and Predrag Živković
University of Kragujevac, Faculty of Education
Jagodina, Serbia

UDC 371.314.6
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APPLICATION OF PROJECT MODEL OF TEACHING IN INITIAL TEACHER EDUCATION – STUDENTS’ OPINIONS

Abstract: The application of the project model of teaching in today’s education system becomes imperative, and it is necessary to implement it in the initial education of future teachers. In addition to the benefits, project teaching poses numerous challenges to teachers and schools. Accordingly, the aim of this research is to examine the attitudes of students of the Faculty of Education, about the application of project teaching and the advantages and disadvantages of this model. The research was carried out at the Faculty of Education, on a sample of 72 students of the second year at the department Teacher. The questionnaire, which was made for the purposes of this research, was applied. The questionnaire contained questions of open type and questions in the form of an assessment scale. The obtained results have shown that students-future teachers are aware of the benefits of project teaching and especially emphasize the contribution to the improvement of students’ social skills. As key problems in the implementation of project teaching, the interviewed students stated that: it requires a lot of time, it is necessary to align the project teaching with the curriculum and train the teachers for the use of this model. The results of this study point to the need for adequate training of future teachers in initial education, since the implementation of project teaching has become a mandatory part of the curriculum of teaching and education in primary schools.

Keywords: project teaching, university education, teacher, student.

INTRODUCTION

Overall changes in society put in front of schools new and high demands that involve changing the paradigm of teaching and learning. The need to change the existing traditional education system stems from a different concept of life and a world that requires a different concept of the school whose goals should be shifted from the cognitive to aspects that include the cultivation of social relations, democratic values and collaborative learning. These changes relate to all levels of the education system, in particular university education in the part dealing with the education of future teachers.

One of the key features of modern teaching, even the one that takes place at universities, is the gradual abandonment of lecturing (frontal teaching) and the establishment of methodical diversity (Bezinović, 2010). In finding the best ways to achieve the goals of teaching, one of the possible didactic solutions is found in the project teaching. The concept of a project in didactic works (Meyer, 2002, according to Visković, 2016) is defined as a joint effort of teachers and students to connect life, learning and work so that the socially significant and participant-related problem is jointly processed (= process) and results in a result (= product) that has a usable value for students. The project is a complex task based on a challenging and interesting issue or problem, which requires students to set up a research, carry out the research, solve the problem over a longer period of time and bring the final product that is publicly presented. Project teaching is also described as the concept of creating conditions in which students can learn the more complex knowledge and skills they need to live in the 21st century (Ravitz et al., 2012). Other definitions include authentic content, authentic assessment, teacher support, explicit education goals, collaborative learning, a community in which one explores or which is explored, the use of technological tools, out-of-the-classroom teaching and multidisciplinary topics.

The application of project teaching in today's university education is based on several essential assumptions of a constructivist approach (Gojkov, 2013):

- Learning must have a purpose which is clear to the student;
- The student must have the support in the adoption of a general goal or task;
- The tasks students are assigned should be authentic;
- Tasks and learning environment should reflect the complexity of the real environment;
- Students need to develop procedural knowledge, for example, how to solve a problem;
- It is necessary to create a learning environment that will encourage and support students' thinking;
- Learning should take place as much as possible in the "learning community", where a student is encouraged to test ideas according to alternative views and contexts.

The interpretation of the purpose of applying this model in university education has developed in three directions: 1) students receive concrete and holistic experience in the process of project work; 2) the implementation of project teaching promotes the integration of contents of various scientific and study disciplines and the development of the skills of applying knowledge; 3) project teaching can be used to promote self-regulated learning at the deepest level. The degree of students' independence in project activities entails a question of the role

and importance of teachers, but also the problems that the teacher will inevitably encounter. A unique approach to project teaching offers not only more flexibility for students, but also transforms the role of teachers (Vasilien-Vasilioskiene, Butviliene & Butvilas, 2016).

According to Graziene (2012), at the beginning of the 21st century, project teaching is perceived as a learning method, as a philosophy or didactically imperative in the construction of knowledge and research approach. Research overview (Roessingh, 2011) indicates that the increasing application of project teaching in educational practice has resulted in changes in the scope and methodology of research. This research has shown that the implementation of teaching through projects improves the quality of teaching and learning and contributes to cognitive development at a higher level which enables students to solve complicated problems and reach innovative solutions.

Numerous pieces of research point to the benefits of applying project teaching, such as better quality adoption and understanding of content, better student achievement, high motivation, etc. (Al-Balushi & Al-Aamri, 2014; Hsu, Van Dike, Chen & Smith, 2015). Studies conducted in Israel (Barak & Asad, 2012) and Taiwan (Koutrouba & Karageorgou, 2013) that focused on learning based on project teaching have shown that such an environment has led to greater motivation and increased interest in learning, as well as greater satisfaction and engagement of students in learning different subjects.

In addition to the advantages, some research, as well as educational practice, showed certain shortcomings in the application of project teaching. According to the opinion of the teachers who participated in the research of Marx and associates (Marx et al., 1997), the main obstacles in the implementation of project teaching are: a) time consumption is too high; b) classrooms are often in disarray, c) teachers can not successfully control the flow of information, d) it is difficult to establish a balance between student autonomy and support, d) difficulties arise in the adequate use of teaching facilities, e) it is difficult to evaluate the work of an individual. The authors also found that the attention of teachers is mainly focused on solving only one or two at the most of these problems, and that there is a conflict between old habits and new ideas (Marx et al., 1997, according to Ristanovic, 2016). Other authors cite some of the difficulties encountered by teachers in implementing project teaching: the duration of the project; the problem of creating a flexible schedule as well as inadequate teaching technology; harmonization with the curriculum established at the state or local level; integrating a large number of subjects and areas; monitoring and evaluation of individual / group activities and results of project teaching, etc. (Viskovic, 2016).

METHOD

Starting from the above results, especially those pointing to the need for more significant use of project activities and subjects of a wider research carried out within the bilateral project of the Faculty of Education of the University of Kragujevac, Jagodina and the Faculty of Education of the University of Primorska, Koper, the aim of this research is to examine student attitudes on the implementation of project teaching in initial teacher education. In line with the goal, the following research tasks were set: 1) to examine the students' attitudes about the advantages of applying the project model of teaching in the initial teacher education; 2) to examine the connection of the students' attitudes with the assessment of their ability to apply the project teaching model; 3) to examine students' attitudes about the limitations and difficulties they may encounter when applying the project model of instruction in primary schools.

Sample. The survey was conducted on a sample of 72 students of the second year of undergraduate studies (study program Teacher) of the Faculty of Education in Jagodina (N = 72, M = 35.19, SD = 14.99)

The instrument used in the research is a questionnaire containing 10 questions – 9 closed questions and one open-type question. Closed-type questions were given in the form of a five-step scale of the Likert type (from 1 – I do not agree at all to 5 – I fully agree) and they concerned the examination of attitudes and the assessment of the importance of the positive aspects of the implementation of the project model of teaching in the initial teacher education. The last question in the questionnaire was of an open type and had the task of examining student attitudes about the limitations and difficulties in the implementation of project teaching.

An independent variable was an assessment of initial training for the application of the teaching model of the teaching (dichotomous categorical variable). The dependent variable made an assessment of the importance of certain benefits of project teaching. The statistical significance of the differences in the estimates of two variables (assessment of the importance of the project model and assessment of the qualification for the project model of teaching) were calculated by the Leven equation of variance and Mann-Whitney U test. In the reliability test, the value of the Crombach's alpha coefficient $\alpha = 0.871$ was obtained.

The process of research. Students who participated in the research, during 2017/18 school year attended for a month Didactics classes working on research projects. The implementation implied the application of all stages of the project model of teaching from preparation, introduction to methodology, the realization of research and data processing, conclusion, presentation of results to reflection on work (Ristanović, Stojanović, Živković, 2018).

RESULTS

When it comes to examining students' attitudes about the importance of applying the project model of teaching in the initial teacher education, the Kolmogorov-Smirnov test for normality of distribution showed uncompromising distribution ($Z = 1.873$, $p = 0.000$, $M = 2.59$, $SD = .693$).

Table 1. Descriptors

Items	Mean	Std.deviation
Development of the research opinion	2.92	2.019
Developing creative behavior	3.74	2.116
Linking knowledge and skills with other school subjects	3.81	2.336
Application of knowledge and skills in life circumstances	3.35	2.502
Receiving and displaying information via different media	4.40	2.499
Durability and knowledge transfer	4.10	2.369
Developing collaborative, leadership, communication and organizational skills through group work	4.29	2.468
Developing internal motivation for learning	3.97	2.472
Creating a good atmosphere and positive emotions	4.63	2.542

The obtained KMO values = 0.633 and Bartlett's sphericity test $p = 0.000$, indicate the possibility of checking the factor structure of the scale. By factor analysis, by the method of the main components, an initial two-factor solution was obtained.

Table 2. Factor structure of the scale of the assessment of the importance of the project model of teaching (Rotated Component Matrix)

Items	Component	
	1	2
Linking knowledge and skills with other school subjects or correlation	.828	
Application of knowledge and skills in life circumstances	.825	
Durability and knowledge transfer	.762	
Receiving and displaying information via different media	.684	

Development of the research opinion	.465	
Developing collaborative, leadership, communication and organizational skills through group work		.815
Developing internal motivation for learning		.809
Creating a good atmosphere and positive emotions		.800
Developing creative behavior		.630
Variance explained	49.683%	14.332%

In checking the internal consistency of the scale, the current researchers obtained satisfactory values of the Cronbach alpha confidence coefficients for reliability (Table 3), for both obtained factors based on EFA (exploratory factor analysis).

Table 3. Internal consistency for two EFA factors.

	Factors	Reliability (α)	Items
1.	ACQUISITION AND APPLICATION OF KNOWLEDGE	.771	1,3,4,5,7
2.	SOCIAL COMPETENCES	.773	2,6,8,9

Both factors explain as much as 64.06% of the variance, with the contribution of the first 49.68% of the explanation and the other 14.33% of the total explained variance. Since the first factor consists of items oriented to the cognitive components and factors of the project model of teaching, the current researchers called it ACQUISITION AND APPLICATION OF KNOWLEDGE (items 1, 3, 4, 5, 7). The second factor consists of items oriented to the social component of the importance of the project model of teaching (items 2, 6, 8, 9), and was called the SOCIAL COMPETENCES of the model. The obtained coefficient of factor correlation (FAC1 acquisition and application of knowledge x FAC2 social competences; $r = .774$) indicates the existence of a latent dimension of the importance assessment of the project model of teaching that can be interpreted as the importance of the project model of teaching and it is possible to calculate the overall score on the scale for it (TS).

The current researchers used a parallel analysis (Monte Carlo PCA) to verify this factor solution. Although the factorial analysis of the first order pointed to the existence of two factors, a parallel analysis indicates the justification of a

single-factor solution. This supports the one-factor solution for the entire scale and calculates the total (one) score on the scale (TS).

Table 4. Results of the parallel analysis

Root	Raw data	Means	Percentile
1,000000	4,471508	1,580451	1,774487
2,000000	1,289888	1,371963	1,494644
3,000000	868397	1,218133	1,318545

The results of the parallel analysis and the correlation of the factors obtained by exploratory factor analysis indicate the existence of **one latent factor** and the possibility of calculating *one overall score of the scale* of importance of the project model of teaching. This is expected since the research is organized on a relatively small sample of respondents and items.

Leven equality test of variance shows that there are no statistically significant differences in estimates for all scales and an assessment of initial education's ability to apply the project teaching model ($F = 2.802$, sig. = .099, $p \leq 0.05$). Thus, it can be concluded that respondents who consider themselves to be qualified for the implementation of the project teaching model do not differ (statistically) in items scores from those who are not qualified.

Mann-Whitney U test of the difference between two independent groups (assessment of skills – yes / no) by comparing the median also shows that there is no statistically significant difference between the level of assessment of the importance of the project model and the self-assessment of competence/incompetence ($U = 584$; $z = -0.675$, $p = 0.500$, $r = 0.07$).

Table 5. Results of Mann-Whitney U test.

Test Statistics for Mann-Whitney U	
	TS_importance
Mann-Whitney U	584,000
Wilcoxon W	1404,000
Z	-,675
Asymp. Sig. (2-tailed)	,500

a. Grouping Variable: Are you capable in initial education of the implementation of the Project Teaching Model?

In the regression analysis, in the evaluation of the model, the value of the determination coefficient $r^2 = 0.004$ was obtained (our model explains only 4% of the variance of the importance of the project model). However, if the corrected r^2 for adjusted samples (adjusted R square) is applied, given the size of our sample, a slightly better result $r^2 = 0.011$ (explains 11% of the variance) is obtained. Statistical significance is not reached, since in ANOVA we get $F = .250$, $\text{sig.} = .619$, $p \geq 0.05$. *The obtained standardized coefficient $\beta = 0.060$ and the respective significance value $\text{sig.} = 0.619$ indicate that it should be concluded that our variability (assessment of capability) does not make a significant contribution to the prediction of the dependent variable (estimation of importance).*

Table 6. Results of regression analysis (r^2 coefficient, ANOVA and standardized β).

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,060 ^a	,004	-,011	15,0771

a. Predictors: (Constant) Are you capable in initial education of the implementation of the Project Teaching Model?

b. Dependent Variable: TS_importance

ANOVA^b

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	56,803	1	56,803	,250	,619 ^a
1	Residual	15912,475	70	227,321		
	Total	15969,278	71			

a. Predictors: (Constant), Are you capable in initial education of the implementation of the Project Teaching Model?

b. Dependent Variable: TS_importance

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
1	(Constant)	32,613	5,462		5,971	,000					
	Capability	1,787	3,576	,060	,500	,619	,060	,060	,060	1,000	1,000

a. Dependent Variable: TS_importance

By examining the last task of our research we obtained the results shown in Table 7.

Table 7. Expected difficulties in the realization of project teaching in primary schools

Difficulties	N	%
Lack of material and technical tools	13	18
It takes a lot of time	18	25
Requires additional teacher preparation	13	18
Hard to fit into the curriculum	18	25
Insufficient teacher training	6	8,4
Difficulties in grading pupils	4	5,6
Total:	72	100

The results show that the opinions of students are different in terms of seeing problems and difficulties in applying project teaching.

DISCUSSION

By examining students' opinions about the positive aspects of the implementation of the project model of teaching, the current researchers have come to the conclusion that the largest number of students ($M = 4.63$) believe that the basic contribution is the creation of a good atmosphere and positive emotions within this model of work. The studies that reported on the results of the research on project teaching mostly emphasized the students' satisfaction in the project work and linked them with motivation for learning, increased interest in topics that were being processed, activation of students, etc. (Gibbes and Carson, 2013).

In the further ranking of the positive aspects of project teaching, students ($M = 4.29$) estimate that developing collaborative, leadership, communication and organizational skills through group work is very important for project teaching. These findings confirm the results of the research, which were also conducted by Hanney & Savin Baden (2013) and Harmer and Stokes (2017). In the application of group forms of work within the framework of project teaching, student activities are based on a complex series of interactions between team members at a given time. Students also pointed out that receiving and sharing information through the senses and the media, as well as knowledge transfer, were a significant

advantage of project teaching. These results coincide with the results of the La-sauskiene & Rauduvaite (2015) research, which conclude that the application of project teaching enables students to apply theoretical knowledge and skills.

Considering the larger number of items in the scale, factor analysis provided an initially two-factor solution as follows: Factor 1 ACQUISITION AND APPLICATION OF KNOWLEDGE, Factor 2 SOCIAL COMPETENCES. According to students' opinions, F2 – building social competences represents a greater contribution to project teaching in relation to the F1 process of acquiring and applying knowledge. In further processing of data, the current researchers wanted to examine whether there is a correlation between students' attitudes about the positive effects of project teaching and the experiences students have with the project model of teaching. The coefficient $\beta = 0.060$ and the relative significance $\text{sig} = 0.619$, showed that the assessment of students' competence **does not make** a significant contribution to the prediction of the importance of different aspects of project teaching.

Regarding the limitations and difficulties that can be encountered when applying the project model of primary school education, students' opinions are different, and four-quarters of respondents (25%) believe that the implementation of this model requires a lot of time. Too much time consuming as a difficulty in the implementation of project teaching is stated by many authors who have studied this problem (Ristanović, 2016; Visković, 2016; Harmer & Stokes, 2017). In the same proportion (25% of respondents), students also answered regarding the compatibility of project teaching with the requirements of the curriculum. In a research conducted by Ristanović (2016) on a sample of experienced teachers, they came to the conclusion that insufficient coherence with the curriculum was one of the key problems in the implementation of project teaching in primary schools as the respondents ranked this problem in the first place. However, the concept of out-of-school education, on which new, reformed plans and teaching and learning programs for the first cycle of basic education are based, treats project teaching as one of the priorities. In this way, the creators of national educational policies seek to change the role of the curriculum, so teachers are no longer perceived as an obstacle, but as an incentive to innovate the teaching process.

A somewhat smaller number of students (18%) points out as aggravating circumstances for the implementation of project teaching, lack of material and technical resources in schools. The results of the research conducted in Croatia by Tomljenović, Novaković (2012) confirm this problem.

Finally, it is important to note that 18% of students believe that project teaching requires better preparation of teachers for this kind of work. These findings are confirmed by other studies (Lasauskiene & Rauduvaite, 2015; Ristanović, 2016; Vujačić, Đević and Stanišić, 2017). "Insufficient teacher training can be a serious

obstacle to the implementation of the project model of teaching work, especially if we take into account the fact that our teachers have little theoretical insight and practical experience in working with this model during their formal education” (Ristanović, 2016: 14). This should be added to the conclusion derived from the results of the research, conducted by Gojkov (2013), according to which insufficient instruction was seen as the main obstacle from the angle of the students.

CONCLUSION

The results obtained by this research indicate that students-future teachers recognize not only the positive effects of project teaching, but also the obstacles in the implementation of this model. As the most important advantages of the project model of teaching, students emphasize the development of students’ social competences, and above all the satisfaction in work, high motivation and positive climate in the classroom. When it comes to disadvantages and difficulties that they may encounter in their work, their attitudes coincide with the opinion of experienced teachers in that the main obstacles are that the project teaching requires a lot of time, good teacher preparation and that it is necessary to harmonize the curriculum and program with the requirements of project teaching.

The results of this study indicate the need for adequate training of future teachers in initial education, since the implementation of project teaching has become a mandatory part of the curriculum and teaching in primary schools.

In order to prevent the functioning of factors that diminish the effectiveness of the project model of teaching in university education, teachers are advised to specifically address the issues of: a) students’ motivation, b) techniques of project design, realization of research, analysis of data and presentation of results, c) using existing knowledge and experience of organization and coordination of activities and resource management. In other words, university teaching based on a constructivist approach in front of teachers sets high demands, not only in terms of possessing expert knowledge from a certain scientific field, but also by possessing appropriate pedagogical competences. For these reasons, the transformation of the role of university teachers comes to a point where they turn them into life-long students and reflective practitioners.

REFERENCES

- Al-Balushi, S. M. & Al-Aamri, S. S. (2014). The effect of environmental science projects on students' environmental knowledge and science attitudes. *International Research in Geographical and Environmental Education*, 23(3), 213–227.
- Barak, M. & Asad, K. (2012). Teaching image-processing concepts in junior high schools: boys' and girls' achievement and attitudes towards technology. *Research in Science and Technological Education*, 30(1), 81–105.
- Bezinović, P. (2010). Prikaz projekta – Samovrednovanje u osnovnim školama. U: P. Bezinović (ur.), *Samovrednovanje škola. Prva iskustva u osnovnim školama* (str. 53–117). Zagreb: Agencija za odgoj i obrazovanje/Institut za društvena istraživanja u Zagrebu.
- Gibbes, M. & Carson, L. (2013). Project-based language learning: an activity theory analysis. *Innovation in Language Learning and Teaching*, 8 (2), pp 171–189.
- Gojkov, G. (2013). *Fragmenti visokoškolske didaktike*, Vršac: Visoka škola strukovnih studija za obrazovanje vaspitača.
- Graziene, V. (2012). Applicability of Project Based Learning Approach in Final Thesis in Educology Studies. *Twenty Years for Sustainable Development: Learning from Each Other*. ATEE Spring University. Vilnius: Klaipeda University, 2, 36–52.
- Hanney, R. & Savin-Baden, M. (2013). The problem of projects: understanding the theoretical underpinnings of project-led PBL. *London Review of Education*, 11 (1), pp 7–19.
- Harmer, N. & Stokes, A. (2017). Choice may not necessarily be a good thing: student attitudes to autonomy in interdisciplinary project-based learning in GEES disciplines, *Journal of Geography in Higher Education*, Volume 40, 2016 – Issue 4, 531–545.
- Hsu, P., Van Dyke, M., Chen, Y. & Smith, T. J. (2015). The effect of a graph-oriented computer-assisted project-based learning environment on argumentation skills, *Journal of Computer Assisted Learning*, 31(1), 32–58.
- Koutrouba, K. & Karageorgou, E. (2013). Cognitive and socio-affective outcomes of project-based learning: Perceptions of Greek Second Chance School students. *Improving Schools*, 16(3), 244–260.
- Lasauskiene, J. & Rauduvaite, A. (2015). Project-Based Learning at University: Teaching Experiences of Lecturers, *7th World Conference on Educational Sciences (WCES-2015)*, 05–07 February 2015, Novotel Athens Convention Center, Athens, Greece.
- Marx et al. (1997). Enacting project-based science: Challenges for practice and policy, *Elementary School Journal*, 97, 341–358.
- Meyer, H. (2002). *Didaktika razredne kvake*. Zagreb: Educa.
- Ravitz, J., Hixson, N., English, M. & Mergendoller, J. (2012). Using project based learning to teach 21st century skills: Findings from a statewide initiative. Paper presented at *Annual meetings of the American Educational Research Association*. Vancouver, BC, April 16, 2012.
- Ristanović, D. (2016). Uloga projektnog modela nastave prirode i društva u razvoju saradničkog ponašanja učenika, *Nastava i vaspitanje* 3, 629–646.
- Ristanović, D., Stojanović, B. & Živković, P. (2018). Teorijski aspekti inoviranja univerzitetskog obrazovanja primenom projektnog modela nastave, *Uzdanica*, XV/1, str. 137–151.

- Roessingh, H. & Chambers, W. (2011). Project-Based Learning and Pedagogy in Teacher Preparation: Staking Out the Theoretical Mid-Ground. *International Journal of Teaching and Learning in Higher Education*, 23(1), 60–71.
- Tomljenović, Z. & Novaković, S. (2012). Integrated Teaching – A Project in Primary School Elective Art Classes, *Metodički obzori*, 7, 119–134.
- Vasiliene-Vasiliauskienė, V., Butviliene, J. & Butvilas, T. (2016). Project-Based Learning: the Complexity and Challenges in Higher Education Institutions, *Computer Modeling & New Technologies*, 20 (2), 7–10.
- Visković, I. (2016). Projektna nastava kao područje unaprjeđenja kvalitete škole. *Školski vjesnik: časopis za pedagošku teoriju*, Tematski broj, 381–391.
- Vujačić, M., Đević, R., Stanišić, J. (2017). Iskustva učitelja u primeni inovativnih nastavnih metoda u okviru programa stručnog usavršavanja. *Zbornik Instituta za pedagoška istraživanja*, 49, 2, 234–260.

Vera Savić
University of Kragujevac, Faculty of Education
Jagodina, Serbia

UDC 378.147::811.111
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INNOVATION IN PRESERVICE ENGLISH LANGUAGE TEACHER EDUCATION: APPLYING MICROTEACHING TO DEVELOP EFFECTIVE REFLECTIVE PRACTICE

Abstract: The paper studied the application of an innovative model of microteaching video activity in preservice English language teacher education and its impact on student teachers' ability to restructure experience through reflection. As the major challenge in preservice English language teacher education today is to bridge the gap between theory and practice and foster autonomy in teaching, the paper aimed to determine the preservice teachers' perceptions of the requirements of microteaching and the impact of microteaching video activity on the development of their teaching skills and ability to reflect effectively on their own teaching behaviour. The participants were preservice English language teachers (N=5) attending English Language Practicum at the Faculty of Education in Jagodina, Serbia. Mixed method was used in the study and both quantitative and qualitative data were collected with questionnaires, narratives and transcripts of video recordings. The findings indicate that microteaching experience contributed to making student teachers fully aware of their anxieties and needs for developing their own teaching skills, constructively changed their beliefs, and guided them towards problem detection, reflection and proposition of solutions. Pedagogical implications of these results involve the application of microteaching as a tool in improving teaching skills, conducting performance assessment, and practising innovations in teaching.

Keywords: preservice English language teacher education, microteaching, effective reflection, video recording, microlesson, innovation in teaching.

INTRODUCTION

Teacher education in teaching English as a foreign language (EFL) today is a field of much change and innovation focused on “refiguring the reified relationship between theory and practice” (Kumaravadivelu, 2006, 170). The major challenge is to bridge the gap between what is learned, i.e. theory, and how it is learned, i.e. practice (Savić, 2009). Since “*what* is learned will be fundamentally shaped by *how* it is learned” (Johnson, 2013, 75), the quality and character of teacher education programmes and activities for student teachers' learning are of primary

importance. It is widely accepted that student teachers will not learn to teach “just by being told what to do or how to do it” (Freeman & Cornwell, 2002, xiii), but, to be able to teach effectively, they should construct their own understanding of the classroom and their role in it.

Applying microteaching in L2 teacher education is one of the possible ways to narrow the gap between theory and practice and to enhance a reflective approach to teaching. This method can help student teachers connect the relevant pedagogical concepts to practical activities and construct their own concepts of language teaching and true expertise in the profession. The first step is to encourage student teachers to reflect deeply on actual practice, both real and simulated.

REFLECTION IN L2 TEACHING

Current research suggests that to be effective, pre-service L2 teacher education curricula should provide student teachers with reflective practicums involving opportunities for observation, lesson planning, teaching, tutoring, feedback and reflection (Hyland & Wong, 2013). Rodgers (2002, 848) argues that the purpose of reflection is to make meaning by formulating the “relationships and continuities” among one’s own experience and knowledge and the knowledge produced by thinkers. Experience itself is insufficient for teacher development, because to become productive, it must be analysed and examined systematically (Richards & Lockhart, 2004). A deeper understanding of one’s own practice can be achieved through critical reflection that can be performed either individually or in collaboration with a colleague (Richards & Lockhart, 2004; Zeichner & Liston, 1996). It is crucial for a student teacher to stay open-minded and to interpret the experience from a number of different perspectives, which may result in “professional knowledge developed through effective reflective practice” (Loughran, 2002, 40) and in a new outlook and change of practice. Reflection on experience is “a process of learning that starts during preservice training” (Savić, 2009, 169), and it can be purposefully developed if given appropriate time and commitment.

The simultaneous focus on content and pedagogy can enable teachers to understand both what to teach and how to teach, like in the study reported by Johnson (2013). This innovative team teaching project which offered novice L2 teachers (two undergraduate and two graduate ones) a number of opportunities to reflect on their experience and to “materialize their emerging understandings of both pedagogical and subject matter concepts within the authentic activities of L2 teaching”. Microteaching simulation was combined with careful and critical reflection, involving multiple opportunities for reflection and support in several

stages of microteaching, i.e. in the process of microteaching, when viewing video recordings of microteaching sessions, and when writing reflective papers on the whole process, which made the project highly innovative.

MICROTEACHING IN L2 TEACHER EDUCATION

Microteaching is a teacher education technique that has been highly valued (Bell, 2007; Wallace, 2001) and successfully implemented in its many variations for several decades. It involves having student teachers simulate teaching a short session to their peers, view a video recording of the performance, and evaluate it in discussion with peers and the supervisor (teacher educator), reflecting deeply on the ‘teaching’ experience and the viewed performance. The technique originated at Stanford University in the 1960s as a three-step programme for developing clearly defined teaching skills of science teachers through carefully prepared lessons that were recorded, reviewed and evaluated (Allen, 1967), and has been used extensively in teacher education throughout the world for half a century. It has been applied in language teacher education as part of the practicum, with the main objective to develop student teachers’ understanding of how to connect theory to practice by providing them with the opportunities to reflect on their own simulated teaching upon viewing a video recording of it, to share experiences and thoughts with the peers and the supervisor, and to give and get constructive feedback in a less-stressful environment than the one in a real classroom. The video is, therefore, used in microteaching as a learning tool that should enable student teachers to master a number of teaching skills and to gain confidence in teaching (Allen & Ryan, 1969).

Wallace (2001) defines microteaching as a range of experiential learning techniques aiming to contribute to developing professional action. To the key question of how experiential knowledge should be acquired, Wallace (2001, 88) answers that language teachers should be given “opportunities for safe experimentation while learning their profession, and, when qualified, for developing new skills and extending their professional repertoire” through microteaching. Microlessons as products of microteaching have been found useful both as a form of preservice training and inservice professional development of English language teachers. The effectiveness of the technique has been studied in different contexts, showing that it can effectively prepare student teachers for the realities of the foreign language classroom. In the model proposed by Sole (2002), the trainees prepared longer presentations using visual aids, examples and questions to check understanding. The sessions were videotaped to be viewed and evaluated by the whole group using a short form prepared either by the teacher educator alone or in cooperation with the group. The strengths and weaknesses of the microlesson

were critiqued and analysed in a small group, by stating what had been good and what could be improved.

The model of training novice language teachers proposed by Houser Pineiro (2002) involved teacher journal reflections on the lessons they had taught and on three lessons videotaped at the beginning, in the middle and at the end of the semester. The novice teachers considered journal reflections very useful for focusing on certain aspects of teaching and for understanding their own teaching, while the video recordings were reported as a successful tool contributing to personal growth through reflection. Similarly, Menti (2002) described a process of preservice language teacher training in which self-observation with the help of video recording was applied. The focus of the recorded lesson was an aspect of teaching to be improved, while viewing of the recordings enabled student teachers to successfully determine their strengths and weaknesses. More recently, Savas (2012) reported on EFL preservice teachers' beliefs about the usefulness of microteaching in the practicum, emphasizing the gains observed not only in the improvement of teaching skills, but also in the English language proficiency of the student teachers. The most frequently mentioned teaching skills developed in the process of microteaching were giving instructions, time management, classroom management, monitoring students and giving feedback, while pronunciation, speaking and vocabulary were the language skills and knowledge upgraded most in the process of microteaching. The author concluded that microteaching video technique had a great potential in English language teaching methodology courses for enhancing preservice teachers teaching skills and foreign language proficiency.

THE STUDY

Based on the literature review, the study aimed to determine preservice English language teachers' perceptions of the impact of microteaching video activity on the development of their teaching skills and ability to reflect effectively on their own teaching practice. The objective of the research was to determine possible benefits and/or disadvantages of applying this technique in a methodology course for student teachers of English.

Research questions

The paper focused on the following research questions:

1. Do EFL student teachers' attitudes to and beliefs about the requirements of microteaching differ before and after the experience with microteaching video activity, and if so, how?

2. Does microteaching video activity contribute to the development of effective reflection of EFL student teachers, and if so, how?

Method

A mixed method was used in the study and both quantitative and qualitative data were collected. Narrative inquiry (see Bense, 2012) was applied to collect and analyse the narratives of student teachers, as a way of gaining insight into their microteaching experience, attitudes and the ability to reflect effectively. Transcripts of video recordings were used for gaining a deeper insight into the student teachers' disposition to reflection.

Participants

The study involved five student teachers in the final (eighth) semester of their undergraduate studies (N=5, aged 22), attending the Practicum of Teaching English to Young Learners at the Faculty of Education in Jagodina, University of Kragujevac, Serbia, in spring 2018. Considering the fact that microteaching is a technique applied with small groups of preservice or inservice teachers, this group of five participants was formed of the preservice teachers studying to become class teachers (major) and English as a foreign language (EFL) teachers (minor). All the participants were informed of the aims of the research and advised that their identity would remain anonymous. The consent to be video recorded was obtained from all the participants before the research.

Instruments

Four instruments were applied in the study: 1. Microteaching Attitudes and Beliefs Questionnaire, with 15 statements related to different aspects of microteaching, and an agreement scale from 1 (strongly disagree) to 5 (strongly agree); 2. Microlesson Self-Evaluation Questionnaire, with 15 open questions; 3. Microlesson Evaluation Questionnaire, with 15 open questions; and 4. Transcripts of video recordings of group discussions, reflections and feedback given by the peers and the supervisor on teaching performance (post-microlesson discussion).

Data collection and procedure

An introductory lecture about the principles of microteaching was conducted by the supervisor, and a demonstration video of a simulated microlesson was viewed and discussed in the regular Teaching English to Young Learners Practicum lessons held in the higher education institution with the purpose of training

the participants in the skills of evaluating and giving constructive feedback on a specific teaching behaviour observed. After that the participants were asked to express their views on microteaching by filling in the Microteaching Attitudes and Beliefs Questionnaire. This instrument was purposefully applied before the microteaching activity in order to measure quantitatively the participants' views about different aspects of microteaching. After that, the microteaching procedure was started by the supervisor's presenting a microteaching task. The procedure was based on the instructions given by Duminy and his associates (2006): 1. Identifying specific teaching skill and content to be taught; 2. Developing an evaluation instrument with a scale/descriptors for measuring the achievement of the teaching skill; 3. Determining the duration of the microlesson (5–10 minutes); and 4. Deciding on the plan of action.

The process of planning a microlesson involved all the participants in collaborative group work. The skill chosen to be practised was 'giving instructions in English', and the content was 'reviewing animal names by playing a bingo game' in a simulated young learner classroom; the criteria for evaluation involved clarity, appropriacy and sequence of instructions. The microlesson was then performed by three participants consecutively (with the other participants role playing young learners), video recorded, viewed, discussed, evaluated and self-evaluated. For the purpose of the research, the discussion and evaluation sessions were also video recorded to be used for data collection. Finally, written narratives (see Bense, 2012) were collected from all the participants in the form of (self)evaluation of microteaching experience.

Data analysis and discussion

Due to the limited length of this paper, only a part of the data collected in the study will be presented, analysed and discussed in the sequence of the research questions.

Student teachers' attitudes to and beliefs about the requirements of microteaching

The participants' attitudes to and beliefs about the requirements of microteaching were measured before and after the microteaching experience. Table 1 shows the quantitative measure of attitudes collected before the microteaching activity from all the participants (N=5).

Table 1. The participants' attitudes to aspects of microteaching (scored on 5-point Likert scale from 1 to 5: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree).

Statements related to aspects of microteaching	Median score
1. I understand the principles of microteaching.	3.2
2. I look forward to cooperating with peers on planning a microlesson.	4.8
3. I think I know how to plan a microlesson.	3.0
4. I believe I know how to define the objectives of a microlesson.	3.2
5. I believe I know how to develop activities for a microlesson.	3.2
6. I feel I know how to evaluate different aspects of microteaching.	3.2
7. I feel I know how to reflect on my teaching experience.	4.2
8. I feel I have a good command of English to teach a microlesson effectively.	4.2
9. I feel I know how to manage a micro lesson.	3.6
10. I think I know how to use my knowledge of TEYL methodology to teach a microlesson effectively.	4.0
11. I think I know how to use different techniques to teach microlesson activities effectively.	3.2
12. I think I will feel embarrassed to watch a video recording of my teaching.	2.8
13. I think I will feel insecure to teach a microlesson in English.	2.2
14. I feel that being observed by my supervisor will negatively affect my confidence in microteaching.	1.6
15. I feel that being video recorded will negatively affect my confidence in microteaching.	2.0

The scores indicate a positive or very positive attitude of the participants to a variety of aspects of microteaching (from $M=3.0$ to $M=4.8$), give evidence of the participants' readiness and self-confidence to participate in the microteaching video activity (questions 1–11), and testify of low or medium anxiety levels related to teaching in English, to being observed by the supervisor, and to being video recorded in the course of 'teaching' (questions 12–15, scores from $M=1.6$ to $M=2.8$). More specifically, all the participants looked forward to cooperating with peers on planning a microlesson ($M=4.8$), felt prepared to reflect on their teaching experience ($M=4.2$), felt they had a good command of English to teach a microlesson effectively ($M=4.2$), and felt confident to transfer their theoretical knowledge into practice ($M=4.0$). Moreover, they expressed no anxiety about being observed by the supervisor ($M=1.6$) or about their own confidence suffering

from being video recorded ($M=2.0$), but there was some anxiety related to viewing the video recording of their own teaching ($M=2.8$).

The above positive attitudes to and beliefs about the requirements of microteaching can be explained by considering the participants' solid knowledge of EFL methodology and TEYL methodology, their high proficiency in English, and their extensive experience in practice teaching of other primary school subjects in local practice schools, their major being class teaching. What is more, being in a small group of their peers whom they had known for four years, helped them express a rather low anxiety related to their future microteaching activity. Some anxiety related to viewing video recordings of one's own simulated teaching is consistent with previous studies of the sources of preservice EFL teachers' anxiety (Merç, 2011), and may have resulted from the fear of getting negative evaluation by the supervisor and/or the peers, or from the possibility of being personally dissatisfied with their own recorded performance. Obviously, not all the participants were fully aware that the microteaching activity was going to be used as a learning tool, rather than as a final evidence of their teaching ability. It must also be noted that the participants expressed a high level of self-confidence in their ability to manage a microteaching activity with success and to reflect effectively on the experience. The former can be explained with the participants' unfamiliarity and complete lack of experience in teaching in English, while the latter may have been the outcome of a great number of practice teaching lessons in other school subjects that they had performed and reflected on previously in group discussions regularly applied in methodology and practicum courses at the Faculty of Education in Jagodina.

The analysis of the participants' narratives in response to open questions after the microteaching experience reveals a change in beliefs and attitudes. Three Microteaching Self-evaluation Questionnaires (Participant 1, Participant 2, Participant 3) and two Microteaching Evaluation Questionnaires (Participant 4, Participant 5) yielded a number of narratives in response to 15 open questions. Some of the issues appearing in the narratives, relevant to the first research question, will be summarised in the form of recurring themes.

The data collected with Microteaching Self-evaluation Questionnaire ($N=3$) showed that, upon reflecting on their microteaching experience, all the participants expressed much less confidence in their readiness to teach a microlesson than before the microteaching activity, revealing that they had concerns related to using appropriate language for giving instructions in English, to sequencing their instructions, to giving feedback to the 'learners', and to pronouncing key vocabulary clearly in English. Also, they stated that they had realised they had not been prepared enough to teach a microlesson because they had had no experience in teaching English and teaching in English to refer to as a form of support. Their surprise was the fact that their experience in practice teaching of other primary

school subjects had not been very useful when teaching English in English because “teaching English differs a lot from teaching other school subjects” (Participant 3). They also expressed surprise and frustration in relation to some aspects of their teaching behaviour observable in the video recordings: “Some of my instructions were too long for the children of such a young age.” (Participant 1); “My instructions were clear, but too long.” (Participant 2); “My instructions kept becoming more complex, less clear, and more inappropriate in the choice of verbs. This made me nervous, too occupied with choosing the right instructions, and with my pronunciation.” (Participant 3). The participants’ narratives show that they became aware of some of their mistakes only after having viewed the recordings, which made them feel embarrassed in front of the peers and the supervisor.

Peer evaluation of simulated teaching performances was collected with Microlesson Evaluation Questionnaire (N=2). The data pointed to the above problems, adding some new ones: inappropriate language in the task of giving instructions, very complex phrases, omission of important instructions, and the lack of enthusiasm and support to the ‘learners’ (Participant 4), incomplete instructions, excessively long instructions, inappropriate language, and not motivating the ‘learners’ appropriately (Participant 5).

The transcripts of the post-microlessons discussions displayed two sets of opposing results. On the one hand, there was too severe self-criticism of the participants who had played the roles of teachers and who expressed disappointment with their own performance; on the other hand, there was evaluation and feedback provided by the supervisor and the peers, who focused on the overall performance, pointing to the success of the microteaching activity in spite of occasional mistakes made. The supervisor praised the pace of the microteaching activity and its successful completion, suggesting minor changes and explaining that further practice should contribute to the improvement of performance as a result of reflection and self-evaluation.

It can be concluded that the participants’ microteaching experience was beneficial in making them fully aware of their own anxieties and personal needs for developing teaching skills. What is more, it resulted in more realistic attitudes of the participants to the requirements of a teaching situation, constructively changed their beliefs. Unlike their beliefs before microteaching, the participants now expressed much less self-confidence, but more realistic views of their competences to teach English. The peer and supervisor feedback was encouraging, provided a positive atmosphere and greatly contributed to the process of understanding microteaching as a learning tool (Allen & Ryan, 1969; Wallace, 2001), so that the participants came to understand the true requirements of the teaching context and viewed their own teaching skills and feelings in relation to it in a more realistic manner.

Contribution of microteaching to the development of effective reflection

The second research question was answered on the basis of data collected with Microlesson Self-Evaluation Questionnaire (N=3) and transcripts (N=3) of video recordings of the participants' reflections on their own teaching performance. The participants had multiple opportunities to reflect on their performance (Johnson, 2013): in the process of teaching a microlesson, upon viewing the video recording of their own microlesson performance, and when writing their reflections in response to questions in Microlesson Self-Evaluation Questionnaire.

The participants' reflections during the process of teaching a microlesson were revealed in the written narratives provided in the Microlesson Self-evaluation Questionnaire, like: "In my microlesson I worried that I would not be able to simplify my language, that my instructions and my demonstration of the task for the learners would be inappropriate." (Participant 2); "Since this was the first time I had taught an activity in English, I was very nervous and in the course of the activity I kept thinking about the instructions I was giving and about my pronunciation. Before the microteaching video activity I had structured the task in my mind and believed it would go as I had planned it, but when I started my microlesson, there was a mess in my head." (Participant 3).

Moreover, the participants' narratives showed their ability to reflect deeply, detect problems and their sources, and suggest solutions for self-improvement. The reasons for failure that were reported involved the unexpected feelings of anxiety and frustration (Participant 2), inexperience in teaching in English (Participant 1, Participant 3), and inability to apply the teaching experience already acquired in practice teaching of other primary school subjects (Participant 3). The solutions offered in the process of self-evaluation were given in the form of newly created general rules for giving effective instructions to young learners in English: "Some of my instructions were too long for the children of such young age. It is more appropriate to have only two simple commands in one sentence. Each command should be supported by body language. [...] The most important strategy for effective teaching is to adapt the language of instructions to the learners' language level." (Participant 1); "My instructions were clear, but too long. I used the vocabulary that young learners would not be able to understand, but I think that I made up for it by demonstrating and miming what I was saying, so that the 'learners' could understand. [...] I think I should improve my instructions by making them clearer, shorter, and the language more appropriate." (Participant 2) "Due to anxiety that appears when we play the role of a teacher, we often make mistakes that we are unaware of during and after the lesson. The microteaching video activity helped me to see my mistakes and to plan how to correct them and improve my performance, not only in teaching English, but also in teaching other primary

school subjects.” (Participant 2). Significantly, the solutions proposed in narratives given by the peers playing the roles of learners were similar: simplifying the language of instructions, adapting the length of instructions to the young learners’ level, creating a competitive atmosphere and motivating the ‘learners’ by promising a reward, making instructions clearer, more concrete and precise, and demonstrating the activity (Participant 4, Participant 5).

The transcripts of video recordings of the post-microlesson discussion showed that the first reactions of the ‘teachers’ were reflections on the teaching behaviours that displayed their own weaknesses. As the supervisor guided the discussion and reflection, she managed to provide a positive atmosphere (Wallace, 2001) by focusing on the successes of microlessons taught. Obviously, reflection provided by the participants immediately after viewing the video recordings of their own microlessons was biased and too critical, while the written narratives provided more balanced reflection, constructive ideas and plans for personal professional improvement. The supervisor played a crucial role in training the participants in effective reflection by guiding them towards problem detection, reflection and proposition of solutions.

CONCLUSION

The paper studied the application of an innovative model of microteaching video activity in preservice English language teacher education and its impact on student teachers’ ability to restructure experience through reflection (Zeichner & Liston, 1996). Critical reflection as part of microteaching video activity stood out as an essential element of student teachers’ learning how to connect theory to practice, and as a result, microteaching sessions became “opportunities for experiential learning” (Wallace, 2001, 103), both for the ‘teacher’ and the peer group. Apart from our findings being consistent with the results of previous studies of the effectiveness of microteaching (Savas, 2012; Sole, 2002; Wallace, 2001), they contributed something unique to our understanding of this technique as a form of pedagogy in preservice English language teacher education. The participants’ written narratives offer evidence of the learning not only through one’s own simulated performance, through self-evaluation and reflection on the video recording of one’s own teaching behaviour, and through constructive feedback obtained by the peers and the supervisor, but also from participating in the microteaching video activity as a ‘learner’, through the process of evaluating the microlessons and giving feedback to the ‘teachers’, and through group discussions of microteaching as a new technique in the practicum.

Pedagogical implications of applying microteaching in training preservice and inservice language teachers may involve practising teaching skills, building

up self-confidence, conducting performance assessment, and practising innovations in teaching (Crandall, 2000). Video recordings of microlessons may be part of student teachers' electronic L2 practicum portfolio, accompanied with evaluation, self-evaluation, reflection and comments by peers, and thus assist in the improvement of teaching skills of student teachers. Microteaching may help experience and develop new teaching and learning strategies, create one's own method of teaching (Kumaravadivelu, 2006), view teaching from a learner's perspective, and gain experience and autonomy in teaching.

REFERENCES

- Allen, D. (1967). *Microteaching: A Description*. California: U.S. Department of Health, Education and Welfare Office of Education
- Allen, D. W. & Ryan, K. A. (1969). *Micro-teaching Reading Mass*. Addison Wesley.
- Bell, N. (2007). Microteaching: What is it that is going on here? *Linguistics in Education*, 18(1), 24–40.
- Bense, K. (2012). Narrative inquiry: A methodology for studying German migrant teachers' experiences in Australian classrooms. The University of Western Australia, Perth.
- Crandall, J. (2000). Language teacher education. *Annual Review of Applied Linguistics*, 20, 34–55.
- Duminy, P. A, MacLarty, A. H. & Maasdrorp, N. (2006). *Teaching practice* (7th imp.). Cape Town: Maskew Miller Longman.
- Freeman, D. & Cornwell, S. (Eds.) (2002) (2nd printing). *New ways in teacher education*. Alexandria, VA: TESOL Inc.
- Houser Pineiro, C. (2002). Video: a tool for reflection. In D. Freeman & S. Cornwell (Eds.), *New ways in teacher education* (2nd printing) (pp. 120–123). Alexandria, VA: TESOL Inc..
- Hyland, K. & Wong, L. (2013) (Eds.). *Innovation and change in English language education*. Abington: Taylor & Francis Books.
- Johnson, K. E. (2013). Innovation and change in teacher education. In: K. Hyland & L. Wong (Eds.), *Innovation and change in English language education* (pp. 75–89). Abington: Taylor & Francis Books.
- Kumaravadivelu, B. (2006). *Understanding language teaching: From method to postmethod*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Loughran, J. (2002). Effective reflective practice: In search of meaning in learning about teaching. *Journal of Teacher Education* 53(1), 33–43.
- Menti, M. (2002) (2nd printing). Self-observation in teacher education. In: D. Freeman & S. Cornwell (Eds.), *New ways in teacher education* (pp. 96–100). Alexandria, VA: TESOL Inc.
- Merç, A. (2011). Sources of foreign language student teacher anxiety: A qualitative inquiry. *Turkish Online Journal of Qualitative Inquiry*, 2(4), 80–94.
- Richards, J. C. & Lockhart, C. (2004) (14th print.). *Reflective teaching in second language classroom*. Cambridge: Cambridge University Press.

- Rodgers, C. (2002). Defining reflection: Another look at John Dewey and reflective practice. *Teachers College Record*, 104 (4), 842–866.
- Savić, V. (2009). Towards Successful Mentoring in Primary English Language Teaching in Serbia. In: M. Meri (Ed.), *Promoting Teacher Education – from Selection to Teaching Practice*, Proceedings of International Conference (pp.167–174). Jagodina: Faculty of Education in Jagodina, book 8/1, vol. 1.
- Savas, P. (2012). Micro-teaching videos in EFL teacher education methodology courses: Tools to enhance English proficiency and teaching skills among trainees. *Procedia – Social and Behavioural Sciences*, 5, 730–738.
- Sole, D. (2002). Multiple evaluations of oral microteaching assignments. In D. Freeman & S. Cornwell (Eds.), *New ways in teacher education* (2nd printing) (pp. 161–165). Alexandria, VA: TESOL Inc.
- Wallace, M. J. (2001). *Training foreign language teachers: A reflective approach* (9th printing). Cambridge: Cambridge University Press.
- Zeichner, K. M. & Liston, D. P. (1996). *Reflective teaching: An introduction*. Mahwah: Lawrence Erlbaum Associates.

Sara Marinič, Mara Cotič and Darjo Felda
University of Primorska, Faculty of Education
Koper, Slovenia

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STUDENTS' MOTIVATION IN THE METHODOLOGY OF TEACHING MATHEMATICS COURSE

Abstract: People's behaviour is targeted to gain and satisfy certain needs, with a driving motivation behind them. The same stands for mathematics, which people encounter in many activities in daily life. The learning of mathematics is the result of human curiosity although it is becoming a less interesting and attractive activity as people age. And the introductory motivation is the key in all of this. The introductory motivation is mostly found only at the elementary school level, where the pupils are still playful, not knowing that introductory motivation is also an important incentive for curiosity for the students who will teach mathematics. Krajnc (1982) defines motivation as a process that triggers an individual's activity, directs it to certain objects, regulates behaviour, unifies it and connects it into the whole in an effort to achieve the objectives that the individual has set for themselves. One can claim that the state of cognitive and emotional arousal leads to a conscious decision for a particular behaviour and consequently persistence in this behaviour (Marentič Požarnik, 2003). The introductory motivation in didactics of mathematics must be directed by the professor into study tasks that are interesting, fun, logical and complex for students. This way, the students approach studying with the goal of acquiring knowledge and increasing learning competence. Learning and knowledge become a value for these students who will transfer it to future students.

Keywords: introductory motivation, motivational activities, mathematics, didactics of mathematics, teaching, game.

INTRODUCTION

A student as a future class teacher should first have the opportunity to understand and love the study of mathematics, and only then focus on the didactics of mathematics. Affect is symbiotically related to learning in mathematics education – students' beliefs, attitudes and emotions influence the learning process, and conversely, students develop mathematical beliefs, attitudes and emotions as they are engaging in the activities of the mathematics classroom (Grootenboer & Marshman, 2016). Many students have rooted beliefs about mathematics and learning that make it difficult for them to successfully teach mathematics (Beswick, 2005).

Concerns about the negative mathematical beliefs of prospective primary teachers have arisen from evidence that such beliefs detrimentally impact future teaching practices (Maasepp & Bobis, 2014). A rapidly evolving and changing society requires ongoing updating of study programmes that educate class teachers. Initial teacher education is concerned with developing proficiency with a number of different dimensions of teacher knowledge, from teachers' knowledge of mathematical content to teachers' knowledge of pedagogy and didactics (Liljedahl et al., 2009). It is important that future teachers are also aware of the importance of continuous professional development in order to constantly adapt to new knowledge and societal demands. This way, teachers will be able to direct pupils at the beginning of schooling into effectively building mathematical competence, one of the key competences needed for the full development of each child. With the right motivation and approaches, the teachers will be able to connect mathematics directly to real-life circumstances, and contribute to the constant increase in the level of mathematical literacy of children thanks to such well-designed lessons in mathematics. This raises the question of whether teachers of didactics of mathematics in the study programme of Class Teaching, also teach on the basis of theory or content they are passing on to students, and whether they motivate pre-service teachers for their own future teaching of mathematics. Most people know that motivation is the key to any learning or acting. Apart from knowledge, skills and habits, mainly motivation is needed for successful education (Bizjak, 2009).

MOTIVATION AND INTRODUCTORY MOTIVATION

In pedagogical practice, incentives, the primary purpose of which is to attract students' attention to their studies, are called introductory motivation, i. e. the key part of the didactic structure of the lesson. These incentives from the pedagogical-psychological side are understood in terms of promoting the situational interest: what students are attracted to now, at this moment. The introductory motivation ultimately leads to the development of individual interests and, consequently, to a longer duration of motivation for studying (Silvia, 2006).

Konečnik Kotnik (2003) found in research that the introductory motivation should contain the elements of surprise, mystery, excitement, that is everything that enthuses and gains their attention. Of course, the key is the professor's own motivation, focus and willingness to use it.

Introductory motivation is therefore a tendency to find academic activities that are sensible and worthwhile (Woolfolk, 2002). The professor will use it to enthuse the students and attract them to the study content, which is not always interesting in itself. The introductory motivation helps the students to discover

the new and the unknown, remember it faster and more permanently, have fun and achieve better results. Introductory motivation is, last but not least, the state of cognitive and emotional arousal leading to a conscious decision for a certain behaviour and, consequently, persistence in this behaviour (Marentič Požarnik, 2003). However, every student is motivated differently. It all depends on his past experience. Therefore, the professor should not expect to equally motivate all the students, but must realise that the students will enjoy attending lectures on the didactics of mathematics and they will enjoy learning if, thanks to introductory motivations, they see that mathematics is an important tool in the life of every human being. The need to learn mathematics in order to pass the exam must be overcome, and students must understand the importance of building up their mathematical competence so that they are able to gradually transfer it to their pupils. Learning and teaching in order to raise the level of mathematical literacy should be the learning and teaching of empirical mathematics based on the inductive method of acquiring knowledge. The pupils would first learn about the power of mathematics in certain cases from everyday life, in order to be able to understand the generalisation and abstraction procedures later (Packer, 2003). It is probably necessary to modernise the mathematics learning and teaching system to be effective enough and to cover the most important needs of a person in a modern society.

Elementary school teachers ask themselves every day how to motivate pupils to develop the joy of learning. However, the question arises how universities cover this matter, especially in didactic study subjects, where the importance of introductory motivation is emphasised for the teachers to direct pupils to the learning material and influences how much interest the students will devote to acquiring new knowledge. Some professors are not aware of the importance of motivation for success in learning. Ultimately, who finds themselves in a learning position has a learning motivation, that is students, too. And Pečjak (1986) says that there is no learning without motivating activities. Professors often stress that attendance at lectures is obligatory, but they do not think that they must do anything to secure the attendance of the students. The motivation for studying is truly primarily dependent on one's own interests, personal goals, curiosity, independence, but it also depends on the method of teaching, introducing and presenting the study material. When talking about the lack of motivation when students are forced to attend lectures, they do not participate in the lectures and avoid any duties. Student interest and initial curiosity are disappearing from one lecture to another, and their studies become an end in themselves. Students become demotivated to study, since the professor gives the same lectures every time, with no challenges with too demanding or insufficiently challenging goals. Marentič Požarnik (2000) says that the goal of learning in demotivated students is not knowledge and its practical application, but only a dull achievement of positive and avoiding

negative consequences. The attendance of lectures and, consequently, the study process becomes more difficult as students are uninterested and begin to avoid lectures. In such circumstances, teachers generally do not use introductory motivational activities to encourage the desire for new knowledge, but often by punishing and rewarding they achieve that at least a small part of the group attends lectures. Therefore, it is necessary that university professors also start using the introduction of motivation in lectures.

Introductory motivation, which is a psychological process (Weiner, 1992), in the form of various motivational activities energises the study process by activating it first, and then directing it until the completion of the study task. In doing so, the professor must understand that motivation is happening within the students, and that the students are the main source of motivational activities. A professor cannot give students motivation, as this is actually intrinsic. However, he or she can support it with various introductory motivational situations (Juriševič, 2006). Motivational activities cannot be carried out if the students do not have properly motivated behaviour that stimulates, directs and maintains behaviour (Woolfolk, 2002).

Psychologists believe that introductory motivation is an essential ingredient for studying (Biehler & Snowman, 2006). Fontana (1995) considers it unlikely that a study process would be conducted in the absence of sufficient introductory motivation. The influence of introductory motivation is very extensive. It can help a professor in guiding students' behaviour, which includes the level of the initiative to study, because it guides and determines intensity, perseverance, duration and quality. The introductory motivation also affects emotions and self-image of students, and as a process, the introductory motivation directs and regulates student activities to the goal, the latter is the source of motivation (Marentič Požarnik, 1988). Mayrhofer (in Brajša, 1995) states that the goal of introductory motivation is to manage and strengthen existing behaviour or to direct it towards a new, better-quality form. Meanwhile, Okoye (1985) states that introductory motivation is a manipulative activity used by the professor to attract the interest of students to the study situation, because the motivation is created while the person performs something with pleasure and satisfaction.

Introductory motivation is a significant strategy regarding students that the professors use in order to stimulate the interest of students or future teachers to study and, consequently, to maintain a positive interest in learning, which they are supposed to transfer into their classes. Introductorily motivated students are better able to understand and follow the study situation, they are more successful and achieve higher achievements than demotivated students. The good relationship and motivated students' interest in studying is even an incentive for the professor to change the way of teaching in a more attractive and interesting way, to use introductory stimuli. (Tella, 2007).

INTRODUCTORY MOTIVATION IN THE STUDY PROCESS

Students evaluate the study course according to the professor's ability to obtain and maintain the attention. Stipek (2002) thinks that it would be unreasonable to expect a professor to equally motivate all the students, but it is crucial to proactively try to stimulate as many students as possible to study.

Juriševič (2012) states that the importance of the pedagogical mission, both of professors at the university and future teachers, is understood in the sense of ancient Chinese wisdom, which states that people should be thrilled about the sea if they are to build boats, cross the ocean and discover new horizons. In a study process that can metaphorically be understood as an ocean of wisdom, the introductory motivation of students is a right and a duty of every professor.

Paterson (2000) lists the three main motivational activities that the professor uses in the study process to initially motivate students for further cooperation and studies, and which are continually intertwined throughout the entire study process:

1. Teaching – introducing learning material in terms of providing advice and guidance;
2. Playing – replaying and achieving effect with a role before the audience;
3. Fun – achieving relaxation and good mood.

Einstein said: "I am neither especially clever nor especially gifted. I am only very, very curious" (Juriševič, 2012). Introductory motivation is a key factor in the dynamics of the study process, as only motivated students continue their studies and persist until they achieve set goals, regardless of whether this is a successfully passed exam, the actual grade or a professor's praise. A unique type of learning takes place within the learning process, which is separated from the spontaneous daily learning by the intensity and content of the introductory motivation. In the study process, a student does not choose the course and study content, but nevertheless is required to have quality knowledge that can only be achieved if one is appropriately motivated for this learning, so that this motive attracts further learning (Marentič Požarnik, 2003). As people age, they find learning less and less appealing as an interesting and attractive activity. In doing so, progress in the study process increases the complexity of knowledge and study tasks, which are becoming more and more demanding and difficult (Hidi, 2000).

The introductory motivation must be directed by the professor into the studies or study tasks that are interesting, fun, logical and complex for students. This way, the students approach studying with the goal of acquiring knowledge and increasing learning competence. It is important how the students are motivated, and whether they are motivated.

As mentioned above, motivated students consequently achieve better results. This is of course true, but a lot of research (Pintrich & Schunk, 2002) shows that the introductory motivation is not as closely related to academic performance as the studying itself, but is mostly related to the storage of new information in the long-term memory. Therefore, the remembering of new information depends on whether the professor uses good introductory motivation to enable students to have better knowledge.

The influence of introductory motivation is reflected in the study at three levels (Rheinberg, Vollmeyer & Rollett, 2000):

1. At the level of time the student dedicates to studying;
2. At the level of the nature of the learning activity, which includes regulating the effort invested by the student in the studying;
3. At the level of student's functional mood, which refers to the optimal psychological state of a student during his studies (for example, commitment, positive emotions, concentration).

Using introductory motivation, the students will be satisfied, studying will be easier and more interesting, and the lectures will be more productive. In all of this, the professor will achieve the goal of making studying, or more precisely, learning and knowledge a value for students.

TYPES OF INTRODUCTORY MOTIVATION

There are four types of introductory motivation:

1. The primary motivation derives from already adopted study material. The professor uses the already acquired knowledge of the students for comparing new knowledge. Within the students, all of this raises the sense of importance of their knowledge, as certain knowledge has already been gained. Here, the professor can use the method of analysis, research, generalisation and logical deduction (Konečnik Kotnik, 2000).
2. Secondary motivation usually coincides with certain personal interests of the students in connection with their everyday life. It didactically, therefore, does not originate directly in the subject matter lectured by the professor. The use of this kind of motivation means greater introductory motivational power for the students, since it is linked to personal desires, needs and interests. It comes to the forefront when the students express a certain initiative, for example, ask a question about something (Zgonik, 1995).
3. Emotional spontaneous motivation is associated with emotional engagement of students (Zgonik, 1995).

4. Mental or cognitive motivation is linked to rational situations that enable the development of thinking by exercising observation, comparing, logical deduction, and generalisation. The best mental motivational situations are problematic, since they are the lever of the deepest thought mechanisms (Konečnik Kotnik, 2000).

In all types of introductory motivation, the professor can use a variety of motivational activities that direct the students' attention to the matter that needs to be studied. Introductory motivation activity should therefore be interesting, short and essential, in the form of surprise, productive repetition and problem-orientation, involving different types of perceptions, contributing to a better study experience, changing the known into the unknown and vice versa, etc.

INTRODUCTORY MOTIVATION IN THE DIDACTICS OF MATHEMATICS

In accordance with the latest scientific results in the field of didactics of mathematics and the expectations of modern society, it is necessary to upgrade the curriculum of courses in the Class Teaching study programme for the students to become familiar with the content of mathematics and didactics of mathematics. Future class teachers need to become acquainted with active learning approaches in order to be able to encourage pupils to engage in critical dialogue, research, and higher mental processes. They will lead their pupils through creative research and solving realistic problems, whereby students will develop mental skills and logical deduction. Here, however, the introductory motivation in the didactics of mathematics has an important place.

Using the introductory motivation, the professor achieves that students feel the curiosity and therefore incentive to gain new knowledge, whereby the learning and teaching of didactics of mathematics get the right meaning. With introductory motivation, the professor can once again present the didactics of mathematics to the students not only as concise and strict, but also as creative and playful.

Researchers have found that introductory motivation is of the utmost importance for the establishment of interest in the subject matter and interest in studying. Introductory motivational activities in the study subject of didactics of mathematics are now diverse. Their usual dry use is ineffective. The professor should always try to choose a new activity, which should contain elements of humour, surprise, secrets and exciting novelties, in order to stimulate the necessary attention for further studying.

In the introductory motivation of the university subject of didactics of mathematics, the professor can use various didactic tools, paintings, objects, photographs, sound recordings, videos, everyday life situations, logical problems, research work, authentic learning tasks, anecdotes from history, riddles, sayings, stories, social and didactic games, learning leaflets, role playing, etc. It is important to ensure students achieve self-confidence, which will enhance the desire for success and further work.

Introductory motivation examples in the didactics of mathematics

Every good start allows further progress; therefore, the professor should stimulate the mind of the students if they want the study to be successful (Poljak, 1974). The professor should always be guided by the question of how to increase the quality of the introductory interest of the students in a particular study subject.

The professor must arouse love for mathematics and teaching in students. For this purpose, he can use various motivational activities and tools for learning and teaching mathematics.

Introductory motivation with problem tasks

For the introductory motivation in didactics of mathematics, the most frequently mentioned activities involve motivational tasks with a mathematical-logical problem. These tasks are most often difficult to solve, because the professor uses them to raise the interest in solving them. The content of these tasks is related to everyday life issues, and the main objective of these tasks is to stimulate interest in dealing with new knowledge needed for solving the motivational task.

Students have to forget the need to learn mathematics in order to pass the exam, and feel the true meaning of building mathematical competence so they will be able to gradually transfer it to pupils on their professional path. Learning and teaching in order to raise the level of mathematical literacy should be the learning and teaching of empirical mathematics based on the inductive method of acquiring knowledge. The pupils would first learn about the power of mathematics in certain cases from everyday life, in order to be able to understand the generalisation and abstraction procedures later (Packer, 2003). The principle and central place in introductory motivation can be a mathematical problem and the realistic solving of it, and research related to it. The professor can offer his students a specific problem situation, which represents a wider context in which students must find, understand and form a problem in different ways, which, when solving, gets its meaning.

An example of the problem task:

Miha was baking baguettes in the Mišmaš bakery. He baked nine of them. All the baguettes seemed to be of the same shape and size. At a later weighing, he found one of the baguettes weighing 10 grams less than the others. How did Miha the baker find which baguette weighed less if it is known that weighed the baguettes only twice?

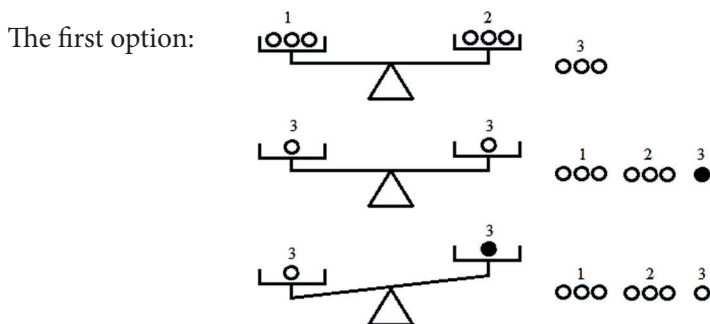


Figure 1. An example of a possible solution to a mathematical problem.

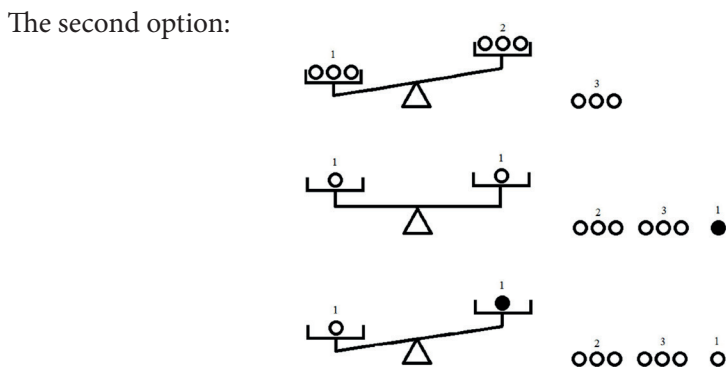


Figure 2. An example of a possible solution to a mathematical problem.

Teaching mathematics is a common experience for the professor and for the students, therefore the opportunities to increase joy and initiative in the lectures of the didactics of mathematics through a common dealing with mathematical problems.

Introductory motivation through the history of mathematics

Examples from the history of mathematics are also an interesting introductory motivation. In such cases, students deal with the origin of ancient discoveries

in mathematics, which were of key importance for the development of modern day mathematics, its teaching and learning, as well as the way of life in general.

An example from the history of mathematics

Historical development of numbers and counting are the predominant motivational mathematical activity. The future class teacher will teach the children about counting or numbers in the same way as man started to count in prehistoric times. So why should the professor not use the history of the development of the concept of numbers as an introductory motivation for students? In doing so, the professor can reach into history, which is definitely interesting for every student, as many do not know the historical development of numbers and counting.

The introductory motivation can begin with a simple explanation of the historical development of writing down numbers: “The word number means a group of characters used for writing down the number. A single character is called a digit. People have been writing down numbers since long before the invention of writing. The first level of writing were simple images that represented things or concepts. They were called hieroglyphs. Later on, the signs of syllables or signs for voices were developed from hieroglyphs; different alphabets were created, such as Phoenician, Jewish, Greek, Cyrillic, Roman, Arabic and so on. The numbers were initially also hieroglyphs. In ancient Egypt, hieroglyphs were also used to record numbers.” (Justinek & Domicelj, 2011).

The professor can then present to the students some of the ancient Egyptians' numbers (Justinek & Domicelj, 2011).

| – A finger on a hand, which means 1:

∩ – There are several explanations, one of them is “both hands”, which means 10:

☉ – A measuring rope with a length of one hundred units, which means 100:

☼ – A lotus flower, which means 1000, as thousands of lotus flowers grew on the banks of the Nile river.

$$1 = |, \quad 2 = ||, \quad 3 = |||, \quad \dots, \quad 8 = \begin{array}{c} |||| \\ |||| \end{array}, \quad 9 = \begin{array}{c} ||| \\ ||| \\ ||| \end{array}, \quad 10 = \cap,$$

$$11 = | \cap \text{ ali } \cap | \quad \dots \quad 20 = \cap \cap \quad \dots \quad 24 = \cap \cap |||| \text{ ali } \begin{array}{c} \cap \cap \\ ||| \end{array} \quad \dots \quad 30 = \cap \cap \cap,$$

$$99 = \begin{array}{c} \cap \cap \cap \\ \cap \cap \cap \\ \cap \cap \cap \end{array} |||, \quad 100 = \text{☉} \quad \text{itd.}$$

Figure 3. An example of the Egyptian way of writing down numbers (Justinek & Domicelj, 2011, pp. 10).

In observing the way ancient Egyptians wrote down numbers, the professor can explain an interesting fact to the students that the places of individual digits are not important, only the number of individual digits is important, for example the number $|n||n|$ means 24. The professor encourages them to write down some more examples.

Introductory motivation through role playing

Introductory motivation in the form of role playing has an imaginary meaning. It takes a lot of engagement for the professor, and the use of imagination for the students. In this type of motivation, changing roles between the professor and the students often takes place. The professor exchanges roles with the students; therefore the students take the role of teacher and help acquire new knowledge or explain the study material. The students can be motivated to help the professor find the appropriate didactic-introductory motivation in introducing a new learning material.

The example of introductory motivation in the didactics of mathematics is when the professor introduces a teaching set of Geometry and Measurement – the mass:

The professor can initially motivate the students by entering the classroom and placing two equal bags and a clothes hanger on his desk. Then, invite them to share ideas, on which theme they would introduce using these three objects. After the final determination that these subjects would be used to introduce weighing under the curriculum of measuring for the 3rd grade of elementary school, the professor invites students to help him formulate an introductory motivation for introducing the concept of weighing, using only the objects brought into the classroom.

Role-playing example:

The teacher in the classroom puts two bags on his desk. One contains 1kg of sugar (numbered as 1), and in the other 500dag of pasta (numbered as 2). The pupils cannot see the contents of these two bags.

The teacher asks the pupils:

- “What do you think, which bag weighs more, which less?”
- “About how much does bag 1 weigh and how much does bag 2 weigh?”
- “What makes you think so?”

The teacher hangs the hanger on the blackboard and asks the students:

- “What will the hanger help us find out?”

The teacher places the bags on the hanger and then asks his pupils:

- “Do you still have the same opinion about how much each bag weighs?

Why?”

- “What makes you think the bags' weights are not the same?”
- “What would be the hanger's position if the bags' weights were the same?”
- “What do you think the bags contain?”

Teacher loosens the bags and shows the contents.

Using this kind of introductory motivation, the professor encourages intellectual efforts of the students in order to achieve the goal he set for the students.

CONCLUSION

Every professor wants their students to be motivated to study. Their role is to create study conditions in which the students will work in a high-quality manner and develop confidence in their own abilities. And the students will enjoy studying only when the professors raise their interest and curiosity for gaining new knowledge.

Mathematics is an important, useful, exciting and creative area of teaching. Most students believe that mathematics is a large collection of rules and formulas, and therefore form negative impressions when it comes to mathematics. However, one of the global goals of teaching mathematics is experiencing mathematics as a pleasant matter. Students should therefore form a positive attitude towards mathematics as a subject they will be teaching after completing their studies. A professor can contribute to formation of positive attitudes towards mathematics, and while teaching the subject of didactics of mathematics, can show that mathematics is something fun and interesting, something people come across every day, and not only when mathematics is on the study schedule. But the main condition for successful teaching of mathematics is the interest of students in this subject, which the professors acquire to a large extent through the introductory motivation.

Through introductory motivation, the professor can offer motivational activities for raising interest in students, thus giving them the opportunity to achieve a feeling of enthusiasm about themselves after their effort, work and mathematical-logical thinking, thereby creating a lasting joy towards mathematics.

Classroom developments and the effect of the teacher or teaching are crucial to improving learning results, where teaching is a key factor in raising the quality of learning (UNESCO, 2004). The teacher's mathematics-related beliefs, which pertain to their subjective knowledge, act in mathematics classroom as a

hidden factor regulating the quality of mathematics teaching and learning (Perkilä, 2003). Education and training of teachers should be a central theme of researchers in the field of education who would introduce the latest findings into school practice. Recently, the teacher was treated as a trained worker who did not make responsible decisions about work but followed the recipes, the precise scenarios and a rigorous teaching process. Professional development is built with special instructions from “experts” within the relevant workshops (Schon & McDonald, 1998). Such an approach is completely wrong, all the more so in modern times, when we give preference to the constructivist approach and the principles of active learning. The teacher must become a thinking practitioner who uses active learning approaches in the classroom and encourages students to engage in a critical dialogue, research, and higher thinking processes in problem lessons (Boyle, While, & Boyle, 2003; Leu, Hays, LeCzel & O’Grady, 2005). The teacher must be an expert who is capable of constant reflection on the school and class situation, and to quickly make appropriate sovereign decisions (Boyle et al., 2003). A class teacher must be trained to teach all curricular areas, and must be aware that the process of learning and teaching each area are interwoven and that teaching is not merely a “mechanical” transfer of knowledge to the learner. Lately, the field of mathematics teaching has received considerable attention; society does not expect the learner to get “armed” with a dry mathematical knowledge, but that the learner will be mathematically literate on all levels or mathematically competent at the end of schooling, therefore motivation in their education plays an important role. The study of mathematics is an exercise in reasoning. Beyond acquiring procedural mathematical skills with their clear methods and boundaries, students need to master the more subjective skills of reading, interpreting, representing and “mathematicizing” a problem (Stumbo & Follett Lusi, 2005). The European Commission (2007) defines competences as a combination of knowledge, skills and attitudes that correspond to the circumstances. The key competences, including the mathematical one, are those that all people need for personal fulfilment and development, for active citizenship, social inclusion and employment.

REFERENCES

- Beswick, K. (2005). Preservice Teachers Understandings of Relational and Instrumental Understanding. In H. L. Chick, & J. L. Vincent (eds.), *Proceedings of the 29th Conference of the International Group for the Psychology of Mathematics Education*, part 2, (pp. 161–168), Melbourne: PME.
- Biehler, R. F., & Snowman, J. (2006). *Psychology Applied to Teaching*. Boston: Houghton Mifflin Company.

- Bizjak, A. (2009). Motiviranje v izobraževanju. In *Znanje: teorija in praksa: zbornik 6. študentske konference Fakultete za management Koper, 18.–20. november 2009, Koper, Celje, Škofja Loka*, (pp. 63–70). Koper: Fakulteta za management.
- Boyle, B., While, D., & Boyle, T. (2003). A Longitudinal Study of Teacher Change: What Makes Professional Development Effective? *The Curriculum Journal*, 15(1), 45–68
- Brajša, P. (1995). *Sedem skrivnosti uspešne šole*. Maribor: Doba.
- European Commission (2007). *Key Competences for Lifelong Learning – European Reference Framework*. Luxembourg: Office for Official Publications of the European Communities.
- Fontana, D. (1995). *Psychology for Teachers*. London: Macmillan Press; BPS books.
- Grootenboer, P., & Marshman, M. (2016). *Mathematics, Affect and Learning*. Springer: NY, doi 10.1007/978-981-287-679-9.
- Hidi, S. (2000). An interest researcher's perspective: The effects of extrinsic and intrinsic factors on motivation. In C. Sansone & J. M. Harackiewicz (eds.), *Intrinsic and extrinsic motivation: the search for optimal motivation and performance* (pp. 309–339). San Diego: Academic Press.
- Juriševič, M. (2006). *Učna motivacija in razlike med učenci*. Ljubljana: UL, Pedagoška fakulteta.
- Juriševič, M. (2012). *Motiviranje učencev v šoli*. Ljubljana: Pedagoška fakulteta.
- Justinek, A., & Domicelj, M. (eds.). (2011). *Matematika za otroke*. Ljubljana: GZS, Center za poslovno usposabljanje. Retrieved from http://www.mizs.gov.si/fileadmin/mizs.gov.si/pageuploads/podrocje/ss/Gradiva_ESS/UNISVET/UNISVET_71PV_Matematika.pdf.
- Konečnik Kotnik, E. (2000). Vloga motivacije pri sodobnem pouku geografije. *Geografija v šoli*, 9(3), 2–7.
- Konečnik Kotnik, E. (2003). Uvodna motivacije pri učnih urah geografije. *Geografija v šoli*, 12(1), 3–11.
- Krajnc, A. (1982). *Motivacija za izobraževanje*. Ljubljana: Delavska enotnost.
- Leu, E., Hays, F., LeCzel, D. K., & O'Grady, B. (2005). *Quality teaching: Building a Flexible and Dynamic Approach*. Washington: AED, Global Education Center.
- Liljedahl P. et al. (2009). Components of Mathematics Teacher Training. In: R. Even & D. L. Ball (eds.), *The Professional Education and Development of Teachers of Mathematics*. New ICMI Study Series, 11. Boston: Springer.
- Maasepp, B., & Bobis, J. (2014). Prospective Primary Teachers' Beliefs about Mathematics. *Mathematics Teacher Education and Development*, 16(2), 89–107.
- Marentič Požarnik, B. (1988). *Dejavniki in metode uspešnega učenja*. Ljubljana: Filozofska fakulteta, Oddelek za pedagogiko.
- Marentič Požarnik, B. (2003). *Psihologija učenja in pouka*. Ljubljana: DZS.
- Okoye, N. N. (1985). *The Psychology of Motivation*. Ibadan: Adebara Publishers Limited
- Packer, A. (2003). What Mathematics Should Everyone Know and Be Able To Do?. In L. Bernard Madison & L. A. Steen (eds.), *Quantitative Literacy: Why Numeracy Matters for Schools and Colleges* (pp. 33–42) Princeton: National Council on Education and the Disciplines.
- Pečjak, V. (1986). *Poti do znanja*. Ljubljana: Cankarjeva založba.

- Perkkilä, P. (2003). Primary School Teachers' Mathematics Beliefs and Teaching Practices, In: *Proceedings of the 3rd Conference of the European Society for Research in Mathematics Education*, Bellaria, Italia.
- Peterson, K. (2000). *Pripravljeni! Pozor! Zdaj!: ogrevanje za učence*. Radovljica: MCA.
- Pintrich, P. R., & Schunk, D. H. (2002). *Motivation in education: theory, research, and applications*. New Jersey: Merrill Prentice Hall.
- Poljak, V. (1974). *Didaktika*. Ljubljana: DZS.
- Rheinberg, F., Vollmeyer, R., & Rollett, W. (2000). Motivation and action in self-regulated learning. In M. Boekaerts, P. R. Pintrich & M. Zeidner (eds.), *Handbook of self-regulation* (pp. 503–529). San Diego: Academic Press.
- Schon, D., & McDonald, J. (1998). *Doing What You Mean To Do in School Reform*. Providence: Brown University Press.
- Silvia, P. J. (2006). *Exploring the psychology of interest*. Oxford: University Press.
- Stipek, D. (2002). *Motivation to learn: integrating theory and practice*. Boston: Allyn & Bacon.
- Stumbo, C., & Follett Lusi, S. (2005), *Why Isn't the Mathematics We Learned Good Enough for Today's Students? The Imperative of Mathematical Literacy*, Washington: Council of Chief State School Officers and Texas Instruments.
- Tella, A. (2017). The Impact of Motivation on Student's Academic Achievement and Learning Outcomes in Mathematics among Secondary School Students in Nigeria. *Eurasia Journal of Mathematics, Science & Technology Education*, 3(2), 149–156. Retrieved from https://www.researchgate.net/profile/Noraini_Idris/publication/26462382_The_Professional_Preparation_of_Malaysian_Teachers_in_the_Implementation_of_Teaching_and_Learning_ofMathematics_and_Science_in_English/links/00b495209f3502992e000000/The-Professional-Preparation-of-Malaysian-Teachers-in-the-Implementation-of-Teaching-and-Learning-ofMathematics-and-Science-in-English.pdf#page=55.
- UNESCO (2004). *EFA Global Monitoring Report 2005: Education for All – The Quality Imperative*. Paris: UNESCO.
- Weiner, B. (1992). *Human motivation: Metaphors, theories, and reserch*. London: Sage Publications. Retrieved from https://books.google.si/books?hl=sl&lr=&id=H1s5cPZIS4QC&oi=fnd&pg=PA1&dq=Human+motivation:+Metaphors,+theories,+and+research&ots=FPblTXxVxG&sig=aW_Sc9uBuSgcXwT-79n3rLcispQ0&redir_esc=y#v=onepage&q=Human%20motivation%3A%20Metaphors%2C%20theories%2C%20and%20research&f=false.
- Woolfolk, A. (2002). *Pedagoška psihologija*. Ljubljana: Educy.
- Zgonik, M. (1995). *Prispevek k didaktiki geografije*. Ljubljana: Zavod RS za šolstvo in šport..

Aleksandra Mihajlović and Milan Milikić
University of Kragujevac, Faculty of Education
Jagodina, Serbia

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THE IMPACT OF LESSON STUDY ON PRE-SERVICE KINDERGARTEN TEACHERS' MATHEMATICS TEACHING ANXIETY

Abstract: In today's society teachers are expected to have adequate knowledge and skills to teach effectively even before graduation. Such expectations can cause anxiety in teachers, especially in inexperienced ones. *Lesson Study* is recognized as an effective tool for providing high-quality learning experiences for future teachers which enables them to learn from engaging in and observing teaching in contrast to traditional pedagogy courses. This study aimed to investigate the effects of Lesson Study on mathematics teaching anxiety of pre-service kindergarten teachers. The quasi-experimental design with two parallel groups was used. The sample consisted of 49 students divided into control (27) and experimental group (22). The students in the experimental group followed an adjusted Lesson Study design, while the control group followed the traditional way of teaching practice. The results showed that there was no significant difference in mathematics teaching anxiety scores between groups. However, there was a significant difference in the findings referring to ability to control the class favoring the experimental group. The findings of the current researchers' study cannot be generalized due to certain limitations (small sample size, quasi-experimental design). The results can be used as support to encourage further investigations of the effects of Lesson Study in teacher education programmes.

Keywords: Teacher education programme, lesson study, pre-service kindergarten teachers, mathematics teaching anxiety.

INTRODUCTION

Schuck (2016) indicates that teacher education is currently facing existential challenges and that it is particularly important to focus attention on primary preservice preparation in mathematics in both content and pedagogy. Teachers are expected to have adequate knowledge and skills to teach effectively in the classroom before graduation and these expectations can cause anxiety in teachers, particularly in inexperienced ones (Peker, 2009a). Research indicates that learning from teacher education programmes has an impact on some teachers'

instructional work (Judson & Sawada, 2001; Murata & Pothen, 2011), but it sometimes takes years to appear in practice. Murata and Pothen (2011) link this to preservice teachers' lack of exposure to pupils and recognize *Lesson Study* as “cohesive professional development tool” for providing high-quality learning experiences for future teachers. Lesson study enables participants to learn from engaging in and observing teaching in contrast to traditional pedagogy courses where usually it is just talked about teaching.

Lesson Study

Lesson Study (LS) has drawn the attention of educators and educational researchers from around the world because of the outstanding achievements of Japanese students in international assessments over the past 20 years (Pjanić, 2014), particularly in Mathematics. It is an established educational investigative method and practice adopted by teacher-led professional development groups in Japan and refers to a set of practices that have been used to improve teaching and learning (Makinae, 2010). Lesson Study is defined as the “systematic investigation of classroom pedagogy conducted collectively by a group of teachers/students, with the aim of improving the quality of teaching and learning” (Tsui and Law, 2007, p. 1294). It involves a group of teachers who meet regularly over some period of time to work on the design, implementation, testing, and improvement of research lessons (Rock & Wilson, 2005). As Lewis & Tsuchida (1998) indicate, research lessons are actual lessons in classroom which are (a) observed by other teachers, (b) carefully planned, usually in collaboration with one or more colleagues, (c) focused on a particular goal/vision of pedagogical practice, (d) recorded for analysis and reflection, and (e) discussed by LS group members, other colleagues or outside educators and researchers.

The majority of the research about LS is focused on in-service teachers, but there are indications that some adapted versions of LS can be effectively used with preservice teachers (Burroughs & Luebeck, 2010; Chassels & Melville, 2009; McMahon & Hines, 2008; Mostofo, 2013). The main idea of LS is to bring together teachers to carry out the process of planning a lesson, teaching the lesson with the LS team observing, and then examining and discussing this lesson during a debriefing session. Based on the group's comments during the debriefing session, the lesson is revised, re-taught and reflected on again before being polished (Tsui & Law, 2007). The main impact of reflection goes beyond improvement of a single lesson. It includes deeper understanding of content knowledge and how students learn, and improved pedagogical skills of teachers. Since the focus is on the research lesson, and not on the teacher, this encourages open and frank discussions about the lessons (Tsui & Law, 2009).

The settings of higher education are usually far removed from the settings where the graduate teachers will eventually work and this can lead toward division between theory and practice (Grossman et al., 2009). For preservice teachers, LS provides opportunities such as: building professional learning communities, broadening their understanding of content knowledge and pedagogy, developing habits of critical and constructive observation, analysis, and improving ability to provide and receive feedback (Chassels & Melville, 2009; Chokshi & Fernandez, 2004; Fadlelmula, 2013; Mostofo, 2013). Collaborative planning, teaching, debriefing, revising and re-teaching increases pre-service teachers' confidence to teach mathematics (Matanluk, Johari & Matanluk, 2013; Villalon, 2016).

Mathematics teaching anxiety

Gardner and Leak (1994, p. 28) conceptualize teaching anxiety as “anxiety experienced in relation to teaching activities that involve preparation and execution of classroom activities”. As they state, teaching anxiety is not just speech anxiety, but also involves interactions with the audience (questions from students, immediate negative feedback, class disruption and student evaluation). In this aspect, mathematics teaching anxiety can be defined as preservice teachers' feelings of tension that they experience while teaching mathematical concepts, theories and formulas, or during solving mathematical problems (Peker, 2009). It differs from mathematics anxiety, and is based on individuals' anxiety about their ability to teach mathematics (Fadlelmula, 2013). According to Levine (1993), anxiety for teaching mathematics is not rare among preservice teachers. It may reflect memories of past occurrences of mathematics failure or mathematics anxiety, as well as actual or perceived knowledge deficits in mathematics content or in teaching skills. It can be linked to teachers' content and pedagogical knowledge, mathematics attitudes and self-confidence (Etheridge, 2016; Peker, 2009).

Teaching anxiety has a significant negative impact on teacher effectiveness (Fadlelmula, 2013). Possible causes of high levels of teaching anxiety among preservice teachers are: difficulty of teaching content; inadequacy of mathematical content knowledge; low level of interest toward teaching profession; incompetence to teach according to the pupils' developmental stage; lack of self-confidence; inexperience and unfamiliarity with material and students (Akinsola, 2014; Ameen, Guffey & Jackson, 2002; Peker, 2009; Sen, 2009). The possibility of encountering unexpected students' questions also increases teaching anxiety (Ameen et al., 2002; Baştürk & Taştepe, 2015) as well as lesson planning and classroom management (Akinsola, 2014). Baştürk and Taştepe (2015) pointed out that there is an inverse relationship between teaching anxiety and confidence.

Although there are studies that examined the sources and effects of the mathematics teaching anxieties, as well as the relationship between mathematics and mathematics teaching anxiety (Fadlelmula, 2013; Peker & Ertekin, 2011), very few studies have been conducted on investigating effects of different teaching methods and approaches on reducing teaching anxiety. Levine (1993) found that mathematics teaching anxiety decreased after the mathematics methods course that used instructional practices consistent with recommendations of the National Council of Teachers of Mathematics (such as teaching mathematics in student-oriented style). Some researchers investigated the impact of microteaching on mathematics teaching anxiety of preservice teachers (Fadlelmula, 2013; Peker, 2009a; Sen, 2009). They reported significant decrease in preservice teachers teaching anxiety levels from the beginning to the end of the teaching practicum course.

Although implementation of LS contributes to the increase of confidence to teach mathematics (Matanluk et al., 2013; Villalon, 2016), there are no studies that investigate the effects of LS on preservice teachers mathematics teaching anxiety. This lack of literature provided the rationale for our study. The aim of the current researchers' study was to investigate the effects of implementing an adjusted LS on preservice kindergarten teachers anxiety for teaching mathematics.

RESEARCH METHOD

The use of LS with preservice kindergarten teachers (PKT) in this project was the innovation that was used to link the Mathematics Teaching Practicum (MTP) course classroom with field experience teaching. Future kindergarten teachers, who are involved in teaching practice in the course of their studies, often experience anxiety for teaching mathematics and feel a lack of confidence in their teaching competences.

The presented study was conducted at the Faculty of Education in Jagodina, University of Kragujevac, as a part of a larger scale research. Since survey instruments were administered and numerical data were collected, a quantitative method was used in analyzing the data. Data were collected through questionnaires which is a very common technique in educational research (McMillan & Schumacher, 2001). The study used a quasi-experimental design with pre- and post-tests. The convenience sampling procedure was followed. According to McMillan and Schumacher (2001), a convenience sample presents a group of subjects selected on the basis of the accessibility or expediency. In the current researchers' study, participants were enrolled in MTP course at Kindergarten Teachers Education

Programme (year 4). The statistical analyses were conducted using the SPSS 17.0 programme.

Sample

The research sample involved 49 student teachers. The study was conducted during the academic year 2017/2018, and it lasted 20 weeks. All students had successfully finished theoretical Mathematics Teaching Methods (MTM) course at their third year of study. They were divided into a control group (CG) and an experimental group (EG). The CG consisted of 27 students (27 females) and EG consisted of 22 (21 females and 1 male) students. The mean age of the EG was 22,48 years (SD=1,12) and the mean age of CG was 22,39 (SD=0,95).

Instruments

The instrument used was a questionnaire that contained two parts. In the first part, background information about preservice teachers was collected (age and MTM course grades). The second part of the instrument contained a scale for assessing anxiety for teaching mathematics. This scale consisted of 12 items that were adapted and slightly modified from the Teaching Anxiety Scale (TCHAS) developed by Parsons (1973). The TCHAS aims to assess preservice teachers self-reporting of their feelings and tensions while teaching. The items included in our instrument referred to different aspects of teaching: confidence in own teaching competencies; teaching preparation and planning; realization of instructional activities (ability to maintain control of the class, ability to effectively present contents, ability to answer students' questions; speaking in front of the group), and concerns about teaching as a profession (Table 1). The translation of the items from English into Serbian was accomplished by a professional translator, and the original denotation and connotation of items was maintained. The Cronbach's alpha reliability coefficient indicated acceptable reliability ($\alpha=0,704$). In the instructions of the questionnaire it was indicated that while answering questions, students should take into account and refer only to mathematics lessons.

Table 1. Items adopted from TCHAS scale (Parsons, 1973)

Items code	Items
A1	I feel uncertain about my ability to improvise in the classroom.
A2*	Even if I have trouble answering a student's question, I (would) find it easy to concentrate on questions that follow.
A3	I (would feel) feel anxious (if I were) when I am preparing lessons.
A4	I'm afraid students won't follow my instructions.
A5	I feel anxious about my ability to keep a class under control.
A6*	I'm happier teaching than I thought I'd be.
A7	I'm worried whether I will find teaching a satisfying profession.
A8	I'm afraid I will forget everything that I know when I get in front of a class.
A9*	I feel comfortable when I speak before a group.
A10*	I (would be) am able to decide how to present information in the classroom without a feeling of uncertainty.
A11*	I feel sure I can be a good teacher.
A12*	Good rapport with my students (will be) is one of my strong points.

* Items that were coded and scored reverse.

Procedure

Kindergarten teacher education programme (bachelor's degree) at the Faculty of Education lasts four years. The MTP course is obligatory for all PKT. During this course PKT spent three hours a week in kindergarten observing and teaching lessons. They are guided by their supervisor, a university teacher. Within this period, every PKT must conduct two lessons in an actual classroom.

Student teachers in the CG used a traditional way in MTP course. This means that student teachers individually planned and prepared lessons, and after consulting with their supervisor and final lesson plan corrections, they taught the lesson in an actual classroom in kindergarten. Other student teachers in CG observed the lessons, and participated in debriefing session. All student teachers from the EG were introduced to the LS process at the beginning of the MTP course. The adjusted LS took two phases (Table 2). In the first phase the teams of two or three student teachers were chosen randomly. Each team was assigned to teach a particular mathematics unit. The teams worked cooperatively on lesson

planning. They used team teaching, both to teach the simulation in MTP classroom and revised lesson in an actual classroom. This collaboration in the form of team teaching was used in order to reduce student teachers' stress when being observed by their peers (Mee & Oyao, 2013). In the second phase, every PKT was assigned a new mathematics unit. This time student teachers worked individually on lesson planning. Every student teacher first taught the lesson in simulated environment in an MTP classroom. After a debriefing session, the process of revision was carried out collaboratively. The same student teacher then re-taught the revised lesson in an actual classroom in kindergarten.

Table 2. Phases of LS implementation

	1st phase of LS	2nd phase of LS
Step 1	Collaborative planning	Individual planning
Step 2	Team teaching of the lesson in simulated environment	Individual teaching of the lesson in simulated environment
Step 3	Debriefing session	Debriefing session
Step 4	Revision of the lesson	Revision of the lesson
Step 5	Team re-teaching of the lesson in real classroom	Individual re-teaching of the lesson in real classroom
Step 6	Debriefing session	Debriefing session

During the lesson simulations, in both phases the rest of the PKT in the EG acted as typical kindergarten children. Each student teacher (or team) taught for about 20 minutes in simulated environment. The debriefing session with the whole group followed immediately after both the lesson and simulation. The debriefing session started with the self-reflection of student (or team) who taught the lesson, followed by the rest of the student teachers' comments, questions, and suggestions for revising the lesson. Supervisors guided the discussion and gave their own feedback after the student teachers' reflections. After that the lesson was revised based on the received feedback, and before teaching in real settings in kindergarten, the lesson plan was sent to the supervisors. Lessons in kindergarten were followed by a debriefing session with the whole group of PKT and the instructor's evaluation. All PKT had one week to prepare a lesson simulation as well as an actual classroom lesson. The authors of the research had multiple roles throughout the study, as researchers, supervisors and practitioners.

RESULTS AND DISCUSSION

At the beginning of the research, the two groups were checked for equivalency in their academic achievement in MTM course. The groups were homogenous in terms of their MTM grades (Table 3).

Table 3. Achievement in MTM course.

Group	Mean	SD	Median	Mean Ranks	Sum of Ranks	Shapiro-Wilks test		Mann-Whitney test		
						Statist.	Sig.	U	Z	Sig.
CG	7,50	1,22	7,50	24,04	577,00	0,893	0,016	251,00	-0,294	0,768
EG	7,41	1,30	7,00	22,91	504,00	0,866	0,007			

PKT mathematics teaching anxiety scores were calculated before and after implementation of LS. The analysis of the findings showed that there was no significant difference between teaching anxiety scores of CG and EG in pre-test (Table 4). Also, there was no significant difference in scores on single items. The groups were homogenous in terms of their teaching anxiety level.

Table 4. Anxiety level of CG and EG in pre-test

Items	Group	Mean	SD	Median	Mean Ranks	Sum of Ranks	Shapiro-Wilks test		Mann-Whitney test		
							Stat-ist.	Sig.	U	Z	Sig.
A1	CG	3,20	0,50	3,00	27,44	741,00	0,667	0,000	231,000	-1,574	0,115
	EG	2,91	0,68	3,00	22,00	484,00	0,804	0,001			
A2*	CG	2,64	0,57	3,00	25,57	690,50	0,643	0,000	281,500	-0,342	0,733
	EG	2,73	1,12	2,50	24,30	534,50	0,893	0,021			
A3	CG	3,04	0,73	3,00	26,80	723,50	0,813	0,000	248,500	-1,047	0,295
	EG	2,82	0,79	3,00	22,80	501,50	0,795	0,000			
A4	CG	3,04	0,84	3,00	25,06	651,50	0,848	0,002	271,500	-0,327	0,744
	EG	3,00	0,82	3,00	23,84	524,50	0,745	0,000			
A5	CG	2,88	0,44	3,00	24,46	660,50	0,597	0,000	282,500	-0,367	0,713
	EG	3,00	0,76	3,00	25,66	564,50	0,814	0,001			
A6*	CG	2,68	0,99	3,00	25,33	684,00	0,865	0,003	288,000	-0,190	0,850
	EG	2,73	1,08	3,00	24,59	541,00	0,923	0,086			

A7	CG	2,28	0,89	2,00	24,78	669,00	0,839	0,001	291,000	-0,127	0,899
	EG	2,32	1,71	2,00	25,27	556,00	0,881	0,013			
A8	CG	3,04	0,73	3,00	25,81	671,00	0,801	0,000	252,000	-0,755	0,450
	EG	2,95	1,05	3,00	22,95	505,00	0,909	0,045			
A9*	CG	2,92	0,81	3,00	26,50	689,00	0,859	0,003	234,000	-1,142	0,254
	EG	2,73	0,93	3,00	22,14	487,00	0,884	0,014			
A10*	CG	3,20	0,71	3,00	24,87	646,50	0,820	0,000	276,500	-0,213	0,831
	EG	3,14	0,89	3,00	24,07	529,50	0,866	0,007			
A11*	CG	1,84	0,75	2,00	26,60	691,50	0,805	0,000	231,500	-1,230	0,219
	EG	1,59	0,67	1,50	22,02	484,50	0,756	0,000			
A12*	CG	1,76	0,66	2,00	23,96	623,00	0,786	0,000	272,000	-0,330	0,741
	EG	1,82	0,59	2,00	25,14	553,00	0,754	0,000			
Total score	CG	32,52	4,22	33,00	26,83	724,50	0,953	0,294	247,500	-1,000	0,318
	EG	31,73/	5,28	30,50	22,75	500,50	0,867	0,007			

* Scores for reverse items are showed in Table 4.

At the end of the semester both groups were given the post-test. The post-test contained the same 12 item scale that was used in the pre-test. The results of CG and EG in post-test are shown in the Table 5.

Table 5. Anxiety level of CG and EG in post-test

Items	Group	Mean	SD	Median	Mean Ranks	Sum of Ranks	Shapiro-Wilks test		Mann-Whitney test		
							Statistic	Sig.	U	Z	Sig.
A1	CG	2,00	0,98	2,00	24,00	624,00	0,821	0,000	273,000	-0,288	0,774
	EG	2,20	1,15	2,00	25,09	552,00	0,774	0,000			
A2*	CG	1,77	0,65	2,00	23,39	631,50	0,783	0,000	253,500	-0,950	0,342
	EG	2,15	1,23	2,00	26,98	593,50	0,815	0,001			
A3	CG	1,73	1,00	1,00	27,67	747,00	0,716	0,000	225,000	-1,669	0,095
	EG	1,35	0,59	1,00	21,73	478,00	0,632	0,000			
A4	CG	1,81	0,80	2,00	26,09	704,50	0,710	0,000	267,500	-0,645	0,519
	EG	1,70	0,92	1,00	23,66	520,50	0,670	0,000			
A5	CG	1,89	0,91	2,00	29,65	800,50	0,671	0,000	171,500	-2,834	0,005
	EG	1,30	0,58	1,00	19,30	424,50	0,583	0,000			

A6*	CG	2,00	0,89	2,00	27,26	736,00	0,848	0,001	236,000	-1,317	0,188
	EG	1,55	0,89	1,00	22,23	489,00	0,679	0,000			
A7	CG	1,65	0,89	1,00	26,09	704,50	0,740	0,000	240,500	-1,070	0,285
	EG	1,45	0,89	1,00	22,45	471,50	0,583	0,000			
A8	CG	1,73	0,83	2,00	27,37	739,00	0,791	0,000	233,000	-1,437	0,151
	EG	1,40	0,76	1,00	22,09	486,00	0,582	0,000			
A9*	CG	2,00	0,94	2,00	26,91	726,50	0,847	0,001	191,500	-1,826	0,068
	EG	1,55	0,76	1,00	20,08	401,50	0,677	0,000			
A10*	CG	2,00	1,02	2,00	27,91	753,50	0,760	0,000	218,500	-1,719	0,086
	EG	1,55	1,00	1,00	21,43	471,50	0,612	0,000			
A11*	CG	1,27	0,45	1,00	26,85	725,00	0,557	0,000	247,000	-1,498	0,134
	EG	1,05	0,22	1,00	22,73	500,00	0,236	0,000			
A12*	CG	1,31	0,55	1,00	25,80	696,50	0,598	0,000	275,500	-0,595	0,552
	EG	1,20	0,52	1,00	24,02	528,50	0,447	0,000			
Total score	CG	21,40	4,83	21,00	28,56	771,00	0,948	0,222	201,000	-1,937	0,053
	EG	18,59	4,92	18,00	20,64	454,00	0,893	0,021			

* Scores for reverse items are showed in Table 5.

There was a decrease between the pre- and post-test total scores in the teaching anxiety level of the participants in the EG and CG. However, the results showed that there was no statistically significant difference regarding teaching anxiety in general between the CG and EG (Table 5). In other words, teaching anxiety levels of the group that practiced LS during MTM course and the group that had traditional teaching experience did not differ significantly.

When comparing scores on single items, we determined that there is statistically significant difference between CG and EG concerning item A5 (*I feel anxious about my ability to keep a class under control*). Preservice teachers in EG showed significantly lower anxiety about their ability of keeping classroom control comparing to preservice teachers in CG ($U=171,500$, $p=0,005$). Some empirical findings support the notion that a high level of anxiety among preservice teachers may be related to various negative consequences such as class control problems and classroom disruptions (Ngidi, Sibaya, 2003). Therefore, we might recognize the benefits of LS on preservice teachers' confidence in classroom control ability.

As for the other items, we have not found statistically significant differences between EG and CG. The reason can perhaps be found in the fact that the sample size is small. Also, although preservice teachers participated in LS the whole academic year, the fact that they taught only two complete individual lessons might have also influenced the results of the study.

CONCLUSION

The results obtained have shown that LS has positive impact in some aspects of student teachers' perceptions of their competences in teaching such as the ability to keep control of the lesson. However, the current researchers have not found statistically significant differences in other items and in teaching anxiety total scores between experimental and control group. The findings of our study cannot be generalized since there are some limitations such as a small sample size and quasi-experimental design. However, the value of this study can be recognized in the fact that it contributes a new insight in the area where there is a lack of literature and empirical evidence on the use and effects of LS on teaching anxiety. Also, this is the first time that LS was used in Serbia at any educational level. Hence, the current researchers believe that results of this research can be used as support to encourage some further investigations of the effects of LS in teacher education programmes on teaching anxiety, but also on teaching competencies, teacher efficacy, content and pedagogy knowledge, attitudes toward mathematics, and the similar.

REFERENCES

- Akinsola, M. K. (2014). Assessing Pre-Service Teachers Teaching Anxiety, *American Journal of Educational Research*, 2, 12A, 41–44.
- Ameen, E., Guffey, D. & Jackson, C. (2002). Evidence of teaching anxiety among accounting professors, *Journal of Business Education*, 78, 16–22.
- Baştürk, S. & Taştepe, M. (2015). Examining Primary Pre-Service Teachers' Difficulties of Mathematics Teaching with the Micro-Teaching Method, *Acta Didactica Napocensia*, 8, 3, 1–10.
- Burroughs, E. A. & Luebeck, J. L. (2010). Pre-service Teachers in Mathematics Lesson Study, *The Mathematics Enthusiast*, 7, 2, 391–400.
- Chassels, C., & Melville, W. (2009). Collaborative, reflective, and iterative Japanese lesson study in an initial teacher education program: Benefits and challenges, *Canadian Journal of Education*, 32, 4, 734–763.
- Chokshi, S. & Fernandez, C. (2004). Challenges to importing Japanese lesson study: Concerns, misconceptions, and nuances, *Phi Delta Kappan*, 85, 7, 520–525.

- Etheridge, L. (2016). *Mathematics Anxiety and Mathematics Self Efficacy as Predictors of Mathematics Teaching Self Efficacy* (PhD dissertation), Graduate Faculty of Auburn University, Retrieved in July 2018 from <https://etd.auburn.edu/handle/10415/5242>
- Fadlemlula, F. K. (2013). The Influence of Micro Teaching Applications on Pre-Service Teachers Anxieties Toward Teaching Mathematics, *Mediterranean Journal of Educational Research*, 14a, 1–6.
- Gardner, L. E., & Leak, G. K. (1994). Characteristics and Correlates of Teaching Anxiety among College Psychology Teachers, *Teaching of Psychology*, 21, 1, 28–32.
- Grossman, P., Compton, C., Igra, D., Ronfeldt, M., Shahan, E. & Williamson, P. W. (2009). Teaching Practice: A Cross-Professional Perspective, *Teachers College Record* 111, 9, 2055–2100.
- Judson, E., & Sawada, D. (2001). *Tracking transfer of reform methodology from science and math college courses to the teaching style of beginning teachers of grades 5–12*, Arizona Collaborative for Excellence in the Preparation of Teachers, Technical Report No. PRGOI-2.
- Levine, G. (1993). *Prior mathematics history, anticipated mathematics teaching style, and anxiety for teaching mathematics among pre-service elementary school teachers*, Paper presented at the Annual Meeting of the International Group for Psychology of Mathematics Education, North American Chapter. Retrieved in May 2017 from <https://files.eric.ed.gov/fulltext/ED373972.pdf>
- Lewis, C. C. & Tsuchida, I. (1998). A lesson is like a swiftly flowing river. How reasearch lessons improve Japanese education, *American Educator*, 22, 4, 12–17 & 50–52.
- Makinae, N. (2010). The origin of lesson study in Japan. In Y. Shimizu, Y. Sekiguchi, & K. Hino (Eds.), *Proceedings of the Fifth East Asia Regional Conference on Mathematics Education: In Search of Excellence in Mathematics Education -EARCOME5*, August 18–22, 2010 (pp. 140–147). Tokyo: Japan Society of Mathematical Education.
- Matanluk, K., Johari, K. & Matanluk, O. (2013). The Perception of Teachers and Students toward Lesson Study Implementation at Rural School of Sabah: A Pilot Study, *Procedia - Social and Behavioral Sciences*, 90, 245 – 250.
- McMahon, M. T., & Hines, E. (2008). Lesson study with preservice teachers, *Mathematics Teacher*, 102, 3, 186–191.
- McMillan, J. H., Schumacher, S. (2001). *Research in Education: A Conceptual Introduction*. New York: Addison Wesley Longman, Inc.
- Mee, L. S. & Oyao, S. G. (2013). Establishing learning communities among science teachers through lesson study, *Journal of Science and Mathematics Education in Southeast Asia*, 36, 1, 1–22.
- Mostofo, J. (2013). *Using lesson study with preservice secondary mathematics teachers: Effects on instruction, planning, and efficacy to teach mathematics* (PhD dissertation), Arizona State University, Retrieved in May, 2018 from <https://cdn.ymaws.com/www.cpedinitiative.org/resource/resmgr/docs/DiPs/Mostofo.pdf>
- Murata A., Pothen B. E. (2011) Lesson Study in Preservice Elementary Mathematics Methods Courses: Connecting Emerging Practice and Understanding. In Hart L., Alston A. & Murata A. (Eds.) *Lesson Study Research and Practice in Mathematics Education* (103–116), Dordrecht: Springer.

- Ngidi, D. P. & Sibaya, P. T. (2003). Student teacher anxieties related to practice teaching, *South African Journal of Education*, 23, 1, 18–22.
- Parsons, J. S. (1973). *Assessment of anxiety about teaching using the Teaching anxiety scale: Manual and research report*. Austin, Texas: Research and Development Center for Teacher Education, University of Texas. Retrieved in May, 2017 from <https://files.eric.ed.gov/fulltext/ED079330.pdf>
- Pjanić, K. (2014). The origins and products of Japanese Lesson Study, *Teaching Innovations*, 27, 3, 83–93.
- Peker, M. (2009). Pre-Service teachers' teaching anxiety about mathematics and their learning styles, *Eurasia Journal of Mathematics, Science & Technology Education*, 5, 4, 335–345.
- Peker, M. (2009a). The use of expanded microteaching for reducing preservice teachers' teaching anxiety about mathematics, *Scientific Research and Essay*, 4, 9, 872–880.
- Peker, M. & Ertekin, E. (2011). The Relationship between Mathematics Teaching Anxiety and Mathematics Anxiety, *The New Educational Review*, 23, 1, 213–226.
- Rock, T. C. & Wilson, C. (2005). Improving teaching through lesson study, *Teacher Education Quarterly*, 32, 1, 77–92.
- Schuck, S. (2016). Enhancing Teacher Education in Primary Mathematics with Mobile Technologies, *Australian Journal of Teacher Education*, 41, 3, 126–139.
- Sen, A. I. (2009). A Study on the Effectiveness of Peer Microteaching in a Teacher Education Program, *Education and Science*, 34, 151, 165–174.
- Tsui, A. B. M. & Law, D. (2007). Learning as boundary-crossing in school-university Partnership, *Teaching and Teacher Education*, 23, 1289–1301.
- Tsui, A. B. M. & Law, D. (2009). Mutual engagement and boundary crossing in lesson studies. In A. B. M. Tsui, G. Edwards & F. Lopez-Real (Eds), *Learning in School-University Partnerships. Social perspectives* (111–131), New York & London: Rotledge, Taylor & Francis Group.
- Villalon, J. (2016). Lesson Study: Its Influence on Planning, Instruction, and Self-Confidence of Pre-Service Mathematics Teachers, *US-China Education Review B*, 6, 7, 429–439.

Silva Bratož
University of Primorska, Faculty of Education
Koper, Slovenija

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FUTURE PRIMARY SCHOOL TEACHERS' ATTITUDES TOWARDS USING ICT IN TEACHING

Abstract: Teachers' attitudes toward information communication technology (ICT) have a considerable impact on the efficient introduction of ICT in the education process. The primary aim of the study presented in this paper is therefore to identify the attitudes of pre-service primary school teachers toward ICT use in teaching and their opinions about the benefits and drawbacks of ICT use in primary education. In addition, the current researchers will look at the competences which education students associate with ICT use. For this purpose, a qualitative research study was carried out based on the analysis of students' personal documentary material in the form of argumentative essays. The results of the content analysis are presented in different categories and include selected direct quotations by the participants. The results indicate that future primary school teachers have favourable attitudes towards using information communication technology in teaching but are also well aware of the advantages and drawbacks related to different aspects of ICT use in primary school. The current researchers would like to argue that for an effective integration of ICT in teaching and learning, teacher training programmes need to provide future teachers with positive experiences and knowledge which will help them to make an efficient and sensible use of ICT in their teaching.

Keywords: information communication technology, ICT in education, pre-service teachers' attitudes, qualitative research.

INTRODUCTION

Information communication technology has been closely associated with innovation in education and innovative learning environments. The use of ICT in learning and teaching has often been seen as a pre-requisite for the development and introduction of new pedagogical practises and approaches. However, as pointed out by Fraillon, Ainley, Schulz and Friedman (2014), while several countries have made significant contributions in equipping schools with ICT, it is by no means clear what the real effect of these investments is. In addition, the common belief that students are familiar with using ICT is more an assumption than a conclusion derived from data.

Similarly to other countries, Slovenia has also published a number of strategic documents outlining the guidelines and policies for an efficient integration of ICT in education (Ministrstvo za izobraževanje, znanosti in šport, 2016; Bela knjiga, 2011; Kreuh, 2012; Kreuh and Bračko, 2011). It is clear from these documents that the skills and knowledge of using ICT in teaching represent one of the key competences in the area of education in the 21st century. The model of six basic e-competences proposed by Kreuh and Brečko (2011) integrates six main areas of ICT development, i. e. knowledge and critical use of ICT; the ability to function and communicate in virtual environments; the skills for searching, collecting, processing and critically evaluating data, information and concepts; a safe use of ICT, including the consideration of legal and ethical principles related to ICT use; developing, designing, updating and publishing products and materials; the ability to plan, deliver and evaluate teaching based on ICT.

The concept of digital competence as defined by Erstad, Kløvstad, Kristiansen, and Soby (in Røkenes and Krumsvik, 2014) encompasses “skills, knowledge, creativity, and attitudes that everybody needs in order to use digital media for learning and functioning in the knowledge society”. Similarly, Martin and Grudziecki (2006) define digital literacy as

”the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse 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” (2006, p. 255).

It is clear from these definitions that digital competence is not merely perceived as the ability to use software or operate digital devices but that it also incorporates other aspects which include the affective and motivation factors. Several authors (Teo, Lee, Chai, 2008; Teo, 2008; Huang and Liaw, 2005) have suggested that the success of implementing ICT in schools is highly dependent upon the support and beliefs of the practising teachers. In other words, if teachers are not convinced of the benefits of digital technology in the teaching process, they are less likely to include ICT in their lessons. This suggests that attitudes toward using computers in schools are important factors that affect the efficient implementation of ICT in teaching. While teachers' attitudes in relation to ICT use in education are undoubtedly crucial, Teo et al. (2008) have also suggested that the building of positive ICT attitudes should start at the pre-service level during teacher training. The main aim of the present paper is therefore to analyse the attitudes of future primary school teachers towards the use of ICT in teaching. To this purpose, a qualitative research study was conducted based on the analysis

of personal documentary material provided by students enrolled in a primary teacher education programme and aimed primarily at identifying their general attitudes towards using ICT in teaching, the ways they perceive and express the benefits and/or drawbacks of using computers in school, and the competences they associate with ICT use.

ATTITUDES TOWARDS USING ICT IN SCHOOLS

Attitudes towards the role and use of ICT in education have a considerable impact on the success of the practical implementation of ICT in the schooling process. According to a recent study conducted by the European Commission (2013) at EU level, a large majority of both school heads and teachers expressed positive attitudes towards ICT use and impact. It is also important to note that the examination of school heads' attitudes revealed no significant correlation as to their gender, age, years of experience, the school socio-economic background or type of location. As for the teachers, a positive correlation was observed between the teachers' attitudes and the length of time using ICT, the extent of use of ICT equipment in their lessons, the frequency of activities supported by ICT, their self-confidence in ICT related skills and their working experience. In addition, the results also showed that teachers are more likely to have positive attitudes if they teach in a school where there is a shared vision about ICT use.

On the other hand, the same study showed also some less encouraging trends in this area. While the number of teachers who have used ICT to prepare lessons increased between 2006 and 2013, the percentages of teachers using ICT in more than 25% of lessons were either stable or in decline. This downward trend is especially worrying considering the fact that there were fewer obstacles to ICT use in 2012 and that teachers' confidence in ICT skills (e.g. word processing, using email, preparing a multimedia presentation, and downloading and installing software) has increased (European Commission 2013).

A study of computer and information literacy conducted by Fraillon et al. (2014) also showed that teachers' attitudes towards ICT use are generally positive although it also revealed that a number of them are well aware of the various drawbacks of using technology in the classroom. The results of the study also showed that the teachers who are more confident of their digital competences and whose school environment offers substantial ICT support and cooperation between teachers are more likely to use ICT in their teaching.

One of the key findings of the European Commission report (2013, p. 14) is that "teachers' confidence and opinions about ICT use for teaching and learning affect the frequency of students' ICT use for learning: boosting teacher

professional development makes a difference, and appears to be a condition for an effective and efficient use of the available infrastructure.”

These conclusions emphasise the increasingly important role of the teachers' confidence level in their own ICT competences and their opinion about the relevance of ICT use for teaching and learning. Finally, the study also revealed no correlation between levels of ICT provision and student and teacher confidence, use and attitudes. This suggests that there may be other factors affecting teachers' confidence, use and attitudes in relation to ICT use which still needs to be identified and examined.

According to the results of the study carried out by Teo et al. (2008), future teachers' computer attitudes are significantly affected by the perceived usefulness of computers and the perceived ease of computer use, the subjective norm and facilitating conditions of ICT use. Another study, focused on the attitudes of pre-service teachers towards ICT use in teaching, was conducted by Ørnes et al. (2011, in Ottestad, Kelentrić and Guðmundsdóttir, 2014) The authors have concluded that future teachers perceive digital tools to be key tools in academic life with a considerable influence on the quality of their education, especially as regards opportunities for collaboration and contact between students and teachers, easier access to information and literature, and more variation in the use of learning materials.

In their study carried out in 1999, Willis, Thompson and Sadera reviewed the results of several studies according to which teachers were found to have generally positive attitudes about the use of technology in schools, but were far less confident of their ability to use technology in the classroom. In addition, they were of the opinion that their teacher training did not sufficiently prepare them to use technology in innovative ways. These results suggest that for an effective integration of ICT in teaching and learning, it is necessary to include strategies for raising ICT awareness and attitudes in teacher training programmes based on a "holistic approach, embracing awareness-raising, professional development (pre-service, induction and in-service), planning, and infrastructure" (Department of Education and Science, 2008, p. 111).

METHODOLOGY

The study presented in this paper is qualitative in nature. One of the benefits of qualitative research is its possibility to provide complex textual descriptions of participants' experiences of a certain research problem. This is especially precious in the research of emotions, beliefs and opinions. Furthermore, in qualitative research the information gained often allows the researcher a deeper insight into

the phenomenon under study. Among the methods for collecting qualitative data Kordeš and Smrdu (2015) mention also sources (besides interviews and observation) in the form of various types of documentary material which may be either personal or official (Mesec 1998). A personal document is a spontaneous first person description by an individual of his or her own actions, experiences or beliefs. Personal documents comprise, for example, diaries, letters, school essays, autobiographies or 'life histories', etc. The type of personal source used for the current research is an argumentative essay which the students had to write as a course requirement and was not primarily intended for research. As pointed out by Kordeš and Smrdu (2015), one of the benefits of qualitative research can also be seen in collecting data which were not primarily intended for the study undertaken. Such data represent phenomena as they occur in their natural environment and are not tainted by the research objectives or hypotheses.

One of the characteristics of qualitative research is that data is usually collected from a smaller sample than would be the case for quantitative approaches. The participants in this qualitative study were 27 student teachers enrolled in the third year of the study programme Primary School Teaching at the Faculty of Education of the University of Primorska. Data were collected on a voluntary basis during the second semester of the academic year 2017/18 in the course Written and Spoken Communication in English. The author was present throughout the data collection process which lasted 60 minutes. The students were asked to write an argumentative essay entitled "Computers should be banned from school" aimed at developing their academic writing competence. One of the limitations of the research is the fact that the essay had to be written in English which is not the students' native language and which could have been an obstacle to the students expressing their thoughts and opinions efficiently. On the other hand, the students who participated in the study are enrolled in the module Teaching English to Young Learners which means their English language competence is rated higher than the competence of other students in the study programme and would be equivalent to a B2 or C1 language competence level.

Research questions

The main research questions were the following:

1. What is the general attitude of pre-service teachers towards using ICT in primary schools?
2. How do pre-service teachers perceive the benefits and/or drawbacks of using ICT in teaching?
3. Which competences can be developed with ICT according to pre-service teachers?

Results

The results of the qualitative analysis are presented on the basis of the categories identified (in italics) for the research questions above. These are additionally documented with participants' direct quotations.

General attitudes towards using computers in teaching

One of the aims of the study was to establish whether the informants' attitude towards using ICT in education was generally more positive, more negative or balanced between the two. While the majority of the students agree that children are exposed to technology from an early age and that "technology runs the world", they expressed different overall attitudes towards using ICT in schools. The vast majority of students discussed the topic by pointing out both advantages and disadvantages of using computers in schools and therefore showed a more balanced attitude towards ICT use. Around a third of all the participants in the study expressed an overtly positive attitude towards using technology in schools, arguing mostly in favour of introducing ICT in teaching. Only two students focused primarily on the negative effects of ICT in education and expressed a distinctly negative attitude towards using computers in teaching.

Benefits of using computers in teaching

The main categories identified in relation to the benefits of using ICT in teaching were: motivation, learning efficiency, immediate feedback, learner autonomy, active learning, developing digital competences, and access to information.

One of the most important benefits of using ICT in teaching as reported by the future teachers involved in the research is *motivation*. Lessons supported by digital technology are considered more interesting and fun by the majority of the students in the study. Several students mentioned activities, such as games, quizzes, teaching materials, etc. which teachers can use to motivate learners to learn. As pointed out by one student, "pupils will be more interested in how the heart and blood circulation function with animation on a tablet screen than if they read about it in a course book".

In addition, teaching with ICT support is perceived as easier and better which increases the *efficiency of learning*. The latter is especially related to better memorisation owing to better support in terms of visualisation. As several students mentioned, ICT support helps the teacher convey and explain complex concepts more efficiently and enhances the pupils' understanding. For example, videos allow children to see something they were not able to see before or see

things more explicitly and thus increase their understanding of a particular phenomenon. Furthermore, ICT assisted teaching enables *immediate feedback* which is rarely possible in teaching without computers. Learners can get information on their performance instantly and the teacher can monitor their progress in a more systematic way. Moreover, ICT can be an efficient tool for teaching pupils with learning disabilities. It can be an empowering experience for both teachers and learners.

Next, by using ICT in teaching and learning, pupils become more independent and *autonomous learners*. They can work on their own also outside the classroom and they can practice independently at home. Another important aspect is that pupils can learn at their own pace and taking into account their level of competence. ICT supported teaching also gives children the opportunity to develop creativity and independent thinking but also to encourage them to explore a topic on their own.

According to the participants in the study, ICT also gives the learners the opportunity to be more *actively involved* in learning, such as through projects. This increases pupil participation and positive interaction between students and teachers. For example, learners can cooperate with the teacher to contact people all around the world using the Skype application. In this way learners will feel more included, keener to learn.

Among the benefits of ICT use, several students mentioned the development of *digital competence*. ICT is seen as a “precious tool, like a ruler, calculator or pencil”. Children will use technology in their future life so they need to be able to know all the possibilities offered by ICT. The participants in the study expressed the opinion that several tools and applications are very useful and are already used by a number of teachers, such as the power point or the e-classroom, but also activities like blogging and creating videos. Furthermore, the development of digital competence also involves learning to use technology safely. As pointed one by one student, “they will use it anyway but by including technology in school we have the opportunity to show them how to use it safely and reliably”. Another related view connects the benefits of using ICT with a number of advanced devices available today, like virtual reality headsets which can be used in schools for teaching. As one student pointed out “we could have virtual science classes for dangerous lab experiments” and “if we want our children to become doctors, pilots and engineers, we need to give them ICT knowledge”.

Several students see *access to information* as one of the most valuable advantages in introducing ICT in schools. Facts and specific content can be accessed easily and, above all, instantly. One of the participants expressed this view by writing that “there is no use having our children memorise pages upon pages of facts if we can teach them how to find them when they need them”.

Finally, an important benefit of using ICT in teaching as seen by pre-service teachers is in the fact that "children's brains are already used to computers" and that "ICT is a child's reality from their birth".

Drawbacks of ICT use

With respect to the disadvantages of using ICT in schools, the following categories were identified: health problems, loss of touch with reality, lack of interpersonal communication, teachers' poor ICT competence, safety issues, and lack of creativity.

First of all, the majority of participants in the study mentioned *health related problems* as the most important disadvantage of using computers in schools. Because of ICT exposure, children are in danger of developing poor eyesight, back pain, inflammation of the carpal tunnel, etc. Several students also mentioned various physical problems and insufficient development of fine motor skills. There is a general agreement among the participants that "spending too much time in front of computers" is not healthy for the learners in primary school. A number of students also mentioned the possibility of children becoming addicted to digital technology.

According to the participants in the study, an important consequence of using ICT in schools may also be a *loss of touch with reality*. With an increasingly more important role of technology in their lives, children are losing the connection with nature and the opportunity to fully develop all their senses. Several students also added that children spend too much time in front of computers outside school, so it is not sensible to expose them to digital technology also during the lessons. As one student commented, "teachers should do everything in their power to get those kids back to reality", while another participant expressed his/her concern at using too much ICT by writing that "instead of learning how to care for plants in nature, they play a game in which they plant trees on computers".

Third, ICT use is often perceived as a negative distraction, a few students expressed the conviction that ICT use may lead to children *losing the ability and willingness to communicate* with their peers. Using digital technology in teaching may negatively affect the learners' social and interaction skills. Rather than spending time doing activities with ICT, children "need to learn other things, such as how to interact with their school mates". One of the students also commented that children are becoming "less human".

The next drawback refers to *teachers' competence* in using computer technology. Several students commented that teachers are not sufficiently qualified for using ICT efficiently, especially teachers with longer working experience. In addition, schools and teachers may not have access to high quality digital equipment. A few students also mentioned *safety issues* and data theft.

Finally, some of the disadvantages mirror the arguments in favour of using ICT. Several students expressed doubt at the efficiency of learning with computers, especially as regards developing *creative thinking*, writing and drawing skills, but also motor abilities. As one of the participants commented, "the web is full of ideas so children are not willing to think with their own heads anymore", while another mentioned that "computers are too helpful" and make everyone, also the teachers, lazy. As a consequence, the children are less autonomous and have fewer opportunities to show their knowledge.

Developing competences with ICT

ICT use is related to several competences and skills. As perceived by future teachers in primary school, the most important competences developed through ICT are connected with the technical use of ICT, such as presentation skills, writing electronic messages, and fast writing. In addition, one of the participants mentioned that children should learn programming and code-function writing and added that ICT classes "should be obligatory for everyone".

Moreover, several students mentioned the development of critical thinking and the skills for distinguishing between reliable and unreliable sources. Another competence mentioned in the essays is the ability to identify relevant content and safe use of the Internet.

Several students also described examples of good practice which they came across during their teaching practice. For example, to show the differences between Ancient Rome and Rome today we can use the application Google Street and compare the Constantine arch or the amphitheatre with a picture of the two from ancient times. Another student mentioned the role of videos and the fact that children can now see many things more explicitly, such as how animals move in different living environments or how cars are assembled.

CONCLUSION

The analysis of pre-service teachers' attitudes toward using computer technology in teaching showed that they are well aware of the advantages and disadvantages related to ICT use. The qualitative approach based on personal documentary materials in the form of argumentative essays gave us the possibility to collect information which enables us to get a deeper insight into the ways future teachers perceive digital technology and reflects different important aspects of attitudes towards ICT use. By analysing the way they developed arguments in the essay, the current researchers were able to see how primary school teaching

students perceive and elaborate both the benefits and drawbacks of ICT use in teaching. They were able to express and illustrate with convincing examples the positive aspects, such as higher motivation, immediate feedback, learner autonomy, etc. Although the students' attitudes towards ICT use in school can be said to be generally positive, it is also evident that they are conscious of the negative effects, such as health related problems or the fact that ICT may hinder creativity development. This is in line with the findings reported by several studies conducted in this area.

One of the main assumptions of the present research is that a teacher's attitude towards learning and teaching is an important determinant of the learners' performance and their motivation to learn. It is therefore recommended to provide future teachers with the experiences and knowledge which will help them to make an efficient and sensible use of ICT in their teaching. Another related issue which is worth exploring in the future is the level of pre-service teachers' digital competence which may also have a considerable impact on their future schooling practices and, as a result, on the digital competence of their pupils.

REFERENCES

- European Commission (2013). *Survey of schools: ICT in education. Benchmarking access, use and attitudes to technology in Europe's schools (final report)*. Brussels, Belgium. Retrieved from <https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/KK-31-13-401-EN-N.pdf>
- Department of Education and Science (2008). *ICT in Schools*. Dublin: Department of Education and Science. Retrieved from <https://www.education.ie/en/Publications/Inspection-Reports-Publications/Evaluation-Reports-Guidelines/ICT-in-Schools-Inspectorate-Evaluation-Studies.pdf>
- Fraillon, J., Ainley, J., Schulz, W., & Friedman, T. (2014). *Preparing for life in a digital age: The IEA International Computer and Information Literacy Study international report*. Melbourne, Australia: Springer.
- Huang, H. M., & Liaw, S. S. (2005). Exploring users' attitudes and intentions toward the web as a survey tool. *Computers in human behavior*, 21(5), 729–743.
- Kordeš, U., Smrdu, M. (2015). *Osnove kvalitativnega raziskovanja*. Koper: Založba Univerze na Primorskem.
- Krek, J., & Metljak, M., eds. (2011). *Bela knjiga o vzgoji in izobraževanju v RS 2011*. Ljubljana: Ministrstvo za šolstvo in šport.
- Kreuh, N. (2012). *Pot do e-kompetentnosti*. Ljubljana: Ministrstvo za izobraževanje, znanost, kulturo in šport.
- Kreuh, N. in Brečko, B. (2011). *Izhodišča standarda e-kompetentni učitelj, ravnatelj in računalnikar*. Ljubljana: Zavod RS za šolstvo.
- Martin, A., & Grudziecki, J. (2006). DigEuLit: concepts and tools for digital literacy development. *Innovation in Teaching and Learning in Information and Computer Sciences*, 5(4), 1–19.

- Ministrstvo za izobraževanje, znanost in šport. (2016). *Strateške usmeritve nadaljnega uvajanja IKT v slovenske VIZ do leta 2020*. Ljubljana: Ministrstvo za izobraževanje, znanost in šport.
- Mesec, B.(1998). *Uvod v kvalitativno raziskovanje v socialnem delu*. Ljubljana: Visoka šola za socialno delo.
- Ottestad, G., Kelentrić, M., & Guðmundsdóttir, G. B. (2014). Professional digital competence in teacher education. *Nordic Journal of Digital Literacy*, 9(04), 243–249.
- Røkenes, F. M., & Krumsvik, R. J. (2014). Development of student teachers' digital competence in teacher education—A literature review. *Nordic Journal of Digital Literacy*, 9(04), 250-280.
- Teo, T. (2008). Pre-service teachers' attitudes towards computer use: A Singapore survey. *Australasian Journal of Educational Technology*, 24(4).
- Teo, T., Lee, C. B., & Chai, C. S. (2008). Understanding pre-service teachers' computer attitudes: applying and extending the technology acceptance model. *Journal of computer assisted learning*, 24(2), 128–143.
- Willis, J., Thompson, A., & Sadera, W. (1999). Research on technology and teacher education: Current status and future directions. *Educational technology research and development*, 47(4), 29–45.

Nataša Vukićević
University of Kragujevac, Faculty of Education
Jagodina, Serbia

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LESSON STUDY MODEL APPLICATION IN THE FIELD OF TEACHING MUSIC AND STUDENT COMPETENCIES

Abstract: This paper considers the possibilities of applying the Japanese Lesson Study Model in the process of teaching music to future kindergarten teachers. Given the artistic character of the subject and diverse music abilities of students, the aim of this paper is to explore the possibility of applying the Lesson Study with regard to students' personal feelings toward competencies to prepare and perform activities during the music lesson. Research results show that student competencies acquired during formal education are sufficient for preparation and performance of activities, but that differences in experiencing competencies can be spotted within individual parameters. According to the attitudes of future teachers, the application of the Lesson Study in teaching music would yield positive results in the context of improving their social competences, self-assurance and confidence when performing music, their ability for collaborative work and some aspects of the teaching method.

Keywords: music education, Lesson Study, student competencies, collaboration, interaction.

INTRODUCTION

Students at universities of education acquire mandatory theoretical knowledge and didactic-methodological competencies to perform classes and other forms of education work. Since teaching is a complex process, future teachers, educators or tutors sometimes find it difficult to apply theory in practice (Kennedy, 1999).

Student's education should be focused on practical programs (training) development enabling future teachers not only to acquire the means for performing lessons but also to learn and permanently develop through performing teaching (Sims and Walsh, 2009).

One of the authentic ways to prepare students to deliver lessons practically is the Japanese Lesson Study genuine model, the application of which has contributed to high achievements in students' learning and the improvement of teaching practice in Japan.

Although Lesson Study was initially conceived as an improvement process for teachers working in schools, research shows that the adapted version of the Lesson Study can also be implemented in the initial education of teachers, in work with students attending universities of education, future elementary school teachers or kindergarten teachers (Cajkler, Wood, 2015, Chassels & Melville, 2009; Fernandez, 2005; Sims & Walsh, 2009). The results of the above research work, being the empirical confirmation of the basic ideas and aims of the study, showed that Lesson Study application in teaching methods has the following positive effects on performing lessons in schools:

- It develops and improves the teaching skills of students, improves the quality of their lessons (Chassels & Melville, 2009; Ganesh & Matteson, 2010);
- After obtaining feedback, revised lessons have become more pupil-centered (Fernandez, 2005);
- It enables better understanding by pupils and greater openness to different styles of teaching and learning (Chassels and Melville, 2009; Ganesh and Matteson, 2010);
- It develops a deeper understanding of the subject contents by pupils (Chassels and Melville, 2009; Fernandez, 2005; Ganesh and Matteson, 2010).

Observing classes by colleagues has improved the insight into the pupil's needs, increased awareness of the importance of collaboration and improved teaching abilities in the critical analysis of classes and in the exploration of effective and non-effective teaching strategies (Chassels and Melville, 2009).

Secondary importance of the process of teaching and learning within the Lesson Study lies in the fact that it represents a form of training students to develop skills crucial for collaborative work.

Having in mind the specific nature of teaching music – the artistic character of the subject and the complex nature of musical abilities of students, the aim of this paper is defined from the aspect of possibilities to apply the Lesson Study model in music education in relation to the students' personal feelings toward competencies to prepare and carry out targeted activities within music education.

DESCRIPTION OF JAPANESE LESSON STUDY MODEL

The essence of the Lesson Study lies in lesson observation, ongoing discussion among teachers and their collaborative work aimed at re-working and improving these lessons (Lewis, 2011).

Lesson Study is a Japanese teaching improvement approach, i.e. the model of a teacher-led research in which participants work together to research, plan, teach and observe series of lessons using ongoing discussions, reflection, and

expert input to track and refine their pedagogical interventions within teaching process (Dudley, 2012). This is a comprehensive and well-articulated process of reviewing practice (Lenski, Caskey, 2009) focused on the successful teaching and learning through implementing a systematic method of modifying lessons through collaborative planning, carrying out the plan, testing the work plan with pupils (through so-called field testing), and the feedback-based revision of the plan (Mostofo, 2014).

The model has been used in teaching practice in Japan since the 1880s as a teaching activity based on observing the way of teaching with the aim of advancing the process of preparing a class, series of classes or a selected teaching unit. It represents the process of collaborative activities focused on content and pupils; it enables teachers to develop their teaching practice – to foresee pupil reactions, to evaluate and improve the class studied within that cycle of improvement, and train pupils to think independently (Pjanić, 2014). In Japan, where it emerged, the Lesson Study model is deemed a powerful means for increasing the capacity and sensitivity of teachers for the very process of learning and the way the pupils learn.

The concept is simple. Teachers work in teams, to target an area (teaching unit) together and plan articulation and flow of activities. Then they together observe a lesson simulation and contemplate on how to improve the lesson preparation. They create a professional knowledge base for learning that can be applied in practice – not remaining documentation only; by carefully observing examples made as a product of interaction during mutual meetings, they attempt to apply them in their classroom now becoming the center of learning (Lewis, 2011).

The focus in all these processes is on *how* pupils learn, on active and careful observation of pupils' learning process, on contemplation about whether this model of learning is useful and productive for pupils, as well as on shedding light on the question: *If this is not functioning, what should we as teachers change and how should we change it?* Due to its clear and simple structure, Lesson Study is a highly practical approach to designing better lessons.

In order to secure and keep the focus on pupils' learning and not on the evaluation of teachers, the practice of the Lesson Study is guided by careful protocols. Two key protocols are: the observing protocol and the discussion protocol.

The purpose of the observing protocol is to carefully observe what pupils do and say and to notice their learning since the role of the teacher is not only to help pupils and to teach them but to learn together with them through direct experiences (Lewis, 2011).

In the discussion protocol or so-called post-research discussions, the presentation is in most of the cases initiated by the teacher who lectured and the discussion is focused on pupils rather than on the teacher. Comments of other team members are also focused on the pupils' activities and answers. A careful and

consistent description of the class does not imply conclusions or evaluation but represents an analysis of the methods used by the student or obstacles the student faced during the class. When we gather them, these descriptions help us to get a picture of what the class looked like from different points of view – the teacher, the students, observers, and the student demonstrator/performer. Only then can the implications for further work be made.

The segments of the Lesson Study cycle are differentiated in the following way:

1. Study of curriculum, standards, and formulation of goals – general, long-term goals relating to pupils' learning and development are taken into account;
2. Planning – a new lesson to be field tested is selected (or the existing one is revised);
3. Performing the field test of the lesson – one team member conducts a lesson and others observe and collect data;
4. Reflection – through formal class analysis data are exchanged in order to identify wider problems in teaching/learning (Lewis, 2011).

Author Lewis discovered that the Lesson Study could be a powerful platform for the professional development of teachers since, as a form of testing and evaluating teachers' work, it allows teachers to explore their own practice, especially the subject matters problematic for teaching.

A team of teachers in Singapore added an innovation to the Lesson Study practice: teachers who observe the lesson are given a few minutes to interview pupils immediately after a field test/simulation. The goal of this interview as an additional segment of the Lesson Study is to motivate the observer to talk to children, to ask the children questions about the assignment they did, all with the aim of obtaining a full insight in their way of thinking.

Having in mind the described characteristics and positive effects on teaching methods, the Lesson Study can also be applied in the field of music education. Certain limitations and deviations from the usual concept are conditioned by the specific nature of this subject that we explained below.

SPECIFIC NATURE OF MUSIC EDUCATION

Innovative forms of teaching music education at universities should correspond to the real needs of students that are, due to heterogeneous music abilities, very diverse in relation to separate segments of music education (theory of music, vocal and instrumental reproduction of music contents – singing and playing, aspects of teaching methods).

The aim of the research was to determine the spheres in which the cooperation and interaction would help students, and whether the Lesson Study could be applied to these spheres. Theoretical starting points that directed the researchers in defining the subject and objective of the research are the existing definitions of peer interaction and group learning extended by dimensions such as the social context in which interaction happens, the type of assignment solved within interaction, the participants' activity in communication, the observation of own competencies, and their evaluation in relation to the competencies of other participants (Petrović, 2015: 79).

The only possible way to see collaborative relation positively reflected in the development of skills and competencies of students is to combine the Lesson Study model with other approaches in a complementary manner. In new research fields, one of them certainly being the field of music education in the context of conceptual development and psychology of music skills, combining two approaches to studying peer interaction as a specific form of learning is almost inevitable (Stepanović, 2010). This is supported by similar terms accepted by different authors, including field test discussion (Mercer, 2003), field testing lessons (Mostofo, 2014), or field test class assignments (Lewis, 2011). Within different contexts or conditions of studies, researchers have come to similar characteristics of the group learning process, including shared responsibility among participants during the common work on the assignment and negotiation or agreement with regard to the meaning of a situation in the direction of common meaning structuring (Mercer and Howe, 2012 in Petrović, 2015).

Building competencies and skills is the result of the tripartite interaction of teachers, students, and assignment (Per-Clermont, 2004). Studying social interactions among students has two main dimensions; 1) peer interaction, and 2) specific nature of the contents that are the subject of interaction between teachers and students. In music activities, interaction is directly conditioned by program requirements of certain fields of work, the implementation of which activates different abilities of students – the ability of active listening to music and music memory in the field of listening to music, vocal skills and performance skills of playing a harmonic instrument when singing children's songs, a sense of rhythm when performing music games, counting rhymes, and playing children's musical instruments, creative ability and ability to observe music elements in children's music creative work.

The efficiency of educational practice in the field of music education largely depends on practical music skills of lower elementary school and kindergarten teachers, i.e. it is conditioned by the level of development of music skills of the student, the knowledge of music theory – music literacy of the student, student's motivation for continual work and improvement, abilities to apply different teaching

methods and forms of work including ability for collaborative work (Nikolić, Ercegovac-Jagljčić, 2010).

Modern approaches to teaching mostly underline active learning as opposed to traditional concept teaching, but the attitudes of authors are somewhat different. According to Kyriacou (1997), “we achieve active learning by involving pupils in activities giving them a marked degree of autonomy and control over the organisation, conduct and direction of the learning activity”, and it is in field test teaching, collaborative learning and teamwork that it is achieved (Svalina, 2015: 71).

In music education, and from the aspect of the methodology, it can be applied to planning and acquiring music-theoretical knowledge, while in the field of performing activity it must be combined with other teaching method approaches. A more significant approach to teaching from the aspect of applying in music education belongs to German didactics advocate Paul Heimann who spoke about models of teaching methods – analytical approach and individual subject methods that “enable considering all specifics of individual educational fields and creativity of practitioners when shaping the educational process” (Bognar, Matijević, 2007: 268).

Authors Bognar and Matijević emphasize that systematization of educational strategies is done in accordance with basic postulates of humanistic psychology and educational strategies according to the areas and interests. In the area of music education, the most important edification task is to make pupils love music and to become familiar with it on the basis of emotional experience in order to freely express their music experience. Cognitive interests of students/pupils can be satisfied by learning about music, by explanations, by analyzing pieces of music; satisfaction of experiential interests is achieved by experience (the most intensive in the area of listening music) and creative expression, while psychomotor interests are met by singing, playing instruments, and performing music games (Bognar, Matijević, 2007).

The interrelatedness between cognitive and experiential aspects points to the inevitability of adjusting methods to music contents and applying educational processes particularly created for music education (Bognar, Matijević, 2007). The application of corresponding methods depends exclusively on the subject area and wrong attempts of some teaching method practitioners to implement certain methods to unsuitable areas can often be encountered in artistic subjects (Bognar, Matijević, 2007:269).

METHODOLOGY FRAMEWORK

Segments and key determinants of the Lesson Study - observation, simulation, feedback, and collaborative work – are not novel to teaching practice¹, but the significance of the Lesson Study is reflected in the sequence and articulation of these activities. The focus is on collaboration and mutual activities of students as well as feedback that students obtain directly after the class/activity through mutual analysis and suggestions, while conceptualization of new ideas is the product of described interaction and collaboration.

The aim of the paper is to establish possible application of the Lesson Study in relation to students' personal experience regarding competencies for preparation and implementation of targeted activities in the field of music education. According to the defined aim, the research tasks are to:

1. Examine student's attitudes about personal experience toward competencies for preparation and implementation of music activities;
2. Examine student's attitudes about the significance of collaboration and interaction for preparation and implementation of targeted activities within music education.

The descriptive method and surveying technique are applied. The sample of this research consisted of fourth-year students of the study program Pre-school Teacher, a total of 74 respondents, and surveying was done at the end of 2017/2018 school year, after the implementation of two different music activities in a preschool institution. Students' attitudes were interpreted in accordance with defined tasks and in relation to evaluations of the first and second lecturing. The evaluation of teachers was formed after a mutual analysis of the performed class with the group of students who observed the class.

RESEARCH RESULTS AND DISCUSSION

When it comes to students' competencies for performing music activities,² students evaluated that their competencies acquired during the formal education were sufficient for the preparation and implementation of activities. Insignificant differences in own experience toward competencies can be spotted within individual parameters: professional knowledge in the field of music theory, vocal and

1 According to American authors Walter and Marx (1981) simulation, group interaction, role playing and practical exercises belong to central methods group, one of "three groups of methods crucial for achieving experiential learning or teaching" (Svalina, 2015: 71).

2 Students' competencies for performing music activities include their knowledge and experience in domain of pedagogical sciences and program contents of music education.

instrumental reproduction of music contents, didactic-methodological competencies and pedagogical-psychological knowledge (Table 1).

Table 1. Students' attitudes toward competencies for the implementation of music activities

Level of competencies	Possessed to a great extent f (%)	Sufficient for activity implementation f (%)	Sufficient only for preparation f (%)	Additional improvement needed f (%)	Total f (%)
Subject areas					
Theory of music	22 (29.73)	42 (56.76)	8 (10.81)	2 (2.70)	
Vocal and instrumental reproduction	12 (16.22)	38 (51.35)	12 (16.22)	12 (16.22)	74
Didactic and methodological knowledge	24 (32.43)	42 (56.76)	8 (10.81)	0	(100)
Pedagogical and psychological knowledge	28 (37.84)	30 (40.54)	10 (13.51)	6 (8.11)	

When we compare their answers relating to the preparation of activities and answers regarding the implementation of activities (including the design of preparation), it can be observed that a certain number of students believe they have sufficient knowledge and skills to prepare an activity but that the implementation of the activity is marked by a certain extent of insecurity regarding their own competencies. This phenomenon stems from the specifics of music education and music activities and a chain of factors influencing their implementation that we have explained it in the previous chapter.

Students obtain basic theoretical knowledge they apply to performing music – playing and singing, but an important factor of successful implementation is music and performing skills that are uneven and vary among students. Work on the development of music skills is a long-term process starting in the preschool period and happening in parallel with other forms of education in lower elementary school grades, while at other levels of education, music knowledge is adopted through the area of listening to music and themes from the history of music, knowledge of musical instruments, musical forms. Continual development of music skills and abilities is a privilege of individuals attending a music school, singing in the choir or playing in an orchestra. Their music education at teacher

education faculties is focused on the possibility of performing a music lesson in a school or music activities in a preschool institution, and insecurity, stage fright, and insufficient self-confidence are significantly in correlation with the level of their skills development.

Similar research in the field of music education of students, the sample of which were future elementary school teachers, showed that “more than one-half of students think that problem in achieving competences (...) is their underdeveloped music skills” (Suzdilovski, 2012:632).

In the same research a large number of students believe that in addition to innovations and intensification of certain teaching contents within music courses (vocal-instrumental teaching and music culture teaching method), an important step in acquiring professional competencies would be continual work on developing self-confidence necessary for singing and playing in front of a larger number of people (Suzdilovski, 2012). The identical attitudes are expressed by future teachers being the sample of this research.

Some psychological studies by the authors dealing with nature of music skills (Sloboda, 2000) attempted to demystify the process of music performance and describe different music parameters that (in addition to inborn talent) influence individual differences when performing the same musical composition. Playing is not only a technical motor skill; it also demands the ability to create distinctly different performances of the same piece of music in relation to the nature of structural elements and the emotional experience of the composition. One of the conditions for mastering a certain instrument is understanding music vs. the mechanical repeating of music materials without thoughtful engagement. Understanding music depends on the existence and deployment of processes for discovering, storing and organizing music materials according to basic structural characteristics. Common cultural experiences that students possess develop these processes to a certain extent but in order to achieve a level of expertise needed for performing music and implementing educational work it is necessary to have a specially designed learning environment and activities implying the inclusion of certain motivating and social factors (Sloboda, 2000).

Other form of music performance, singing, also can be advanced by applying corresponding techniques (Welch and McPherson, 2012). The analysis of data about class observations in the research conducted with elementary school pupils showed characteristics of high-quality teaching of singing that can also be applied in music education of future teachers:

- Learning is the most efficient when pupils are actively engaged during the most part of the class;
- Pupils' activities are dominant during singing and answering the questions;
- Success criteria are explicit, students' performing/singing is promptly

evaluated and feedback is offered with clear indications on how to improve singing;

- Achievement is evaluated and related to success criteria (Welch and McPherson, 2012).

With other research task relating to students' need to cooperate and interact in music education, students' experience in preparation and implementation of music activities during the school year showed that majority of students, 58 or 78.38% of respondents, prepared activities most easily and efficiently when acting partially independently in consultations with the subject professor. Only 16 of them (21.62%) confirmed that collaborative work in groups helped in designing the preparation. In both categories of the answers, the majority of the students better evaluated the second targeted activity (Table 2).

Table 2. Manner of preparation and implementation of music activities and evaluation of activities

First and second activity evaluation	Better evaluation of second activity f (%)	Same evaluations f (%)	Poorer evaluation of the second activity f (%)	Total f (%)
Manner of preparation of activities				
Independently in consultation with professor	30 (51.72)	20 (34.48)	8 (13.79)	58 (100)
Collaboratively in pair or group	10 (62.5)	4 (25)	2 (12.5)	16 (100)
Total f (%)	40 (54.05)	24 (32.43)	10 (13.51)	74 (100)

Based on the evaluation of practical lectures, the implementation of the second class was more successful and better evaluated with 54.05% students, while other student showed the same (32.43%) or weaker evaluation (13.51%). These data confirm that students are not trained for collaborative work and that the given abilities are not developed spontaneously, but with systematic support within a specially designed program for acquiring these skills.

Providing aspects where collaborative work can contribute to competences improvement, a total of 20 (27.03%) participants responded they needed support in the form of cooperation with other students when it comes to their

self-assurance, self-confidence, and inner motivation, while 46 students (62.16%) said they needed help with singing and playing instruments. In our research and educational system in general, it can be noticed that students are not taught to be partners in the collaborative process of learning and researching. The focus of contemporary higher school learning should be shifted from knowing concepts and contents to acquiring competencies and developing students' skills (Gojkov, Stojanović, 2015). The Lesson Study in such context would be a convenient procedure to encourage and develop student competencies.

Experience in planning and implementing the first activity, learning from mistakes and feedback have helped students to implement the second practical lecture although it included a different unit and theme of activity (56 or 75.67%). With smaller number of students (18 or 24.32%), due to the given specifics of music skills and circumstances that the performance of different music field is conditioned by a certain component of skills, the implementation of activities depended only on program requirements by the fields of work, regardless of the former experience (Table 3).

Table 3. Students' attitudes about factors influencing the activity implementation

Activity evaluation→ Factors	Better evaluation of the second activity f (%)	Same evaluations f (%)	Poorer evaluation of the second activity f (%)	Total f(%)
Positive influence of former experience in planning the second class	30 (53.57)	16 (28.57)	10 (17.86)	56 (100)
Planning depends on teaching unit	10 (55.56)	8 (44.44)	0	18 (100)
Total f (%)	40 (54.05)	24 (32.43)	10 (13.51)	74 (100)

Students' attitudes on the way of preparing and implementing the class – independently or in collaboration with the group, and on factors influencing the implementation, are not in correlation with the evaluation of their targeted activities.

This points to the assumption that during the implementation of activities, a Lesson Study simulation would help students only in teaching method aspects,

such as planning, content articulation and predicted and expected answers of children, while in the area of music competencies it has no sufficient effect on their development and improvement. In order to make interaction advantageous to the outcomes of the class/practical lecture, student's dialogue or exchange of thoughts and ideas with other students as a form of social interaction would not suffice – the interactive process must include the contents of different areas. A higher level of correlation and linking music with other non-musical contents and areas gives a feeling of confidence to all surveyed students (100%), while the correlating area depends on the topic and student's affinity.

CONCLUSION

Research results show that the Lesson Study can be applied to music education with respect of specific nature of the subject area – experiential-educational aspects of teaching that need to be harmonized with the selection and application of certain methods and strategies, and that musical abilities of students are the crucial pre-condition for the efficient application of the Japanese model. The education of future teachers is a dynamic and open process that involves theoretical knowledge, competency, collaboration, development of skills relevant for the performance of different segments of educational work, and, therefore, demands the integration of knowledge, abilities, and action (Tatković, Mocinić 2012).

On the basis of students' attitudes, it is possible to conclude that the Lesson Study application in music education would yield good results in the context of improving students' competencies only in the aspects of teaching method, while it shows no sufficient effect on the development of performing competencies.

In order to train future teachers to apply modern scientific insights in the educational process, in addition to knowledge of different psychological and pedagogical theories, mastering teaching methods in educational work, it is necessary to train them to apply modern interactive, cooperative and other methods and ways of work (Gojkov, 2015).

Research results confirmed the assumption that the collaborative work skill does not develop spontaneously; it is necessary to learn according to the special program. In this regard, the Lesson Study could have a significant role in training the students to apply interactive forms of learning. Its advantages are not limited to knowledge participants obtain in the framework of reflexive discussion after the lesson (Pjanić, 2014). The interactive approach in the Lesson Study has a double function: in professor–student (teacher–child) relation and in the form of collaboration between students who learn, resolve different practical problems, reflect on their own work through discussion (Gojkov, 2015: 141).

Music education of future teachers could be improved using the application of the Lesson Study method toward obtaining social competences, self-confidence, and self-assurance in performing music, which are, according to the respondents, the key factors limiting their progression and development.

REFERENCES

- Bognar, L. M. Matijeć (2007). *Didaktika*. Zagreb: Školska knjiga.
- Cajkler, W. & Wood, P. (2015). Adapting 'lesson study' to investigate classroom pedagogy in initial teacher education: what student-teachers think, *Cambridge Journal of Education*, 46:1, 1–18, DOI: 10.1080/0305764X.2015.1009363
- Chassels, C. & Melville, W. (2009). Collaborative, reflective, and iterative Japanese lesson study in an initial teacher education program: Benefits and challenges. *Canadian Journal of Education*, 32(4), 734–763.
- Dudley, P. (2012). Lesson Study in England: from school networks to national policy. *International Journal for Lesson and Learning Studies*, Vol 1, 1. January 2012, Emerald, London.
- Fernandez, M. L. (2005). Exploring "lesson study" in teacher preparation. *Proceedings of the 29th Conference of the International Group for the Psychology of Mathematics Education*, 2, 305–312.
- Gojkov, G. A. Stojanović (2015). *Didaktičke kompetencije i evropski kvalifikacioni okvir*. Beograd: Srpska akademija obrazovanja.
- Welch, Graham F. and McPherson, Gary E. (2012). Introduction and Commentary: Music Education and the Role of Music in People's Lives. *The Oxford Handbook of Music Education*, Volume 1 (1 ed.), Edited by Gary E. McPherson and Graham F. Welch.
- Kennedy, M. (1999). The role of preservice teacher education. In L. Darling Hammond, & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp. 54 – 85). San Francisco: Jossey-Bass.
- Lenski, S. J., & Caskey, M. M. (2009). Using the Lesson Study Approach to Plan for Student Learning. *Middle School Journal*, 40(3), 50–57.
- Lewis, C. and Hurd J. (2011): *Lesson Study StepbyStep: How Teacher Learning Communities Improve Instruction*, Heinemann, USA.
- Mostofo, J. (2014). The Impact of Using Lesson Study with Pre-Service Mathematics Teachers. *Journal of Instructional Research*, 3, 55-63.
- Nikolić, L. Ercegovac-Jagljčić, G. (2010). Uloga glazbenih sposobnosti u obrazovanju učitelja primarnog obrazovanja, *Metodika*, Vol.11, br. 20 (1/2010), 23–33.
- Petrović, V. (2015). Argumentativni dijalog u vršnjačkoj grupi i pojmovna promena, *Psihološka istraživanja*, Vol. XVIII(1), 77–98.
- Pjanić, K. (2014). Poreklo i proizvod japanske „studije časa“, *Inovacije u nastavi*, vol. 25, br. 3. str. 83–93.
- Sims, L., & Walsh, D. (2009). Lesson study with prospective teachers: Lessons from lessons. *Teaching and Teacher Education* 25, 724 – 733.

- Sloboda, J. A (2000). Individual differences in music performance, *Trends Cogn Sci.* 2000 Oct 1; 4 (10), 397–403.
- Sudžilovski, D. (2012). Studenti i kompetencije za nastavni predmet Muzička kultura, *Nastava i učenje – ciljevi, standardi, ishodi.* Užice: Učiteljski fakultet u Užicu, 627–636.
- Svalina, V. (2015). *Kurikulum nastave glazbene kulture i kompetencije učitelja za poučavanje glazbe.* Osijek: Fakultet za odgojne i obrazovne znanosti.
- Tatković, N. Mocinić, S. (2012). Profesionalne kompetencije budućih učitelja u kontekstu stručno-pedagoške prakse, In: *Pedagoška praksa i proces razvijanja kompetencija budućih učitelja u Srbiji, Hrvatskoj i Sloveniji, Chapter: Professional Practice and Teacher Competence Development,* Editors: M. Valenčić Zuljan, G. Gojkov, A. Rončević, J. Vogrinc. Vršac: Visokavaspitačka škola „MihailoPalov”, pp. 51–78.

Sandra Milanović and Ivana Milić
University of Kragujevac, Faculty of Education
Jagodina, Serbia

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UNIVERSITY TEACHING THROUGH THE EFFECTS OF CELLULAR WORK APPLICATION AND ADDITIONAL EXERCISE WITH MUSIC AS THE METHODOLOGICAL AND ORGANIZATIONAL FORM OF WORK

Abstract: The holistic development of students at schools largely depends on properly directed learning process, for which the students, future teachers, are getting prepared during their university education, thus being able to acquire teaching competence and develop their pedagogical skills as well. Nowadays, students are faced with a series of demands arising from the development of technology and scientific advances, but in order to successfully meet their requirements, the application of innovative teaching models is essential.

The aim of this paper is to show the effects of methodological and organizational forms of work in teaching with the integration of different methodological content. The sample was made up of primary school students ($n = 120$), aged 12 to 13 from the Jagodina region, divided into two sub-samples where the first group consisted of 60 subjects, who were included in the experimental program of the cell forms of methodical work and the additional exercises accompanied with the selected music compositions (Experimental group) and the second group consisting of 60 subjects, who were engaged in the regular program of physical education (Control group). Through the application of test subjects, the following motor skills were monitored: coordination, explosive force, repetitive force, sprint and segment speed, as well as the following functional capacities: vital lung capacity, anaerobic power and pulse frequency after the load. For the purpose of determining the differences between the motor and the functional capacities of the children, in addition to the basic statistical parameters to define the global quantitative differences in the motor and functional area, multivariate and univariate analysis of variance and co-variance as well as factor analysis are applied. The results show that statistically significant differences do exist in the motor and the functional space of children as well as the existence of latent dimensions of the defined space.

Keywords: pupils, motor skills, functional abilities, integration, musical arts, university teaching.

INTRODUCTION

The cellular forms of work and additional exercises as methodological and organizational forms of work are applicable in almost all the material conditions and age categories. They represent the methods of organizing the process of training and achieving objectives of physical education that will through the integration with music provide a more powerful effect. Releasing an excessive subject differentiation by linking content opens the way for integration of knowledge and increases the performance of university teaching. In addition to the existing models, methods, and forms in teaching, it is necessary to include an innovative teaching since the integrative teaching is the one that enables connection of the specific teaching content of different subjects, erasing their boundaries and forming structural and meaningful connections. The actual goal is to avoid stereotypes in teaching physical and music education, but also to eliminate as many factors that negatively affect the development of elements of physical and musical abilities among the school age children. Through university education it is necessary to train students for the application of innovation, and they will later, through their efforts, applying the acquired knowledge and professionally customizing content for the connection of physical and music education, contribute to the modernization of teaching at schools.

Although the frontal teaching, as the traditional model, still exists, it should not be turned into a passive process of acquiring knowledge and skills. Applying integration model to the teaching programs, teaching teams, pupils/students with disabilities, educational institution and nature, represents the future of university teaching and the method of improving its quality and competitiveness.

Research shows that the use of methodical form of cellular work and the additional exercises with music enables achieving great effective time during exercise with high work intensity, thus significantly increasing the energy and informational component of the exercise, necessary for the students' anthropological area dimension transformation and motor skills acquisition (Findak, 1992). In the aspect of music, the survey shows that music contributes to increasing ergogenic effects, i. e. capacity for physical or mental work (Karageorghis et al, 2009), provides a psychological stimulus and improves positive feelings. Although the role of music is motivational, it certainly contributes to relaxation and efficacy in long-term sports activities. Karageorghis, Terry and Lane (1999) developed a conceptual approach, known as Brunel Music Rating Inventory (BMRI), that was supposed to call for the effects of motivational music and similar measures for checking motivational qualities of music. According to them, the main features of motivational music are fast tempo and powerful rhythm that supports the energy and activity of the body (Karageorghis et al, 1999). The primary factors that

influence music to cause a reaction in exercise and sports activities are the rhythm, melody and harmony whereas the secondary factors include cultural impact and associations that a piece of music may evoke (Terry et al, 2012).

Studies of the effects of the organizational work forms in regular physical education demonstrated that applying methodological organizational forms of cellular work and additional exercises (adequate selection of the operator, the method, the extent and intensity of load) achieves the significant positive adaptive processes of the anthropological characteristics of school children (Malacko and Radjo, 2004; Przulj, 2006; Visnjic, 2006).

Previous studies gathered sufficient information that are relevant for studying the results of this research. Brankovic, Zivkovic and Kocic (2012) in a sample of primary school students, aged 11 ± 6 months, conducted a study to determine the effects of the application of cellular methods of work on the development of (repetitive and explosive) dynamic force in students. The sample was divided into two subgroups: sub-sample of the experimental group and control group sub-sample. Experimental group applied the cellular work during 24 hours of physical education in the main phase of the class while the control group respondents implemented the standard program suggested by physical education curriculum. The results show statistically significant differences in multivariate level in all the monitored variables of the dynamic force (repetitive and explosive strength), in the final compared to the initial state, at the level of significance ($Q = .00$). The univariate analysis showed a statistically significant difference in all the variables of the dynamic force, at the level of significance $Q = .00$. Based on these results, it can be concluded that the use of cellular methods in physical education caused significant adaptive changes of the explosive and repetitive force in the experimental group (a) whereas the standard program caused statistically significant adaptive changes only in the variables of the explosive force.

Markovic, Milanovic, Bogdanovic (2010) conducted a research in the first half of the school year 2009/2010, on a sample of 79 fifth grade primary school students. The sample of variables consisted of five anthropometric characteristics. The aim of this study was to determine the possible differences among them, caused by applying different methodical forms of work in the main part of the physical education class. The first experimental group applied circular work, the second experimental group worked with the application of the additional exercises, and the control group did classical form of a class, applying work in columns. Using descriptive statistics, final measurement showed differences in the anthropometric characteristics among the three groups of students. Multivariate analysis of the variance showed no statistically significant differences among the groups during the initial and final measuring. Analysis of variance revealed a statistically significant difference among the groups only for the body height. T-test

at the final measurement also showed the difference between the first and second experimental and control group related to the body height. The results obtained indicate that the effects of the applied work forms during the main part of the physical education class did not cause significant changes in the search area of the anthropometric characteristics.

The subject of the research is the study of the experimental models of cellular methodical forms of work and the additional motor and functional exercises with music in elementary school students, aged 12 and 13 during regular classes. The research problem is whether the equipment, methods and load used in the process of applying the methodical forms of work as well as the additional exercises while listening to music can affect a statistically significant development of motor and functional capacities of the experimental group. The age of subjects is a middle school age (12-13 years), which is characterized by the intense psychosomatic changes, accompanied by numerous anatomical-physiological and psychological changes, so we assumed that music can accelerate the intrinsic motivation, focus attention, improve concentration and be an incentive for applying innovative forms of work. Bearing in mind biological condition of these individuals, an additional problem can be defined as a structural analysis of these parameters, that is, a latent dimensionality of the defined space.

The main objective of the research is to determine the level of difference in motor and functional space of children. Since the pattern of the defined population is located in the intensive phase of the growth and development, the specific aim is to establish the latent dimensionality that characterizes this population on the basis of the manifest variables, both in the motor and in the functional capabilities area. Research tasks are defined as follows: to determine statistically significant differences in the motor and the functional space and to determine the level of the latent dimensionality of the space defined in the experimental group.

METHODS

Multivariate and univariate analysis of variance and covariance are used for the needs of this study in order to determine the effects of practicing cellular methodical forms of work with the additional exercises to music on the development of motor and functional abilities in the final measurement, in the experimental group, and the effects of the application of standard teaching programs in the control group. The analysis of intergroup differences in two studied areas (motor and functional capability) was calculated, as well as the existence of the latent dimensions.

The sample consisted of 120 subjects, primary school students, aged 12 and 13, in the region of Jagodina. The sample was divided into two groups: the first group consisted of 60, covered with the experimental program of the cellular methods of work and the additional exercises to music (Experimental group), and the second group had 60 examinees that were included in the standard teaching program (Control group).

The sample of variables and the instruments for measuring motor skills

Motor skills are made of these dimensions:

(1) Coordination

1. Agility in the air OKVZ
2. Coordination with a bat KOPL
3. Agility the ground OKNT

Music piece that accompanied the measuring was „Song of the Turtledove“ from the first Serbian ballet „The Legend of Ohrid“ by Stevan Hristic.

(2) Explosive force

4. Standing long jump SKDM
5. Standing triple jump MTRS
6. Throwing a medicine ball from a standing position MBMS

Music that followed the measurement was „Balkan Dance No. 2“ by Marko Tajcevic.

(3) Repetitive force

7. The lift of the hull in the Swedish bench MDTK
8. Mixed pull-ups MMZG
9. Squats MČUČ

Music that accompanied the measurement was „Small Pepper“, medieval Scomrash dance performed by the ensemble „Renaissance“.

(4) Sprint speed

10. Running 20m with standing start M20VS
11. Running 40m with standing start M40VS
12. Running 60m with standing start M60VS

Music that accompanied the measurement was the „Kolo“, performed by Ljubisa Pavkovic on the accordion.

(5) Segment speed:

13. Hand tapping MTAPR

14. Foot tapping MTAPN

15. Tapping off the wall MTAPZ

Music that followed the measurement was „Rhapsody of Senjak“ by Vera Milanković, performed by ensemble „Arte“.

Instruments (physical education) for measuring motor skills were based on the researches of Kurelic and the associates in 1975.

Measuring instruments for the evaluation of the functional capabilities

The functional capabilities consist of these tests:

1. Vital lung capacity FVKPL

2. Anaerobic power – „Margarija“ test FMARG

3. Pulse frequency after the load FPPOP

Functional tests in this study were obtained from the model of the functional tests (Gajic, 1985).

RESEARCH RESULTS WITH THE DISCUSSION**Differences between the experimental and control group at the initial testing**

Table 1. Multivariate analysis of motor skills variance in the experimental and control group at the initial measuring

WILK'S LAMBDA TEST	.667
RAO's F-approximation	1.35
Q	.155

The analysis of Table 1 presenting the results of testing the significance of the differences between the arithmetic means of all the motor tests, the initial sample measurements of the experimental and control group, did not show statistically significant difference since WILK'S LAMBDA was .667, which gives a significant difference in the level of $Q = .155$ with Ra's F-approximation of 1.35. Accordingly, the applied system of motor skills of participants showed no statistically significant differences.

Table 2. Univariate analysis of motor skills variance between the experimental and the control group at the initial testing

Motor tests	Mean (E)	Mean (K)	F-proportion	Q
MOKVZ	15.34	15.90	1.24	.244
MKOPL	5.46	6.02	1.52	.155
MOKNT	6.61	7.74	1.35	.265
MSKDM	155.20	160.00	0.44	.425
MTRSK	446.62	425.26	1.62	.168
MBMDC	3828.35	379.56	1.55	.285
MDTŠK	10.45	11.05	1.26	.247
MMZGB	13.54	14.15	1.32	.150
MČUČN	16.75	17.37	0.42	.458
M20VS	4.65	4.52	1.84	.122
M40VS	7.84	8.00	1.82	.122
M60VS	10.45	11.28	0.74	.354
MTAPR	23.24	24.00	1.42	.135
MTAPN	32.22	32.00	1.56	.260
MTAPZ	20.68	21.10	1.57	.257

Table 2 shows the analysis of motor skills variance test by comparing the results of the arithmetic means of the experimental and control group at the initial measurement. Based on the coefficients of the F-proportion and their significance (P-Level), we can conclude that no significant difference was found on the level of motor skills between the experimental and control group.

Table 3. Multivariate analysis of variance between the functional capacities of the experimental and the control group at the initial testing

WILK'S LAMBDA TEST	.744
RAO's F-approximation	1.58
Q	.102

The analysis of Table 3 shows the results of testing significance of the differences in the arithmetic mean level of all the functional capabilities tests. No statistically significant difference among the initial sample measurements in the

experimental and control groups was found since WILK'S LAMBDA is .744, and with Ra's F-approximation of 1:58 it gives a significant difference at the level of $Q=.102$. Accordingly, the applied system of the functional abilities of the subjects showed no statistically significant differences.

Table 4. The univariate analysis of the functional capacity variance between the experimental and the control group at the initial testing.

Functional capacity tests	Mean (E)	Mean (K)	F-proportion	Q
FVKPL	2770.00	2690.00	1.55	.198
FMARG	3.86	3.79	1.34	.155
FPPOP	159.50	160.00	1.58	.179

Table 4 shows the univariate analysis of the functional capacities test variance, comparing results of the arithmetic means in the experimental and control groups at the initial measurement. Based on the coefficients of F-relationships and their significance (P-Level), we can conclude that there were no significant differences in the levels of functional capabilities between the experimental and control groups.

The effects of the experimental program

Table 5. Multivariate analysis of covariance of motor skills between the experimental and control groups at the final measuring

Wilks' Lambda	Rao's R	Q
.314	4.95	.000

The analysis of Table 5 presenting the results of testing the significance of the differences in the arithmetic means levels of all the motor tests between sample measurements of the final experimental and control groups, showed statistically significant differences since WILK'S LAMBDA is .314, which gives a significant difference on the level of $Q = .000$ by Ra's F-approximation of 4.95. Accordingly, the applied system of motor skills showed statistically significant differences.

Table 6. Univariate analysis of covariance of motor skills between the experimental and control groups at the final measuring

Motor tests	Means (E)	Means (K)	F-proportion	Q
MOKVZ	12.35	15.20	4.77	.000
MKOPL	3.70	5.80	5.74	.000
MOKNT	4.48	6.35	8.55	.000
MSKDM	182.40	164.10	14.68	.000
MTRSK	495.60	435.42	5.85	.000
MBMS	462.55	389.56	15.47	.000
MDTŠK	15.10	12.25	12.64	.000
MMZGB	18.65	15.60	12.27	.000
MČUČN	22.25	18.73	11.95	.000
M20VS	3.65	4.37	7.12	.000
M40VS	6.24	7.83	19.32	.000
M60VS	9.20	10.76	12.65	.000
MTAPR	29.95	25.00	6.23	.000
MTAPN	37.38	33.00	14.12	.000
MTAPZ	26.56	23.00	5.02	.000

Table 6 represents the univariate analysis of the motor skills test variance by comparing the results of the arithmetic means between the experimental and control group at the final measuring. On the basis of the F-proportion coefficients and their significance (P-Level), we can conclude that there was a statistically significant difference on the level of motor skills between the experimental and control groups for the following motor tests: in the air (MOKVZ, 000), co-ordination with a rod (MKOPL .000), agility on the ground (MOKNT, 000) accompanied with „Song of the Turtledove“ from the ballet „The Legend of Ohrid“ by Hristic, standing long jump (MSKDM, 000), standing triple jump (MTRSK, 000), throwing a medicine ball from a standing position (MBMS .000) accompanied with „Balkan Dance No. 2“ by Tajcevic, lifting the trunk in the Swedish bench (MDTŠK, 000), mixed pull-ups (MMZGB, 000) and squats (MČUČN, 000) accompanied with the Scomrash dance „Small Pepper“, running 20 meters with standing start (M20VS, 000), running 40 meters with standing start (M40VS, 000), running 60 meters with standing start (M60VS, 000) accompanied with „Kolo“ by Pavkovic, hand tapping (MTAPR, 000), foot tapping (MTAPN, 000), and tapping against

the wall (MTAPZ .000) performed along with „Rhapsody of Senjak“ by Vera Milanković.

Table 7. Multivariate analysis of the functional capacity covariance between the experimental and control groups at the final measuring

Wilks' Lambda	Rao's R	Q
.199	10.25	.000

The analysis of the Table 7 presenting the results of testing the level of significance of the arithmetic means' differences of all the tests related to the functional capacities of the final measurements between the experimental and control groups, showed statistically significant differences, as WILK'S LAMBDA is .199, and with Ra's F-approximation of 10.25, it gives the significant difference at the level of Q = .000. Accordingly, the applied system of the functional abilities of subjects showed statistically significant differences.

Table 8. Univariate analysis of the functional capacities covariance between the experimental and control groups at the final measuring

Func.tests	Means (E)	Means (K)	F-proportion	Q
FVKPL	2940.47	2740.00	7.44	.000
FMARG	3.26	3.67	3.85	.010
FPPOP	14910	158.10	9.19	.000

Table 8 shows the analysis of the functional capacity tests variance comparing the results of the arithmetic means between the experimental and control group at the final measuring. On the basis of the F-proportion coefficients and their significance (P-Level), we could conclude that there was a statistically significant difference among the levels of the functional capabilities between the experimental and control groups in all the tests: vital breathing capacity (FVKPL .000), Margarija test (FMARG .010) and pulse frequency after the load (FPPOP .000).

The results of the multivariate and univariate analysis of variance indicate that the Experimental group examinees significantly discerned from the Control group by higher level of motor and functional abilities.

Factor analysis and the factor structure of motor skills at the final measuring in the experimental group

Table 9. The matrix of the main components

Motor tests	FAC1	FAC2	FAC3	h2
MOKVZ	.56	.83	.33	.70
MKOPL	.41	.85	.25	.79
MOKNT	.38	.74	.37	.75
MSKDM	.76	.26	-.15	.71
MTRSK	.78	.35	.01	.72
MBMDC	.34	.41	.10	.88
MDTŠK	.33	-.40	-.76	.74
MMZGB	.31	-.32	.84	.86
MČUČN	.26	-.27	.73	.72
M20VS	.86	-.29	-.15	.81
M40VS	.82	.21	-.01	.78
M60VS	.79	.13	-.12	.58
MTAPR	.71	.15	.05	.72
MTAPN	.68	.24	.17	.80
MTAPZ	.56	.36	.15	.70

Table 10. Eigenv.extraction

	Eigenval	% total Variance	Cumul. Eigenval	Cumul. % Variance
1	4.65	45.10	4.65	45.10
2	3.30	19.20	7.95	64.30
3	2.42	10.57	10.37	74.87

Table 11. Factor intercorelation matrix

	FAC1	FAC2	FAC3
FAC1	1.00		
FAC2	.35	1.00	
FAC3	-.25	.30	1.00

In the factor analysis of motor skills in the experimental group, we used a procedure called Gutman-Kajzer's normalization. A collection of 15 manifesting motor variables in the experimental group was explained with 70.87% of the total system variance, wherein three factors determining the total system variance were identified. On the basis of the values obtained within the entire motor space, it can be concluded that in the experimental group the first factor (latent variable) is the result of sprint speed, explosive force and segment speed variables. Common variance of the first factor accounts for more than 45% of total system variance, as confirmed by the high value of eigen. vector (4.65). As for the saturation of the first factor, sprint speed variables made the largest contribution: (.86 M20VS), running 40m standing start (.82 M40VS) and running 60m standing start (.79 M60VS). The participation of these variables justifies the value of the communalities in the range from (com. = .71) to (com. = .88). Regarding the extraction of the first factor, the variables for assessing the explosive force of the limbs demonstrated their influence and contribution: triple jump (MTRSK .78), long jump (MSKDM .76), with high projections of communalities confirming their relationship in a defined system. In addition to these two groups of variables, the variances of the segment speed, hand tapping, foot tapping also participated in the mutual system variable, with high and significant projections (MTAPR .71) and (MTAN .68). The values of communalities in space are high as well. The fact confirming that the first factor in the experimental group is the main carrier of the common variability is based on the analysis of the matrix structure and the assembly matrix, as well as the proof that the first primary component passes through the thickest sheaf of manifest variable vectors explaining the largest part of the total system variance. Accordingly, this factor can be interpreted as a latent dimension of speed and explosiveness of movement.

The second latent dimension was defined by the participation and extraction of body coordination variables, which enabled self-extraction with their ratios size and the position in the coordination system. The main carrier of the second extracted factor are the variables of coordination, coordination with the bat (.85 KOPAL), agility in the air (.83 MOKVZ), agility on the ground (.74 OKNT). This factor used 19.20% of the total motor system variability in the experimental group, as evidenced by the eigen. value - 3.30. Also, the values of communality in the observed area are in the regular range from .70 to .79. This is interesting because coordination is highly genetically determined by over 80% and is independent in the motor area. This is confirmed by its independent extraction, which is not affected by any motor skill. It is often called the motor intelligence because it is included in the movement structure mechanism, depending on the function of the CNS. Based on these isolated variables, this second latent dimension can be defined as the dimension of *body coordination*.

Lastly, the third extracted factor in rotation is defined by repetitive force variables: lifting the hull on the Swedish bench (.76 MDTSK), mixed pull-ups (.84 MMZGB) as a leading system projection and squats variable (.73 MČUČN). All three variables show values higher than .70 which classifies them as high projections in the entire system, forming a bundle of factors within the monitored area. This factor used 10:57% of the common system variance with the eigen. value of -(2.42) (Table 9). The factor determination values, that is, the values of the communalities are high projections wherein MDTSK (com. = .74), MMZGB (com. = .86), squats (com = .72). It can be said that this set is positioned close to the largest number of manifest variables that have its beam passing by. Such position in the coordination system is the behaviour of this factor as a secondary one, which determines the highest amount of common variability of the extracted factors (the latent dimensions) in relation to the first one. Additionally, the values of the structure matrix and the assembly matrix are very high, and confirm the extraction of components. The third extracted factor is described as an excitation duration factor in the area of the second-order, within the energy regulation of movement. It is genetically conditioned with about 50% and is defined as a latent dimension of *the repetitive force*.

By analysis of the manifest variables in motor space of students in the experimental group, 3 different factors were extracted, with different regulatory mechanisms (energy and central regulation), which are likely responsible for the structure of and motor space arrangement. The inspection of the correlation matrix (Table 11.) of the isolated motor factors showed statistically significant correlations related to both levels of significance.

The first factor, latent dimension of speed and movement explosiveness, achieved a medium correlation with other factor of body coordination (.35) and a negative correlation with the repetitive force (-.25). Another latent dimension, the body coordination, has established positive correlation with the third factor (.30). However, these correlation values are low, so we can say that they are conditionally independent of each other.

The factor analysis of the functional capacities of the experimental groups

Table 12. The matrix of the main components

Functional tests	FAC 1	H2
FVKPL	.85	.76
FMARG	.67	.78
FPPO	.70	.71

Table 13. Eigenval.extraction

	Eigenval	% total Variance	Cumul. Eigenval	Cumul. % Variance
1	3.74	17.75	3.74	18.75

Table 14. Assembly matrix

Functional tests	FAC1
FVKPL	.76
FMARG	.60
FPPO	.67

Table 15. Structure matrix

Functional tests	FAC1
FVKPL	.73
FMARG	.54
FPPO	.64

Applying GK criteria, only one of the components was isolated from a relatively small number of variables used for the evaluation of the functional capacities in the experimental group (Table 15). The amount of variability explaining the main component isolated the functional capacities of the experimental group was 17.75 whereby the program of the experimental treatment left a small trace in the differentiation of functional capabilities. The main component extracted with almost 20% of the variance, which is the percent of the total exhaustion of the entire functional variable system, with eigen. values of 3.74, gives a confirmation of the substantial extraction of the first factor. The main and only defining factors are variables of aerobic endurance, vital lung capacity as a leading projection (.85 FVKPL), pulse frequency after load (.70 FPPO). Also, the variable of anaerobic endurance in Margarija test had a meaningful impact with its projections (.67 FMARG), thus contributing to the definition of the common system variance. The values of the assembly matrix and the matrix of the variable structure analysed, confirmed this extraction. On the basis of the variables defined and the size of their projections in the saturation of the single latent dimension, it can be concluded that there was homogeneity maintained in the aerobic-anaerobic capacity in the context of the functional capacities of the experimental group. This latent dimension is defined as *the aerobic-anaerobic endurance*.

The results obtained in this study about the impact of cellular models of work and the additional exercises to music on the adaptive processes of some anthropological characteristics of secondary school students are of practical importance in the use of collected data for the selection process in sport, training control, diagnostics and modelling. We can also perceive the effects of physical education classes in the integration with music education at schools and suggest ways and guidelines for innovating the teaching process. By searching over a longer period, we could achieve a higher level of generalization of the results and it would be possible to discover new scientific principles. The results will be also used for more efficient keying of the planning process, optimization, rationalization and individualization of work, which will allow a more efficient method for identifying indicators and systematic monitoring as well as controlling the effects of exercising process in the regular physical education and training process.

CONCLUSION

The sample consisted of 120 elementary school students, aged 12 and 13, from the region of Jagodina. The sample was divided into two groups: *the first group* consisted of 60 students included in the experimental program of the cellular methodical forms of work and the additional exercises to music in a regular class (experimental group). *The second group* of 60 subjects was included in the regular program of physical education (control group). Based on the results obtained, we can conclude that there are statistically significant differences in the experimental group, both in motor and functional space of research. After processing the data and the results obtained by applying the factor analysis in the defined research areas (motor and functional), we obtained a small number of latent dimensions on the basis of the actual manifest variables applied in the experimental group. The results of the factor analysis of motor skills in the experimental group showed the existence of a different number of factors (two and three factors) which operate under the second order mechanism, that is, the mechanism of energy and central control of movement. The results of the factor analysis of the functional capabilities in the experimental group confirmed the existence of the common factor, a latent dimension of the functional area. This dimension has unified endurance, but based on its specifics, it relates to the anaerobic and aerobic endurance.

In order to have the evident effects of the application of methodical and organizational forms of work with music in the classroom, and to enable continuous and constant development of each individual by further transfer of knowledge through all levels of education, the training of students must be understood as structurally complex and multidimensional, like the development process, as an

open concept that provides the opportunities for the application of various innovative models. The integration of certain aspects in several scientific disciplines represents the model for solving complex problems occurring in narrowly concentrated fields of different subjects as well as overcoming the limitations of a differentiated approach, achieving inter-connectivity, and exchanging the position of student where he has to become an active participant in all the phases of university education.

REFERENCES

- Bogičević, D. (2009). Interaktivna nastava kao inovativni model univerzitetskog predavanja. *Inovacije u nastavi – časopis za savremenu nastavu*, Vol. 22, br. 2. Beograd: Univerzitet u Beogradu – Učiteljski fakultet, str. 42–52.
- Branković, N., Živković, A. & Kocić, J. (2012). The effects of the station exercise method on the development of strength among elementary school students. In Naumovski, A. (Ed.), *Research in kinesiology, International Journal of Kinesiology and Other Related Sciences*, Vol. 40 (2). pp. 205–208 ISSN 1857–7679.
- Findak, V. (1992). *Metodički organizacijski oblici rada u edukaciji, športu i športskoj rekreaciji*. [Methodological organisational work forms in education, sport and sport recreation.] Zagreb: Hrvatski savez za športsku rekreaciju, MENTOREX.
- Gajić (1985). *Osnovi motorike čovjeka*. Novi Sad: Fakultet fizičke kulture.
- Karageorghis, C. I., Terry, P. C., Lane, A. M. (1999). Development and validation of an instrument to assess the motivational qualities of music in exercise and sport: The Brunel Music Rating Inventory. *Journal of Sports Sciences*, 17, 713–724. https://www.researchgate.net/profile/Peter_Terry3/publication/12779530
- Karageorghis, C. I., Mouzourides, D. A., Priest, D. L., Sasso, T. A., Morrish, D. J., and Walley, C. L. (2009). Psychophysical and Ergogenic Effects of Synchronous Music During Treadmill Walking. *Journal of Sport & Exercise Psychology – Human Kinetics, Inc.*, 31, 18–36. <https://core.ac.uk/download/pdf/335737.pdf>
- Karageorghis, C. I., Priest, D. L. (2011). Music in the exercise domain: a review and synthesis (Part I). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3339578/>
- Karageorghis C. I., Terry, P. C., Lane, A. M., Bishop, D. T., Priest, D. L. (2012). The Bases Expert Statement on use of music in exercise. *Journal of Sports Sciences*, 30 (9), British Association of Sports Sciences; International Society for Advancement of Kinanthropometry, Taylor & Francis. <https://www.researchgate.net/publication/224707185/download>
- Kurelić N., Momirović, K., Stojanović, M., Radojević, Ž.-Štalec, N. (1975). *Struktura i razvoj morfoloških i motoričkih dimenzija omladine*. Beograd: Institut za naučni straživanje. Fakultet za fizičku kulturu
- Malacko, J., Rađo, I. (2004). *Tehnologija sporta i sportskog treninga*. Sarajevo: Fakultet za sport i tjelesni odgoj Univerziteta u Sarajevu.

- Marković, Ž., Milanović, S., Bogdanović, Z. (2010). Uticaj različitih oblika rada u nastavi fizičkog vaspitanja na antropometrijske karakteristike učenika. *Fizicka Kultura (Skopje)*, 38 (3), 58–61.
- Pržulj, D. (2006). *Osnovi antropomotorike*, Udžbenik. Pale: Fakultet fizičke kulture.
- Suzić, N. et al. (1999). *Interaktivno učenje*. Banja Luka: Ministarstvo prosvjete Republike Srpske, UNICEF kancelarija u Banja Luci.
- Vilotijević, N. (2006). *Integrativna nastava prirode i društva*. Beograd: Papirus.
- Višnjić, D. (2006). *Nastava fizičkog vaspitanja: od V do VIII razreda osnovne škole: Priručnik za studente, nastavnike i profesore*. Beograd: Zavod za udžbenike i nastavna sredstva.

Vesna Trifunović and Jelena Mladenović
University of Kragujevac, Faculty of Education
Jagodina, Serbia

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INNOVATION AND TEACHING: MUSEUMS AS EDUCATIONAL RESOURCES FOR TEACHING SUSTAINABLE DEVELOPMENT OF ENVIRONMENT

Summary: Modernization of education after 2000 is mainly aimed at standardization in the so-called European cultural space and takes place, in parallel, in different dimensions concerning the organization of education at different levels, financing education and redesigning of immanent internal processes of education by establishing a new curriculum, whose ultimate intent is to provide knowledge to the "beneficiaries" that will enable them better preparation for performing numerous social roles. An innovative approach to teaching, from basic to higher education, is one of the ways to bring educational practice closer to the demands of a "society of knowledge" – the requirement for an individual to possess specific knowledge, skills and abilities that are in the function of personal and social development. In that sense, it is necessary to realize a kind of symbiosis between institutionalized education and other institutions with educational capacities, such as museums, to achieve better results in the presentation of certain educational contents to different participants' categories in the educational process in their synergy. This would enable, in addition to the primary effect, a comprehensive and high-quality presentation of educational content, and other effects such as *efficiency* and *equity* in education. The subject of this study is a connection between the teaching contents of the course *Sustainable Development of the Environment* in the study program Teacher at the Faculty of Education in Jagodina with permanent exhibitions of similar contents in museums in Serbia in order to determine the possibility of their connection and joint engagement in presentation and processing of the course curriculum contents. Descriptive-analytical methods were used in this study.

Keywords: education, innovation, museums, sustainable development, environment.

INTRODUCTION

In this paper, the authors start from the premise that culture and education are linked, that, in fact, education is a form of cultural reproduction as well and participates in the distribution of cultural capital (Bourdieu, 1986; Koković, 2009), that is, only by linking educational institutions (called micro-society), education

can fully accomplish its complex role in the wider society (Mialaret, 1989). At the same time, it is pointed out that the possibility of linking educational institutions with museums and the prerequisites for learning in the museum arise from the strategic determination of “using” culture for educational purposes and resources it provides in the so-called “European Agenda for Culture” – the original act for all cultural and educational activities of the European Union (EU) member states.

Culture is a kind of communication through space and time in which we share knowledge with others: “The challenge is how to place our knowledge in the live context in which the problem arises. And this live context in the field of education is a classroom – classroom located in a wider culture” (Bruner, 2000: 57). This classroom, in the broadest sense, is located wherever learning is possible, therefore in the museums, which are known as places of entertainment and enjoyment, as well as places of discovery that strengthen curiosity (Gob & Druge, 2009).

The distribution of cultural capital is connected with social reproduction, with the transfer of values, and with the identity issues, but also with the remembrance and transfer of knowledge to the new generations. “In a new meaning, cultural capital represents something that has been accumulated over several generations in the form of performances, knowledge and abilities, interpretations and recognition of meaningful layers of reality, and which is transferred to new generations by social heritage” (Koković, 2009: 156). Access to cultural capital within the educational system is limited to the social aims of education and the ruling ideas on how it should be distributed among members of different groups (Trifunović, 2015). A “more equitable distribution” of cultural capital would imply a systemic approach to the young by expanding the list of sources of cultural formation that includes cultural institutions, therefore, museums. Using the museum as an educational resource would contribute to the culturalization of new generations. However, not all cultural workers observe the general participation in the consumption of culture in the same way. There are those who consider that museums actually introduce “new spaces, exhibitions, educational initiatives and spending options, but in essence they remain elitist institutions[...] they seek to unify their ‘audience’ rather than accept their multiple and variable identities” (Marstine, 2013: 47). However, the flows of culture testify to the fact that museums become one of the central places of cultural policy – museums deal with the cultural production of collections and their collection and mobility, in order to make them accessible to the public (Svanberg, 2012). On the other hand, museums are also viewed as “contradictory space for negotiating in difficult relations between knowledge and politics, ethics and aesthetics, power and participation” (Aronsson, 2012: 35–36). Reflecting on the ways in which museums are used for educational purposes, as it becomes a place of complex learning, socialization and significantly contributes to the quality of learning at different educational levels,

basically comes from the view that: Learning in general and learning in a museum can: (a) build an individual, deepening his knowledge, and (b) build a society in which we will live better, a society “in which every person can enjoy resources that will gradually build him up as a person” (Zask, 2004: 81).

The possibility to use museums as an educational resource in terms of integrating them into a unified learning system is recognized in the societies that have built an effective management system of learning process that takes place in an environment of uninterrupted changes and recommendations for the unification of education and culture and where all available resources that can contribute to better learning are used. Museums have the capacity to develop as a “place of learning”, and in the process of dialogue with other actors of cultural and educational policies it can be defined how to become that: precisely by designing and redesigning the existing exhibitions and aligning them with the educational needs. In addition to museums, teaching that enables studying phenomena and processes in an integrated form, with the perception of cause-and-effect relationships, the interdependence and conditionality of a man from natural phenomena and vice versa, can be organized in various natural and social environments, such as zoos, parks, on farms or at different locations in the city (Mladenović, Golubović-Ilić & Koprivica, 2015).

Museums have the following functions: exhibition, collection, research and entertainment (Gob & Druge, 2009: 63). The educational function can be added to the listed functions since museums are learning places too: “Museums also redefine their mission; instead of the focus on collecting and classifying, the significance is now attached to the design of the exhibition and on the museum as a place of communication and learning[...].” (Insulander & Selander, 2010: 39). Learning in the museum, according to Stamenković (2012), takes place through: “Teaching process – interactive and cooperative methods, active learning, and student participation; Context for learning – interdisciplinarity in approach (pacified environment, cooperation of various actors in the local community, clearly defined needs and learning objectives); Linkage of learning with current social issues and everyday experiences of students (relevance of learning, applicability of learning)” (Stamenković, 2012: 211).

The new museum theory and practice point to “the tendency and desire to link the local cultural offer with the educational policy of educational institutions” (Bloas-Gonen, 2005: 79). Cooperation with educational institutions would involve additional engagement both museum professional staff (museum educators and curators) as well as employees in educational institutions, primarily in the dimension of the calendar activities correlation, harmonization of organizational activities and realization of concrete micro-projects – creation of prerequisites for learning in the museum. The use of a museum as an educational resource would

open the perspective of 1) a museum to become a “living organism that develops, having its own identity, living in mutual cooperation with its environment, thanks to the audience and for the audience” (Joly, 2005: 99) and 2) the educational institution to free itself from a rigid approach in the organization of teaching.

The assumptions for the future of using museums as an educational resource and learning in our education system are given in the document *Education Strategy in Serbia until 2020 (Strategija obrazovanja u Srbiji do 2020 godine)*:

1) In the first part of this document, it is emphasized that the educational system faces a host of challenges, in terms of globalization and changes that accompany education, and even the change in the way of learning. It is considered that institutionalized education needs to be “open” and to function in cooperation with other subsystems of the society, in interaction with them, including culture, in a way that “strengthens the contribution of culture to the overall quality of life of the population” (Education Strategy in Serbia until 2020, pp. 8).

2) In the second part of this document, which deals with the *Strategy for the Development of Pre-university Education*, it is especially emphasized the necessity of establishing two-way cooperation with the local environment for “improving the quality of teaching/learning (especially extra-curricular activities, involving school in the life of the local community,...)” (pp. 17). The *Strategy* states that “with the adequate use of its existing capacities, the system also uses the capacities of other institutions or areas of other resources in the local community (educational, health, social, cultural) in which special and/or specialized programs for children and families are carried out” (pp. 23). Then, in the section dedicated to *elementary education*, at the very beginning it is emphasized that the function is to create all the preconditions for “the formation of national and cultural identity, and basic cultural needs and habits” (pp. 37). Considering the current quality of elementary education, as well as other levels of education, the *Strategy* indicates that the participants in the education system do not develop “cultural literacy (which is the goal of education under the *Law on the Foundations of the Education System, Article 4*) nor basic cultural needs and habits that are important for the formation of values necessary for life and work in a modern society, and for the private and professional life of every citizen” (pp. 43). The use of a museum as an educational resource would, however, contribute to the formation and cultivation of cultural needs and habits and the recognition of the importance of using significant so-called extracurricular sources of knowledge.

When talking about the *quality of the curricula*, the significance of the diversity of extracurricular programs is emphasized and their design should be set interdisciplinary. Teachers should receive training sessions for implementation of extra-curricular activities in professional training. The “School Work Plan” should implement the active learning program (at least once a year) with a “reference

institution” in the country, but “according to a pre-developed program”. *The quality of the teaching and learning process* also “predicts the use of a variety of forms and methods of teaching/learning focused on learning and students (creative and cultural activities, independent work of students, project method of teaching, working in a laboratory and in the field, etc.)”, according to “School Work Plan” (pp. 56). In defining the *development of the school as a public service*, the “extended cooperation of the elementary school with cultural, educational, scientific, sports, ecological and other institutions and organizations” is emphasized (pp. 60), which serve as “resources for educational work”. The last paragraph states that schools should create conditions for “testing and introducing educational innovations” by engaging in projects and being trained in some forms of research and reflection in order to improve their own practice. All of the above norms concerning the functioning of the school can become useful instructions for the functioning of higher education institutions, especially the need for cooperation with other institutions in order to improve the quality of education – introducing innovations in order to improve their own practice.

In the first appendix of the *Strategy*, in the section that presents *the expected changes in the labor market requirements in other sectors*, among other things culture is also listed. At this point, at the very end of the *Strategy*, the essence of the uniqueness of education and culture area with common starting points for meeting the needs of an individual and society in learning about culture, cultural identity, values, creating a culture from the perspective of diversity in society, improved communications, interdisciplinary connectivity and multidisciplinary, the connection between educational institutions and cultural institutions (for the first time the museum is mentioned (pp. 253)), the promotion of creativity, and the increase of the cultural capital of the individual and the community, is clearly expressed.

There is a clear commitment to linking education institutions with culture institutions, i.e. co-operation of education systems with other social subsystems: therefore, there are no obstacles for educational institutions to implement learning in reference to cultural institutions as part of a school curriculum and study programs.

The museum is an “institution designed to make the cultural heritage available to the public” (Gob & Druge, 2009: 83), but the question remains how this cultural heritage is made available to consumers, to what extent, by which choice and whose choice it is. The audience passes through a process, designed by experts, in which each exhibit has a special place and role in providing information and forming narratives. Museums “place objects and the audience in certain frameworks to provide control over the sightseeing process” (Marstine, 2013: 17), i.e. to lead the audience through the multidimensional meaning of the exhibitions

to essential cognition. Formally, museum exhibitions provide certain information and messages, however, the question of the possibility of their monitoring and understanding by the visitors arises, because by accessing them, visitors create a certain personal experience. Visitors have the role of observers and listeners, but they also interact with exhibits (Barker & Smiden, 2013: 127), i.e. in a complex way they consume and create the exhibition itself.

It is this creative aspect of visitors' experiences that make museums a stimulating "environment" for learning. Likewise, the new museum theory and practice point to "the inclination and desire to link the local cultural offer with the educational policy in schools" (Bloas-Gonen, 2005: 79). The educational role of the museum is reflected in the possibility of displaying huge accumulated knowledge and artifacts that testify about different world achievements to all categories of population, especially to young people involved in the educational process at different levels. Various museum exhibitions can help the student population to acquire new knowledge more easily and more quickly, in interaction with material resources and interaction with the narrator (curator, etc.). It is, however, known as a phenomenon that local populations do not come spontaneously into the museum (Lor Alma, 2005). This kind of behavior is observed among students as well. Therefore, it is necessary to initiate a kind of cultural dialogue between educational institutions and museums in order to put educational capacities of museums into the function of their fuller and more comprehensive presentation to young people, pupils and students. Different initial exhibitions, which would have a direct or additional educational function in order to present contents predicted in the curricula for certain levels of education, could contribute to efficiency and better learning outcomes. It is therefore necessary that museums and educational institutions constantly "listen to one another" and to gain insight into mutual needs and possibilities. Establishing such a special cooperative relationship would be, at the same time, an active inclusion of museums as institutions of culture in the process of creating educational policies, on the level of achieving educational goals. In this context, museums would have a social responsibility to design projects that implement educational goals. Museum projects should then reflect the broad participation of participants in the education process, such as teachers and students. This would satisfy the condition of the existence of a museum to which Joly (2005) draws attention: *it is not enough that the museum exists, but that its activity becomes coherent and efficient and fully targeted to the audience*. This implies a full use of their own resources – depots, collections, human resources, audience needs, the need of educational institutions as an element of the local environment, etc. By fully perceiving its own possibilities, the museum, as a cultural entity, but now also an educational factor, can cooperate with educational institutions through joint meetings and cooperation on the organization of various projects, which would be in function of achieving educational goals.

METHODOLOGY

The subject of this study is the connection between the teaching contents of the course Sustainable Development of the Environment in the Study program Teacher, at the Faculty of Education in Jagodina, with permanent exhibition settings in museums in Serbia dealing with the presentation of similar contents. The aim of the research is to determine the possibilities of linking learning within the educational institution with learning in the museum from the aspect of joint engagement in the presentation and processing of the curriculum content.

Tasks of the research are:

1. to analyze the contents of the course Sustainable development of the Environment in the Study program Teacher at the Faculty of Education in Jagodina;
2. to determine which permanent exhibition in museums on the territory of Serbia coincide with the contents of the course Sustainable Development of the Environment;
3. to highlight the effectiveness of learning in the museum and give recommendations for the teaching subjects such as Sustainable Development of the Environment.

The basic hypothesis of the research is: Museums are not sufficiently used as an educational resource – there is no correlation in the presentation and processing of various educational contents between educational institutions and museums.

The special hypothesis is: Museum exhibitions, to a great extent can contribute to a more comprehensive presentation and processing of educational content related to the issues of sustainable development of the environment.

In this study the descriptive-analytical method was used: 1) study program teacher at the Faculty of Education in Jagodina, and the teaching contents of the course Sustainable Development of Environment (an elective course in the first year of master studies) were studied; 2) exhibitions of “live” museums on the territory of Serbia were analyzed, and museums which, according to the resources they possess, can achieve direct or additional educational function in the presentation and processing of the curriculum content were presented.

RESULTS AND DISCUSSION

The course Sustainable Development of the Environment belongs to a group of elective courses in master’s studies of the study program Teacher at the Faculty

of Education in Jagodina, and is being taught since the 2009/2010 academic year. It belongs to a group of subjects whose outcomes are the “ecologization of education” and the preparation of future teachers to actively participate in strengthening the ecological paradigm of society’s development. Based on the analysis of the mentioned course contents and the analysis of exhibits in the so-called live or active museums in Serbia (of which there are 150, classified into different categories (Krivošejev & Damjanović, 2014)), it was found that 10 of them, with their resources, can enable the realization of certain teaching units within the analyzed subject (Table 1).

Table 1. Correlation between museum exhibitions and teaching units of the course Sustainable Development of Environment

Museums suitable for the realization of teaching units	Museum of Science and Technology, Belgrade	Natural History Museum, Belgrade	Natural Science Center of Serbia, Svilajnac	Open-air museum “Staro selo”, Sirogojno	Lepenski Vir Museum	Ethnographic Museum, Belgrade	Museum of Mining and Metallurgy, Bor	NIS Museum, Novi Sad	Coal Mining Museum, Senjski Rudnik	Zoo; Botanical Garden; Public aquarium; Park of the Faculty of Education in Jagodina
Ecology as an economics of nature		+	+	+	+	+				+
Ecological factors		+	+	+				+		+
Ecological niche		+	+	+						+
Population		+	+	+		+				+
Ecosystem and biosphere	+	+	+	+	+			+		+
Conventional forms of energy production (coal, oil, natural gas, nuclear energy)		+	+				+	+	+	
Renewable energy (solar, wind, geothermal energy, water power, energy of biomass)	+			+			+	+	+	+
Global warming		+	+				+	+	+	+
Acid rains		+					+	+	+	+

The greenhouse effect and the ozone hole			+			+	+	+	+
Air pollution, effects and prevention measures			+			+	+	+	+
Water pollution, effects and prevention measures			+		+	+	+	+	+
Land pollution			+			+	+	+	+
Deforestation and erosion				+	+				+
Effects of soil contamination and prevention measures					+	+	+	+	+
Toxicity					+			+	+
Concept of sustainable environmental development		+	+		+			+	
Rational use of energy and resources		+	+		+		+	+	+
Ecological principles in regulating cities							+		+
Bioremediation					+				+
Humid habitats		+	+		+				+
Biodiversity		+	+	+					+
Concept and types of protected areas			+		+				

The permanent exhibition of the *Museum of Science and Technology* (Belgrade), with over four hundred exhibits presents technological developments and its impact on people's lives, among others, the development of electrification in Serbia. Environmental protection is one of the sections of this museum as well.

The collections of the *Natural History Museum* (Belgrade) include the biological sector (General Herbarium of the Balkan Peninsula, Entomological collection, Bird collection, Mammals collection and others) and the geological sector (Paleobotanical collection, Fossil invertebrate and vertebrate collections, and others). In addition to the permanent exhibition, this museum also organizes numerous thematic exhibitions: Minerals of Trepča, Biodiversity, Ice Age, Indigenous and Traditional Fruits of Serbia, and others.

The museum *Natural History Center of Serbia* (Svilajnac), consists of 8 thematic exhibitions among which are Geodiversity of Serbia, Biodiversity of Serbia, Ice Age Geo-archaeology of the Djerdap, Minerals and rocks, Geological time machine, with depictions of Earth's geological history and key events in the evolution of the living world. Exhibitions in a picturesque manner show, among other things, the diversity of flora and fauna as well as the mineral wealth of Serbia.

The permanent museum exhibition of the *Open-air museum "Staro selo"* (Sirogojno) shows the architecture and development of the culture of living in the Zlatibor region, and at the same time social and economic relations in the 19th century village.

Also, although not classified as museums, the collections presented in botanical gardens, zoos and aquariums correlate with the teaching contents of this analyzed subject (Simic, Simić, Tošić, Milošević & Anđelković 2001).

The results of this research served to define *a set of recommendations* for the teaching classes in subjects such as Sustainable Development of the Environment and efficiency of learning in the museum, as indicated further:

1. Forming a team of experts within or under the jurisdiction of the National Education Council to develop the normative and program framework for cooperation between higher education institutions and museums, which would include the issue of learning in museums (means, methods, techniques), especially on topics that belong to the field of sustainable development and sustainable development of the environment.
2. Since it is possible to understand the issue of sustainable development of the environment by its placement in the wider framework of the problem area *education for sustainable development*, it is necessary to include the *course Education for Sustainable Development* in the list of subjects within the study program Teacher (Trifunovic, 2011). This course deals with the issues of relations between developed and underdeveloped countries in the world, the problem of relations in the sphere of labor at the global level that induces the occurrence of poverty and exploiting relationship towards nature, the issue of preserving identity but also the ecological aspect of society's development, that is, creates the basis for understanding the connection between society and environment and, in general, the opportunities for sustainable development of the environment in the existing social circumstances.
3. Organize different types of professional training for subject professors, where they will be introduced to the recommendations, guidelines and ways of learning in the museum.
4. Organize different types of professional training for employees in museums for the implementations of new forms of pedagogical work and their participation in joint learning projects.

5. Develop standards and outcomes in establishing cooperation between higher education institutions and museums in the field of learning in museums, as well as appropriate statistics to evaluate its quality (and based on which further decisions to improve the practice of learning in museums could be made).

CONCLUSION

Research presented in this paper show that:

1. the general research hypothesis: *Museums are not sufficiently used as an educational resource – there is no correlation in the presentation and processing of different educational content between educational institutions and museums* – is confirmed. The museum as an educational resource in the educational policy of the Republic of Serbia is not used to the extent that it could be used for teaching subjects such as Sustainable Development.
2. the special research hypothesis: *The museum exhibitions in Serbia can greatly contribute to a more comprehensive presentation and processing of educational contents related to the issues of sustainable development of the environment* – is confirmed.

The analysis of exhibits and artifacts of the 10 museums in Serbia correlate with the teaching contents of the specified study subject and can significantly contribute to the achievement of its goals and outcomes. Museums as educational resources can contribute to a better understanding of sustainable environmental development issues, and it is up to teachers to create and develop cooperation with them in a way that would be in the best interests of pupils and students.

The cooperation between educational institutions and museums as institutions of culture in terms of achieving the goals and outcomes of various study subjects is a form of “networking” of resources that can contribute to the quality of education. Relocation of “learning” from the classroom into a new space that includes the architectural ensemble of the museum, the richness of the museum items, displayed through numerous exhibition settings, and interaction with employees, who are kind of specific knowledge keepers, together provide incentives for young (pupils and students) to approach the unknown in a more complex way and to gain knowledge of it. An innovative approach in this multi-member interaction is reflected in the opportunity provided to its participants that in direct contact with the subject of knowledge, knowledge mediators and knowledge recipients can replace their positions and encourage each other to observe new dimensions of the subject of knowledge or to observe it from new and different perspectives. Both processes, in the end, lead to the desired goal – more complete knowledge and creating habits to get to it outside the classroom.

REFERENCES

- Aronsson, P. (2012). Writing the Museum. In J. Hegardt (Ed.), *The Museum Beyond the Nation*. Studies 21. (pp 17–39). Stockholm: The National Historical Museum.
- Barker, R. & Smiden, P. (2013). Nova umetnost, novi izazovi: novi načini konzervacije u 21. veku. In J. Marstine (Ed.), (2013). *Nova muzejska teorija i praksa*. (pp 113–137). Beograd: Clio, Narodni muzej.
- Bloas-Gonen, J. (2005). Nastava u muzejima, obrazovanje i kultura. In C. Gilbert (Ed.), *Muzej i publika*. (pp 77–80). Beograd: Clio.
- Bourdieu, P. (1986) The forms of capital. In J. Richardson (Ed.), *Handbook of Theory and Research for the Sociology of Education* (New York, Greenwood), 241–258.
- Bruner, J. (2000). *Kultura obrazovanja*. Zagreb: EDUCA.
- Gob, A. & Druge, N. (2009). *Muzeologija (Istorija, razvoj i savremeni izazovi)*. Beograd: Clio.
- Insulander, E. & Selander, S. (2010). Designs for learning in museum contexts. *The Museum as forum and actor*. Studies 15. Stockholm: The museum of national antiquities. Pp 39–53.
- Koković, D. (2009). *Društvo i obrazovni kapital*. Novi Sad: Mediterran Publishing.
- Krivošejev, V. & I. Damjanović (2014). Visits to Local Museums in Serbia – The Average Model and Programmed Exception, *American Journal of Tourism Management*, 3, 1B, 26–33, doi: 10.5923/s.tourism.201402.04.
- Lor Alma, M. (2005). Muzej kao faktor društvene integracije. In C. Gilbert (Ed.), *Muzej i publika*. (pp 117–123). Beograd: Clio.
- Marstine, J. (Ed.). (2013). *Nova muzejska teorija i praksa*. Beograd: Clio, Narodni muzej.
- Mialaret, G. (1989). *Uvod u edukacijske znanosti*. Zagreb: Školske novine.
- Mladenović, J., Golubović-Ilić, I. & Koprivica, M. (2015). Ambijentalna nastava prirode i društva, *Uzdanica*, XII, 2, 131–145.
- RESOLUTION OF THE COUNCIL of 16 November 2007 on a European Agenda for Culture (2007/C 287/01). [http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32007G1129\(01\)](http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32007G1129(01)).
- Simić, V., Simić, S., Tošić, J., Milošević, S. & Anđelković, V. (2001). Značaj akvarijuma Kragujevac u očuvanju biodiverziteta vodenih staništa centralne Srbije. Naučni skup posvećen istraživanjima vodenih ekosistema i plavnih zona: „Zasavica 2001“. *Zbornik rezimea* (pp 62). Sremska Mitrovica.
- Stamenković, A. (2012). Museum of the Past for Future – The Use of History in Education for Human Rights and Tolerance. In Larsson, H. (Ed.), *This is Not a Report: cultural exchange Sweden/Serbia 2009–2012*, 209–223. Belgrade: Embassy of Sweden.
- Strategija razvoja obrazovanja u Srbiji do 2020. godine (2012)*. Beograd: Vlada republike Srbije, Ministarstvo prosvete, nauke i tehnološkog razvoja.
- Svanberg, F. (2012). The Nation Collected. In J. Hegardt (Ed.), *The Museum Beyond the Nation*. Studies 21. (pp 159–170). Stockholm: The National Historical Museum.
- Trifunović, V. (2011). Obrazovanje za održivi razvoj. *Uzdanica* VIII, 2, 213–219.
- Trifunović, V. (2015). *Obrazovanje i kulturni identitet*. Jagodina: Fakultet pedagoških nauka Univerziteta u Kragujevcu.

Zakon o osnovama sistema obrazovanja i vaspitanja (2009). *Beograd: Službeni glasnik RS, Br 72/09.*

Zask, Z. (2004). *Umetnost i demokratija*. Beograd: Clio.

Joly, M. (2005). Kulturni projekti muzeja. In C. Gilbert (Ed.), *Muzej i publika*, 86–99. Beograd: Clio

Majda Cencič
University of Primorska, Faculty of Education
Koper, Slovenia

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THE CHALLENGES OF MENTORING: SOME OF THE TASKS, ROLES, AND DESIRED PERSONALITY FEATURES OF A MENTOR

Abstract: Provided they meet certain criteria, higher education teachers can also be mentors to students. The text focuses on the selection of the mentor, their tasks, which are listed in some legal documents at the University of Primorska, Faculty of Education. These documents refer to the production of the final work in the study, either at the first, the second, or the third level of the study. Based on the literature and the author's own practice some of the mentee's and mentor's expectations are highlighted. The central section of the paper is devoted to some roles the mentor performs, such as: provider of information and knowledge, adviser, expert, organiser, analyst, evaluator, assessor, advocate, reporter, coach, but also supervisor. Summed up after Mayer (204) some personality traits are also listed and include: intelligence, openness (extraversion), emotional stability, decisiveness, ethics, but also altruism and philanthropy. The paper concludes with the suggestion that mentors also need a special training for all the different tasks, roles, and challenges awaiting them in the mentoring process.

Keywords: mentor, mentee, roles of the mentor, legal documents, Univerza na Primorskem.

INTRODUCTION

With various changes in today's world of knowledge, mentors' tasks and responsibilities change as well, which is in accordance to different expectations of students. Mentoring has been becoming a very diverse and multifaceted activity and process, as the mentor must combine various roles and evolve through them.¹

The paper is focused on a higher education teacher in the role of a mentor and on the role of the mentor in students' final theses. At the University of Primorska, Faculty of Education these can be the graduation assignment, the graduation thesis, master's thesis, or doctoral dissertation. Legal acts of the University of Primorska, Faculty of Education (hereinafter: UP PEF) have been used as the basis.

1 If caricatured, it can be the role of an informer, but also that of a therapist.

Discussing mentoring, the role of the mentee, the student with whom the mentor the most frequently works individually, cannot be circumvented. In the paper other stakeholders (co-mentor/s, members of various committees, deans, employers, etc.) have been omitted.

The process of communication or interaction between the mentor and the mentee is one of the crucial elements of assessing the quality of lecturing or teaching at university level.

WHO IS A MENTOR?

Higher education teachers and associates can play the role of students' thesis mentors.²

McKimm & Jollie (2003, p. 21) state that:

"/.../ the concept of the mentor is that of a wise counsellor, a good friend, and a role model. The term mentor has traditionally been used in the business sector to describe powerful individuals who take a protégé under their wings with the aim of using their power and influence to shape and advance that person's career. When we use it, we imply something to do with the provision of support and being a suitable role model."

They (Ibid.) sum up that the key activities of a mentor can be described as providing academic, personal, and professional support to the mentee. Here we will also add administrative support to the mentee.

McKimm & Jollie (2003, p. 21) also wrote: "Mentors act as personal guides, often working alongside the student".

In the guidelines for theses (*Smernice za zaključna dela*, 2015) at the UP PEF four names are stated for the final product of the thesis according to the level of study and the range of the thesis is also determined. Final works at the UP PEF are:

- *Diplomska naloga* – graduation assignment, the final written product at a higher education professional study programme;
- *Diplomsko delo* – graduation thesis, the final written product at the first level of a university study programme;
- *Magistrsko delo* – master's thesis, the final written product at the second level of a university study programme; and
- *Doktorska disertacija* – doctoral dissertation, the final written product at doctoral study.

² The paper is mainly about the mentor and mentoring, although the same is also true of the co-mentor and co-mentoring.

At the first and the second level of schooling the final written product can be theoretical, practical or empirical, based either on quantitative or qualitative methodology. A combination of qualitative and quantitative methodology is also possible, which, however, is more frequent at doctoral study.

In consistence with graduation rules at the UP PEF (Pravila o diplomih Univerze na Primorskem Pedagoške fakultete, 2016) production of an artwork, didactic material, or of another product in relation with the area or content of study usually appears as a practical final product. A practical thesis can also be a design, implementation, and then evaluation of learning and teaching unit in which an innovative learning method, didactic approach or didactic means or tools have been used. Beside theoretical premises, a practical thesis also involves the description of the problem, the objectives, and research questions, followed by a presentation of the design, description of its implementation and finally the evaluation. Based on the interviews with students it is estimated that at undergraduate and master's level the students who are rather practically oriented and not really interested in scientific research see the greatest value and applicability in practical theses that can also be accompanied by an evaluation of the introduced novelty into practice. Close to such students could also be classroom research (Hopkins, 2008) or action research (Sagor, 2011), where, however, a definite methodology must also be taken into account.

The current researcher concludes, however, that theoretical and empirical theses are appropriate for the students who are fond of research work and possess well developed writing skills.

A theoretical thesis is about presentations and critical analysis of a theory about a certain phenomenon or a problem.

At the third level of study, at doctoral study, the thesis is in most cases empirical. It can also be theoretical, but at the UP PEF this is not frequently the case.

Empirical theses have a classical structure: in addition to the theoretical part there is a central empirical part, which includes the description of the problem, the purpose and the objectives, followed by the research questions and hypotheses, the description of methodology, and the results and discussion. The thesis closes with concluding findings. The references and annexes follow at the end.

At the UP PEF the guidelines for theses (Smernice za zaključna dela, 2015) include precise instructions describing components the thesis should contain and explain individual methodological concepts. Mainly due to insufficiently clarified methodology, students and mentors nevertheless continue to face problems.

It could be speculated that practical work is the easiest for students, being directly linked to practice. Theoretical work comes after. According to the current

researchers' experience empirical work is the most demanding, as it requires good theoretical premises and in addition to this appropriate and correct methodology, which is not very close to many mentees, not even to all mentors. Well-developed competences are expected both from the mentor and from the student in the area of the discussed topic as well as in the area of educational methodology, especially if the candidate chooses to write an empirical thesis.

Looking at the empirical research work itself, both the mentee and the mentor need good methodological knowledge, which has already been underlined, e.g.: in what ways the problem is defined, what the purpose and the objectives of the research are, how and what research questions are asked in qualitative research and how the hypotheses are designed in quantitative research, in what ways sampling is performed, how data are gathered, and diverse possibilities of processing the data. They must also know the specificities and possibilities of diverse types of quantitative and qualitative research studies.

For the attainment of the set hypotheses, for example, if they opt for quantitative educational research, the mentee expects from the mentor to suggest appropriate, usually multivariate data processing, even assistance in working with the statistical program and, of course with the interpretation of data as well. The mentor, on the other hand, expects the mentee to have already mastered all this and that he/she will only present his/her decisions and choices knowing how to justify them.

The current researcher believes that people must be aware of the fact that empirical research is neither simple nor easy and also not a quickly finished process and work if researchers wish for a quality concluding work. In the current researchers' opinion, the most difficult problem is if the student approaches the mentor with the wish to conclude and defend his thesis as quickly as possible instead of proposals concerning the topic and the type of the thesis.

CHOOSING THE MENTOR

Choosing a mentor is a highly personal thing, but a number of issues need to be considered whomever the mentee asks to be their mentor (McKimm & Jollie, 2003, p. 21). The current researcher believes it is good if the mentor and the mentee already know each other. Usually, it is the student who chooses the mentor, being guided in this by various motives – either by the course the mentor lectures, the attitude and the expectations the student has towards the mentor, etc. The mentor and the student can also start the joint work, but later one or the other withdraws from it. The reason a mentor does not accept a mentee can also lie in the problem of excess number of mentorships, as the mentor - if they are

self-critical - knows that quality work is not possible with more than a certain number of mentees.³

McKimm & Jollie (2003) highlight yet another criterion in the choice of the mentor, namely that the mentor needs to be accessible in both time and geography and respectful of confidentiality and autonomy.

The current researcher has experienced, in practice, that there are some, fortunately not many, mentees who speculate and calculate with which mentor they could most likely attain the desired title fast and easily, and who do not really care about the quality of their thesis. This will be neglected as this paper focuses rather on the tasks of the mentor.

TASKS OF THE MENTOR

Tasks of the mentor at the UP PEF are defined by various legal acts. Here we start from the UP PEF regulation that refers to the rules about written theses.

The graduation rules (Pravila o diplomu Univerze na Primorskem, Pedagoške fakultete, 2016) state who can be a mentor or co-mentor in higher education professional study programmes and in university study programmes, as well as the tasks that include feedback to the student about the appropriateness of the thesis regarding the methodology and content for the defence.

The rules of the preparation and defence of master's thesis at 2nd level study programmes (Pravilnik o pripravi in zagovoru magistrskega dela v študijskem programu 2. stopnje na Univerzi na Primorskem, 2015) include a special section titled *Mentor and co-mentor* consisting four articles. The conditions that they must meet as well as their tasks and competences are defined in the articles 9 to 12.

Among the tasks it is emphasised that the mentor must:

- monitor the work of the student;
- be available for consultations;
- be regularly in contact with the student;
- cooperate with the student in the exchange of information and views referring to the topic of master's thesis;
- take care of the appropriate professional level of master's thesis;
- guide the student and provide advice in the selection of sources;
- alert the student about any defects or inadequacies;
- judge when the master's thesis is ready for defense.

3 Article 19 of the rules on the preparation and defence of doctoral dissertation at the UP PEF (Pravilnik o pripravi in zagovoru doktorske disertacije) stipulates: "A mentor can simultaneously have maximum five doctoral candidates with doctoral theme approved by the University Senate."

The section (Article 11) also states that the mentor may require occasional oral or written reports about the progress and results of work from the mentee.

A sentence is also dedicated to the mentee saying the student must consult the mentor about the content, the method and the standards of the work (Ibid.)

Similarly, the rules on the preparation and defense of doctoral dissertation (Pravilnik o pripravi in zagovoru doktorske disertacije na Univerzi na Primorskem, 2005) define who can be a mentor and what conditions the person must meet. In relation to doctoral dissertation similar tasks are also stated as with master's theses. A further task is added (Article 23), that states the mentor is obliged to report on the progress of work on the dissertation to competent bodies and committees of the member of the University in the case the latter has expressed such requirement.

As previously mentioned, both in master's and doctoral studies withdrawal from mentoring is of course possible due to justified reasons.

THE MENTOR AND THE MENTEE

The current researcher has written that most frequently mentoring is individual work of the mentor with an individual mentee.⁴ In mentoring the mentor and the mentee are in a certain more or less personal relationship, they cooperate and communicate with each other, so between them more or less obvious conflicts may arise that result from differences in expectations. Different mentor's and mentee's expectations regarding the selection of methods with empirical thesis have already been mentioned, and there are also other mentor's and mentee's expectations where there are differences between them.

It can be summed up from literature (e.g. Light, Cox & Calkins, 2009) and from the current researchers' practice that students expect the mentor to:

- be quickly responsive to student's questions;
- quickly read their work and provide feedback well;
- be friendly, open and supportive;
- have relevant experience and knowledge of the research field;
- help them in defining the methodology, e.g. in defining the problem, the purpose, the objectives, and in the formulation of the research questions

4 To attain a graduation or master's certificate, at the UP PEF two or more candidates can also perform their work as a thematic group, each of them must, however, write and submit their own thesis (Pravila o diplomi Univerze na Primorskem Pedagoške fakultete, 2016; Pravilnik o pripravi in zagovoru magistrskega dela v študijskem programu 2. stopnje na Univerzi na Primorskem, 2015).

or hypotheses, in determining the sample, data processing, etc., as previously stated;

- help them locate resources;
- be involved and interested in their development, etc.

Certainly, mentors also have expectations from students (*ibid.*):

- to be independent;
- to study autonomously;
- to have a lot of initiative;
- to show uniqueness, originality, and creativity;
- to respect ethical principles;
- to be honest;
- to follow advice, especially when requested by the student;
- to know the rules of written language and suitable professional or scientific style of writing;
- to produce coherent and structured written work that is fairly polished;
- to be enthusiastic about the research, etc.

Given the different expectations, between the mentor and the student there must be good and primarily understandable communication acceptable by both. It has been said (McKimm & Jollie, 2003, p. 29) that poor communication can lead to mistakes, misunderstandings and time-wasting and can have a drastic effect on individual relationships, leading to general feelings of dissatisfaction which can result in poor cooperation. McKimm & Jollie (2003) also think, if their reasoning is applied to the mentor, that it is the mentor's responsibility to provide a secure atmosphere in which consultations may take place. They (*Ibid.*) also argue that it is very important that the mentor, acting in a support rather than a formal meeting capacity, has good communication skills because situations and topics that arise may require a discussion of problems of understanding, and may reveal embarrassment or confusion by the student.

SOME ROLES OF THE MENTOR

In view of the above tasks, which mentors have at the UP PEF and the various expectations of mentees, one can look at some of the roles in which mentors appear. What the current researcher has in mind here with the concept of role is a socially expected behaviour pattern usually determined by an individual's status in a particular society, behaviour, which is expected of an individual by those

for whom and with whom the person works (Goldhamer, Anderson & Krajewski, 1980, p. 16). Richards & Lockhart (2007) sum up that a role can be defined as the part taken by a participant in any act of communication. They (ibid.) add that roles have some common characteristics, because they involve:

- different kinds of work and different levels of responsibility;
- different kinds of relationship and different patterns of interaction and communication;
- and different power relationship.

Mentors similarly as teachers are (cf. Cencič, 2015) often in the roles of:

- informers, as they provide different kinds of information;
- teachers, as they must transfer a lot of knowledge;
- advisers, to know how to provide advice at different stages of the research process;
- experts or specialists for a certain area of research;
- methodologists, to know well educational methods of the research process;
- evaluators, to know how to evaluate and judge whether the thesis is appropriate and ready to be defended;
- analysts, to analyse the appropriateness of selected methods, presented results, interpretations, conclusions, etc.;
- assessors, to assess the thesis;
- companions, to monitor the work and progress of the mentee;
- workmates, to work with, occasionally also actively in writing the thesis;
- trainers, to point to any deficiencies and errors and to monitor the development of appropriate skills;
- facilitators, to encourage the continuation and completion of work;
- solicitors or advocates of the thesis e.g. before members of the committee;
- reporters about the work, and similar.

If the student is very autonomous, innovative, and competent in the area of the research and the topic, the role of the mentor can also be that of a coach or just of an “observer” of mentee’s work.⁵ A characteristic of coaching is leading without offering advice or providing recipes, it is more about listening, asking key questions that help individuals to arrive at the best solutions by themselves (Mentorstvo, 2008).

5 Although supposedly coaching has originally appeared just to promote practical skills, where the student or trainee is taken through the steps of learning how to do some action, and skills are developed mainly through practice (McKimm & Caroll Jollie 2003, p. 15).

One should also highlight the role of the supervisor and substantiate it a little more.

Speaking about supervision, different types are mentioned, for example: educational supervision (McKimm & Jollie, 2003), instructional supervision, clinical supervision (Goldhamer, Anderson & Krajewski, 1980), etc.

McKimm & Jollie (2003, p. 17) wrote: “There are many types of educational supervision, some of which are purely academic but many of which incorporate academic and/or pastoral tutoring. Supervisors and learners often have a close relationship [...]. Other supervision/learner relationships may be more distant.”

The authors believe (Ibid.) that the educational supervisor is some sort of consultant in the specialty or a principal in general practice. They say (Ibid.): “Educational supervisors are expected to oversee the education of trainees and to act as their mentors and are responsible for ensuring that trainees are making the necessary clinical and educational progress during the post.”

Here the current researcher sees the emphasis on the responsibility of the supervisor to bring the supervised person to the conclusion. As they wrote (Ibid., p. 3): “Support and guidance often involves giving advice, offering supervision, acting as an advocate or mentor and employing counselling skills [...]” Mentoring is thus also a kind of responsibility towards the supervisee, their defence, and of course advice and monitoring, what has already been emphasised in listing some of the roles of the mentor. Or, as we can read, in supervisory position, the collaboration is both an attitude and a repertoire of behaviours, where the outcome becomes a mutual plan of action (Treslan, 2008).

The authors (Goldhamer, Anderson & Krajewski, 1980, p. 16) also wrote: “The supervisor’s role is very often too generally defined.” If they transfer to university level, they can say, that it varies from a university system to a university system, from one faculty to another. University teachers can sum up that the supervisor can be referred to as a student’s helper, instructional specialist, master, coordinator, theme specialist, consultant, advisor, the responsible person, as already mentioned, assessor of student’s work and the similar. The mentor must support independent and autonomous learning and the work of the student, but also take care of cooperation and adequate relationship with the mentee. They must always be maintaining the balance between support and independence (Light, Cox & Calkins, 2009). Since mentors are professionals, it would be prudent for any supervisory assistance to emphasize collaboration and be as non-directive as possible (Treslan, 2008).

In the supervision process the stages or phases of supervision process are emphasised. In this section, however, the emphasis is primarily on the role of a supervisor / adviser that is often performed by the mentor, especially when the mentor and the mentee are both involved in mutual interaction and two-way

communication (Kobolt & Žorga, 1999, p. 135). Treslan (2008) highlights the specific components of supervision: interpersonal skills, knowledge and task area or topic. In the context of interpersonal skills one can list, for example: listening, clarifying, encouraging, reflecting, presenting, problem solving, negotiating, directing etc. (ibid.)

If summed up after Kobolt & Žorga (1999) this is transferred to the role of mentor, the mentor's main goal is to enable feedback and mentee's academic development, while the objectives are the following:

- To enable the mentee feedback on their work, putting the mentee “in front of a mirror” to see what they are really doing. This might be different from what the mentee thinks they are doing.
- The mentee must receive regular feedback, which for them is an impulse, strong enough to start the self-improving process.
- The mentor must facilitate the diagnosis and solving problems that arise in the process of the final work.
- The mentor helps the mentee develop the skills of diverse strategies of producing final works, while the mentee can try different strategies and obtain feedback on them.
- The mentor also helps the mentee develop positive self-image of continuous professional, academic, and career development.

Encouraging a dialogue (Light, Cox & Calkins, 2009) between a mentor and a mentee is also extremely important. Light, Cox & Calkins (Ibid., p. 167) wrote:

”Supervision is predominately about a dialogue. There is a need for constant adjustment to what each participant is saying, and the balance between giving and taking, listening and talking is crucial if the session is not to become a lecture in disguise. Although supervisors can and do learn a great deal from supervisions, the dialogue is not simply a friendly conversation.”

Probably the mentor is often really also in the role of supervisor, as they often have an additional formal role in monitoring progress (McKimm & Jollie, 2003, p. 21). In practice the mentor performs all this and more often also establishing a genuine relation of friendship with the mentee, which lasts and continues even after the end of mentoring.

Against this background, mentors too would probably need special training for all the different roles and challenges awaiting them in the mentoring process.⁶

6 Similar wish has also been highlighted by supervisors, educational supervisors must have courses on supervision in order to apply clinical supervision (Kayıkçı, Yılmaz, & Şahin, 2017).

In addition to the need for formal training we also emphasise personality traits and characteristics the mentor should possess.

THE PERSONALITY TRAITS OF THE MENTOR

Appropriate personality traits of the mentor are also very desirable and the current researcher thinks that they are also expected by mentees in the mentoring process. The mentor should be open to suggestions, ideas, and wishes of the mentee, and should not doggedly persist in their views, and above all, they must not be confined to themselves and into their perhaps even obsolete knowledge. The mentor must be ready to learn too.

Here is the summary of some of the personality traits that refer to successful leaders, and the current researcher considers them to be relevant for a mentor as well. Mayer (2004) lists the following personality traits:

- Intelligence as speed and adequacy of adaptation to changes.
- Openness (extroversion), which is the foundation of communicativeness, sociability, emotional expressivity, indispensable in the establishment of interpersonal relationships and cooperation, and strongly linked to the acceptance of diversity.
- Emotional stability, which prevents long lasting extreme expression of emotions and causes a person to return to a neutral emotional state relatively quickly. It works against stress, to which also mentors, not just mentees, are exposed.
- Creativity (and innovation) as the capacity of growing beyond what has already been created.
- Expressivity as emitting comprehensible, interesting, and convincing messages.
- Empathy as the ability of identification with others. Mayer (Ibid., p. 57) believes that empathy is given by nature and that it cannot be learnt. It can be summarised that empathy is especially important when the positions of the mentor and of the mentee are diametrically opposed.
- Positive self-image. Mayer (Ibid.) wrote: “Only a person who trusts in himself, who is predominantly satisfied, self-critical, and committed to progress, can successfully lead others, because a negative attitude towards oneself excludes affection for others as a basis for cooperation.”
- He suggests determination as the next personality trait, highlighting courage in this. He believes no one is courageous in all cases, as a certain decision can represent a huge emotional burden for someone whereas someone else will act indecisively.

- Ethical principles are, according to Mayer (Ibid.), the core of functioning leading to value – valence – the human. They include, however, also the feeling for good/bad, justice/injustice, etc. that can be learnt. Besides, they are also crucial for interpersonal relations. He adds that being a good human is the most relevant goal of ethical development. The current researcher completely agrees with this; acting ethically is also one of the most important characteristics of a good mentor.
- Mayer (Ibid.) also states altruism and philanthropy. This, transferred to mentoring, can be summed up for the mentor who stays in the background and only comes to the front if necessary, always taking care of the mentee. In this he highlights social responsibility, which is the personal belief that assistance must always be provided to the one(s) who depend(s) on us.

CONCLUSION

With this paper the current researcher wishes to emphasise that the tasks, expectations, and roles of the mentor are changing in the quickly changing educated society and welfare society as well. Mentoring has been becoming a demanding activity and process. The mentor no longer performs just one role, but must swiftly switch from one role into another and be competent for quite a number of diverse roles. Some have also been highlighted in the paper. The roles can cover some aspects of support: academic, professional, personal and administrative support.

The current researcher believes, however, that mentoring also requires certain personality traits of the mentor, among which one can emphasise ethics – the mentor as model or example to the mentee because of various unethical practices in higher education.

The current researcher concludes, with the words of McKimm & Jollie (2003, p. 21), that relationships usually “flourish when the mentor and the mentee have compatible expectations from the relationship and there is evidence that two elements which contribute to successful mentoring are mentors who are trained in mentoring skills and where the aims and outcomes of the mentoring process are clearly defined and agreed.”

REFERENCES

- Cencič, M. (2015). *Izbrani pristopi pri spodbujanju refleksije učiteljev*. Koper: Univerzitetna založba Annales.
- Goldhamer, R., Anderson, R. H., & Krajewski, R. J. (1980). *Clinical Supervision: Special Methods for the Supervision of Teachers* (2nd ed.). New York etc: Holt, Rinehart and Winston.

- Hopkins, D. (2008). *A Teacher's Guide to Classroom Research* (4th ed.). Michigan: McGraw-Hill Education.
- Kayıkçı, K., Yılmaz, O., & Şahin, A. (2017). The Views of Educational Supervisors on Clinical Supervision, *Journal of Education and Practice* (vol 8, No. 21, pp. 159–168). Retrieved from: <https://files.eric.ed.gov/fulltext/ED581541.pdf>
- Kobolt, A., & Žorga, S. (1999). *Supervizija: Proces razvoja in učenja v poklicu*. Ljubljana: Pedagoška fakulteta.
- Light, G., Cox, R., & Calkins, S. (2009). *Learning and Teaching in Higher Education* (2nd ed.). Los Angeles etc.: Sage.
- Mayer, J. (2004). Lastnosti uspešnih vodij. *Lex localis* (vol. 2, No. 3, pp. 51–68). Retrieved from: http://www.lex-localis.info/files/b4ce87df-3ba3-4e0b-a2d5-b4d7c2e30d6b/632898835609843750_2004_03_03.pdf
- McKimm, J., & Jollie, C. (2003). Educational Supervision, Personal Support and Mentoring. Retrieved from: https://faculty.londondeanery.ac.uk/e-learning/feedback/files/Educational_supervision_and_personal_support.pdf
- Mentorstvo (2008). Glotta Nova – center za novo znanje. Retrieved from: <http://prf.viz.glottanova.si/frames/podrocja/d1.htm>
- Pravila o diplomski Univerze na Primorskem Pedagoške fakultete (2016). Retrieved from: https://www.pef.upr.si/studenti/zakljucek_studija/
- Pravilnik o pripravi in zagovoru doktorske disertacije na Univerzi na Primorskem (2005). Retrieved from: https://www.pef.upr.si/studenti/zakljucek_studija/
- Pravilnik o pripravi in zagovoru magistrskega dela v študijskem programu 2. stopnje na Univerzi na Primorskem. (2015). Retrieved from: https://www.pef.upr.si/studenti/zakljucek_studija/
- Richards, J. C., & Lockhart, C. (2007). *Reflective Teaching in Secondary Language Classrooms* (15th print.). Cambridge, New York, Melbourne: Cambridge University Press.
- Sagor, R. (2011). *The Action Research Guidebook: A Four-Stage Process for Educators and School Teams* (2nd ed.). Thousand Oaks, London, New Delhi, Singapore: Corwin, A Sage Company.
- Smernice za zaključna dela (2015). Koper: Univerza na Primorskem, Pedagoška fakulteta. Retrieved from: https://www.pef.upr.si/studenti/zakljucek_studija/
- Treslan, D. (2008). *Educational Supervision in a "transformed" School Organization*. Retrieved from: <http://www.mun.ca/educ/faculty/mwatch/Treslan.pdf>

Irena Golubović-Ilić and Slađana Stanković
University of Kragujevac, Faculty of Education
Jagodina, Serbia

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STUDENTS' OPINIONS ABOUT INTEGRATION OF STUDY COURSES

Abstract: Searching for the possibilities of improving the quality of university education, we noticed that the programs (syllabuses) of study courses contain common and mutually related elements or parts of content which can be successfully integrated. By integrating the content of study courses, university education becomes innovative, modernized and creates a space where the teachers can express their creativity and professional competences. The aim of this research was to determine the opinions of students (N=116) of III and IV year of undergraduate studies at the department *Preschool teacher* regarding the possibilities of improvement of the quality of university education through the integration of study courses. By analyzing those opinions, we tried to determine the impact of integrative university education on quality, application of knowledge, motivation and self-confidence of students. The research was conducted by applying the descriptive method and surveying procedure. Research results confirm that the opinions of students, when it comes to the impact of integrative education on the understanding of the material, the quality of acquired knowledge and success in exams, their commitment and motivation for studying, self-confidence and preparedness for working with children, are positive.

Keywords: university education, integrative approach, opinions, students.

INTRODUCTION

On the road to improving university education, the quality and innovations of the education process at all levels should be high, and the basic assumptions for securing the quality of the process and outcome of university education are engagement of students in the education process, mutual project activities with teachers, their readiness for learning and taking initiative, quality of their knowledge and possibility of acquiring new, applicable knowledge. The analysis of recent research (Spiro, Feltovich, Jacobson & Coulson, 1991; Putnam & Borko, 2000; Margerum-Leys & Marx, 2002) about education of teachers for application of modern teaching technology shows numerous examples of educational programs, training and additional education of teachers, the integral part of which

are, with the exception of implementation of the educational technology, the ways that boost integration (Hacker & Niederhauser, 2000; Fulton, Glenn, Valdez & Blomeyer, 2002; Fulton, Glenn & Valdez, 2003).

The fact that our country joined and entered the European educational space determines the strategic approaches of development of higher education the primary goal of which is to improve the quality of teaching, i.e. to enable the students to “obtain functional knowledge (applicable in practice), develop key competencies and thus secure their place at the labor market with their personal qualities and professional competencies” (Kopas-Vukašinić, Golubović-Ilić, Cekić-Jovanović, 2017: 161). In that context, the *quality of teacher's work* is considered as the key factor of the quality of education, conditioned by their permanent professional training, development and widening the professional competencies in accordance with the dynamic changes, needs and requirements of modern society (*Strategy of development of education in Serbia until 2020*, 2012). The university teacher is expected to create conditions and organize the lectures in such a way so that the students can express their creative potentials, to enable them for critical thinking and understanding the problem, for application of acquired knowledge and their transfer in different life and professional situations by applying different innovative models (Kopas–Vukašinić, 2017). One of the ways to modernize and innovate the university education is the integration of study courses.

A THEORETICAL APPROACH TO THE PROBLEM

Integrative education is an “innovative model where there are no strict boundaries between study courses” (Stanković, Golubović-Ilić, 2018: 304), and its impact on the interest of students is far greater if the integration is established among study courses where such a connection is not expected and usual. An integrative approach to education “insists on exiting the *course frameworks*, where contents with slight mutual connection used to be placed” (Jovanović, 2016), and it favors the teaching of interdisciplinary phenomena and topics, cross-cultural and interrelated course fields. Integrative education is directed at “co-organization and co-responsibility, and then, gradually, towards self-organization and self-responsibility” (Buljubašić-Kuzmanović, 2007), thus contributing to the students' independence and development of their professional competencies. One of the important characteristics of modern university education is that *student is in the center of education*, i.e. *student-centered learning* (Liarakou & Flogaitis, 2007; Tsurusaki & Anderson, 2010; Condeand Sanchez, 2010). In literature about higher education (hereinafter HE), two notions are “mostly used in triple meaning: (a) new approach to the culture of HE based on the constructivist theory of learning; b) interactive methods of educational work which promote active

participation of students; (c) involvement of students in designing the curriculum and its evaluation” (Geven & Attard, 2012, according to Bodroški-Spariosu, 2015: 413).

As for university classes, it is common that teachers hold the lectures individually, while cooperation of teachers in the realization of certain parts of study programs are rare. Teachers work alone, they are isolated from each other, they do not have the opportunity to observe the work of their colleagues, the effects and the impacts of their work on the quality of students' knowledge. In a situation like this, what may happen is that the teacher, in accordance with their aspirations, interests, and extensive knowledge of certain parts of the matter, devotes more attention to an area for which they are “specialized” or more interested, and not to the contents that are more important and necessary for the students. That is why it is important to provide that, in one or several classes, the students listen to several teachers with different teaching and professional competencies, viewpoints and manners of engagement of students. During the integration of study courses, teachers share responsibilities, cooperate, work together on planning and preparing the lectures, resources and evaluation of students (Đukić and Španović, 2006), thus making the evaluation of students more objective.

INTEGRATIVE TEACHING – ”FOR” AND ”AGAINST”

In professional and scientific texts, integrative teaching can be treated as a synonym or term of similar meaning with the following terms: cooperative teaching, partner-teaching, co-teaching, and team teaching (Stepić, 2016). Integrative teaching resembles the most to the *team teaching* where teachers jointly plan, carry out and evaluate the lectures intended for a group of students (Lloyd Trump according to Đorđević, 1997).

Integrative university teaching is characterized by direct work of usually two teachers who discuss with students about the following: 1) contents from different fields (in our case Methodology of Physical Education – MFE and Methodology of Introduction to the Environment – MIE); 2) specific topics (MFE - *Prevention and correction of flat feet*, MIE – *Materials and their characteristics*) from different angles, perspectives, from different levels and aspects of expertise. In one piece of research (Faculty of Philosophy in Osijek), students' opinions show that integrative learning contributes to the active participation in lectures, mobilizes the existing knowledge and experiences, reflexive discussion, self-evaluation, anticipation and working on the personal concept of learning” (Buljubašić-Kuzmanović, 2007:159). In Serbian educational system Integrative teaching is rarely and occasionally applied (usually in pre-school institutions and primary schools),

while course teaching, high school teaching and university teaching are mostly closed to these.

Conditions for successful application of integrative teaching in higher education are that the teachers are first and foremost familiar with its theoretical bases, to be creative, have adequate skills and desire for innovative lectures, the awareness that in this way, they can improve their individual teaching competences (Vasilijević & Laketa, 2013), improve the curriculum, study programs and increase the intensity and quality of teaching activities, which will, most certainly, reflect on the achievement of students, quality of their work and their success in exams (Đukić and Španović, 2008). Integration of study programs requires the gathering of teachers from several different professions regarding the development of common and interdisciplinary topics, the emergence of common work roles and the routine of classical realization of teaching and motivates them to work together with other members of the staff (Boreham, 2002). Not all the teachers can adjust to such a method of work, because every change or novelty in any field of human labor in most cases faces resistance. Integration of study programs includes the need to invest additional time in terms of planning and reorganization of work, change of schedule of classes, procurement of the necessary equipment and materials for work, etc. (Buckley, 2000).

By applying the integrative approach to the university education, students of pedagogical faculties have double benefits (Murawskog & Swanson 2001). Primarily, their knowledge is of better quality and lasts longer, and, at the same time, they are enabled to use the integration of educational content in working with children in pre-school institutions. Lectures based on the integration of study programs can be very stimulating and encouraging for students, and the interrelated contents contribute that the knowledge adopted by the integrative approach be comprehensive, applicable in practice and long lasting (Stanković and Golubović-Ilić, 2018) Besause of those reasons it is desirable that the students attend such classes during their studies (Stanković and Golubović-Ilić, 2018) and also to have practical experience with that way of work. With the intention to check whether students recognize the integration of study courses as a new possibility for improvement of the quality of university education, we conducted a survey of 116 students who actively participated in the application of integrative teaching in the study courses Methodology of Physical Education and Methodology of Introduction to the Environment. These are the students of III and IV year of undergraduate studies at the department *Teacher in pre-school institutions* of the Faculty of Education of the University of Kragujevac, Jagodina.

RESEARCH METHODOLOGY

We set the quality of university education as the subject of research by applying integrative approach. The aim of the research was to determine the opinions of students regarding the impact of integrative approach on the quality of university education. The quality of university education was viewed from the aspect of impact of integrative teaching on: 1) understanding of the matter, quality of acquired knowledge of students and their success in exams; 2) motivation for studying and 3) self-confidence and practical preparedness (application of knowledge) for performance of the vocation of preschool teacher. The following research tasks have been set based on these objectives:

1. To determine whether students notice the positive impact of the application of integrative teaching on their understanding of the matter, quality of their knowledge (whereby we think not only of the knowledge from study courses which the current researchers had integrated before the research, but also on the quality of knowledge in general) and success in exams;
2. To examine the opinions of students regarding the impact of the application of integrative teaching on the approach of the university education on their *dedication and motivation on studying*;
3. To examine whether the students consider that their *self-confidence and practical preparedness* for working with children in preschool institutions is the consequence of the application of integrative teaching at the faculty.

In this research the current researchers used the descriptive method and surveying technique. In February 2018, students of the Faculty of Education at the University of Kragujevac, Jagodina (N = 116) completed a questionnaire which was created for the purposes of this research (five-fold scale of Likert's type of views consisting of 10 claims).

RESEARCH RESULTS AND DISCUSSION

The aim of the process of increasing the quality and outcome of education is "to increase the efficiency of use of all resources of education" (*Strategy of development of education in Serbia until 2020*, 2012: 7). By examining the opinions of students – future teachers about the effects of integration of study courses, the current researchers tried to determine the impact of such a manner of work on the improvement of the quality of university education.

The first research task was supposed to determine whether students notice positive impact of the application of integrative teaching on the understanding of the matter, quality of their knowledge and success in exams. During the course of theoretical studies, students of the III year of studies have been familiarized with the conceptual definition, the essence and importance of integrative teaching, and manner and possibilities of its application, while students of IV year also took active participation, i.e. attended the classes which were simultaneously held by two teachers from the mentioned study courses. Students' opinions were examined in relation to three claims: 1) Application of integrative teaching contributes to better success of students in exams; 2) Integrative teaching has a negative impact on understanding of the matter and 3) Knowledge of students, from study courses the content of which is integrated and has more quality in comparison to the knowledge of study courses the content of which is acquired in isolation from other courses (control claim). Descriptive indicators point to the fact that the majority of students surveyed, 76 of them (65.5%), in relation to the claim 1) say *I agree* and 36 of them (31%) *agree completely*. They believe that the application of integrative teaching has a positive impact on their success in exams, while only 4 students (3.4%) have a negative opinion. The calculated value of the median (as average measure, since the data come from the ordinal scale), which in this case amounts to 2.00 confirms these results, as well as the fact that more than half of the students involved in the research have a positive attitude about the stated claim.

When it comes to the second claim (which the current researchers purposefully formulated contrary to the presupposed opinions of students), the descriptive indicators were the following: 52 (44.8%) of the students *disagree completely* with this claim, 60 of them (51.7%) *disagree* with the claim, thus enabling the current researchers to check, on one hand, whether the students filled in the questionnaire automatically and without thinking, and on the other hand, whether the majority of the surveyed students believes that the application of integrative teaching has a negative impact on their understanding of the matter.

Table 1. Distribution of students' opinions about the first three claims

No.	Claim	I agree completely	I agree	I don't know	I disagree	I disagree completely
1.	Application of integrative teaching contributes to the better success of students in exams	36 (31%)	76 (65.5%)	0	4 (3.5%)	0
2.	Integrative teaching has a negative impact on the understanding of the matter	0	4 (3.5%)	0	60 (51.7%)	52 (44.8%)

3.	Knowledge of students, from study courses the content of which is integrated, has more quality in comparison to the knowledge of study courses the content of which is acquired in isolation from other courses	84 (72.4%)	20 (17.2%)	12 (10.3%)	0	0
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Only four students had a positive opinion regarding this claim. The value of the median in this case was 2.00.

Opinions of students about the third claim are also positive for more than half of the respondents. The results show that 84 (72.4%) students *agree completely*, 20 (17.2%) *agree*, 12 students or 10.3% of respondents opted for the answer *I don't know*, and there were no negative opinions. The mean value (median 2.00) is an indicator that the attitude of the majority of students regarding the mentioned claim is positive. Research conducted by Murawski & Swanson (2001) also shows that integrative teaching provides multi-level instructions to the respondents and that students have positive opinions about this issue. According to students' opinions, combining the matter in integrative teaching enables the application of multi-functional material and one way of a partnership between teachers and students, and thus contributes to the more quality knowledge of students from study courses the content of which was integrated (Feiman & Nemser, 2001).

Based on the presented results (Table 1), the current researchers state that the students notice the positive impact of the application of integrative teaching on their understanding of the matter, quality of their knowledge and success in exams.

This distribution of opinions is similar to results of previous research (Buljubašić-Kuzmanović, 2007; Spraker, according to Đukić and Španović, 2008), because students, regardless of the year of studies, agree that integrative teaching contributes to their success and better results in exams, and that the grading methods are more objective when several teachers grade each student from their aspect (Đukić and Španović, 2006; Boreham, 2002). Considering that 96% of them have a negative attitude towards the claim that *integrative teaching has a negative impact on the understanding of the matter*, it is clear that the students are aware of and notice the benefits of observation, connection and processing of the same contents (parts of different study programs) from different levels and aspects of professionalism of teachers who teach those courses. A greater number (10.3%) of neutral attitudes (*I do not know*) when it comes to the quality of knowledge acquired through integrative teaching in relation to the teaching where the contents of study courses are acquired in isolation from other courses, is supposedly made

by the students of the III years of studies who didn't have any practical experience when it comes to integrative teaching until the beginning of the research, which is somewhat understandable, justified and expected.

The second research task was supposed to examine the opinions of students about the impact of implementation of integrative teaching on their *dedication and motivation for studying*, which was done by the claims: 1) Practical examples of integration of content of two or more study courses and analyses/realizations of directed activities of implementation of such a method of work motivate me additionally; 2) I expect that university teachers will engage me and motivate me more in practice by using the integrative approach and 3) It would be good to have more classes held simultaneously by two or more teachers at the faculty, because those classes are more interesting and encourage me to participate more. Students of the III year of studies only analyzed such examples in the scope of theoretical lessons before the research was conducted, whereas students of the IV year had active participation in integrative teaching (realization) of the contents of MFE and MIE. Research results show that 84 students (72.4%) *agree completely*, while 24 (20.7%) *agrees* with the first statement. About 93% of respondents (median value 2.00) have a positive opinion regarding the statement that practical examples of integration of contents of two or more study courses and analyses/realization of directed activities motivate them additionally. Eight students (6.9%) had a neutral opinion (*I don't know*), and there were no negative opinions.

As for the second statement "I expect that university teachers will engage me and motivate me more in practice by using the integrative approach" descriptive indicators point to the fact that 64 students (55.2%) *completely agree*, 48 (41.4%) students *agree*, and four students (3.4%) *disagree*. The current researchers assume that the negative opinions were expressed by the students who did not attend the classes regularly, they were fine with being passive and did not have any additional engagements during the academic year other than preparing and taking the exams. Median value (1.00) points to the fact that the attitude of more than 75% of respondents is positive.

Distribution of opinions about the third statement partially differs from the opinions about the two previous statements. Namely, 36 (31%) students *agree completely*, 64 (55.2%) *agree*, and 8 (6.9%) students have neutral (*I don't know*) or negative attitude (*I disagree*) respectively. The value of the median was 1.00 – more than 75% of students have a positive opinion.

When the current researchers analyze the opinions of students (Table 2) with regard to the statements concerning the second research task, the conclusion is reached that a certain number of students notices the positive impact of integrative university teaching on their dedication and motivation for studying, but that there also are students who do not have positive opinions about it.

Table 2. Distribution of opinions of students about statements 4, 5 and 6

No.	Statement	I agree completely	I agree	I don't know	I disagree	I disagree completely
4.	Practical examples of integration of content of two or more study programs and analyses/realizations of directed activities motivate me additionally by applying such method of work.	84 (72.4%)	24 (20.7%)	8 (6.9%)	0	0
5.	I expect that university teachers will engage me and motivate me more in practice by using the integrative approach	64 (55.2%)	48 (41.4%)	0	4 (3.4%)	0
6.	It would be good to have more classes held simultaneously by two or more teachers at the faculty, because those classes are more interesting and encourage me to participate more.	36 (31%)	64 (55.2%)	8 (6.9%)	8 (6.9%)	0

Considering that the characteristic of integrative teaching is that education is student-centered (Liarakou & Flogaitis, 2007; Tsurusaki & Anderson, 2010), that integrative methods of work promote the active participation of students (Geven & Attard, 2012, according to Bodroški-Spariosu, 2015), opinions of the majority of students are positive. We assume that negative and neutral opinions were expressed by the students who, on the one hand, don't want and don't like to be active in classes and students who do not have the knowledge and practical experience about integrative university teaching.

The third research task was to examine whether students consider that their *practical preparedness* for working with children in pre-school institutions to be a consequence of the implementation of integrative teaching. Students' opinions were examined in relation to four statements: 1) University education with practical and evident examples of integrative approach prepares students better for future work with children in pre-school institutions; 2) it is not necessary that integrative approach be used in university education so that I can use that method of

work in my work; 3) I know what integrative approach in working with children of pre-school age includes and 4) I am familiar with the ways in which I can apply the integrative approach in my work.

Distribution of opinions of students about the first statement which refers to the third task was the following: *I completely agree* 84 (72.4%) students, *I agree* 20 (17.2%), and 12 students (10.3%) said that they *didn't know*. The median value was 1.00 – more than 75% of students have a positive attitude about the fact that university education with practical and more obvious examples provides better and more preparedness for future work with children in preschool institutions.

The second statement of the third research task was formulated in a negative context with the intention to determine the opinions of students about their practical readiness for implementation of the integrative approach in future work. Here the results were the most diverse in comparison to all previous statements: 12 (10.3%) students *agree completely*, 24 students (20.7%) *agree* with the statement, and eight students (6.9%) have neutral attitude (*I don't know*), 48 students (41.4%) *disagree* with the mentioned statement, and 24 (20.7%) *disagree completely*. We assume that mostly students of the III year of studies had positive opinions about the statement *It is not necessary that the integrative approach be used in university education so that I can use that method of work in my work*, because based on the theoretical lessons, the implementation of integrative approach seems easy and simple. Students at the IV study year believe that such a method of work is necessary in university education. Of course, the assumption and causes of the students' considerable self-confidence when it comes to the practical application and their ability to apply the integrative approach should be examined and checked in some future research. The median value of 4.00 indicates that more than half of the students have a negative attitude towards this statement. They believe that it is necessary that the integrative approach be present in university education so that they could use such method of work in their work.

The third statement - "I know what integrative approach in working with children of pre-school age includes" was intended to examine the opinions of students about their knowledge of the essence of the integrative approach in working with children. The majority of students (76 or 65.5%) *agree* with the mentioned statement, 28 students (24.1%) *agree completely*, 12 students (10.3%) had neutral stance (*I don't know*) and there were no negative opinions. An indicator that the opinion of the majority of students is positive is a median value (2.00).

The last, fourth statement - "I am familiar with the ways in which I can use the integrative approach in my work", determine the opinions of students about their (self-evaluation) practical preparedness for implementation of the mentioned approach.

Table 3. Distribution of opinions of students about statements 8, 9 and 10

No.	Statement	I agree completely	I agree	I don't know	I disagree	I disagree completely
7.	University education with practical and evident examples of the integrative approach prepares students better for their future work with children in preschool institutions	84 (72.4%)	20 (17.2%)	12 (10.3%)	0	0
8.	It is not necessary that the integrative approach be present in university education so that I can use such method of work in my work.	12 (10.3%)	24 (20.7%)	8 (6.9%)	48 (41.4%)	24 (20.7%)
9.	I know what integrative approach in working with children of pre-school age includes	28 (24.1%)	76 (65.5%)	12 (10.3%)	0	0
10.	I am familiar with the ways in which I can use the integrative approach in my work	8 (6.9%)	80 (69%)	24 (20.7%)	4 (3.4%)	0

Descriptive indicators indicate that 80 (69%) students *agree* with the statement, 24 (20.7%) students had a neutral attitude (*I don't know*), eight students (6.9%) *agree completely*, while four (3.4%) students *disagree* with the above statement. As with the previous statement, the median value (2.00) shows that the attitude of most students is positive. Students' opinions about the statements related to the third research task (Table 3) point to the fact that they consider their *practical ability* to work with children in preschool institutions partly as a consequence of the application of integrative teaching.

This group of results is also in line with previous research and indicators that by applying an integrative approach, students become technically more skilled, organized, more creative, more responsible and independent for future work (Buljubašić-Kuzmanović, 2007; Conde and Sanchez, 2010). The causes and reasons for a different distribution of students opinions about the last 4 statements (Table 3) could be the subject of some future research, but the fact is that the teacher is responsible for developing key competencies of students, acquiring functional knowledge and transferring them in different life and professional situations (Kopas-Vukašinović, 2017).

CONCLUSION

Lectures, teaching and evaluation in modern university education should be adjusted and directed at students. Instead of being passive listeners of study programs, students should become active parties in the teaching process, creators of their own development, with basic skills and abilities to learn independently and adapt to changing circumstances (Kwok, 2015). The efforts and aspirations of university teachers should be focused on the classes where students would have an initiative, be thoughtfully engaged, active in solving creative tasks and motivated (Stanković, Golubović-Ilić, 2018). University teachers are facing a serious, complex task and a professional challenge to enable their students to quickly learn, react, and adapt to different life and professional situations, make decisions, and think critically. Twenty-first century teachers, including university teachers, are expected to be using different innovative models in teaching, which will create conditions in which a student will demonstrate his creative potential, develop responsibility, flexibility and critical evaluation of others' and personal achievements.

The results of the research show that students consider that implementation of integrative university teaching contributes to their success and better results in exams, a better understanding of the content of study courses that are integrated and the quality of the acquired knowledge; they are aware of and perceive the advantages of linking and processing the same content (parts of different study programs) from different levels and aspects, due to their more intense engagement, dedication and greater motivation; most of them believe that the integration of study programs also influences their practical ability to perform future vocation and develop professional competencies. Based on this, the current researchers confirmed that the integration of study programs is significant and necessary for the improvement of university education and that students have positive attitudes about integrated teaching. In this context, and with the aim of improving education at universities, all teachers, step by step, should enrich, change and transform their professional practice through integrative teaching.

REFERENCES

- Bodroški-Spariosu, B. (2015). Univerzitetsko obrazovanje – od Humboltovog modela do Bolonjskog procesa. *Nastava i vaspitanje*, vol.64, 3, 407–420
- Boreham, N. (2002). Work Process Knowledge, Curriculum Control and the Workbased Route to Vocational Qualifications. *The British Journal of Educational Studies*, 50(2), 225–235.
- Buckley, F. J. (2000). *Team teaching: What, who and How?* Thousand Oaks CA: Sage Publications.
- Buljubašić–Kuzmanović, V. (2007). Studentska prosudba učinkovitosti integrativnog učenja. *Odgovorne znanosti*, vol. 9, no.2, 47–160
- Vasilijević, D., Laketa, N. (2013). Uticaj timske nastave na stvaralačka postignuća učenika. *Nastava i vaspitanje*, 2, 611–630.
- Golubovic-Ilic, I., Cirkovic-Miladinovic, I. (2018). Integrative approach to directed activities in Basic Science and English language, *KNOWLEDGE – International Journal Scientific papers*, vol. 22. 6, Institute of knowledge Management, 1641–1646.
- Dymond, J. S., Scheifele, L. Z., Richardson, S., Lee, .P., Chandrasegaran, S., Bader, J. S., Boeke, J. D. (2009): Teaching synthetic biology, bioinformatics and engineering to undergraduates: the interdisciplinary Build-a-Genome course. *Genetics*, 181 (1): 13–21.
- Đorđević, J. (2007). *Nastava i učenje u savremenoj školi*. Učiteljski fakultet: Beograd.
- Đukić, M., Španović, S. (2007). Nastavnička percepcija timske nastave, u *Evropske dimenzije promena obrazovnog sistema u Srbiji*. Novi Sad: Filozofski fakultet. 1, 289–314.
- Jevremov, T., Lungulov, B., Dinić, B. (2016). Zadovoljstvo studenata kvalitetom nastave: efekti godine studija i akademskog postignuća, *Nastava i vaspitanje*, vol. 65, 3, 491- 508
- Jovanović, M. (2016). *Uticaj integrativne nastave na postignuća učenika u nastavi Prirode i društva u dijaspori*, Vranje, neobjavljena doktorska disertacija.
- Kopas-Vukašinović, E., Golubović-Ilić, I. (2016). Attitudes of students about the effects of ambient teaching. *Razsežnosti sodobnih učnih okolij*, yp. Silva Bartož, Koper: University of Primorska, 253–265
- Kopas-Vukašinović, E. (2017). Mogućnosti inoviranja nastavnog procesa u sistemu univerzitetskog obrazovanja. *Uzdanica, časopis za jezik, književnost i pedagoške nauke*, Fakultet pedagoških nauka Univerziteta u Kragujevcu, Jagodina, XIV, 1, 7–15.
- Kopas-Vukašinović, E., Golubović-Ilić, I., Cekić-Jovanović, O. (2017). Project planning of Joint activities as a Possibility for Improving the Quality of International University Cooperation. *Perspectives of Internationalisation and Quality in Higher Education*, edited by Sonja Rutar, Sonja Čotar Konrad, Tina Štemberger i Silva Bratož, Koper: University of Primorska Press, 155–170.
- Kwok, S. (2015). What is the purpose of the Univesity education? retrived June 30,2018.<http://www.scmp.com/comment/insight-opinion/article/1889686-what-purpose-university-education>
- Liarakou, G., & Flogaitis, E. (2007): From environmental education to education for sustainable development. *International Journal of Environmental and Science Education*, 6 (1): 79–98.

- Margerum-Leys, J., & Marx, R. (2002). Teacher knowledge of educational technology: A study of student teacher/mentor teacher pairs. *Journal of Educational Computing Research*, 26(4), 427–462.
- Murawski, W. W. & Swanson, H. L. (2001). A meta-analysis of co-teaching research. *Remedial and Special Education*, 22, 258–267.
- Putnam, R. T. & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher*, 29(1), 4–15
- Spiro, R. J., Feltovich, P. J., Jacobson, M. J., Coulson, R. L. (1991). Cognitive flexibility, constructivism and hypertext: Random access instruction for advanced knowledge acquisition in ill-structured domains. *Educational Tehnology*, 31(1), 24–33.
- Stanković, S. Golubović-Ilić, I. (2018). Osavremenjavanje univerzitetske nastave korišćenjem novih modela učenja i nastave. *Zbornik Filozofskog fakulteta u Kosovskoj Mitrovici*, XLVIII (1), 299–315.
- Stepić, G. (2016). *Efekti timske nastave prirode i društva u veb okruženju*. Užice: Učiteljski fakultet, doktorska disertacija
- Strategija razvoja obrazovanja u Srbiji do 2020. godine (2012), "Sl. glasnik RS", br. 107.
- Tsurusaki, B. K., Anderson, C.W. (2010): Students' understanding of connections between human engineered and natural environmental systems. *International Journal of Environmental and Science Education*, 5 (4): 407–433.
- Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record*, 103(6), 1013–1055.
- Fulton, K., Glenn, A., Valdez, G. (2004). *Teacher Education and Technology Planning Guide* retrieved Avgust 3, 2018. from the World Wide Web <https://files.eric.ed.gov/fulltext/ED489530.pdf>
- Fulton, K., Glenn, A., Valdez, G. (2003). *Three preservice programs preparing tomorrow's teachers to use technology: A study in partnerships*. Retrieved Avgust 3, 2018. from the World Wide Web <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.551.9729&rep=rep1&type=pdf>
- Conde, M. C. & Sanchez, S. J. (2010): The school curriculum and environmental education: A school environmental audit experience. *International Journal of Environmental and Science Education*, 5 (4): 477–494.

Maja Mezgec
University of Primorska, Faculty of Education
Koper, Slovenija

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INTERNATIONALISATION OF CURRICULUM: THE CASE OF THE PRIMARY SCHOOL TEACHING STUDY PROGRAMMES IN SLOVENIA

Abstract: This paper focuses on the internationalisation of the curriculum. Internationalisation of higher education is about including international, intercultural and global dimensions into goals and activities (teaching, research and other facilities) of higher educational institutions. The aim of this research is to investigate how much internationalisation at home is realised through the internationalised curricula in the primary teaching study programme in Slovenia. The research design includes the analysis of the internationalisation of the formal curriculum of Slovenian universities that offer the primary teaching study programme. The data showed that the curriculum for these study programmes is still a work in progress regarding becoming internationalised. A general recommendation can be formulated to give more relevance to the internationalised learning outcomes and to clearly define the international competence that graduates should achieve during their studies.

Keywords: internationalisation of the curriculum, internationalisation of higher education, intercultural competences, internationalised learning outcomes, primary school teaching.

GLOBALISATION AND INTERNATIONALISATION OF HIGHER EDUCATION

Finding a holistic definition for the term 'globalisation' is a challenge, as definitions in literature are related to a single discipline whilst the concept of globalisation itself is an interdisciplinary phenomenon with multidisciplinary consequences. Globalisation is about the cross-border intensification of economic, political, social and cultural relations (Holm and Sørensen in Svetličič, 2004). This intensification reflects a process; however, the outcomes of globalisation contribute much more: the transfer of technology, economy, knowledge, people, currency, ideas that are broadening the interrelations and connections among nations (Knight, 2007).

Globalisation has influenced several aspects of the human being and areas of activities. Education and higher education is no exception. Globalisation has pushed universities into the process of internationalisation. Therefore, globalisation is the reason and internationalisation of universities, the consequence (Počtnik, 2016).

Globalisation and internationalisation are interrelated but do not have the same meaning. *Globalisation is the context of economic and academic trends that are part of the reality of the 21st century. Internationalisation includes the policies and practices undertaken by academic systems and institutions – and even individuals – to cope with the global academic environment* (Knight & Altbach, 2007, 290). From this point of view, we can understand internationalisation of higher education as a response to globalisation (Knight, 2005). Therefore, internationalisation is about including international and intercultural and global dimensions into goals, activities (teaching studying, researching and other facilities) of higher educational institutions. *”Specific initiatives such as branch campuses, cross-border collaborative arrangements, programs for international students, establishing English-medium programs and degrees, and others have been put into place as part of internationalisation”* (Knight & Altbach, 2007, 290).

Knight (2007) identifies two different dimensions of internationalisation: internationalisation at home and internationalisation abroad.

THE INTERNATIONALISATION OF HIGHER EDUCATION IN SLOVENIA

Like other nations, Slovenia has defined its own internationalisation of higher education strategy which was adopted by the Government of the Republic of Slovenia on 28.07.2016 for the period 2016–2020 (Aškerc & Flander, 2016 a).

In order to realise this plan of internationalisation, the Strategy for the Internationalisation of the Slovenian Higher Education identifies five main areas:

1. mobility as a key component of the Slovenian higher education community, open to the international environment;
2. quality international scientific research and development cooperation;
3. promoting the development of intercultural competences;
4. targeting priority regions and countries;
5. promotion, support and monitoring of the Strategy for the Internationalisation of Slovenian Higher Education (Aškerc & Flander, 2016a, 10).

For the purpose of this paper, we have decided to focus only on the third area: promoting the development of intercultural competences.

PROMOTING THE DEVELOPMENT OF INTERCULTURAL COMPETENCES

Intercultural competences refer to the ability to cope successfully in international, intercultural and global contexts at home and abroad.

”Intercultural competences refer to having adequate relevant knowledge about particular cultures, as well as general knowledge about the sorts of issues arising when members of different cultures interact, holding receptive attitudes that encourage establishing and maintaining contact with diverse others, as well as having the skills required to draw upon both knowledge and attitudes when interacting with others from different cultures. One way to divide intercultural competences into separate skills is to distinguish between: *savoirs* (knowledge of the culture), *savoir comprendre* (skills of interpreting/relating), *savoir apprendre* (skills of discovery/interaction), *savoir etre* (attitudes of curiosity/openness), and *savoir s'engager* (critical cultural awareness)” (UNESCO, 2013, 16).

Developing intercultural competences is a long process rather than something which can be completed in a short period of time.

In the description of the area of the development of intercultural competences in the above mentioned Strategy for the Internationalisation of the Slovenian Higher Education it is stated that:

”Slovenian higher education institutions are responsible for the development of the intercultural and global competences of their graduates, which will enable them to function successfully in either a local/national environment, which is a part of the global environment, or directly in an international environment. Slovenian higher education institutions must therefore implement high-quality internationalised curricula¹, which, in particular, systematically include the intercultural dimension into all study programmes and disciplines at all study levels and in all fields. This will be complimented by a range of quality study programmes, modules, and subjects offered in a foreign language” (Aškerc & Flander, 2016a, 16).

Furthermore, the Strategy defines and sets specific objectives for each area. Development of intercultural competences includes the following: the development of intercultural, social and civic competences of students and academic staff. Objective 18 is the only one that specifically refers to this field “Including intercultural competences and internationalised learning outcomes in study programmes” (Aškerc & Flander, 2016a, 17).

The objective of the Strategy is to use the proposed measures and activities to develop the intercultural, social and national competences of students and academic staff through the curriculum, so that they may operate successfully and gain employment on both global and local level.

1 Curricula contain the subjects and learning outcomes of study programmes.

The teaching profession is of strategic importance to develop intercultural competences in the future generations. To this end, our attention will be focussed on analysing the inclusion of intercultural competences and internationalised learning outcomes² in primary school teaching study programmes; the extent to which these objectives have been included in these programmes. Therefore, we are interested in understanding which opportunities future teachers are given to develop their intercultural competences within the higher education system since they will act as promoters of intercultural competences for future school populations.

INTERNATIONALISED CURRICULA AS ONE OF THE TOOLS TO ACHIEVE INTERNATIONALISATION AT HOME

Even though mobility is the most effective way to internationalise education, we also have to consider the fact that only a fraction of students and academic staff actually go abroad. In Slovenia, the level of international mobility is quite low: only 3% of students participate in international mobility programmes and approximately 6% of higher education teaching staff (Aškerc and Flanders, 2016b). Therefore, in order to broaden horizons, develop intercultural and global competences, and soft skills of the majority of students and academic staff, it is necessary to have a high-quality, structured, integrated and systematically organised study experience, which embeds internationalised curricula and the concept of internationalisation at home.

Internationalisation at home refers to the intentional and systematic inclusion of the international and intercultural dimension into the formal and informal curriculum for all the students within the national/domestic learning environment (Beelen and Jones, 2015). One of the outputs and evolutions of the internationalisation at home is the internationalisation of the curriculum that refers to the inclusion of international, intercultural and global dimensions in the contents of the formal curriculum as well as in the informal curriculum, for all the students, especially in the home/domestic learning environment (Aškerc, 2017).

The internationalised curriculum is part of the formal curriculum and therefore the international and intercultural dimensions have to be visible among the learning outcomes. Therefore, an internationalised curriculum leads to internationalised learning outcomes. There is no universal model of internationalised learning outcomes, since they are relative and differ depending on the different discipline and study programme (Aškerc, 2017).

2 "Learning outcomes describe what a learner is expected to know, understand and be able to do after successful completion of a process of learning" (ECTS Users' Guide, 2009, 13).

With internationalisation at home the objectives of internationalisation of the curriculum are achieved, regardless of whether students have the experience of studying abroad or not. The main focus should be on the process of learning and teaching, and the learning outcomes of students, which include an international, intercultural, and global dimension.

The present paper focuses on the internationalisation of the curricula for primary school teachers. It attempts to combine two issues: internationalisation of the curricula measured by the intended learning outcomes and teachers' education. The academic production on the topic of internationalisation of higher education and internationalisation at home has prospered over the last decade (see for example Aerden, 2015, Beelen & Jones, 2015, De wit, Hunger, Howard & Egron-Polak, 2015), as well as research on the international dimensions of the teacher profession. These dimension connects to the issue of teacher's intercultural competencies. The attempts to find a common framework that defines the competences a teacher should have nowadays lead the European Commission to edit the document *The Common European principles for teacher competences and qualifications*, which have been devised in response to the challenges laid down in the Joint Interim Report by the Education Council and the European Commission on progress towards Education and Training 2010. Among keys competences listed there is the ability to work with and in society (European Commission, 2005).

"Teachers contribute to preparing learners for their role as EU citizens (...). They should be able to promote mobility and co-operation in Europe, and encourage intercultural respect and understanding. They also need to know the contribution that education makes to developing cohesive societies. They should have an understanding of the balance between respecting and being aware of the diversity of learners' cultures and identifying common values" (European Commission, 2005, 4).

But we have less evidence of academic works that combines both topics: the internationalisation of the curricula within the intercultural competences of primary school teachers.

METHODOLOGY AND RESEARCH DESIGN

For the purpose of this paper, a pilot study has been developed. The research aim was to investigate how much internationalisation at home is realised through the internationalised curricula in the primary school teaching study programme³ in Slovenia. In Slovenia there are actually three universities with primary school

3 Teaching pupils aged 6 to 11 (1st Grade to 6th Grade).

teaching study programmes: the Faculty of Education of the University of Primorska, the Faculty of Education of the University of Ljubljana and the Faculty of Education of the University of Maribor. In Slovenia, the professional profile of primary teacher is regulated and governed by national regulation and therefore candidates have to fulfil statutory requirements in order to gain the relevant professional qualification. One of the requirements is a Master's diploma in Primary school teaching⁴. All three universities provide similar study programmes due to the regulation of the profession set parameters. The envisaged quality of learning outcomes and competences ensures the employability of graduates, as they are aligned with learning outcomes and competences that are required by law for the profession for which the study programme provides education.

The research design includes the analysis of the internationalisation of the formal curriculum of the three Slovenian universities offering the primary school teaching study programme. Since, as defined in the Strategy for the Internationalisation of Slovenian Higher Education 2016–2020, the curricula contain the subjects and learning outcomes of each study programme (Aškerc & Flander, 2016 a), the research design aims to investigate the internationalisation of the formal curricula by analysing qualitative data available in two different types of document: the list of competences that students develop within the study programme and the intended learning outcomes of the subjects. The analysis of the qualitative data was limited to the analysis of the contents of these two different types of document. For each type of document, we have defined the categories we were looking for and then scanned the documents in order to find where these categories are mentioned.

Since we had two different types of data, we analysed each type separately and therefore the analysis of the data has been conducted on two different levels:

- Level 1: list of the competencies students develop within the study programme for primary teacher in Slovenia (that refers to the competences that students develop in the study program as a whole and not of each subject separately);
- Level 2: list of the intended learning outcomes of each compulsory subject included into the curriculum.

In the analysis at Level 1 we focused our attention on the competences that have an international, intercultural and global dimensions, while at Level 2 we focused on the intended learning outcomes that have an international, intercultural and global connotation.

4 Completion of a Master's is required to get the full professional title of Primary school teacher. Therefore, there is both an undergraduate and post graduate primary school teaching study programme. For the aim of this research both levels were considered (as a whole), due to the fact national legislation requires a Master's to get the professional qualification.

The selection of the above mentioned levels was founded on the following considerations:

- The list of subjects included in the study programmes gave no sufficient evidence of the international, intercultural and global dimensions of the curriculum. We considered the possibility of analysing the contents of all the subjects, but for the aim of this paper and from the perspective of the internationalisation of the curriculum, greater evidence is given in the learning outcomes rather than just content. In the internationalised curriculum the international and intercultural dimension should be clearly stated and reflected in the learning outcomes. International and intercultural dimension can be included in the subject contents but these do not necessarily lead to internationalised learning outcomes. Therefore, in one of the subsequent levels of research we considered and analysed the learning outcomes for all the compulsory subjects by analysing the course syllabi⁵.
- Not all data is accessible to the public. We only used data that is published on the relevant institutions' websites. Therefore, we did not manage to collect data referring to all three levels of research at all three universities, but we concluded that a combination of data relating to the three levels would give a sufficiently accurate picture of the situation.
- The lists of learning outcomes that refer to the study programme itself as a whole were not available. Therefore, for study programmes as a whole we used the list of competences that students acquire. Although learning outcomes differ from competences, we consider that for the aim of our analysis the list of competences a student develops are a reasonable substitute.

The collection of the qualitative data was limited to data published on the web pages of the faculties that have the study programme and refers to academic year 2018/2019.

Each university is presented and analysed as a case study, marked as Case 1, Case 2 and Case 3. The following data was available and analysed for each case:

Case 1:

- the competences students develop within the study programme
- the course syllabus of all the compulsory subjects

Case 2

- the competences students develop within the study programme
- the course syllabus of all the compulsory subjects was not available

⁵ The course syllabi include several elements describing the subject. The intended learning outcomes are one of the elements.

Case 3

- the competences students develop within the study programme was not available
- the course syllabus of all the compulsory subjects

RESULTS

In order to realise the aim of the research we considered the formal curriculum of the three above mentioned universities offering primary school teaching study programmes.

Analysis at level 1: the list of competences graduate students develop within the study programme

From the lists published we have extracted the competences⁶ that are related to international, intercultural and global dimensions.

Case 1

- Social competences
- Shapes safe and stimulating learning environment, in which learners feel accepted and in which diversity is valued and (...)
- Demonstrate positive attitude towards learners while respecting their social, cultural, linguistic and religious background
- Adapting the teaching and learning approaches to individual, social, linguistic and cultural differences between learners.

Case 2

- Acquiring knowledge, understanding and acting following the criteria of inclusion, non-discrimination and multiculturalism
- Shaping a holistic analysis of the individual/group need, their strong and weak areas of competences while considering the environmental factors (physical, social and cultural)
- Adapting the teaching and learning approaches to individual, social, linguistic and cultural differences between learners.

Case 3

- Communication competences and skills, especially in international contexts
- Cooperative skills and team work (even in international contexts)

⁶ Competences, subjects and learning outcomes are quoted word by word.

- Awareness for natural and social environment, national culture, cultural heritage, identity, interculturalism and non-discrimination.

If we form categories (that refer to the intercultural dimensions) from the listed items, we can see that:

In Case 1, we find items related to:

- Shaping and adequate learning environments,
- Acceptance,
- Respect of differences,
- Adapting teaching and learning approaches.

In Case 2, we find items related to:

- Inclusion,
- Non-discrimination,
- Analysis of the individual/group need considering social factors,
- Adapting teaching and learning approaches.

In Case 3, we find items related to:

- Communication competences in international context,
- Cooperative skills in international context,
- Awareness for social environment, national culture, cultural heritage, identity, interculturalism and non-discrimination.

The analysis shows that the lists of competences at Level 1 can be considered as quite different; the only common denominator is awareness of differences and non-discrimination. That shows that there is no convergence at national level about the intercultural competence that primary teachers should develop within the formal curriculum.

Level 2: the analysis of the intended learning outcomes for each compulsory subject

Since we realised that the analysis of the list of subjects does not give sufficient information about the inclusion of international, intercultural and global dimensions in the formal curriculum, we considered analysing the syllabus of all the compulsory subjects, where data were available (Cases 1 and 3) focusing attention on the intended learning outcomes that have an international, intercultural and global connotation. Below, the subjects for which we have found learning outcomes related to international, intercultural and global dimension are displayed for each study case.

Case 1

Basics of Pedagogy: Understand, develop sensitivity and feel committed to working in favour of individuals marginalised due to their ethnicity, socio-economic status, gender or special need.

Social sciences II: The students know and understand basic facts about the role of migration in contemporary society, and about multiculturalism and modern settlements patterns.

Language in society: The students are able to assess issues related to the use of language in education; language policy in school; maintaining or changing language and ethnic identity; language conflicts based on the understanding of terms acquired in the course.

Sociology of Education: Students understand teachers' roles in the process of social inclusion or exclusion; are aware of differences among members of class community; modify their actions according to racial, social and gender diversity in the class community and strive for coexistence in diversity; assess pupils fairly regardless their racial, social and gender diversity.

Case 3

Slovenian language I: recognise and understand the learning difficulties as a result of multilingualism, multiculturalism, deprivation, etc.

Music Art Didactic II: recognise and understand the learning difficulties as a result of multilingualism, multiculturalism, deprivation, etc.

Musical Culture: Understanding influence of cultural environment on music language; ability to plan and organise visits to cultural performances, creating short programmes of cultural arrangements; autonomy in searching and preparing chosen music content from a defined cultural environment and present them in music professional and Slovenian literary language.

Foreign Language for Primary School Teachers: demonstrate knowledge and understanding of professional foreign language, vocabulary and content connected to pedagogical/educational issues for primary school teachers,

Selected Topics from Social Sciences – Geography: The student will be able to synthesise and evaluate the complexity of geographical space, with special emphasis on home country education and ability to form spatial and national identity and inter-cultural communication; evaluating sustainable development as local, regional, national and global space development; ability to independently collect, analyse and represent geographical information on an example of Slovenia and Europe.

Mathematics Education II: recognise and understand the learning difficulties as a result of multilingualism, multiculturalism, deprivation, et al.

Children's literature: they can choose books for easy reading (also for the students whose mother tongue is not Slovene) and books for children with special needs.

Art Didactics I: on completing this course the student should be able to recognise and understand the learning difficulties as a result of multilingualism, multiculturalism, deprivation, etc.

Art Didactics II: On completing this course the student should be able to recognise and understand the learning difficulties as a result of multilingualism, multiculturalism, deprivation, etc.

Didactics of Slovene Language and Literature I: recognise and understand the learning difficulties as a result of multilingualism, multiculturalism, deprivation, etc.

Didactics of Slovene Language and Literature II: recognize and understand the learning difficulties as a result of multilingualism, multiculturalism, deprivation, etc.

Didactics of Science and Technics I: recognize and understand the learning difficulties as a result of multilingualism, multiculturalism, deprivation, etc.

Selected Topics from Social Sciences – History: The student will be able to synthesise and evaluate the complexity of historical space, with special emphasis on home country education and ability to form spatial and national identity and inter-cultural communication, ability to independently collect, analyse and represent historical information on an example of Slovenia and Europe, transfer of theoretical knowledge into field research and ability to research domestic landscape in inclusion in making decisions about its development,

Teacher as Research Practitioner in Science, Technology, and Mathematics: on completion of this course the student will be able to: demonstrate the reasonable attitude regarding joining the European initiative, including project schemes of EU; demonstrate knowledge and understanding of chosen results from international research aiming at improvement in teaching practices.

Analysis at Level 2 gives much more evidence about the international, intercultural and global dimension of the curriculum. The intended study outcomes give more evidence of inclusion of these dimensions, although we have noticed that the subjects are quite similar. The study outcomes are set and defined by the teacher, who decides to put more emphasis on aspect or another. Internationalisation is therefore given evidence even in subject's areas where we might not expect it since its contents are not much related to international, multicultural and global dimension.

FINAL REMARKS

Internationalisation at home is the purposeful integration of international and intercultural dimensions into the formal and informal curriculum for all students, within domestic learning environments. It encompasses study programmes, the process of learning and teaching, development of human resources in higher education, extracurricular activities and connecting with local cultural and ethnic groups.

Analysis at Level 1 showed that there is no convergence at a national level about the intercultural competences that primary teachers should develop within the formal curriculum. This is a relevant issue for policy makers and stakeholders that is worth defining since teachers need these competences for their profession in an environment that is getting more and more international and intercultural.

Analysis at Level 2 showed that internationalisation, intercultural and global dimension can be recorded even in subject areas where content is not traditionally related to international, multicultural and global dimensions. There are subjects where international, intercultural and global dimensions are expected, such as social sciences and literature, but we can find examples of other subjects where international and global perspectives are reasonably included, e.g. *Teachers as research practitioners in science, technology and mathematics*. Data shows that there is still plenty of room to strengthen the internationalisation of the intended learning outcomes in several compulsory subjects. Therefore, the internationalisation of the curriculum is possible, but has to be empowered in order to become an important issue for achieving internationalisation at home.

The analysis presented in the paper is limited to the formal curriculum, as stated in the official document published by the two faculties. We believe that international and intercultural dimensions are *de facto* included in several different manners outside of the formal curriculum. Even when analysing the syllabi of the compulsory subjects we have noticed cases where the international, intercultural and global dimension were present among the contents but not listed among the intended study outcomes. Therefore, we can assume not always are given enough importance to translate them into learning outcomes or/and given them proper evidence. Their relevance for the process of internationalisation of higher education should raise the question whether these elements should in fact be included in the formal curriculum. In an internationalised curriculum the international and intercultural dimension should be clearly visible in the learning outcomes. We can therefore conclude that the curriculum for the primary teaching study programme is still a work in progress regarding becoming internationalised. A general recommendation can be formulised to give more relevance

to the internationalised learning outcomes and to clearly define a framework of international competence that graduate students should achieve at the end of the study.

The ability to function successfully in an intercultural, multilingual and international environment, and to understand cultural specifics, is of crucial importance to every individual in modern society. Teachers and the educational system have an important role in developing intercultural competences among future generations.

If internationalisation and the intercultural competences developed within are often seen even as an added value to students, that will be able to cope in international environments and get jobs in different cultural setting, the perspective for future teachers is slightly different: the international mobility⁷ among primary school teachers is lower since it is a regulated profession that requires even high linguistic standards in order to be performed even if in *The Common European principles for teacher competences and qualifications* (European Commission, 2005) it is stated that mobility should be a central component of initial and continuing teacher education programs. Therefore, the perspective of working as a teacher abroad is less frequent as it might be for other professions. Although the perspective for future teachers is to work in the national context, internationalisation has an important impact because the national context is changing as well and the “customers” of the educational systems are changing: which means teaching pupils coming from abroad, facing family situations that reflect different cultures with different cultural heritage, interacting with parents that belong to different culture, preparing pupils to cope with different cultures at home and abroad. To sum up, we can expect that teachers are teaching in a context that is getting more and more international and intercultural and they too need intercultural competences to successfully fulfil the challenges of their profession.

REFERENCES

- Aerden, A. (2015) *An introduction to international and intercultural learning outcomes*. Brussels: European Consortium for Accreditation in Higher Education.
- Aškerc Veniger, K. (2017). *Internacionalizacija kurikuluma*. Ljubljana: CMEPIUS.
- Aškerc Veniger, K. & Flander, A. (eds.) (2016a). *The Strategy for the Internationalisation of Slovenian Higher Education 2016–2020*. Ljubljana: Center RS za mobilnost in evropske programe izobraževanja.
- Aškerc Veniger, K. and Flander, A. (2016b). *Pregled stanja v slovenskem visokem šolstvu na področju internacionalizacije*. Ljubljana: CMEPIUS, Ministrstvo za šolstvo, izobraževanja in šport.

⁷ For international mobility we refer to the opportunity to work abroad and not only to shorter study visits.

- Beelen, J & Jones E. (2015). Redefining internationalization at home. In A. Curai, L. Matei, R. Pricopie, J. Salmi & P. Scott (eds.). *The European higher education area: between critical reflections and future policies*. Dordrecht: Springer, 67–80.
- De Wit, H., F. Hunter, L. Howard & E. Egron-Polak (ed.) (2015). *Internationalisation of higher education*. Brussels: European Parliament, Directorate General for Internal Policies.
- ECTS Users' Guide*. (2009). Luxembourg: Office for Official Publications of the European Communities.
- European Commission (2005). *The Common European principles for teacher competences and qualifications*. Brussels: European Commission, Directorate-General for Education and Culture.
- Knight, J. & Altbach, P. G. (2007). The Internationalization of Higher Education: Motivations and Realities. *Journal of Studies in International Education* 3/4, 290–305.
- Knight, J. (2005). An Internationalization Model: Responding to New Realities and Challenges. In H. De Wit, I.C. Jaramillo, J. Gacel-Avila & J. Knhight (eds.) *Higher education in Latin America*. 1–30. Retrived from <https://elibrary.worldbank.org/doi/pdf/10.1596/978-0-8213-6209-9>
- Knight, J. (2007). Internationalization: Concepts, Complexities and Challenges. In J. J. F. Forest, P.G. Altbach (eds.) *International Handbook of Higher Education*. Springer International Handbooks of Education, 18. Springer: Dordrecht, 207–227.
- Potočnik Mesarič, T. (2016). *Pomen internacionalizacije za razvoj visokega šolstva: primer skupnih študijskih programov*. Doktorska disertacija. Ljubljana: Fakulteta za družbene vede.
- Svetličič, M. (2004). *Globalizacija in neenakomeren razvoj po svetu*. Ljubljana: Fakulteta za družbene vede.
- UNESCO (2013). *Intercultural competencies: conceptual and operational framework*. Paris: UNESCO. Retrived from <http://unesdoc.unesco.org/images/0021/002197/219768e.pdf>

Barbara Baloh
University of Primorska, Faculty of Education
Koper, Slovenia

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FUTURE EDUCATORS AND TEACHERS' VIEWS ON INTERCULTURALISM AND SLOVENIAN LANGUAGE LEARNING

Abstract: It is necessary to discuss interculturalism even when we are not surrounded by immigrants, foreigners, and members of minority groups, since they are always part of our reality as cultural diversity (whether local, regional, linguistic...) is a feature of every modern society. Teaching children in an intercultural and multilingual environment must be based on the knowledge of the reality of the linguistic and cultural framework in which the teaching process is taking place, and it is necessary to monitor and adapt it to newer social and historical developments accordingly.

As stated by R. Bešter and M. Medvešek (2016), in all ethnically and culturally diverse societies (including Slovenia, according to the author of this article, it is necessary to develop democratic thinking, mutual respect, and prevention of discrimination and unequal relations and power balances among different social groups. At the same time, ethnocentrism needs to be alleviated, both as concerns of culture and language. To achieve this, it is important that the educational system too remains focused on these objectives and values.

Considering the theoretical bases, the current researchers were interested in seeing what the students of the undergraduate programme Primary school teaching, who will become class teachers, and the students of the undergraduate programme Pre-school teaching, who will become preschool teachers, think about interculturalism, intercultural communication and teaching the Slovenian language in an intercultural context.

Keywords: Future preschool teachers, future class teachers, views, interculturalism, Slovenian language learning.

INTRODUCTION

There are many multicultural communities around the world since people move from one part of the world to the other for various reasons. The modern times entail the need to acquire intercultural competences/abilities, to be able to live interculturally in a multicultural world. Through competence and ability one

understands a series of relations, skills and knowledge that enable us to adopt adequate and efficient behaviour in a given context. Competences include a cognitive (knowledge) and a personal dimension (socially-emotional and motivational), ethics or principles that consciously or unconsciously shape values, decisions and actions.

Numerous studies and initiatives show that this enables the European, as well as the Slovenian society, to be aware of the importance of strengthening intercultural awareness, communication and dialogue.

According to various studies (Mello 2001, Zipes 1995), the opportunities to contemplate the concepts of identity, diversity, culture, monoculturalism, multiculturalism, also arise in kindergartens and schools, specifically in terms of establishing positive and constructive relationships with adults and peers, understanding personal cultural environment and being aware of the changes in personal identities.

Educators and teachers at all education levels play a crucial role in the promotion of intercultural understanding, since they are not merely agents of knowledge transfer, but also role models who transmit and help to shape the foundations for responsible, fair and intercultural functioning of individuals in society. As specified by the Council of Europe (2008), a successful establishment of intercultural dialogue is a prerequisite for development and stability of inclusive societies that aspire to the integration and social cohesion and reject marginalisation of vulnerable social groups, while at the same time contributing to the fight against prejudices and stereotypes in public life and political discourse.

As the primary school teachers and preschool teachers play an important role in modeling children's understanding of their socio-cultural environment and language acquiring, we find necessary that in the university teacher training curricula also the multicultural topics are included. There are not many studies in Slovenia researching the intercultural competences of teachers and educators, especially of those teaching the Slovenian language.

In this article we present the results of a research on students' comprehension of the related topics.

THEORETICAL FRAME

Intercultural language teaching methodology in the light of teaching the Slovenian language in different linguistic contexts

While working on preserving multilingualism in the educational process in Slovenia, we encounter different rationales which have been changing since

Slovenia's declaration of independence in the 1990s to date because of historical developments and opportunities, and thus transforming the pedagogical and didactical discourse in the field of the Slovenian language teaching. The main rationale for teaching the Slovenian language today is preserving the mother tongue (first language), the second is preserving the mother tongue in areas with ethnic minorities (second language/language of the environment). Cultural and linguistic diversity of modern Slovenian society highlighted a new rationale for teaching the Slovenian language, i.e. preserving the mother tongue of minorities that are not recognised officially, and who therefore go through the education process in a language that is foreign or second for them. Increasingly frequent is the rationale or desire to learn and develop communicative competences in more than one language. M. Žefran, S. Bratož and A. Pirih (2017) believe that an individual develops their communicative competences on the basis of a thorough knowledge of different languages and experiences with them, where these are mutually connected and affecting one another. The individual can activate this competence in different communication circumstances with the intention to effectively reach the communication goal, since one finds themselves in numerous situations where linguistic sources are activated in ways other than our mother tongue.

As stated by S. Rutar (2014), the rationale behind multilingual learning and teaching are universal human and children's rights. In this regard, the current researchers would like to continue with the consideration of intercultural language teaching methodology, which, according to N. Zudič and A. Zorman (2006), does not only consider language learning/teaching, but also includes the developed ability to coexist with people who speak the language. It stems from the hypothesis that language acquisition is based on real situations which are meaningful to the child. The same authors (Ibid.) deem that the intercultural teaching methodology is based on inquiry-based learning through interaction and therefore takes into account the language communicative function and considers it to be a symbolic system of understanding the world and processing experiences.

As regarded by R. Bešter and M. Medvešek (2016), in order to put the principle of interculturalism in education into practice, the teachers must, on the one hand, be highly qualified in the field they are teaching, and on the other they must know how to handle (and take into account) ethnic, religious, cultural and other differences encountered in the classroom, meaning that they must already have developed intercultural competences.

On the basis of multi-year research in the field of interculturalism and bilingualism, the current researchers attempted to summarise their experience into a few characteristics of an intercultural teacher's profile. An intercultural teacher accepts the multicultural nature of the society, has a positive relationship with their own culture and is open to other cultures, knows how to behave confidently and

without prevailing over other cultures, works with diverse groups, finds diversity valuable and respects differences, handles the challenges of the multicultural facets of the knowledge society and is committed to encouraging equal opportunities.

R. Bešter in M. Medvešek (2016) state that educational options can be limited if the teacher does not take into account their ethnic, linguistic and cultural source. It is therefore necessary for the intercultural teacher to be also "curious research-wise" and study both their own interculturalism and that of the others. The same authors (Ibid.) state that the more positive the relationship to cultural diversity of an individual is and the greater knowledge he acquires, the more they develop the necessary skills in the process, reflects on their actions in intercultural situations and thus the higher the probabilities will be that they reach a greater level of intercultural competences.

Further on, the current researchers will present Bennett's model of developing intercultural sensitivity (1993), based on studying behavioural patterns, on the basis of which it is possible to determine how an individual acquires experiences of cultural diversity.

Intercultural competences and intercultural sensitivity

In Slovenia, intercultural competences of teachers and educators (especially those who teach the Slovenian language) were not given much attention in the educational process. Nor are there many studies with a holistic, in-depth treatment of this area.

The research on interculturalism questions carried out by the Italian researcher Marina Medi (2017) shows the following stereotypical answers: the immigrants are weak and require help and special care; the immigrants are poor and must be helped and solidarity must be expressed in order to help them; the immigrants must overcome language and culture obstacles which prevent them from becoming socially integrated as soon as possible (the value of the individual's cultural wealth and thus an opportunity to discover the other is never underlined here); the immigrants do not differ from the majority of the population, hence they must be offered the universal Western culture values, the only ones that can be accepted in this environment; the immigrants differ from us in terms of their cuisine, songs, dances, folklore, exoticism of their own culture (these are in fact the only areas which most European nations can accept easily, whereas the language is not among them).

As pointed out by the authors R. Bešter and M. Medvešek (2016), building on the model by Darla D. Deardoff (2006, 2009) and its upgrade (Boecker, 2008), intercultural competences are developed as concerns four dimensions: 1) attitudes and views of the others/the different ones; 2) knowledge, understanding and

specific skills; 3) intercultural reflection (which represents the desired internal result) and 4) constructive interaction (which represents the desired external result).

The more defined an individual's attitude towards cultural diversity, the more sensitive and understanding and accepting of interculturalism he is. When an individual defines their attitude towards cultural difference based on some experience, they maintain the acquired attitude towards all phenomena related to that culture. They are capable of generalizing the acquired knowledge to different capability levels and to different types of cultural diversity. This means that they maintain the same attitude towards all forms of cultural diversity, regardless of the type of culture they are facing (Zudič-Antonič, 2008: 117).

On the other hand, Bennett (1993) developmental model of intercultural sensitivity (dmis, presented further on) can be of assistance to educators and other education workers in discovering their own level of intercultural sensitivity, as well as discovering the level of intercultural sensitivity of individual children who acquire their knowledge of the world from broader (educational institutions, company of adults and peers, media ...) and closer (family) environment, while being influenced by different internal – endogenous (personal, psychological) and external – exogenous (socio-cultural) factors.

Bennett (in Zudič-Antonič, 2008: 117–119) presents two categories of intercultural capability development, ethnocentrism and ethnorelativism. Ethnocentrism is the process of rejecting a culture. It is about evaluating other cultures based on the individual's own culture, so it is an opinion, a belief, a feeling of an individual that the culture in which he lives is superior, dominant and therefore he does not acknowledge other cultural communities with a different culture, religion, language. Ethnorelativism is a process of accepting intercultural differences.

Table 1. Intercultural sensitivity development stages

ETHNOCENTRIC STAGES	denial defence minimisation
ETHNORELATIVIST STAGES	acceptance adaptation integration

according to Zudič-Antonič, 2008

The current researchers can summarise them into a few key goals: strengthening personal and collective identity which will not contradict the others/different ones but will communicate with them; developing research curiosity which

will be democratic, sensitive and respectful of others; knowing how to think about oneself, about others, about stereotypes and prejudices and showing the capability for self-criticism; encouraging awareness about complexity and relativity of different views on (intercultural) reality and being able to change one's own view; accepting and constructively co-existing with the others/different ones and acknowledging their rights.

When discussing the early language learning and intercultural development, we have to highlight that children become aware of their environment and themselves through language and culture. That is the reason why students in different courses¹ must learn about different didactic strategies for language acquisition of Slovenian as mother tongue and second/foreign language.

Considering the theoretical bases shown, we were interested in seeing what the students of the undergraduate programme Primary school teaching, who will become teachers, and the students of the undergraduate programme Preschool teaching, who will become educators, think about interculturalism, intercultural communication and teaching the Slovenian language in an intercultural context.

RESEARCH

Problem

As stated by authors M. Žefran, S. Bratož in A. Pirih (2017), there are several studies in the field of foreign language teaching where authors determine the views and beliefs of students (both students of languages as well as other subjects) towards learning and teaching a foreign language.

The authors (Ibid.) refer to many studies and their bases and goals: Beliefs About Language Learning Inventory (BALLI) – an instrument to assess beliefs about learning a foreign language, developed by Horowitz (1988) in the latter part of the '80s; Rieger (2009) determines the differences in beliefs about language learning based on gender and language type; Peacock (2001) studies the differences in beliefs of future ESL teachers and experienced ESL teachers; Jeoffrion et al. (2014) studies the ideas of French students about plurilingualism where they find that the French academic environment is highly monolingual.

However, there are not many studies in Slovenia researching the intercultural competences of teachers and educators, especially of those teaching Slovenian language. The current researchers found no studies that would focus on the future primary school teachers and preschool teachers who are not language teachers but are trained in early Slovenian language teaching and have a very important

1 This is the case on the Faculty of Education, University of Primorska.

role in the development of students' and children' views on mother tongue and different languages and can therefore directly influence their beliefs.

The goal of the research

The aim of the research was to study the views of future teaching staff on interculturalism, intercultural communication, and on teaching Slovenian language in an intercultural context. Students had to answer to the following questions in the questionnaires:

What are the views and beliefs of the future teaching staff on interculturalism and immigrants?, What are the views and beliefs of the future teaching staff on language learning?, According to the future teaching staff, to what extent is culture related to language?, What are the views and beliefs of the future teaching staff on learning the mother tongue? and What are the views and beliefs of the future teaching staff on the immigrants and their learning of Slovenian language?

Methodology

The dominating research methods included a theoretical content analysis and non-experimental quantitative scientific research, in which the descriptive method of pedagogical research prevails. For the assessment of opinions and attitudes a questionnaire was developed; a four-point instead of a five-point scale was used for the views, where the option "Neither agree nor disagree" was intentionally left out, since the current researchers wanted to achieve more self-reflection in the answers.

The survey was conducted on an *ad hoc* sample of students of the Faculty of Education at the University of Primorska. It included full-time students of the Preschool teaching (N=52) and Primary school teaching (N=48) programmes. The participation in the survey was on a voluntary basis and it lasted approximately 15 minutes. The anonymity of the participants was guaranteed. Answers were gathered in the period between 18/10/2018 and 25/10/2018. A total of 100 forms were filled in. There were 98 female and 2 male participants. This is why the frequency of the answers in the analysis is equal to the percentage, so the current researchers used only one number in the table to make the results more comprehensible.

Results and discussion

In determining the participants' views and beliefs on interculturalism and on immigrants, the current researchers were above all interested in the participants'

views on Slovenian culture and language in the light of immigration (Table 2) and the future teaching staff views on immigrants and their Slovenian language learning (Table 6).

Table 2. The participants' views on the Slovenian culture and language in the light of immigration

Statement	Strongly disagree	Disagree	Agree	Strongly agree
Language is an important element of a culture	0	0	37	63
When we study a different/foreign language, it is not necessary to know the culture of that language	20	73	6	1
We need to respect everyone, regardless of their language and culture	0	0	26	74
In our society, it is necessary to prevent negative prejudices and ethnic stereotypes about the immigrants	0	2	46	52
The immigrants must completely adapt to the majority, i.e. to the Slovenian culture	2	55	35	8
The Slovenian culture and language are in jeopardy due to the immigrants	26	44	26	4

The current researchers find that the participants treat the language as an important element of a culture, which is especially important if one considers the fact that linguistic communication is the most complete and the most accessible transmitter of culture. The participants also confirm the fact that culture is inseparably connected to language. When people study a language, the cultural background is studied as well. It can be observed in the views of future educators and teachers that they do not treat their own culture of origin as superior and that they do not feel that their own culture and language are in jeopardy due to the presence of immigrants.

Further on the current researchers were interested in the participants' opinions on preventing negative prejudices and ethnic stereotypes about immigrants.

Generally speaking, by prejudices the current researchers imply certain negative views that one has about someone; a prejudice is therefore something that is not based on our experiences but is created in our mind. Ethnic stereotypes, however, are simplified and non-justified judgements on members of different nationalities, so we deem the participants' view important, because children acquire behavioural and communication patterns from their role models in the period of primary socialisation (from the society in general, as well as from their parents, carers, educators, teachers...). The current researchers find that most participants think that negative prejudices and ethnic stereotypes about immigrants should be prevented in modern society.

Furthermore, we were interested in seeing how the participants viewed bilingualism/multilingualism and bilingual/multilingual society (Table 3).

Table 3. Bilingualism/multilingualism and bilingual/multilingual society

Statement	Strongly disagree	Disagree	Agree	Strongly agree
The multiculturalism and multilingualism enrich the Slovenian nation	0	24	55	20
It is better to live in a monolingual than a multilingual community	20	69	11	0
A bilingual society means that an individual knows both the minority and the majority language	0	0	0	0
The bilingualism means that two people speak in their different mother tongues, yet understand one another	17	45	33	3

The changed reality of modern Europe has forced us to rethink and re-evaluate the view on key elements of personal identity. One of the key elements is interculturalism. The intercultural society is sensitive to change and is under constant transformation, therefore it is necessary to think about the role of educational institutions in it (preschools, schools and universities) which provide the young with the tools needed to live in the new reality. This is why the participants' answers confirming that multiculturalism and multilingualism are a wealth, that it is better to live in a multilingual community in this modern era, and that bilingualism implies equivalence of two language codes, are encouraging.

We were also interested in participants' views on immigrants (Table 4).

Table 4. Participants' views on immigrants

Statement	Strongly disagree	Disagree	Agree	Strongly agree
Slovenian culture is in jeopardy due to immigrants	19	54	23	4
A multilingual society means there will be greater problems	24	52	24	0
More immigrants mean there will be more crime	25	49	21	5
More immigrants mean there will be greater poverty	30	57	12	1
The immigrants take away jobs and social security benefits from the native population	22	50	25	3
I feel uncomfortable when I'm next to an immigrant	45	40	14	0

As is apparent from the table, the participants do not present negative views on immigrants. Positive views on immigrants can be a positive influence in forming views on language and cultures related to it, which is a prerequisite for the development of interculturalism and intercultural individuals.

In determining participants' views and beliefs on language learning the current researchers were interested in seeing how much importance was attributed to the languages in their environment, thus the set of statements refers to the importance and learning of languages in the environment of future educators and teachers (Table 5).

Table 5. The importance and learning of languages in the environment of future educators and teachers

Statement	Strongly disagree	Disagree	Agree	Strongly agree
It is important to speak several languages, because we can then communicate with various people	0	1	46	53
The importance of speaking foreign languages is overrated	9	65	21	5

Early learning of a second/foreign language negatively influences the mother tongue knowledge	29	62	9	0
Children must start learning a second/foreign language as soon as possible	3	33	56	8
Children must first learn well their mother tongue, and only then can they learn a second/foreign language	5	53	30	12
You can learn a second/foreign language very well even if you didn't start learning it as a child	1	12	66	21
A speaker who starts learning a second/foreign language early on, comes close to a native speaker in their knowledge of the language	3	34	60	3
I prefer to talk to people who speak my language	4	21	55	20
When I speak a second/foreign language, I am always afraid that I will make mistakes	1	19	63	17

The analysis of future educators' and teachers' views on the importance and learning of languages in the environment reveals a complex picture. For Slovenians, the Slovenian language has had a highly unifying role throughout history, stemming from the need to belong to a community, the need for territorial cohesion, for statehood, and from the need for validation of personal roots, therefore the fact that the participants/young people overcome historical beliefs and attribute high importance to the learning of a second/foreign language is of utmost importance. It is interesting that future educators and teachers prefer to talk to people who speak their language and that they are always afraid they will be making mistakes when speaking in a second/foreign language. In this regard, we can probably refer to the foreign language anxiety discussed by authors M. Žefran, S. Bratož and A. Pirih (2017).

The last set of statements refers to views of future teaching staff on immigrants and their learning of Slovenian language (Table 6).

Table 6. Views of future teaching staff on immigrants and their learning of the Slovenian language

Statement	Strongly disagree	Disagree	Agree	Strongly agree
The cultural and linguistic diversity in the preschool /primary school enriches teaching	0	0	76	24
It is necessary to use only the Slovenian language in the preschool /primary school teaching	4	46	46	4
The immigrant children must learn the Slovenian language as soon as possible	3	9	76	12
The assessment programme in the Slovenian language classes can be adapted for immigrant children for 1 year only	13	71	13	0
It is good that the immigrant children preserve their culture of origin and their mother tongue	0	3	60	37
It is good that the educator/ teacher encourages other children to learn the immigrants' language	0	29	64	7
It is good that the educator/ teacher encourages communication in the immigrants' language as well	2	35	55	8
It is good that the immigrants' language is used in informal situations in the preschool/primary school	4	38	52	6

In the early language learning/teaching, the child's positive experience with the language is the best motivation for further work and an incentive to reach a higher level of knowledge. For the preschool and primary-school-aged child, the language is a means of communication and never a goal, because the child is interested in obtaining new information, in what we are communicating with

the language and not the language per se with all its grammatical and pragmatic dimensions. The child needs above all a supportive environment for language development, where they will be able to use speech. This means that they need to have an opportunity to hear and use speech in different circumstances, while also needing encouragement from adults and peers. Language teaching/acquisition in preschool and early primary school age must proceed in a planned way, because it demands specifically developed and well-considered methods of and approaches to learning, which must be based on the knowledge of child development and preschool learning. This is confirmed by participants' views which show a positive stance towards immigrants' learning of the Slovenian language while preserving their mother tongue. As pointed out by S. Rutar (2014), the awareness of the link between the language and the meaning in a particular environment is important for the organisation of a bilingual learning environment, therefore the presence of different languages in kindergarten and school may offer a chance for reflection on a similar, same or different meaning.

CONCLUSION

It is necessary to determine and recognise views and beliefs of various stakeholders in the learning process to design and establish efficient intercultural practices in education. The views of future educators and teachers on interculturalism and the Slovenian language learning have an important influence on encouraging language diversity, which is one of the basic values of the modern European society.

The research finds that, to build a school for the future, the diverse needs of children must present a challenge for the teacher/educator in designing the teaching process to help each child reach optimal results. It is a path of research, cooperation, change and a never-ending process of searching for optimal solutions. This is why it is important for the teacher/educator to become aware of their role in the process of the language planning for the child, because they have a direct influence on the development of the child's linguistic competences (grammatical and communicative) with their own cultural capital.

That's why in the university education is necessary to develop educators' and teachers' pedagogical competences, to provide special skills and knowledge, to ensure the spreading and delivering of knowledge and to find solutions and challenges presented by diverse needs of students in modern schools. It is also necessary to encourage the teachers' desire for acquiring knowledge and skills to change the relationship with students, which would enable the co-creation of a modern Slovenian language teaching, with sensitivity for multiculturalism.

In the future, research should be carried out on views of other stakeholders responsible for the education planning, since the development of intercultural capability must be embedded into many activities of the educational institution and of the broader local community rather than being restricted to individual subjects or specific activities, sporadically organised by the educational institution.

REFERENCES

- Bennett, J. M. (1993). Towards ethnorelativism: A development model of intercultural sensitivity. In R. M. Paige (Ed.), *Education for intercultural experience*. 2nd ed. Yarmouth, ME: Intercultural Press. pp. 21–72.
- Bešter, R., Medvešek, M. (2016). Medkulturne kompetence učiteljev: primer poučevanja romskih učencev. *Sodobna pedagogika*. 2/2016. pp. 26–44.
- Broecker, M. C. (2008). *Intercultural competence – The Key Competence in the 21st Century*. Bertelsmann Stiftung in fondazione Cariplo. Retrieved on 18.10.2018 from <https://www.ngobg.info/bg/documents/49/726bertelsmanninterculturalcompetences.pdf>
- Dearborn, D. K. (2006). Identification and Assessment in Intercultural Competence as a Student Outcome of Internationalization. *Journal of Studies in International Education*, 10, 3. pp 241–266.
- Dearborn, D. K. (2009). Implementing Intercultural Competence Assessment. In D. K. Dearborn (Ed.) *The SAGE Handbook of Intercultural Competence*. Thousand Oaks, CA: Sage. pp. 477–491.
- Horwitz, E. K. (1988). The beliefs about language learning of beginning university foreign language students. *The Modern Language Journal*, 72. pp 283–294.
- Jeoffrion, C., Marcouyeux, A., Starkey-Perret, R., Narcy-Combes, M. F., & Birkan, I. (2014). From multilingualism to plurilingualism: University students' beliefs about language learning in a monolingual context. *Language, Culture and Curriculum* 27 (1). pp 8–26.
- Medved Udovič, V. (2008). Igra vlog kot otrokova poustvarjalna dejavnost bralnega odziva. V: Krakar-Vogel, B. (Ed.). *Književnost v izobraževanju – cilji, vsebine, metode, (Obdobja, Metode in zvrsti, 25)*. Ljubljana: Filozofska fakulteta, Oddelek za slovenistiko, Center za slovenščino kot drugi/tuji jezik. pp 431–446.
- Medi, M. (2017). Per un'educazione interculturale nella scuola. Retrieved on 20.10.2018 from <http://www.funzioniobiettivi.it/glossadid/intercultural/intercultural.htm>
- Mello, R. (2001). The Power of Storytelling: How Oral Narrative influences Children's Relationships in Classrooms. *International Journal of Education & Arts*, n. 2 (1). Retrieved on 10. 9. 2018 from <http://www.ijea.org/v2n1/>
- Peacock, M. (2001). Pre-service ESL teachers' beliefs about second language learning: A longitudinal study. *System* 29 (2). pp 177–195.
- Rieger, B. (2009). Hungarian university students' beliefs about language learning: A questionnaire study. *WoPaLP* 3. pp 97–113.
- Rutar, S. (2014). Večjezično učenje in poučevanje kot načelo inkluzivne prakse. *Sodobna pedagogika* 1/2014. pp 22–37

- White Paper of Intercultural Dialogue Living Together as Equals in Dignity*. Ljubljana: Andargoški center Republike Slovenije. Retrieved on 20. 10. 2018 from <https://www.coe.int/t/dg4/intercultural/>
- Zipser, J. D. (1995). *Creative Storytelling: Building Community. Changing Lives*. New York and London: Routledge.
- Znanstveni svet (2012). *Medkulturna vzgoja v šoli: izhodišča in smernice*. Retrieved on 20.10.2018 from <http://eduka-itaslo.eu/uploads/analize/uploadsanalize18.pdf>
- Zudič-Antonič, N. in Zorman, A. (2006). Prvi koraki pri razvijanju medkulturnega zavedanja: seznanjanje z jezikom okolja na narodnostno mešanih območjih v Republiki Sloveniji. *Sodobna pedagogika* 57, posebna izdaja. pp 232–245.
- Žefran, M., Bratož, S., Pirih, A. (2017). Večjezičnost in raznojezičnost z vidika bodočih pedagoških delavcev. In S. Rutar, S. Čotar Konrad, T. Štemberger, S. Bratož (Ed.) *Vidiki internacionalizacije in kakovosti v visokem šolstvu* ur. Univerza na Primorskem. pp 139–155.

Radmila Milovanović and Ivana Ćirković-Miladinović

University of Kragujevac, Faculty of Education

Jagodina, Serbia

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EMOTIONAL EFFECTS OF IMPLEMENTING GESTALT THERAPY TECHNIQUES IN UNIVERSITY TEACHING

Abstract: The aim of this paper was to examine the emotional effects of implementing Gestalt therapy techniques focused on the emotional experience triggered by the learning process. The sample consisted of 289 students, future teachers and preschool teachers. The research design implied an initial assessment of students' emotional reactions to traditional, frontal teaching (4 lessons of Psychology and 4 English language lessons), an implementation of Gestalt therapy techniques in teaching (also 4 lessons in both subjects) and a final assessment of students' emotional reactions. A *Questionnaire for the self-assessment of emotional reactions to teaching by Shabot and Shabot* was used for the collection of data. Statistically highly significant differences were found regarding the type and intensity of emotional reactions, in favour of the final assessment. Unpleasant emotional reactions such as anxiety, irritability, boredom and discouragement were highly significant ($p < 0.01$) as reactions to traditional teaching, while pleasant emotional reactions of amazement, pleasure, optimism and self-confidence were highly significant ($p < 0.01$) reactions to teaching in which Gestalt therapy techniques were implemented. Highly significant differences ($p < 0.01$) were found in the assessment of other aspects of teaching as well, such as involvement, connection and communication with others. The results indicate the significance of encouraging pleasant emotional reactions in the teaching process.

Keywords: emotional aspects of teaching, Gestalt therapy techniques, improvement of university teaching, English language classes.

INTRODUCTION

In all educational environments, the process of learning is founded on a formal approach to education, meaning that successful learning is closely linked to successful teaching (Shabot & Shabot, 2004). This, more precisely, means that, from the repertoire of various teaching methods the one that will ensure that participants learn needs to be selected, i.e. the one that will initiate a cognitive process leading to the desired outcome (knowledge, skills). The cognitive activity of the participants in the teaching process is a key factor that impacts learning. A specific cognitive activity represents a specific form of learning, and a specific

form of learning enables the realization of a completely determined educational outcome (Sternberg, 2009). On the basis of the differences in the cognitive activities during learning, the current researchers are able to determine the form of learning in question. The efficiency of teaching is, therefore, a direct consequence of the efficient choice of teaching methods. In other words, the educational goal conditions cognitive activity (a form of learning), and the teaching method ensures appropriate cognitive activity (an appropriate form of learning). This leads to the conclusion that all valid approaches to teaching are cognitive, since learning is thought to be primarily a cognitive process aimed at handling information (Neisser, 1967).

This paper starts from the notion argued by contemporary neuroscience, that the cognitive approach is incomplete and incapable to answer all the questions related to the process of learning and all the difficulties involved in it (Chica et al. 2013). A new way of understanding learning and teaching includes the consideration of the role of emotional regulation in educational practice. This approach is focused on emotions and its starting point is that emotions represent an integral part of the teaching process (Gläser-Zikuda, 2013).

THE INFLUENCE OF EMOTIONS ON COGNITIVE ACTIVITY

Emotionality represents a special dimension of human existence that has, until recently, defied satisfactory scientific and professional conceptualization. The lack of scientific knowledge about emotions is in great dissonance with the enormous role that emotions have in the life of each individual (Ekman, 2011). In recent decades, several relevant theories have been formed, that include emotional life in their consideration of the issues of human existence (Salovey, 2004). According to the cognitive theory of emotions, the cognitive assessment of the situation in which people find themselves determines the nature of the emotional reaction. Human beings possess a vast repertoire of emotional reactions, the main characteristic of which is the pleasant or unpleasant emotional undertone (positive and negative emotions). Contemporary studies indicate a different effect of positive and negative emotions on cognitive activity (Warren, 2004).

The feeling of social vulnerability, the fear of negative evaluation of others, the fear of being mocked, boredom, dissatisfaction, tension, anger, etc. as well as all other emotional states, have their neurophysiological basis (Cabanac, 2002). Neurobiological mechanisms triggered by unpleasant emotions impede the ability to plan, implement intentions, focus attention, learn and retain information. Under the influence of emotions, people enter a state that neuroscience refers to as cognitive dysfunction. The stronger the emotion, the lesser the cognitive

efficiency is. The more people are occupied by fear, worry, resentment or sadness, the lower the levels of activation of the prefrontal cortex – making it all the more difficult for us to think. Boredom decreases the efficiency of the brain in much the same way – while wandering, thoughts lose their focus and motivation wanes (Damasio, 2002).

Contrary to this, pleasant emotions such as joy, pleasantness, satisfaction, optimism, self-confidence, have an activating effect on “higher”, prefrontal brain regions and stimulate cognitive functions (Buckley & Saarni, 2009). Negative emotions may produce the same effect as they do not cross a certain threshold, i.e. if they are moderate (anger, trembling, anticipation, etc.). When something that represents a challenge for a person happens, attention is focused, the person looks, listens, thinks and therefore learns as well. In interpersonal relationships, positive emotions encourage different behaviours, the purpose of which is to ensure that both sides win, i.e. cooperate and become more tolerant (Fredrickson & Branigan, 2005).

THE POSSIBILITIES OF IMPLEMENTING GESTALT THERAPY TECHNIQUES IN TEACHING

The psychotherapeutic approach to teaching implies the recognition, acceptance and respect for the actual emotional reactions of the participants in the teaching process, their authentic needs, and the ability to incorporate this understanding and psychological knowledge into the teaching process (Tadić, 2004). The words “therapy” and “therapist”, of course, have a medical connotation and suggest that psychotherapy is developed and shaped exclusively according to the medical model. However, every teacher will have to face the issues regarding the emotional aspect of the teaching process, sooner or later. Therefore, psychotherapy cannot be modelled exclusively according to the medical model, and it is increasingly becoming an interdisciplinary field in which psychology, psychiatry, sociology and pedagogy, as well as other natural and social sciences meet and become integrated (Nevis, 2000). The aim of implementing psychotherapeutic techniques in teaching is not only to stimulate positive emotional reactions and cognitive activity, but also to assist students in getting to know themselves, in finding support within themselves as well as in finding the ability to make the right choices, to assist them in their development towards self-actualization (Milovanović, 2008).

Gestalt therapy is a holistic therapy, the focus of which is on the whole person, with equal respect for cognition and emotions. Gestalt theory and method was developed in 1940 by psychologist Fritz Perls (Perls, 1969). The word *gestalt*

itself is of German origin and signifies the whole. Gestalt therapy is a creative and patient therapy aimed at making us aware of each passing moment of our lives (Zinker, 1977). Its starting point is that which is healthy in people, it helps put their positive emotions in motion, free their creative potentials and develop. The main method of Gestalt therapy is the dialectical method based on the Buberian Me–You contact and dialogue between two people, in which there is a possibility of one person having an influence on the other (Perls et al., 1951). Its main concepts are awareness, contact and emotional experience. These concepts can be applied, not only within the psychotherapeutic relationship, but also in every interpersonal relationship (Sutton et al., 2009). The application makes experience authentic and human relationships *real human* relationships. For these reasons, Gestalt is not only used for therapeutic purposes, but may also be used in other areas. In some Western countries (Great Britain) it is widely used in education (Woldt, 2009). Gestalt therapy is, in fact, nothing more than learning how to govern with one's emotions (Ellis, 1962). This learning has a healing effect, because when one masters their own emotionality, they release their potential. In order to be able to use one's abilities and intelligence, emotions are of paramount importance. People's reactions to stimuli and whether they will realize their abilities, depend on their emotions (Ochsnerand & Gross, 2008).

Gestalt therapy is equipped with numerous and various techniques that can be successfully altered and tailored to given situations (Spagnuolo & Amendt-Lyon, 2003). Some of the techniques are: the technique of dialogue, the technique of unfinished business, the technique of taking responsibility, the rotation technique. Methods, such as the following, can also be used successfully in teaching: guided fantasy, drawings, drama, role play, etc. It is important that all techniques are tailored to certain rules whose basic purpose is to trigger emotional reactions (Woldt, 2008).

EMOTIONAL ASPECTS OF UNIVERSITY TEACHING

Emotional aspects of university teaching represent a phenomenon that has rarely been studied. Given that contemporary university teaching is facing the problems regarding the motivation of students to actively participate in teaching (Sutton, 2004) and that emotions are a powerful motivational factor which guides behaviour, the current researchers consider the search for the teaching models that would trigger positive emotional reactions and act as motivators to be relevant, especially considering the fact that these issues are rarely dealt with. As a reminder, motivation represents the search for what the person lacks, i.e. the search for a way to meet one's needs (Kort et al., 2002). It is a common concept when it comes to all internal factors, above all emotional ones that consolidate individual

activities, guide behaviour and determine its direction, intensity and duration. Emotions, as key personality components, have an orientation role and represent a significant motivational factor. Contemporary science allows us to understand how negative emotions influence cognitive functioning and offers evidence that they are responsible for many learning difficulties (Oatley and Jenkins, 2003). Therefore, we believe that teachers, in all levels of education, need to take into consideration the emotional aspect of the teaching process and learn how to stimulate positive emotions in their students.

METHOD

Research problem and aim

The main problem of this research is to examine the emotional effects of implementing Gestalt therapy techniques in teaching students. The main aim of the research is to analyse the emotional reactions of students and identify possible differences between the emotional reactions of students to traditional teaching and their emotional reactions to teaching based on the implementation of Gestalt therapy techniques.

Sample

The research was carried out on a sample of 289 students, future teachers and preschool teachers, with an average age of 20.9 years (134 from the Department for Class Teachers and 155 from the Department for Preschool Teachers). Female students were significantly more numerous than male students and made up 87.41% of the total sample (251 female and 38 male students).

Instruments

The *Questionnaire for the self-assessment of emotional reactions to teaching by Shabot and Shabot (2009)* was used to collect the data on the emotional reactions of students, constructed of items describing emotional reactions related to the six basic categories of emotions (fear, anger, sadness, contempt, surprise and joy). The surveyed students were instructed to use a ten-point scale in providing their response in accordance with their emotional reactions, ranging from weak (score 1) to strong (score 10) emotional reactions. From a total of 18 offered emotional reactions there were three for each basic category of emotions: I have felt: frightened, worried, insecure (fear); anxious, irritable, impatient (anger); disappointed, discouraged, sad (sadness); disinterested, distrustful, bored (contempt); amazed,

astonished, impressed (surprise); satisfied, optimistic, self-confident (joy). Students were also expected to use a ten-point scale to assess their general emotional experience (I have mainly felt “Not very good” or “Very good”), their connection to other participants in the teaching process (I have felt “Not very closely connected to others” or “Very closely connected to others”), their communication with others (My communication with others was “Poor” or “Very good”), as well as their involvement in activity (My involvement in activities was “Low” or “High”).

Procedure

The research design had implied an initial assessment of the emotional reactions of students to traditional, frontal teaching (4 lessons of Psychology and 4 English language lessons), an implementation of Gestalt therapy techniques in teaching (4 lessons of Psychology and 4 English language lessons) and a final assessment of the emotional reactions of students to the implementation of Gestalt therapy techniques in teaching. More precisely, after the four lessons that were realized on the basis of the traditional concept of frontal teaching, the students have provided their responses to the questionnaire (initial assessment). After that, the teaching in the subjects in question was organized by implementing the Gestalt therapy techniques “guided fantasy”, “dialogue” and “role play”. The use of these techniques was adapted to the topic of teaching. After four lessons, organized in this fashion, the students have provided their responses to the questionnaire once more (final assessment). The data on the emotional reactions of students were collected during 2017.

Analysis procedures

The processing of data included methods of descriptive statistics (frequency, mean values), as well as methods of analytical statistics for estimating the significance of differences. The *t-test* was used to test the significance of differences.

RESULTS

In order to determine the type and intensity of the emotional reactions of students to traditional teaching, an average score was calculated, for each emotion in a certain category, on the basis of their estimates (on a scale from 1 to 10) in the initial assessment (Table 1).

Table 1. Average scores for the emotional reactions of students to traditional teaching (on a scale from 1 to 10)

Category	Emotion	M
Fear	frightened	0.34
	worried	1.29
	insecure	0.78
Anger	anxious	2.58
	irritable	3.79
	impatient	5.78
Sadness	disappointed	0.46
	discouraged	0.34
	sad	0.00
Contempt	disinterested	3.76
	distrustful	0.43
	bored	3.54
Surprise	amazed	0.12
	astonished	0.32
	impressed	0.13
Joy	satisfied	0.45
	optimistic	0.02
	self-confident	0.01

Table 2 shows the ranking list of the categories of emotions in the initial assessment, according to the average scores for the emotional reactions that belong to them.

Table 2. Ranking list of the categories of emotional reactions to traditional teaching

Rank	Category	M
I	Anger	4.05
II	Contempt	2.57
III	Fear	0.80
IV	Sadness	0.26
V	Surprise	0.19
VI	Joy	0.16

In order to determine the type and intensity of emotional reactions of students to teaching organized on the basis of implementing Gestalt therapy techniques, an average score was calculated, for every emotion in a certain category, on the basis of their estimates (on a scale from 1 to 10) in the final assessment (Table 3).

Table 3. Average scores for the emotional reactions of students to the implementation of Gestalt therapy techniques in teaching (on a scale from 1 to 10)

Category	Emotion	M
Fear	Frightened	0.32
	Worried	0.16
	Insecure	0.28
Anger	Anxious	0.26
	Irritable	0.36
	Impatient	0.39
Sadness	Disappointed	0.25
	Discouraged	0.21
	Sad	1.48
Contempt	Disinterested	0.00
	Distrustful	0.21
	Bored	0.00
Surprise	Amazed	4.89
	Astonished	5.47
	Impressed	3.68
Joy	Satisfied	8.69
	Optimistic	6.25
	Self-confident	5.01

Table 4 shows the ranking list of the categories of emotions in the final assessment, according to the average scores for the emotional reactions that belong to them.

Table 4. Ranking list of the categories of emotional reactions to the implementation of Gestalt therapy techniques in teaching

Rank	Category	M
I	Joy	6.65
II	Surprise	4.68
III	Sadnes	0.64
IV	Anger	0.33
V	Fear	0.25
VI	Boredom	0.07

The most significant issue in the context of the aims of this research, was the issue of the existence of differences in the emotional reactions of students to different methods of teaching that were applied in the initial and final assessment. Table 5 shows the results of the *t-test* that was used to analyse the significance of differences between the average scores obtained in the initial and final assessment.

Table 5. Significance of differences between the mean scores regarding the intensity of emotional reactions in the initial and final assessment

Category	Emotion	M (I)	M (F)	t	Sig(2-tailed)
Fear	frightened	0.34	0.32	-1.287	.426
	worried	1.29	0.16	1.763	.001*
	insecure	0.78	0.28	-1.352	.518
Anger	anxious	2.58	0.26	2.631	.000**
	irritable	3.79	0.36	3.579	.000**
	impatient	5.78	0.39	4.215	.000**
Sadness	disappointed	0.46	0.25	-1.072	.129
	discouraged	0.34	0.21	-1.069	.129
	sad	0.00	1.48	1.897	.002*

	disinterested	3.76	0.00	2.123	.000**
Contempt	distrustful	0.43	0.21	-1.365	.476
	bored	3.54	0.00	2.631	.000**
Surprise	amazed	0.12	4.89	3.579	.000**
	astonished	0.32	5.47	4.215	.000**
	impressed	0.13	3.68	2.463	.000**
Joy	satisfied	0.45	8.69	9.235	.000**
	optimistic	0.02	6.25	7.468	.000**
	self-confident	0.01	5.01	4.753	.000**

* level of significance 0.05

** level of significance 0.01

Table 6 shows the mean values and significance of differences between the reactions of students in the initial and final assessment. The average scores are related to the general emotional experience of students, their connection to others, communication and involvement in activities.

Table 6. Significance of differences between the mean scores regarding the emotional experience, involvement and communication in the initial and final assessment

	M (I)	M (F)	t	Sig(2-tailed)
In an emotional sense, I have felt (from 1–10 not very good – very good)	0.34	8.35	9.763	.000**
I have felt (not connected to others – very connected, from 1- 10)	0.48	5.67	6.135	.000**
My communication with others was (poor –very good, from 1-10)	0.05	6.83	7.468	.000**
My involvement in the activities was (low – high, from 1-10)	1.29	6.68	7.243	.000**

DISCUSSION

The results of the initial assessment indicate that the surveyed students have reacted to traditional teaching mainly by experiencing negative emotions of moderate intensity. On the ranking list, which was obtained on the basis of the average scores related to the emotional reactions of students, the first place belongs to the emotional reactions in the category of anger (anxiety, irritability, impatience), the second place belongs to the emotional reactions that belong to the category of contempt (disinterest, distrust, boredom), the third place belongs to the emotional reactions in the category of fear (fear, worry, insecurity) and the fourth place belongs to the emotional reactions from the category of sadness (sadness, disappointment, discouragement). The last place belongs to the emotional reactions from the category of surprise (amazement, astonishment, impression) and joy (satisfaction, optimism, self-confidence). In short, the highest average scores, on a scale from 1 to 10, belong to the following emotional reactions: impatience, irritability, disinterest, boredom and anxiety.

The results in the final assessment indicate that the surveyed students have reacted to the teaching organized with the use of Gestalt therapy techniques mainly by experiencing positive emotions of higher intensity. The first place on the ranking list belongs to joy with an average score of 6.65, the second place belongs to surprise with an average score of 4.68 and the third place belongs to sadness with an average score of just 0.64. The end of the list is occupied by anger, fear and boredom, with average scores slightly above zero.

By calculating the significance of differences between the average scores in the initial and final assessment, using the t-test, highly significant differences were determined between the groups of negative and positive emotional reactions. Worry, anxiety, irritability, impatience, disinterest and boredom were statistically highly significantly more often negative emotional reactions to traditional teaching, while positive emotional reactions of amazement, astonishment, impression, satisfaction, optimism and self-confidence were highly significantly more often emotional reactions to teaching organized on the basis of implementing Gestalt therapy techniques.

The obtained and highly significant differences in the mean scores for the general emotional experience, connection with others, communication and involvement in activities, in the initial and final assessment, have confirmed the importance of positive emotional reactions in relation to these aspects of the teaching process. During teaching that was organized on the basis of implementing Gestalt therapy techniques, the students felt highly significantly better than during teaching organized in a traditional manner. Also, the students felt connected with others, they estimated their communication with others as very good and they were, according to their own assessment, involved in the activities.

Starting from the standpoint argued by the representatives of emotional pedagogy, who are demonstrating a new manner of understanding learning and teaching and have more and more supporters, in which the main assumption is that feelings precede learning and that there is a direct connection between the opportunities for learning and the emotional state (Chabot and Chabot 2009), we consider the results obtained in the initial assessment to be worrisome. According to Johnson and associates, anger, fear and sadness are emotions that have the greatest role in the onset of cognitive dysfunction (Johnson and Fredrickson 2005). The emotion of anger, which may vary in intensity and modality, arises as a reaction to frustrations, as a response of people to the prevention of the satisfaction of their motives. Anger is associated with aggression and a tendency to seek change in the behaviour of the other in communication (Milovanović, 2015). In teaching, the recognition of anger and its correlates (anxiety, irritability, impatience) invites teachers to reconsider their own messages, consider the situational context and modify the teaching method. Boredom and disinterest are emotional reactions through which the subject reacts to situations that do not offer him the possibility to satisfy any of his wishes. The purpose of boredom and disinterest is to motivate activity that is aimed at abandoning a situation in which there is no satisfaction or stimulation (Rimé, 2007). Boredom, as well as fear, are considered to be unwanted and harmful emotions in education, and in this sense, recognizing the facial expressions of boredom and fear is invaluable in communicating with students (Rothwell, 2004). Since fear is an innate emotion that arises as a reaction to real or imaginary threats of injury, it blocks cognitive functions and narrows the repertoire of possible reactions to a single one: fleeing a situation that is perceived as threatening. In addition, the physiological processes that represent an integral part of fear may result in the development of psychophysiological disorders. Sadness is an emotion that appears as a reaction to the loss of something important. The facial appearance of sadness transmits the message “I am suffering, I need help”. Recognizing the correlates of suffering, such as sadness, disappointment and discouragement, triggers an empathic reaction in most people and ensures, when it comes to teachers, a reaction that involves compassion and support (Milders et al., 2006). This type of reaction of teachers is priceless, not only in terms of cognitive activity, but also taking into account the significance of support in the prevention of numerous psychopathological phenomena in youth, primarily the prevention of depression and related conditions (Mercer & Littleton, 2007).

The results obtained in the final assessment are encouraging, since pleasure and satisfaction are emotions that usually represent a response to needs being met and wishes being fulfilled. Unlike the negative emotions, that signal danger and narrow the focus by preparing the body to fight or flee, positive emotions signal safety which extends the scope of attention and allows us to see the whole picture

of some occurrence. Because there is a feeling of safety, the tendency to think about alternatives increases, expanding the repertoire of behaviour. Thinking becomes more creative and productive and the number of incentives for action increases and following stress, physiological functions quickly return to a peaceful state (Lyubomirsky et al. 2005). In interpersonal relationships, positive emotions encourage different behaviours, the purpose of which is to ensure that both sides win, i.e. cooperate and become more tolerant (Ainley et. al., 2005). Since positive emotions have a great value in the context of the cognitive activity, their encouragement and support will create a solid foundation for a constructive interaction and communication in the process of education (Adolphs, 2002).

These findings coincide with the findings of other researchers who deal with teaching at the primary school and secondary school age (Manning, 2007). The studies of emotions in teaching, which were conducted by Bognar and associates, have shown that the emotions of fear and boredom dominate teaching, but that it is possible to achieve a domination of pleasant emotions, which are a prerequisite for successful teaching, through a modified approach (Kragulj, 2011). When it comes to university teaching, research that was conducted at various university institutions in Serbia, has shown that fear represents a very dominant emotional reaction in the teaching of the English language (fear of making mistakes and of being negatively evaluated by others), but that applying an innovative model of teaching (integrating the teaching contents and applying affective strategies) can contribute to the ability of students to regulate their own emotions, to improve overall knowledge of language and enhance oral presentations in the English language (Ćirković-Miladinović, 2014a). As a reminder, studies in neuroscience have shown that emotions are broadly related to various cognitive processes such as attention, long-term memory, problem solving, decision-making. Estrada and associates have found that positive emotions increase intrinsic motivation (Estrada et al. 1994). Negative emotions cause attention problems, delayed decision-making latency and a deficit in inductive reasoning (Reed, 1977). In a traditional model of teaching, students who were irritable and bored were not able to learn and think effectively (Goleman, 1995).

Despite its shortcomings (the success of students in learning was not examined), we consider the findings of this research to be relevant, given that they point to a path that should be taken in the search for the models of teaching that trigger positive emotional reactions of students. One example of the innovative teaching model is the integration of the content and affective learning strategies in the English language classroom. This innovative model may enhance the knowledge quality not only in English but to make it possible for students to read texts in English and improve their professional skills, regulate their emotions, influence positively on their own motivation and attitudes towards teaching and

learning (Ćirković-Miladinović, 2014b). Such a new way of university teaching, will have an impact on many generations that will join the school and will improve the overall quality of knowledge and professional development. The teaching models that are new, unusual and avoid routine, trigger emotional reactions that ensure cognitive involvement (Rosiek, 2003). The current researchers also consider that the awareness of the significance, observation and proper interpretation of emotional expressions is the starting point that provides teachers with necessary information about the emotional state of students. The emotional state of students should represent a signpost in search for innovative teaching methods and methods of communication that trigger positive emotional responses which, in turn, enable students to feel safe and therefore involved and cognitively active.

CONCLUSION

Studies that deal with the emotional aspects of university teaching in our surroundings are extremely rare. The results of this research warn that more attention should be given to this issue. Worrying, anxiety, irritability, impatience, disinterest and boredom are dominant emotional reactions to traditional teaching, while positive emotional reactions of amazement, astonishment, impression, satisfaction, optimism and self-confidence are dominant emotional reactions to teaching organized on the basis of implementing Gestalt therapy techniques. These findings coincide with the findings of researchers whose results show that fear and boredom are dominant emotions in teaching, but also that it is possible to achieve a dominance of pleasant emotions, which are a prerequisite for successful teaching, through a modified approach. Since contemporary neuroscience has shown that emotions are broadly related to various cognitive processes such as attention, long-term memory, problem solving, decision-making, that positive emotions increase motivation and negative emotions cause attention problems, delays in the decision-making latency and a deficit in inductive reasoning, the findings of this research point to the path that should be taken in search for the models of teaching that trigger positive emotional reactions, prevent cognitive dysfunction and trigger intrinsic motivation.

REFERENCES

- Adolphs, R. (2002). Neural systems for recognizing emotion. *Current Opinion in Neurobiology*, Vol.12, No. 2, 169–177.
- Ainley, M., Corrigan, M., and Richardson, N. (2005). Students, tasks and emotions: Identifying the contribution of emotions to students' reading of popular culture and popular science texts. *Learning and Instruction*, 15(5), 433–447.
- Buckley, M. and Saarni, C. (2009). Emotion Regulation. In: R. Gilman, E. S. Heubner i M. J. Furlong (Eds.), *Handbook of positive psychology in the schools* (107–118). Mahwah, NJ: Lawrence Erlbaum.
- Chica, A. B., Bartolomeo, P., and Lupiáñez, J. (2013). Two cognitive and neural systems for endogenous and exogenous spatial attention. *Behavioural Brain Research*, 23, 7107–123.
- Chabot, D., Shabot, M. (2004). *Emotional Pedagogy*. Canada: Trafford publishing Victoria, B C
- Cabanac, M. (2002). What is emotion? *Behavioural Processes* 60 (2): 69-83.
- Ćirković-Miladinović, I. (2014a). *Zastupljenost afektivnih strategija učenja engleskog jezika kod studenata na nematičnim fakultetima*. PhD thesis defended on 4/6/2014 at the Faculty of Philosophy in Novi Sad, University of Novi Sad. Mentor: Dr Biljana Radić-Bojanić, assistant professor.
- Ćirković-Miladinović, I. (2014b). Language learning strategies used by adult learners: benefits for the teacher as a researcher. *Andragogical Studies - Journal for the Study of Adult Education and Learning*, 2014–1, 171–190.
- Damasio, A. (2002). Subcortical and cortical brain activity during feeling of self-generated emotions. *Nature neuroscience* 3(10):1049–56
- Ekman, P. (2011). *Razotkrivene emocije*. Beograd. Zavod za udžbenike.
- Ellis, A. (1962). *Reason and emotion in psychotherapy*. Secaucus, NJ: The Citadel Press
- Fredrickson, B. L. and Branigan, C. (2005.). Positive emotions broaden the scope of attention and thought-action repertoires. *Cognition and Emotion*, Vol. 19, No.3, 313–332.
- Gläser-Zikuda, M., Stuchlíková, I., Janík, T. (2013). Emotional Aspects of Learning and Teaching: Reviewing the Field – Discussing the Issues. *Orbis Scholae*, 7 (2)7–22
- Goleman, D. (1995). *Emotional Intelligence*. Bantam Books: New York.
- Johnson, K.J and Fredrickson, B. L. (2005). Positive Emotions Eliminate the Own-Race Bias in Face Recognition, *Psychol Sci*. Nov 16(11): 875–881.
- Kort, B. Reilly, R. Picard, R. (2001). An Affective Model of Interplay Between Emotions and Learning: Reengineering Educational Pedagogy–Building a Learning Companion. *Proceedings of ICALT 2001*, Madison Wisconsin.
- Kragulj, S. (2011). Odgojno-obrazovna klima u sveučilišnoj nastavi. *Život i škola*, 25 (1), 35-60.
- Lyubomirsky, S., Sheldon, K. M., Schkade, D. (2005.). Pursuing happiness: The architecture of sustainable change. *Review of General Psychology*, Vol. 9, No.2, 111–131.
- Milovanović, R. (2008). Primena geštalt terapijskih konceptata u nastavi. *Uzdanica*. V (2):186-195.
- Milovanović, R. (2015). Effectiveness of prospective lower primary and kindergarten teachers in the interpretation on facial expressions, *Procedia - Social and Behavioral Sciences* Vol. 203 (2015) p.42–49.

- Mercer, N., Littleton K. (2007). *Dialogue and the development of children's thinking—A sociocultural approach*. London: Routledge
- Milders, M., Sahraie, A., Logan, S., Donnellon, N. (2006). Awareness of faces is modulated by their emotional meaning. *Emotion*, Vol. 6, No.1, 10-17
- Manning, J. B. (2007). Emotions in Education: Toward an Integrative Understanding of Affect and Cognition in Learning. *The Heinz School Review*, 4, (1):153-168
- Neisser, U. (1967). *Cognitive Psychology*. Englewood Cliffs, NJ: Prentice Hall
- Nevis, E. (2000). *Introduction in Gestalt therapy: Perspectives and Applications*. Edwin Nevis (ed.). Cambridge, MA: Gestalt Press. p. 3.
- Ochsner KN, Gross JJ (2008) Cognitive emotion regulation. *Curr Dir Psych Sci* 17:153-158.
- Oatley, K., Jenkins, J. M. (2003). *Razumijevanje emocija*. Jastrebarsko: Naklada Slap
- Perls, F. (1969). *Geštaltistički pristup psihoterapiji*. Beograd: Vuk Karadžić
- Perls, F., Hefferline, R., and Goodman, P. (1951). *Gestalt therapy: Excitement and growth in the human personality*. New York: Julian Press
- Rothwell, J. D. (2004). *In the Company of Others: An Introduction to Communication*, New York: McGraw-Hill
- Rimé, B (2007). The Social Sharing of Emotion as an Interface Between Individual and Collective Processes in the Construction of Emotional Climates. *Journal of Social Issues*. 63 (2): 307–322.
- Rosiek, J. (2003). Emotional Scaffolding: An Exploration of the Teacher Knowledge at the Intersection of Student Emotion and the Subject Matter, *Journal of Teacher Education* 54: 399-412
- Shabot, D., Shabot, M. (2009). *Emocionalna pedagogija*. Zagreb: Eduka
- Salovey, P., Mayer, J., Caruso, D. (2004). Emotional Intelligence: Theory, Findings, and Implications”, *Psychological Inquiry*, Vol.15, No. 2, 197–215
- Sutton, R. E. (2004). Emotional regulation goals and strategies of teachers. *Social Psychology of Education*, 7(4), 379–398.
- Sutton, R. E., Mudrey-Camino, R., and Knight, C. C. (2009). Teachers' emotion regulation and classroom management. *Theory Into Practice*, 48(2), 130–137.
- Sternberg, R. J., and Sternberg, K. (2009). *Cognitive psychology* (6th Ed.). Belmont, CA: Wadsworth, Cengage Learning.
- Spagnuolo Lobb, M., and Amendt-Lyon, N. (Eds.). (2003). *Creative license: The art of Gestalt therapy*. New York: Springer Wein.
- Tadić, N. (2004). *Psihoanalitička psihoterapija dece i mladih*. Beograd: Narodna knjiga
- Warren, M. (2004). Cognitive psychology and anxiety. *Psychiatry*, 3 (4): 6–10
- Woldt, A. (2009). Gestalt Pedagogy – Creativity in Teaching *Gestalt Review*, 3(2):135-148,
- Woldt, A. (2008). *Gestalt therapy syllabus*. Kent, OH: Kent State University. Unpublished manuscript, p. 2
- Zinker, J. (1977). *Creative process in Gestalt therapy*. New York: Random House.

Marko Gavriloski
University of Primorska, Faculty of Education
Koper, Slovenija

UDC 378.014.5
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A SHIFT TOWARDS THE BALANCE BETWEEN INTRINSIC AND EXTRINSIC CHARACTERISTICS OF HIGHER EDUCATION WITH THE PURPOSE OF QUALITY ASSURANCE

Abstract: The purpose of the paper is to explain the importance of balancing the relationship between intrinsic and extrinsic characteristics of higher education. Only with a clear understanding and balance of this relationship and in accordance with the objectives of university education, the current researchers can analyse in a precise manner how to determine and how to ensure the quality of both parts. For the university to maintain a key historical and social role in contemporary society, higher education must maintain a balance between seeking the truth (providing knowledge) and the social services offered by such education. Due to the numerous changes in higher education (the Bologna Reform, the growth of the number of students, the multitude of higher education institutions, the imbalance between outgoing costs and public funding etc.) over the past twenty years, the focus of quality measuring has shifted more towards the extrinsic part.

This model of balance between the two parts will serve to explain how we can determine (means) and ensure (objective) the quality and excellence of higher education teaching (process), which only acquires its significance when it is connected with students' learning outcomes, motivation and student-centred approaches. This process must be planned, systematic and harmonious (in line with all stakeholders and objectives of education). In the conclusion of the paper, we propose, among other things, the introduction of conceptual mapping, which can increase the quality of higher education teaching as well as learning.

Keywords: extrinsic and intrinsic characteristics, quality of higher education, quality of higher education teaching, quality assurance.

INTRODUCTION

There were no previous or later individual questions that shook the European higher education system in the way that the establishment of the European Higher Education Area (EHEA) through the implementation of the Bologna Reform (1999) did (Roche, 2014). In addition to the establishment of the EHEA

and the realization of two objectives (easily readable and comparable level and the establishment of an undergraduate and postgraduate cycle), the introduction of the Bologna Process also highlighted the key issue of quality assurance in higher education. The result of quality assurance should be the increased mobility of students who would have quality and equivalent study programmes in a transparent European Higher Education Area at their disposal (Eurydice, 2015). However, the question of the quality of higher education did not emerge with the signing of the Bologna Reform, because the quality was in different ways always a part of the historical and social role of the university. In the 1990s, due to certain external factors¹ and in the form of audits, accreditations and evaluations, quality determination and assurance were becoming increasingly implemented in the field of higher education, with higher education institutions beginning to adopt this managerial-entrepreneurial model of understanding and assuring the quality (Vroeijenstijn, 1995; Schwartz and Westerheijden, 2004). As summarized by Serrano-Velarde and Stensaker (2010), countries initially set up national quality assurance agencies (Stensaker et al., 2006), resulting in external control and the transfer of responsibility to these agencies. Consequently, internal quality assurance systems and procedures (Reichert and Tauch, 2005) were introduced, of course, with numerous external indicators that were focused merely on a few aspects of the so-called measurable (quantitative) quality.

Critics reproach the Bologna Reform and particularly the external systems of quality determination and assurance that they have departed from the classic ideas of Humboldt's model (Serrano-Velarde and Stensaker, 2010) as well as their focus on quantity, neoliberal influence, emphasizing competitiveness, productivity and entrepreneurship as well as using managerial concepts and approaches. Palfreyman (2008) even labelled the Bologna Reform as unsuccessful, since universities² have largely not adapted (or adapted too slowly) to the social conditions and needs of the economy (Palfreyman, 2008) and began to focus more on the so-called extrinsic values of higher education even before the introduction of the reform (Van Vught and Westerheijden, 1994). On the other hand, the introduction of a business model of quality and the instruments for ensuring this quality in higher education institutions in connection with higher education teaching and learning should be understood also in the context of the development of a market economy in the 1980s and 1990s (Saarinen, 2007; Westerheijden, 2007).

The key emphasis of the paper touches upon the relationship between intrinsic and extrinsic characteristics of higher education. In order for a university

1 Massification of higher education, deregulation of higher education systems, constraints on government funding and neoliberal influences (Scwarz and Westerheijden, 2004).

2 With the exception of traditionally excellent ones in the United Kingdom, Australia, New Zealand and the USA, which did not have to adapt.

and its members to retain the key historical and social role defined by Van Vught and Westerheijden (1994), higher education must maintain a balance between seeking the truth and providing knowledge (intrinsic aspect) and the social services offered by such education (extrinsic aspect). According to Van Vught and Westerheijden (1994), the quality of higher education is ensured precisely by an appropriate combination of both aspects. However, in the light of the reforms of higher education in the last 20 years – in particular the Bologna Reform – the understanding, measuring and ensuring the quality of higher education have also changed, especially if one connects this with the abovementioned critiques. Today, it is known that quality on the one hand must not be the objective of higher education, but on the other hand, the emphasis must not be solely on assessing this quality. When reviewing the Rules of Quality of the University of Primorska (UP) and the structure of the self-evaluation report for the educational activities of the University of Primorska, the Faculty of Education (UP PEF), the emphasis seems to lie mainly on the extrinsic characteristics and values that emphasize the transition, satisfaction and employability of students. Of course, this does not reflect the transformational quality (Harvey and Green, 1993) and does not say anything about the ways of thinking (for example, critical thinking, reflection and conceptual mapping). Precisely the development of these qualities and competences and the connection between determining and ensuring the quality of higher education with students' learning outcomes can be a prerequisite for raising quality, easier adaptation and response to social changes as well as facing the social reality and the challenges of the 21st century.

In continuation, the current researchers focus only on one of the UP members, i.e. the Faculty of Education (UP PEF). Despite the fact that the curricula of the study programmes of the UP PEF reflect this relationship, the question is why in monitoring, determining and ensuring quality we refer only to statistical indicators that fall within the scope of the extrinsic characteristics of higher education. One of the fast answers lies in the exactness of the results, where such indicators can be obtained with the statistically relevant and representative data, with which the funds used can be justified. However, this is just a small part of a complex understanding of the quality of higher education. Such an understanding of quality can be dangerous for higher education teaching, since all stakeholders at this stage of education can be satisfied too quickly with partial answers and consequently do not develop other than achieving a certain level of set indicators. This can only lead to a greater bureaucratization of the educational process.

The development of innovative models and teaching practices is of utmost importance, but we also need to understand the purposes and objectives, the relationship and functioning of intrinsic and extrinsic characteristics as well as the

structure and dynamics of massification of higher education and know how we can measure – in order to improve – critical thinking, (critical) reflection, learning outcomes and similar indicators of the intrinsic part of higher education. The proposed solutions lead towards the balancing of intrinsic and extrinsic characteristics, with the emphasis on the construction of conceptual maps of students of the University of Primorska, Faculty of Education.

FROM THE QUALITY OF HIGHER EDUCATION TO THE QUALITY OF HIGHER EDUCATION TEACHING

Approximately twenty years ago it was established that the notion of quality is not new, although at the same time, due to some external factors, the academic world began to increasingly focus on quality (Vroeijenstijn, 1995), it is now completely clear that without a concrete definition of determining and ensuring the quality of university education, the higher education institutions cannot exist. Along the numerous pieces of research and definitions of the quality of university education, many authors (Harvey and Green, 1993; Jarvis, 1995; Vroeijenstijn 1995; Tam, 2001; Anderson, 2006; Westerheijden, 2007; Chi-Kin Lee and Day, 2016; João Rosa and Amaral, 2014, Eggins, 2014) are still discovering that defining quality in higher education is complex and challenging, especially when this concept is confronted with the processes of quality measurement and assurance, with the excellence of teaching and students' learning outcomes. Regardless of the complexity of the definition, it is currently obvious that each higher education institution sets its own quality indicators and is in line with its objectives and carries out the activities that are then evaluated in one way or another.

As determined by Harvey and Green (1993) – still the main references when talking about the quality of higher education – before their definition, not a lot was written about quality as a concept. The authors mainly dealt with “quality control, assurance, management, audit, evaluation, policies and financing” (Harvey and Green, 1993, p. 10) and did not define the concept. Quality must be seen through related aspects of different levels, which are summed up by the authors into five interconnected ways of understanding quality, which is illustrated by the following scheme:

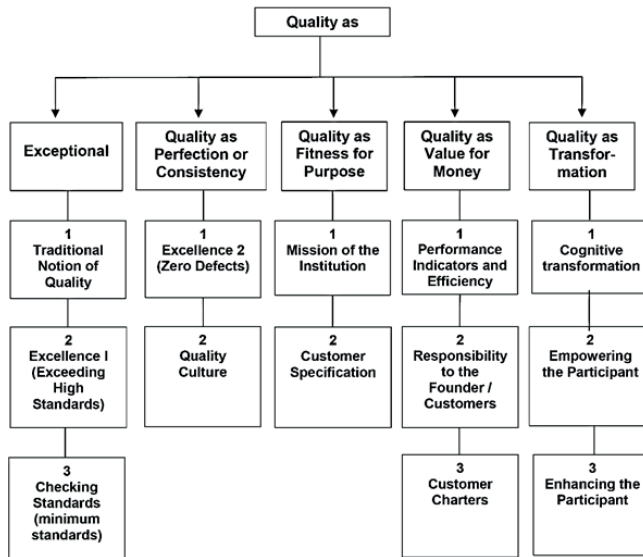


Table 1. Representation of understanding quality (Harvey and Green, 1993, pp. 11–27)

The current researchers have summarized this rough understanding of quality primarily because there will be a return to some starting points in continuation. Of course, it should be emphasized that none of the above aspects of quality can be dealt with separately because they are more or less connected with one another. In other words, in order to achieve quality standards, quality monitoring and assurance must be balanced across all five aspects. Attention must also be paid to the distinction between quality and the processes of quality assurance and measuring, since, regardless of how we perceive quality, “these processes do not necessarily define or improve it, but merely try to ensure that the pre-specified quality level is achieved” (Holt, Palmer and Challis, 2008, p. 5).

With the help of various authors, Cvetek (2015) outlined an extremely transparent development of the understanding of the quality of higher education, teaching and learning from the 1990s onwards, leaning on Oliver (2003) in the key point of defining quality. With the help of Biggs’s (1989) 3P model of learning, the latter proposed that each quality model should contain both teaching and learning, each of which should further include the input, process and effect factors (Oliver, 2003). Without this construction, the current researchers cannot talk about the quality of teaching and learning in higher education. This type of model is also followed by the University of Primorska and it would make sense that it would further upgrade it with the recommendations set out in the Report to the European Commission on Improving the Quality of Teaching and Learning in Europe’s Higher Education Institutions. Of the 16 recommendations, Cvetek

(2015) mentions 4 extremely important ones: 1) didactic, continuous and compulsory training of higher education teachers; 2) taking into account the assessment of the didactic competence of higher education teachers; 3) developing and monitoring curricula through a partnership dialogue between pedagogical staff, students, graduates and labour market actors; 4) support for higher education teachers in introducing the ICT into the process of teaching and learning (Cvetek, 2015). Attention should be paid, however, to prevent this from resulting merely in bureaucratic compliance with certain regulations, only because it is necessary, but rather encouraging quality and planned professional development of higher education teachers. The question is also how to determine (measure and monitor) the quality of these processes.

	teaching	learning
inputs elements and attributes which describe pre-conditions for successful teaching and learning	<ul style="list-style-type: none"> • course establishment and course review processes • curriculum specifications • course materials & resources • teacher qualifications and currency • strategic plan for teaching and learning • facilities and resources for teaching and learning 	<ul style="list-style-type: none"> • student selection and entry into courses • students' progression through courses
processes elements and attributes which describe on-going conditions for successful teaching and learning	<ul style="list-style-type: none"> • provision of appropriate learning experiences • work, community and professional engagement • assessment procedures • student support 	
outputs elements and attributes which describe post-conditions from successful teaching and learning	<ul style="list-style-type: none"> • continuous improvement in teaching processes • reflective practice and ongoing commitment to continuous • improvement in teaching processes 	<ul style="list-style-type: none"> • graduates are employable in various ways • graduates can demonstrate outcomes • course satisfaction and attitudes

Table 2. A model describing the quality of teaching and learning (Oliver, 2003)

Cvetek (2015) warns that in the processes of determining and ensuring the quality of higher education, there is a trap or a dilemma what should be pursued in these processes: accountability or improvement. Quality is related to the objectives of an individual study program or faculty/university. In each study programme, in addition to the objectives, the general and subject-specific competences that graduates should obtain are listed as well; with this, they should also develop a critical attitude towards contents, a systematic way of thinking, an understanding of complex concepts, a convincing way of writing etc. When talking about this dimension, it is specifically about the tendency for improvement; therefore it also must take into account the tendency for accountability (to

different stakeholders). The first is connected with the future (development model), the second with the past (“defending the actions”) (Entwistle, 1993 in Cvetek 2015). These are just two aspects of understanding of quality, as defined by Harvey and Green (1993) or of the effect of teaching and learning according to Oliver (2003). Van Vught and Westerheijden (1994, p. 356) also write about this and they emphasize that throughout history, higher education has always included both the intrinsic (“the ideal of seeking the truth, pursuit of knowledge”) and extrinsic qualities (“services the higher education institutions provide to the society”). Later on, Ewel (2009) and Borden (2010) discussed precisely this relationship. While Ewel (2009) mentions two types of paradigms (improvement paradigm and accountability paradigm), Borden (2010) draws attention to the paradox caused by the requirement to provide both aspects. The demand for accountability comes from external stakeholders, while the demand for improvement stems from the internal imperative and represents the centre of professional development. Precisely external control or the so-called justification leads to systemic distrust of the professional knowledge of higher education teachers (Borden, 2010).

	Assessment for Improvement Paradigm	Assessment for Accountability Paradigm
Strategic Dimensions		
<i>Intent</i>	Formative (Improvement)	Summative (Judgment)
<i>Stance</i>	Internal	External
<i>Predominant Ethos</i>	Engagement	Compliance
Application Choices		
<i>Instrumentation</i>	Multiple/Triangulation	Standardized
<i>Nature of Evidence</i>	Quantitative and Qualitative	Quantitative
<i>Reference Points</i>	Over Time, Comparative, Established Goal	Comparative or Fixed Standard
<i>Communication of Results</i>	Multiple Internal Channels and Media	Public Communication
<i>Uses of Results</i>	Multiple Feedback Loops	Reporting

Table 3. Two assessment paradigms (Ewell, 2009)

Despite the fact that Ewell (2009) described this type of distinction as ideal, since virtually none of the existing assessment approaches is in line with both paradigms and in his opinion, the differences between the two paradigms are exaggerated, this conceptual tool can help to eliminate some fundamental tensions associated with the implementation of quality assessment (Ewell, 2009). This definition will be returned to later in the paper.

CHALLENGES IN DETERMINING AND ENSURING THE QUALITY OF HIGHER EDUCATION

The processes of determining and ensuring the quality of higher education differ and, as Holt, Palmer and Challis (2008) mention, do not necessarily define quality nor improve it. On the basis of the analysis of 400 articles published by the international magazine *Quality and Higher Education*, Harvey (2011) concluded that until then 1) there were few theoretical discussions about quality and quality assurance, 2) that the quality of higher education does not coincide with the quality assurance systems, 3) that there is considerable confusion in understanding quality and quality standards, 4) that quality assurance is characterized by a lack of trust and expensive bureaucratic procedures, although the latter have established a certain level of transparency, 5) that a mistake was made at the very beginning, when quality assurance was linked to the improvement of the students' learning. Based on these findings, Harvey concludes that the quality assurance process has failed to integrate the quality culture with academic culture (Harvey, 2011). The attempts to solve the above problems are still ongoing and an overview of studies and researches on quality and quality assurance in higher education (Eggins, 2014; Fadeeva, Galkute, Mader and Scott, 2014; João Rosa and Amaral, 2014; Chi-Kin Lee and Day, 2016) shows that there is an active engagement in this area in order to answer the key issues of *what is quality* and *how to successfully ensure quality in higher education*. Westerheijden (2014) notes that the activities and the implementation of higher education are multidimensional, while also criticizing the current system of classifying higher education institutions on scales of excellence because they do not take into account institutional horizontal and vertical diversity. However, this falls into a completely different debate, although it is indirectly connected with these issues as well.

In 2005, the European Association for Quality Assurance in Higher Education adopted the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). Westerheijden and Kohoutek (2014) emphasize that the implementation of these standards and guidelines strongly depends on the so-called national translation, which in other words means that each institution should ensure that determining and ensuring the quality is adapted to the objectives, specifics, attitudes and needs of all stakeholders in a higher education institution. Based on a review of the fundamental authors from the subject area, Cvetek (2015) speculates that “in Slovenia, quality is considered (and understood) primarily as ‘quality assurance’, while the very concept (quality) remains unclear and undefined or blurred with semantically empty expressions and phrases such as excellence, usability for customers etc.” (Cvetek 2015, p. 20). In connection to this, he stresses that, precisely because of constant dealing with quality, references to quality, pursuit and assurance of the quality of higher education, in Europe and

in the world, there are increasing tendencies to return to the understanding of “quality as the virtue of the academic community, which must be the subject of a constant critical assessment and endeavour for the improvement, stemming from the university itself or from within” (Ibid.).

THE RULES OF QUALITY OF THE UNIVERSITY OF PRIMORSKA AND THE SELF-EVALUATION REPORT OF THE UP PEF

The Rules of Quality of the University of Primorska “determine the organization, responsibilities and the system of quality management at the UP” (The Rules of Quality of the University of Primorska, 2015, p. 3). Considering the fact that the Rules of Quality are prescribed by the Criteria for Accreditation and External Evaluation of Higher Education Institutions and Study Programmes, adopted by the Council of the Slovenian Quality Assurance Agency for Higher Education, this is an external regulation, which belongs to the accountability paradigm mentioned by Ewell (2009). While the Rules of Quality of the UP (2015) define the elements of the quality system at the UP, they do not determine the elements of the quality of higher education teaching and learning. In order to improve the study activity, according to the Rules of Procedure, it is monitored by “conducting surveys among students and graduates, monitoring the burden of students in accordance with the ECTS, obtaining information on employers’ satisfaction with the competences that the graduates of the UP achieved during their studies at the UP”. In addition, with the quantitative methodology, the satisfaction of the students of the UP is also monitored, including the monitoring of the graduates of the UP. The aforementioned criteria do not specify precisely with which methodology (quantitative or qualitative) the institution has to collect data, nor how to ensure and improve quality. It is only important that this is performed and that it is precisely defined. This means that each institution can decide how to address these issues. Regardless of the manner in which it addresses them, it is important that both accountability and improvement dimensions are balanced. However, this is not evident from the Rules of Quality of the UP and as will be seen in continuation, nor from the self-evaluation report.

The abovementioned criteria and the Rules provide for the establishment of self-evaluation, which encourages both the university and the individual members to improve quality in all areas of operation. An example of the self-evaluation report of the UP PEF shows that the educational activity indicators are: a) the percentage of students enrolled in the first year for the first time in the first application deadline, b) the average number of points of the accepted candidates, c) the numerical ratio between the available places, the applicants and the enrolled students in the first year (without repeaters), c) the transition to higher years, d) the

percentage of repeaters in study programmes; e) the average number of years of study duration, f) the number of students per employed higher education teacher, g) the assessments of higher education teachers and co-workers in student surveys, and h) the employment and employability of graduates. These indicators correspond only to the accountability paradigm (Ewell, 2009) and belong to the area of extrinsic characteristics (Van Vught and Westerheijden, 1994). They testify only about the users' satisfaction and the accountability to the founder (Harvey and Green, 1993) and although it is written with many indicators that they do not reflect quality, they are nevertheless presented as indicators that fall under the framework of the UP's Rules of Quality. In any case, these indicators do not tell anything about the intrinsic characteristics of higher education or the knowledge and critical reflection (Van Vught and Westerheijden, 1994) as well as about the transformation as one of the key aspects of quality (Harvey and Green, 1993) of higher education.

CONCLUDING REMARKS: PROPOSALS FOR BALANCING

In the central part of the paper, the current researchers have demonstrated to a very limited extent the complexity of understanding the quality of higher education as well as teaching. Through the discussion, the conditions for understanding the balance of the relationship between the intrinsic and extrinsic characteristics of university education have been outlined, which in other words means that the current researchers cannot pursue merely the knowledge or merely the services that higher education institution provides to the society. Both poles have to be connected, which consequently means that determining and ensuring the quality of higher education must be linked as well. At present, the quality or the quality assurance at the University of Primorska is focused more on the assessment based on the accountability paradigm (Ewell, 2009) and is not connected among itself. Although the improvement paradigm of the pedagogical process is taking place, it is not as planned and connected as it could be. Ensuring the quality of higher education must be at an extremely high level with guaranteed high academic standards, with the university assuming the key role and responsibility for achieving this (Resolution on the National Higher Education Programme in Slovenia for the period 2011–2020). University chancellors also committed themselves to this in a resolution regarding the commitment of Slovene universities for developing a quality culture (Commitment of Slovene universities to Develop a Quality Culture, 2012). However, such definitions are insufficiently concrete to cause important changes in the quality of teaching and learning. Cvetek (2015) even cites a number of studies that show 1) that changes in teaching approaches are too slow if the didactic training of teachers is not intense (Postareff, Lindblom-Ylänne and

Nevgi, 2007 in Cvetek, 2015); 2) that changes in the beliefs and attitudes of university teachers are possible only with long-term and profound understanding of teaching and learning by the teachers (Norton, Richardson, Hartley, Newstead and Mayes, 2005 in Cvetek, 2015); 3) there is a positive correlation between didactic training of teachers and the use of a deep approach to teaching and learning (Gibbs and Coffey, 2004 in Cvetek, 2015).

In the academic year 2018/2019, at the University of Primorska, the Faculty of Education, a cycle of training courses in the field of higher education didactics is under way, with an emphasis on effective learning and teaching strategies in higher education. The training is carried out within the framework of the project *Innovative Learning and Teaching in Higher Education (INOVUP)*, where the aim of the project is to ensure and improve the quality of higher education by introducing more flexible forms of learning and teaching. The key question that arises in this regard is how the effects of such courses and training will be measured or monitored in the future and whether the positive changes in the form of learning outcomes, feedback and nonetheless the cognitive transformation, the transformative quality and empowerment as well as improvement of the user (Harvey and Green, 1993), will be actually seen, perceived and taken into account in the further quality assurance process.

Due to the exceptional role it has in the field of and education, the University of Primorska, the Faculty of Education, can play a pivotal role in this and also on the basis of the recommendations below develops and implements a long-term model of determining and ensuring the quality of higher education, which will not be based solely on the extrinsic characteristics, quantitative indicators and accountability paradigm. It would be sensible that the Rules of Quality of the University of Primorska would also include measures for achieving the improvement dimension. Thus, in line with the above findings and with the aim of balancing the intrinsic and extrinsic characteristics of higher education, we present the proposals that have already been defined by Cvetek (2015):

- Introduction of a pedagogical portfolio in the process of self-evaluation of higher education (described in more detail in Cvetek, 2015);
- Compulsory and intensive didactic training of higher education teachers and colleagues;
- Active, planned and deliberate cross-subject networking;
- Introduction of conceptual maps in teaching and learning (described in more detail in Hay, Kinchin and Lygo-Baker, 2008; Vanhear, 2012; Kinchin, 2014; Pai, 2016);
- Preparation and implementation of a qualitative methodology for monitoring

the effects and learning outcomes of the introduction of new and more flexible teaching and learning methods;

- Development and use of the assessment of teaching and learning based on the improvement paradigm;
- Collegial observation of teaching by higher education teachers and colleagues;
- Introduction of collegial mentorship to higher education teachers and colleagues;
- Recording of higher education teaching with subsequent analysis with the purpose of improvement;
- Preparation and implementation of short, one-year and multi-year training courses for the improvement in the field of higher education didactics based on the Finnish model (Postareff, Lindblom-Ylänne and Nevgi, 2008 in Cvetek, 2015);
- Systematic and long-term set of measures for the precise defining, monitoring and improvement of higher education teaching and learning;
- Systematic and accurate monitoring and encouragement of the development of critical thinking, reflection and conceptual mapping of students.

The mentioned proposals represent only the beginning of the shift in perceiving the importance of interconnectedness of higher education teaching and learning with the quality of higher education. With such measures, we should be careful not to wander off into the bureaucratization of processes, where an organization would deal exclusively with the processes of determining the quality and not with the results of these processes, namely quality assurance and the improvement paradigm. The vision and the objectives have already been set by higher education institutions; there are also numerous good practices in the European Higher Education Area, which we must only recognize and adapt to the needs of our institution and all stakeholders. After all, it will not be superfluous if we return – as pointed out by Cvetek (2015) – to that quality which we recognize as a virtue of the academic community and which the academic community recognizes as important, critically evaluates it and aims at improving it.

REFERENCES

- Borden, V. M. H. (2010). *The Accountability/Improvement Paradox*. Accessible at <http://www.insidehighered.com/node/19231/atom.xml>.
- Cvetek, S. (2015). *Učenje in poučevanje v visokošolskem izobraževanju. Teorija in praksa*. Ljubljana: Buča.
- Eggin, H. (Ed.) (2014). *Drivers and Barriers to Achieving Quality in Higher Education*. Rotterdam: Sense Publishers.
- European Commission/EACEA/Eurydice. (2015). *The European Higher Education Area in 2015: Bologna Process Implementation Report*. Luxembourg: Publications Office of the European Union.
- Ewell, P. T. (2009). *Assessment, Accountability, and Improvement: Revisiting the Tension* National Institute for Learning Outcomes Assessment. Accessible at http://www.learningoutcomeassessment.org/documents/PeterEwell_005.pdf.
- Fadeeva, Z., Galkute, L., Mader, C., Scott, G. in Mohun, S. (Ed.) (2014). *Sustainable Development and Quality Assurance in Higher Education Transformation of Learning and Society*, Palgrave Macmillan.
- Harvey, L. in Green, D. (1993). Defining Quality. *Assessment & Evaluation in Higher Education* 18(1), 9–34.
- Harvey, L. (2011). Twenty years of trying to make sense of quality assurance: the misalignment of quality assurance with institutional quality frameworks and quality culture. In *Building bridges: Making sense of quality assurance in European, national and institutional contexts. a selection of papers from the 5th European quality assurance forum*. Accessible at https://www.eurashe.eu/library/wgsii-7_papers_harvey-pdf/.
- Holt, D. in Palmer, S. (2008). Strategic Leadership and its Contribution to Improvements in Teaching and Learning in Higher Education. *Higher Education Research and Development* 30(6), 807–821.
- João Rosa, M. in Amaral, A. (Ed.) (2014). *Quality Assurance in Higher Education Contemporary Debates*. Palgrave Macmillan.
- Oliver, R. G. (2003). Exploring benchmarks and standards for assuring quality online teaching and learning in higher education. *Proceedings of Open and Distance Learning Association of Australia Biennial Forum*, Canberra (pp. 79–90). Accessible at <https://ro.ecu.edu.au/ecuworks/3279/>.
- Palfreyman, D. (2008). The legal impact of Bologna implementation: exploring criticisms and critiques of the Bologna process, *Education and the Law*, 20(3), 249–257.
- Poslovník kakovosti Univerze na Primorskem 2015*. Accessible at <https://www.upr.si/sl/univerza/kakovost>.
- Reichert, S. in Tauch, C. (2005) *Trends IV: European Universities Implementing Bologna*, Brussels: European University Association (EUA).
- Resolucija o nacionalnem programu visokega šolstva v Sloveniji za obdobje 2011–2020* (ReNPVŠ11-20). (2011). Uradni list RS, št. 92/07 in 105/10 (21/5/2011). Accessible at <http://pisrs.si/Pis.web/pregledPredpisa?id=RESO71>.
- Roche, S. (2014). Perception versus reality: understanding the intrinsic and extrinsic determinants of success in education. *International Review of Education*, 60(1), 1–5.

- Samoevalvacijsko poročilo za izobraževalno dejavnost za študijsko leto 2015/2016* (UP PEF). Accessible at https://www.pef.upr.si/predstavitev_fakultete/skrb_za_kakovost/.
- Schwarz, S. in Westerheijden, D. F. (2007). Accreditation in the Framework of Evaluation Activities: A Comparative Study in the European Higher Education Area. In S. Schwarz and D. F. Westerheijden (Ed.), *Accreditation and Evaluation in the European Higher Education Area*. Springer.
- Serrano-Velardea, K. in Stensakerb, B. (2010). Bologna — Realising Old or New Ideals of Quality? *Higher Education Policy* 23(2), 213–226.
- Stensaker, B., Enders, J. in de Boer, H. (2006). *The Extent and Impact of Higher Education Governance Reforms across Europe, Comparative Analysis*, Enschede: CHEPS/CHE/ESMU/NIFU STEP.
- Vroeijenstijn, A. I. (1995). *Improvement and Accountability: Navigate between Scylla and Charybdis. Guide for External Quality Assessment in Higher Education*. Higher Education Policy Series 30. London/Bristol: Jessica Kingsley Publishers.
- Westerheijden, D. F. (2007). The Changing concepts of quality in the assessment of study programmes, teaching and learning. In A. Cavalli (Ed). *Quality Assessment for Higher Education in Europe* (pp. 5–16). London: Portland Press Ltd.
- Zavezanost slovenskih univerz za razvoj kulture kakovosti* (2012). Accessible at http://www.rkrs.si/gradiva/rkrs_2015/rkrs-resolucija.pdf.

BIOGRAPHIES OF AUTHORS

Barbara Baloh, PhD (1970) is an Assistant Professor of Slovene teaching methodology at the Faculty of Education of the University of Primorska. Her main research interest lies in issues connected with the development of linguistic competences (in the first and second language). Especially relevant are her publications in which she combines socio-linguistic approaches and language teaching methodology with the language of the environment and literacy teaching in a second language, as well as the publications in which new approaches to language teaching to preschool and school-age children are considered. Her current research involves exploring linguistic and socio-linguistic aspects of child development, in particular the effect of storytelling on preschool and school-age children in a monolingual or plurilingual environment, the learning and teaching of the Slovenian language as a mother tongue, second and foreign language and the pre-literacy and literacy activities in a monolingual or plurilingual environment.

E-mail: barbara.baloh@pef.upr.si

Silva Bratož, PhD (1970) is an Associate Professor of English at the Faculty of Education of the University of Primorska, Slovenia, where she teaches several courses in the area of foreign language teaching. She earned her PhD in linguistics from the Faculty of Arts, University of Ljubljana. She has researched and published articles in the area of the methodology of foreign language teaching to young learners, second language teaching and acquisition, cognitive linguistics, and metaphor theory. Her current research focuses on pre-service teachers' attitudes towards multilingualism and foreign language learning, exploring the potential of classroom interaction in English and applying cognitive linguistics principles in SLT.

E-mail: silva.bratoz@pef.upr.si

Olivera Cekić-Jovanović, PhD (1983) is an Assistant Professor of Methodology of Teaching Science and Social Studies at the Faculty of Education in Jagodina, and teaches several academic courses in that field. She is also: 1) the Head of the Department for Didactics and Methodology; 2) a member of the NUM team for the promotion of science, art and math; 3) a co-author of the projects for the Promotion and Popularization of Science Program entitled *Conceptual Solutions for Interactive Exhibits in Science Park* financed by the Ministry of Education, Republic of Serbia; 4) a coordinator of the regional centre for the "Hands-on" project for

dissemination of the use of an inquiry learning method in teaching; 5) engaged in an international project for introducing innovative approaches in university teaching; 6) interested in the innovation of academic courses by using integrative approach within a multimedia programmed teaching, ICT, Flipped Classroom, inquiry-based learning and local community facilities. She has published a number of papers in the field of teaching.

E-mail: olivera.cekic@pefja.kg.ac.rs

Majda Cencič, PhD (1958), has been employed at the University of Primorska's Faculty of Education in Koper. Previously, she worked at the Faculty of Education of the University of Ljubljana. She deals with various subjects, ranging from the history of schooling in Slovenia, education methodologies, assessment, quality, reflective teaching, entrepreneurial competences related to education to learning environments (specifically physical or built learning environments), managing education facilities as well as teachers' innovation and creativity. She is the author of hundreds of bibliographic units. Furthermore, she has written several monographic publications, for example: *Izbrani pristopi k spodbujanju refleksije učiteljev* (2015), *Kako poteka pedagoško raziskovanje* (2009), *Šola za znanje učiteljev* (2004), *Pisanje in predstavljanje rezultatov raziskovalnega dela* (2002) and *Učitelj – raziskovalec* (1994).

E-mail: majda.cencic@pef.upr.si

Mara Cotič, PhD (1954) is a Professor of Didactics of Mathematics and Elementary School Mathematics at the Faculty of Education, University of Primorska. As a researcher in the area of didactics of mathematics, she develops new models of teaching and learning mathematics, especially in the area of data processing. Besides scientific and professional articles presented at the international conferences, the results of her research work are seen in the didactic materials (handbooks for teachers, textbooks, exercises for consolidation) for all nine grades of primary schools. Her works represent a significant contribution to the theoretical issues and practical implementation of the development of Slovenian primary school didactics for mathematics.

E-mail: mara.cotic@pef.upr.si

Ivana Ćirković Miladinović, PhD (1977) is a Vice-dean for International relations and Erasmus plus coordinator at the Faculty of Education in Jagodina, University of Kragujevac in Serbia. She is currently teaching EGP, ESP, TEFL, TEYL and EAP. She completed her MA studies at the School of Education, University of Nottingham, UK. In 2014 she defended her PhD thesis in the area of Methodology of ELT. Her current interest is in language learning strategies, affective learning strategies, Content and Language Integrated Learning (CLIL), Computer

Assisted Language Learning (CALL), Teaching English to Young Learners (TEYL) and teaching foreign language at the university level. She has published over 30 papers and presented at international conferences in the country and abroad. Furthermore, she is involved in several research activities in the process of promoting the English language and practice in the country.

E-mail: ivanajag@yahoo.co.uk

Miloš Djordjević (1978) is an Assistant Professor currently teaching Methodology of teaching Art, Printmaking, Puppetry and Theater at the Faculty of Education in Jagodina, University of Kragujevac, Serbia. He specialized in the art of printmaking during his elementary studies at Faculty of Arts in Pristina and M.A. studies at Faculty of Fine Arts in Belgrade. At the moment he is working on a PhD research project at the University of Arts in Belgrade. His interests are in the curriculum development, art theory and contemporary art practices. Aside teaching Art at the university level, he is pursuing an active career as a professional and awarded printmaker-artist, participating in numerous international group exhibitions worldwide.

E-mail: djordjevicmilos@yahoo.com

Darjo Felda, PhD (1956) is an Associate Professor at the Faculty of Education, University of Primorska. He is also chairing the Mathematics Testing Committee for the National Assessment of Mathematical Knowledge at the National Examination Centre. His research is focused on the development of models of teaching and learning mathematics, involving problem situations and realistic problems as well as the complex question about the meaning of mathematics education in connection with the effectiveness of teaching and learning.

E-mail: darjo.felda@pef.upr.si

Marko Gavriloski, (1985) is a Teaching Assistant at University of Primorska, Faculty of Education, habilitated in the field of social science research. His main research interests are gender studies, partnership with parents, pedagogical communication, inclusive education, construction and anthropology of knowledge. He has been working as a Teaching Assistant since 2014 and since then he has carried out professional development programmes in different areas of education: Basic pedagogy, Learning processes, Shaping and leading learning society, History of Slovenian education, Partnership with parents. Within the framework of his doctoral studies, he is researching gender stereotypes and its impact on children's toys.

E-mail: marko.gavriloski@pef.upr.si

Irena Golubović-Ilić, PhD (1974) graduated from the Faculty of Teacher Education in 1998. In 2006, she received an academic title of Magister of Methodology of Science teaching. She completed her PhD studies in Teaching Methodology at the Faculty of Philosophy, University of Novi Sad in 2014. Her interests are focused on the study of didactics and methodical specificities, the possibilities of innovating and intensifying the educational process of children of pre-school and school age, especially in the field of natural sciences. She is the author of two monographs *Individualization of Science Teaching* (2008) and *Research Activities in Teaching of Nature and Society* (2017). She has published more than 30 scientific and professional papers in journals of national importance and she has participated in numerous scientific conferences and professional meetings in the country and abroad.

E-mail: golubovic.ilic@gmail.com

Tomaz Grušovnik, PhD (1982) is an Assistant Professor of philosophy of education and a scientific associate at the Faculty of Education, University of Primorska, Koper, Slovenia. His main areas of research include environmental and animal ethics, philosophy of education, philosophy of later Wittgenstein and Stanley Cavell, and pragmatism. He was a Fulbright visiting colleague at the Department of Philosophy, University of New Mexico (2009), and a guest lecturer at the Centre for Development and the Environment, University of Oslo (2010). He authored three books in Slovenian, edited several volumes, and presented papers on conferences in America, Asia, Australia, and Europe. In 2011 he was awarded a “Herald of Science” prize at the University of Primorska, and in 2018 he was awarded a “Honorary Plaque for young university teachers” at the Faculty of education at the same university. Since 2016 he has been a vice president of the Slovenian National Commission on handling genetically modified organisms.

E-mail: tomaz.grusovnik@pef.upr.si

Barbara Horvat, PhD (1983) finished elementary school in Mozirje in 1998 and high school in Celje in 2002. She graduated from the Faculty of Education of the University of Ljubljana in 2007 and completed her doctoral studies in pedagogy at the Faculty of Arts, University of Ljubljana in 2016. Until 2010, she was employed in the Primary School 'Vodmat', and since then she has been employed at the Faculty of Education of the University of Primorska as a Pedagogy Assistant. Her professional work is aimed at studying mainly didactic and pedagogical topics related to time and scientific paradigms.

E-mail: barbara.horvat@pef.upr.si

Emina Kopas-Vukašinić, PhD (1959) is a Full Professor and Vice-dean for science research. She graduated from the University of Novi Sad, at the Faculty of Philosophy (the Department of Pedagogy) and completed her doctoral studies at the same University. She is a pedagogy professor at the Faculty of Education, University of Kragujevac, in Jagodina, Serbia. Her areas of study are preschool pedagogy, university education and prevention of behavioural disorders. She is an external collaborator in two projects of the Institute for Educational Research in Belgrade, financially supported by the Ministry of Education and Science, Republic of Serbia (2011–2018). Her surveys are directed towards two main areas, the learning and behaviour of preschool children and the examination of possible development of students' activities system in university teaching, with the aim to provide them quality education and preparation for the future profession. She has published more than 100 papers in international journals.

E-mail: emina.kopas@pefja.kg.ac.rs

Jurka Lepičnik Vodopivec, PhD (1954) is a Full Professor of Pedagogy at the Faculty of Education at the University of Primorska. Her professional and scientific work focuses on teaching communication, education for a sustainable future, and media studies. Recently, she has been engaged in the professional development of preschool teachers, competences and ICT competences of preschool teachers and children, and in the hidden curriculum. She lectures undergraduate, postgraduate and doctoral study courses at the Faculty of Education at University of Primorska. She is a member of Council of Experts for preschool education at the Ministry of Education, Science and Sport of the Republic of Slovenia. She was awarded for teaching excellence by the University of Primorska in 2014. She was awarded by the Educational Research Institute and Slovenian Educational Research Association in 2016 as well. She has published more than 100 papers in International Journals.

E-mail: jurka.lepicnik@pef.upr.si

Sara Marinič (1992) gained her Master's degree at the Faculty of Education of the University of Primorska in 2017 with the thesis *Primary School Teachers' Views on the Usefulness of Tasks in the Course Mathematics Through Play Regarding the Development of Logical Thinking*. She is employed at the Faculty of Education and is currently involved in the PhD programme on Education sciences. Her main areas of interest lie in methodology of teaching mathematics, with a special emphasis on the strategies used by children with learning disabilities. She has also been involved in the development of several mathematics textbooks for the primary school level as an author assistant.

E-mail: sara.marinic@upr.si

Maja Mezgec, PhD (1976) is an Assistant Professor at the Department of educational study, Faculty of Education of the University of Primorska (Slovenia). She studied pedagogy at the Faculty of Education at the University of Trieste (Italy). A research experience at the University of Roskilde (Denmark) played an important role in her decision to focus on adult education. She gained a PhD in pedagogy and adult education at the Faculty of Arts at the University of Ljubljana (Slovenia) and was granted a scholarship by the Republic of Slovenia for postgraduate studies. Her research interests relate to education in multilingual contexts, lifelong learning, cross border education, education in minority languages, literacy and functional literacy among adults.

E-mail: maja.mezgec@pef.upr.si

Aleksandra Mihajlović, PhD (1975) is an Assistant Professor at Faculty of Education in Jagodina, University of Kragujevac. She was awarded a Bachelor's degree in Mathematics and Computer Science by the Faculty of Science, University of Kragujevac. In 2012 she received her PhD in Methodology of Teaching Mathematics from the Faculty of Education, University of Kragujevac. Her research interests are focused on the didactics of mathematics, mathematics education, history and psychology of mathematics. She is an author of a university textbook, two monographs, and over 25 research papers. Currently, she is working on the development and implementation of innovative approaches in teaching mathematics.

E-mail: aleksandra.mihajlovic@pefja.kg.ac.rs

Sandra Milanović, PhD (1977) works at the Faculty of Education in Jagodina, University of Kragujevac and holds a position of an Assistant Professor in the scientific area called Physical education with methodology. She graduated from the Faculty of Physical education and sport, University of Niš, in 2001 and was awarded a Master's degree in 2010 at the University of Education in Jagodina, Department of Methodology of physical education. She successfully completed her doctoral dissertation in 2014 and gained a diploma of Doctor of pedagogical sciences in the physical education field. At the University, she works on researching methods in physical education classes, which is her field of interest and she is successful in it. She participates in the project *Harmonization and Modernization of the Curriculum for Primary School Teacher Education - HAMOC*.

E-mail: sandra.milanovic@pefja.kg.ac.rs

Andrijana Miletić (1986) is an Assistant of Methodology of Teaching Science and Social Studies at the Faculty of Education in Jagodina, University of Kragujevac. Her areas of interest are possibilities of innovation of university

education by using integrative approach and multimedia content, as well as possibilities to use multimedia content in order to provide good quality knowledge to students during the first cycle of elementary education. She is an author and presenter of the professional development program *Possibilities of Innovation and Modernization of Teaching World Around us and Nature and Society*, accredited by the Institute for promotion of education of Republic of Serbia. She is a member of the Team for the promotion of science, art and mathematic, and an author of conceptual designs for interactive exhibits which are financed by the Center for the promotion of science of the Republic of Serbia.

E-mail: andrijana.jakovljevic@yahoo.com

Ivana Milić (1975) is a Teaching Assistant in the field of Methodology of Teaching Music at the University of Kragujevac, Faculty of Education in Jagodina. Her research focuses on Music and innovative models of Teaching Music with a special interest in the integrative approach to music education at preschool and primary school level. As a member of a scientific research team, she was given a recognition for an interactive exhibit entitled *Music Through Science and Art* by the Centre for the Promotion of Science of Republic of Serbia. She is one of the presenters of the professional development program for school and preschool teachers financed by the Ministry of Education of the Republic of Serbia. Ivana Milic earned a bachelor's degree at the Faculty of Arts in Pristina, and a Master's degree at Faculty of Education in Jagodina and now she is a PhD student of Interdisciplinary study programmes at the Faculty of Philosophy in Novi Sad. She has published a number of professional and scientific papers in journals of international and national importance.

E-mail: ivana.milic75@gmail.com

Milan Milikić (1988) works as a Teaching Assistant at Faculty of Education in Jagodina and teaches the following courses: Methodology of teaching mathematics (lower primary), Teaching practice in mathematics and Methodology of the development of initial mathematical concepts. His research interests are: Methodology and Didactics of Teaching Mathematics and Geometry. His work is focused on the improvement of quality of current teaching practice in mathematics education, in development of methods and promotion of mathematics both among children and teachers. He has experience as a teacher trainer as he has presented three professional development programmes to primary school teachers. These programs were accredited by the Ministry of Education for the period 2016–2017 and 2017–2018. He was a member of the organizing committee of three international conferences: Methodological Aspects of Teaching Mathematics 3 – MATM2014 (2014), Methodological Aspects of Teaching

Mathematics 4 – MATM2017 (2017) and History of Mathematics in Mathematics Education (2018).

E-mail: milikic.milan@yahoo.com

Radmila Milovanović, PhD (1954) has been working at the Faculty of Education, University of Kragujevac for 10 years and currently works there as an Assistant Professor. She graduated from the Faculty of Philosophy in Nis (the department of Psychology) and defended her MA and PhD theses in the field of developmental neuropsychology at the Faculty of Medicine in Belgrade. She holds a certificate in psychotherapy and she has published 3 university textbooks, 3 monographs, one workbook, and over 40 scientific papers in the national and international journals. She participated in many scientific conferences in the country and abroad. Her field of interest is the social competences of class teachers, preschool teachers, and emotional aspects of educational work and mental health of young people. She is a member of The Association of Psychologists of Serbia, The Association of Neuropsychologists of Serbia and The Society of Psychotherapists of Serbia.

E-mail: andjelao@beotel.net

Jelena Mladenović, PhD (1971) is an Assistant Professor in the field of Methodology of Teaching Natural Sciences at the Faculty of Education in Jagodina, University of Kragujevac. Her research focuses on ecology and on aspects of outdoor learning, as well as on physiology and nutrition. Previously, she worked in the public aquarium “Kragujevac” at the Faculty of Natural Sciences and Mathematics in Kragujevac, as a researcher and implementer of educational programs dealing with the protection of ecosystems dedicated primarily for children of school age and university students. Jelena Mladenović earned a bachelor’s degree and a doctorate in biology from the University of Kragujevac, Faculty of Natural Sciences and Mathematics. She participated in projects financed by the Ministry of Education and Programs for the Promotion and Popularization of Science.

E-mail: jelena.mladenovic@pefja.kg.ac.rs

Dušan Ristanović, PhD (1974) is an Assistant Professor at the Faculty of Education in Jagodina, University of Kragujevac, with specific academic expertise in Didactics with Methodology. He earned his Bachelor’s and Master’s degree at the Faculty of Education in Jagodina, and defended his PhD dissertation in Didactics at Teacher Education Faculty at the University of Belgrade. He is the author of one monography, forty scientific and professional articles which are published in scientific journals and proceedings, and the author of several terms in the *Lexicon of Educational Terms*. He is engaged in the study of modern teaching models,

especially in the effects of the project model on different levels of education. He is a coauthor and presenter of three modules of the *Training Program for Pedagogical Assistants*, and he is an author of a professional development program for teachers called *Project Model in Teaching Science*. He is a member of *Educational Research Association of Serbia*, and he is a manager of *Center for Curriculum Innovation and Development* at the Faculty.

E-mail: dusan.ristanovic@pefja.kg.ac.rs

Vera Savić, PhD (1957) is a Lecturer in English and Applied Linguistics and Head of Philological Department at the Faculty of Education in Jagodina, University of Kragujevac, Serbia. She has developed and delivered courses of TEYL to preservice and in-service EFL teachers. Her research focuses mainly on early language learning and teaching and teacher education, and includes beginning reading in English, theme-based instruction, inclusive L2 teaching, assessment, teacher attitudes, teacher professional development, and curriculum development. She has presented papers at a number of international conferences in Europe and the USA, and published extensively in the field of primary TEFL. In 2016 she received *Award for International Participation at TESOL* for her paper presented at *TESOL International Convention & English Language Expo 2016*, Baltimore, USA. She has co-authored the accredited professional development programme titled *Theme-Based Instruction in Teaching English to Young Learners* and conducted the training of trainers and teachers in Serbia.

E-mail: verasavic035@gmail.com

Slađana Stanković, PhD (1974) earned a Bachelor's and Master's degree in Physical Education at the Faculty of Physical Education, University of Nis. In 2016 she defended two doctoral dissertations: the first was defended at the Faculty of Education, University of Kragujevac, Jagodina (PhD in Methodology of teaching physical education) and the second was defended at the Faculty of Sport and Tourism, University of Novi Sad (PhD in sports science). She is a lifeguard and a junior scuba diver, a choreographer on synchronized swimming and a member of the Stewardship Jury in modern ballet and (contemporary) dance. She has published over 60 professional and scientific papers, actively participated in many professional and scientific meetings and she is also a co-author of the textbook titled *Fundamentals of Kinesiology and Sports Based on Aesthetics and Coordination*.

E-mail: iskrasladja@gmail.com

Biljana Stojanović, PhD (1965) is an Assistant Professor of Pedagogy at the University of Kragujevac. She received her PhD degree in the field of curriculum development in primary education. She is a licensed Gestalt therapist. Her

previous professional experience is connected to early education as an educator in *Pioneer* preschool institution in Jagodina and the principal of the same institution (2000–2004). Her main research interests are early education and communication. She published seven books and over 30 research papers. Since 2016, she has been the Head of the Department for Pedagogy and Psychology at the Faculty of Education in Jagodina. Besides pedagogy courses in BA studies, she teaches Pedagogical communication at MA level and Innovative models in primary school teaching at PhD level. She participated in the project *Leadership in Education* (TEMPUS) where she was a member of working team for curriculum development (MA Leadership in Education).

E-mail: biljanastojanovic23@yahoo.com

Vesna Trifunović, PhD (1966) is a Doctor of Sociology and an Associate Professor at the Faculty of Education of the University of Kragujevac. Fields of interest: sociology of social development, culture, cultural identity, religion, education, educational policy, school violence. She has published dozens of scientific papers and monographs: *Village School and Culture* (2001), *Violence in Schools* (2006), *Education and Religion* (2008), *Civic Education and Identity* (2012), *Education and Cultural Identity* (2015). She writes short stories.

E-mail: dimitrije95@ptt.rs

Nataša Vukićević, MA (1971) is an Associate Professor at the Faculty of Education in Jagodina, University of Kragujevac, Serbia. She lectures several courses in the area of Methodology of Teaching Music. She completed her music studies at the Academy of Arts in Novi Sad and defended her MA Thesis in the area of Methodology of Teaching Music at the Faculty of Arts in Pristina. The topic of her doctoral dissertation is *Interactive Approach to Developing Children's Musical Creativity in Lower Primary Grades* was approved at the Faculty of Philosophy in Novi Sad. Her research interests are learning strategies in teaching music to young learners, the area of children's creativity and interdisciplinary and interactive approach in teaching music.

E-mail: vukicnatas@yahoo.com

Predrag Živković, PhD (1970) graduated from the Faculty of Philosophy in 1996 and received his Master of Science degree in 2007. He defended his doctoral dissertation in 2011. He started working as a school counselor in several elementary schools in Jagodina in 1994. From 2002 to 2013, he was an Assistant-trainee, Assistant and Assistant Professor at the Faculty of Philosophy, University of Kosovska Mitrovica (Serbia). He was elected an assistant professor at the Faculty of Education in Jagodina, University of Kragujevac in 2014. Predrag Živković

is the author of three books: *Self-Evaluation and Pedagogical Tact of Teachers*, *Teachers' Professional Identity* and *Pedagogical Essays*. He is the author and co-author of a number of scientific papers published in domestic and international journals. Predrag Živković is a member of the Society of Researchers in Education of Serbia.

E-mail: predrag.zivkovic@pefja.kg.ac.rs

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Vladan Dimitrijević

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