Violeta Orlović Lovren
Jan Peeters
Nataša Matović (Eds.)

Quality of Education: Global Development Goals and Local Strategies

Institute for Pedagogy and Andragogy
Faculty of Philosophy, University of Belgrade
Department of Social Work and Social Pedagogy
Centre for Innovation in the Early Years
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For the Publisher

Prof. Živka Krnjaja, PhD
Faculty of Philosophy, University of Belgrade, Serbia

Editors

Prof. Violeta Orlović Lovren, PhD
Faculty of Philosophy, University of Belgrade, Serbia

Jan Peeters, PhD
Ghent University, Belgium

Prof. Nataša Matović, PhD
Faculty of Philosophy, University of Belgrade, Serbia

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Hana Ovesni

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Belgrade, 2019

CONTENTS

RELATIONS AND COMMUNITIES OF TEACHERS

QUALITY ASSESSMENT AND EVALUATION IN EDUCATION FOR SUSTAINABLE DEVELOPMENT

INTRODUCTION

The framework of the sustainable development goals (SDGs), which were adopted in 2015, puts education and lifelong learning high on the agenda. Within the 2030 Agenda for Sustainable Development, comprising 17 goals, education is defined as a stand-alone goal – SDG 4: **Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all**. With its seven targets and three means of implementation, this goal covers all the levels – from early childhood to higher and adult education and learning – calling for quality in all its aspects and dimensions.

Education is seen as the key for achieving not only Goal four, but all the other SDGs, significantly contributing to gender equity, health and well-being, to better economic and social status and improved quality of living. While quality is embedded in this framework as one of the key values, there is evidence of numerous challenges in achieving and assessing the quality of education, due to differences between countries, social determinants, qualification or assessment standards, etc.

The thematic collection of papers of the Institute for Pedagogy and Andragogy, Faculty of Philosophy, University of Belgrade and the Department of Social Work and Social Pedagogy, Centre for Innovation in the Early Years, Ghent University, titled "*Quality of education: Global development goals and local strategies*" provides much needed contributions to the reflection on the trends, challenges and opportunities, briefly elaborated above, as seen through the theoretical, empirical, teaching, policy and practical perspective within this broad and complex field. With this edition, the Institute for Pedagogy and Andragogy of the Faculty of Philosophy of Belgrade University continues the series of publications initiated within the project titled Models of Assessment and Strategies to Improve Education Quality in Serbia (no. 179060), started in 2011, while colleagues from the Centre for Innovation in the Early Years, Ghent University, continue cooperation with the Department and the Institute for Pedagogy and Andragogy, contributing to scientific discussion of this globally relevant and locally significant issue.

The collection consists of 11 papers, responding to conceptual and policy questions related to quality in education, considering global trends as well as local development strategies and specific conditions. Addressing the gaps between the globally developed and adopted quality criteria and practice at the

national level, or within the HE institutions, Katarina Popović and Nemeth Balazs in their papers provide analytical inputs for understanding the challenges faced by countries – including Serbia – and by institutions – in particular universities – in playing responsible roles in assuring quality education and lifelong learning for all.

The dominant focus of the papers prepared for this Collection is, not surprisingly, on teachers' perspectives, competences and professional development needed in performing their highly complex and responsible role, as required by the policy documents and addressed in the literature, in particular in the last two decades and not only in the field of education for sustainable development.

Analyzing the constituent elements of problem-oriented teaching and their role in the process of developing critical and creative thinking, the authors Antonijević and Nikolić contribute to the largely elaborated topic of necessity and teachers' responsibility in developing higher order abilities to support students, future active citizens, to understand and act towards sustainable development.

The understanding of sustainable development from the perspective of teachers from primary and secondary schools in Serbia (Orlović Lovren, Petrović, Simić), the contribution of formal education to competences for education for sustainable development (ESD) as seen by student-teachers in Croatia (Vukelić, Rončević, Vinković), as well as the analysis of competences for sustainable development defined by the global guidelines and local strategies to guide professional engagement and development of teachers at the preschool level in Serbia (Mitranić, Miškeljin, Breneselović) address a set of questions which have attracted the attention of researchers interested in studying teachers' competences related explicitly to meeting conceptual and policy demands for sustainable development. Reflecting on didactically significant aspects of the process of designing and implementing professional development courses for university teachers in Serbia (Milin, Radulović, Stančić), may be seen as part of this set of authors' efforts to consider those significant issues not only in terms of quality, but also in terms of the sustainability of such programs.

Papers tackling the institutional culture of relations between preschool teachers, based on the research conducted in Croatia, Slovenia and Serbia (Čamber Tambolaš, Vujičić) as well as the engagement of teachers in international professional communities, analyzed in Macedonia and England (Underwood and Joshevska), provide relevant insights into teachers' perceptions and actions of importance for their professional development and quality of teaching, which are among the preconditions for assuring the quality and sustainability of education.

Authors focused on the assessment of quality in preschool education in Slovenia (Kovač Šebart and Hočevar) as well as on the participatory evaluation

in education for sustainable development (Purešević, Krnjaja) offer a thorough analysis of concepts identified in global policy and their implications on strategic frameworks, from the perspective of holistic and reflective approaches in assuring quality learning and education.

Expressing gratitude to all the authors and to the reviewers of the papers, we trust this publication will contribute to further reflection on aspects of quality in education, inseparable from thinking and acting towards sustainability.

Editors

Violeta Orlović Lovren
Faculty of Philosophy, University of Belgrade, Serbia

Jan Peeters
Ghent University, Belgium

Nataša Matović
Faculty of Philosophy, University of Belgrade, Serbia

EDUCATION AND LIFELONG LEARNING FOR SUSTAINABLE DEVELOPMENT:

PAST AND PRESENT, GLOBAL AND LOCAL

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EDUCATION BETWEEN GLOBAL GOALS AND NATIONAL PRACTICES[1]

Katarina Popović*
Faculty of Philosophy, University of Belgrade, Serbia

Abstract

This article explores conceptual and theoretical reflections on aspects and dimensions of the quality of education in relationship to global development goals and to the Education 2030 Agenda, as well as gaps and challenges in the harmonization of global and national strategies aiming at the improvement of the quality of education. Through text analysis and critical language analysis (including analysis of the context, relations and interdependencies of the concepts), with the elements of discourse and interpretive analysis, the quality of education and lifelong learning are examined. The concept of quality is first presented and analysed as it is in the Agenda 2030 and Education 2030, and further on as the instrument of global policy making, created in certain political relationships, based on the concepts of economy and on the quantitative research paradigm. Further on, the quality of education is investigated through the gap created between ambitions of global goals and local realities, which are widely ignored. The strategies that countries are using to deal with the quality of education are described, and the challenges of the inconsistencies in the global Agenda. Finally, serious risk for the implementation of the global quality concept is examined, rooted in the attributes of the global economic architecture that limits investments in the quality of education.

Keywords: Quality education, Sustainable Development Goals, Agenda 2030, Education 2030

Quality education in the Agenda 2030 and Education 2030

Quality is one of the key words of the *Transforming our world: the 2030 Agenda for Sustainable Development* (2015) – the document talks about the quality of many things: quality data, quality health care, quality and resilient infra-

1 This article is a result of the project "Models of Evaluation and Strategies for Improvement of Education Quality in Serbia", No 179060, financially supported by the Ministry of Education, Science and Technological Development, Republic of Serbia.

* E-mail: kpopovic@f.bg.ac.rs

structure, quality of life, land and soil quality, water quality, air quality and, of course, quality education. Agenda 2030 is building on the 'unfinished business' of the Millenium Development Goals and the lessons learned from them, so the world decided to set a more ambitious agenda (Agenda 2030 was signed and adopted by the 193 countries of the UN General Assembly), with 17 Sustainable Development Goals (SDGs), including an ambitious universal education agenda. Experiences from the MDGs, and also from EFA (Education for All) have resulted in the same message: "The fact that the EFA goals have not been reached carries a further lesson: 'business as usual' will not bring quality education to all" (UNESCO et al., 2015, p. 3). One of the missing elements and one of the most important contributing factors to this increased ambition is quality, which is in the focus of new goals, strategies and recommendations for implementation and monitoring.

Sustainable Development Goal 4 (SDG 4) couldn't be clearer in phrasing this universal ambition: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all", whereby 'quality' seems to be one of the main pillars of the whole agenda, *differentia specifica* compared to previous education agendas, and a kind of 'guarantee' for its success. Throughout the text, as well as in other related documents (such as the Incheon declaration, called *Education 2030*, a kind of elaboration of the SDG 4), the quality education *at all levels* is strongly insisted upon – from early childhood development, care and pre-primary education until quality technical, vocational and tertiary education, including university and adult education. It is an obvious effort to ensure the continuous achievement of expected outcomes, where none of the education levels and areas would be a weak link in the lifelong learning chain, understood as the 'education chain' in Cochinaux and de Woot: "an open, interconnected system in which each element is important, since the quality of any chain is determined by its weakest link" (1995, p. 10 / 12).

The way quality of education is understood throughout different levels varies, but most often it is related to the duration of education as the first element of quality, mostly described as the duration of schooling – 12 years are required to be free, publicly funded, equitable quality primary and secondary education, of which at least nine years are compulsory (UNESCO et al., 2015). This repeated demand is supposed to lead to relevant learning outcomes (UNESCO et al., 2015, p. 12), but other preconditions are also mentioned: "We commit to quality education and to improving learning outcomes, which requires strengthening inputs, processes and evaluation of outcomes and mechanisms to measure progress" (UNESCO et al., 2015, p. IV). Taking care of the entirety of the education process and all its stages becomes thus a secondary important element of quality education.

The third element is the sector-wide approach – the global agenda tries to include all areas, sub-sectors, and fields of education, including various settings, formal and non-formal education, and varieties of skills and competencies: "Quality education fosters creativity and knowledge, and ensures the acquisition

of the foundational skills of literacy and numeracy as well as analytical, problem solving and other high-level cognitive, interpersonal and social skills. It also develops the skills, values and attitudes that enable citizens to lead healthy and fulfilled lives, make informed decisions, and respond to local and global challenges through... This includes equitable and increased access to quality technical and vocational education and training and higher education and research, with due attention to quality assurance. In addition, the provision of flexible learning pathways, as well as the recognition, validation and accreditation of the knowledge, skills and competencies acquired through non-formal and informal education, is important" (UNESCO et al., 2015, p. IV). Quality should be a golden thread that runs across the sectors, areas and levels, which should be therefore connected and intertwined: literacy and numeracy, technical and vocational education and training, science, technology and innovation, but also health, citizenship and climate change. Quality curricula and training programs include both work-related skills and life skills, as well as entrepreneurial, basic and ICT skills, combined with soft skills and non-cognitive/transferable skills. In accordance with the inclusive character of the whole agenda, it is stressed that quality education should be accessible and affordable for all – diversity of target groups is seen as required if the overall motto and most ambitious goal of Agenda 2030 is to be achieved: "No one will be left behind" (UN, 2015, p. 35)

Traditionally, probably the most important element of quality is staff – it is required that "teachers and educators are empowered, adequately recruited and remunerated, well trained, professionally qualified, motivated, equitably and efficiently deployed across the whole education system, and supported within well-resourced, efficient and effectively governed systems" (UNESCO et al., 2015, p. 11). This includes teachers, teacher trainers, teacher supervisors and inspectors, leaders at all education levels and in all sectors. The education, professional development and working conditions of teacheers are at the core of quality assurance efforts, which are usually accompanied by the demand for quality books, learning materials and other educational resources, methods and approaches that are learner-centred, active, collaborative and context-specific, and environments that are supportive and learner friendly.

Of course, policy should ensure well-resourced, efficient and effectively governed national systems, so many of the recommendations striving towards quality assurance mention the need for a high quality management system, governance, multi-stakeholder participation, data collection, accountability mechanisms and evaluation.

Since 'lifelong learning opportunities' are an equally valuable and integral part of SDG 4, there is also an attempt to define the quality of lifelong learning and lifelong learning opportunities. But since there is no clear differentiation between these two terms in the Agenda 2030, there is consequently confusion in operating with these terms. Thus, quality of learning is mostly discussed as the

quality of learning outcomes and it has been repeatedly added: "within a lifelong learning approach," a phrase that puts a frame around education, but doesn't say much about it. At the same time, learning is understood as the core of education, and learning outcomes are one of the most important ways of evaluating the quality of education. Commitment "to promoting quality lifelong learning opportunities for all, in all settings and at all levels of education" (UNESCO et al., 2015, p. IV) is made, but lifelong learning is also understood as something that complements and supplements formal schooling (UNESCO et al., 2015, p. 9). The confusion is increased by the definition that lifelong learning "is an integral part of quality education," but the focus is on affordable and quality technical and vocational education and training, skills acquisition and updates, and institutions of tertiary education, including universities (UNESCO et al., 2015, p. 21). These ambiguities increase the difficulties in defining, measuring, and improving quality of education and learning.

The concept of quality – instrument of global policy-making

Quality is not a universally defined and unquestioned concept – it is always a consensus, value-loaded set of criteria, a bar raised on the level decided by those who have the possibility or the power to do that. The quality of education reflects the paradigm, values and aims of those defining it, and its analysis is always informing (directly or indirectly) about those who created the dominant concept of quality. The main questions in the analysis of the dominant concept of quality of education are: who created it, whose values are included in it, and whose are not, what is the purpose of it?

There are three dimensions to this analysis: terminology (terms, words and concepts used); methods for quality definition, assessment and evaluation; and purpose, the nature of the concept and what it serves, what kind of results should it enable or achieve (more in: Popović and Maksimović, 2014).

Agenda 2030 should be an universal agenda for all countries. Compared to the MDGs, the most ground-breaking novelty of the SDGs is that they explicitly acknowledge that development objectives should no longer be seen only as objectives that concern various countries of the Global South, but should be also in countries of the Global North. The "universality of country coverage" (UNESCO, 2016, p. 10) implies that approaches, concepts and operational tools will reflect variety and include experiences and practices from different regions. But the current concept of quality, expressed in Education 2030, comes from the 'global players' and international organisations located in the North and supported mainly by wealthy countries, which directly or indirectly define the agenda. National education authorities, especially in developing countries, face the challenge of the

implicit quality criteria coming from the global level. They are indirectly imposed, while the global agenda claims neutrality and flexibility. Without prejudging the result of more inclusive and participatory processes – that might lead to similar outcomes through bringing together different approaches – it must be noted that the sense of ownership and universality of the agenda would be stronger and shared by many involved stakeholders, especially countries, while the gap between global goals and local implementations would be smaller.

But at the later stage, countries are left on their own, "As the primary responsibility for monitoring lies at the country level, countries should build up effective monitoring and accountability mechanisms, adapted to national priorities, in consultation with civil society," with further, increased expectations, "They should also work to build greater consensus at the global level as to what specific quality standards and learning outcomes should be achieved across the life course – from early childhood development to adult skills acquisition – and how they should be measured. In addition, countries should seek to improve the quality and timeliness of reporting"(UNESCO, 2015, p. 30).

Further on, the approach and concept of quality, chosen in the education sector, came from the positivist research paradigm, world of statistics and world of work. Education is mostly about skills, a concept introduced from the world of production, implying that learning should be predominantly in the function of the economy, productivity and employability. Further on, the language of the Agenda 2030 and Education 2030 reveal further the nature of this approach. Education and quality of education are described through the terms: inputs, processes, outcomes, educational performances, income, productivity, effective, efficient... Without knowing that we are discussing the quality of education here, we could hardly differentiate it from an industrial or informational process: "Monitoring quality... requires a multidimensional approach covering system design, inputs, content, processes and outcomes" (UNESCO, 2015, p. 30).

The proportion of attention given to vocational education, training, and skills, compared to education for personal development, civic and peace education, and education for sustainable development, shows clearly that the later is neglected and that the value system the Agenda is based on, comes from the world of economy. "No doubt education and world of work need a common understanding, concepts and terminology enabling dialogue, but skills as a concept are introduced from the world of production; therefore, they omit some of the most important features of the learning and education process" (Popović, 2013, p. 27). So, it is not about the either-or false dilemma, since none of the education sub-sectors can be neglected, but it is about final or dominant purposes, the goals education should serve.

Analysis of terminology and concepts indicates another strong paradigmatic dimension of the education agenda. It has a double character – targets and indicators are formulated in a way that sounds like an ode to quantitative discourse,

insisting that only statistical and quantitative data can be used in monitoring and evaluation. Even if the benefit of this approach is the potential to convince governments to take more accountability and exact reporting, the huge risk is that only quantitatively measurable things will be strategically and financially supported and implemented. The way the Agenda is created and monitoring is being done shows an almost obsessive belief that exact measuring is the silver bullet for the implementation of the Agenda (Popović, 2019, p. 9). By focusing strongly on the monitoring and not on the implementation, the education Agenda is narrowing the efforts for the quality of education, putting the evaluation on a pedestal (see for example Schwandt et al., 2016) and neglecting other parts of the education process. They are rhetorically mentioned, but elaboration serves mostly the evaluation, measuring and monitoring. The old cliché: "What gets measured gets done" is valued more than ever in Education 2030. No doubt it is easier to measure, for example, 'the level of skills shortage' than the effects of 'learning to live together,' but it definitely doesn't mean that the later is less important.

For quality of education, and for national struggles to find the best ways to improve it, means a one-dimensional approach, driven by the dominance of statistical, quantitative tools and measurable indicators, often excluding other approaches and indicators. The decision to make measurable indicators the precondition for financial support is further narrowing the understanding of the quality of education, and excluding the validity of various national monitoring and evaluation practices for global reporting.

Quality education – global ambitions and local realities

Education 2030 has succeeded in avoiding the narrow conceptions of education quality focused on standardised testing, which currently dominates global education policy, especially after the Organisation for Economic Co-operation and Development (OECD has offered regular PISA and PIAAC assessment programs and many countries adopted them. The Incheon declaration insists on quality, with a renewed focus on effective acquisition of foundational skills, and new foci on the relevance of learning for decent work and of learning for social and civic life. References to education for sustainable development and global citizenship education were retained, and both recognised as essential elements to education quality, at least rhetorically. But this apparently holistic approach bears several risks.

Ambitious agenda

Its strength is at the same time its curse: the agenda is being seen as too ambitious and thus unrealistic. Without denying the fact that quality should be an important characteristic of every aspect of education, it must be noted that the danger of the inclusive and holistic 'Quality is everything' leads easily

to 'Quality is lost.' The same could be said as for the quality of education for the whole education agenda: "If SDG 4 Education 2030 covers all of education – are there no more priorities? Given that SDG 4 on Education covers all levels of education and a great deal more in its ten targets, it may not be too difficult to argue that the education programmes of most agencies, NGOs and education ministries are already engaged with the SDGs in some manner. In the brave new world of the SDG 4 and its targets, is there no longer a key focus area?" (NORRAG, 2017, p. 7)

Losing focus and not defining priorities, missing contextualisation and leaving everything to national governments, claiming that everything is equally important and needed, this all reduces an aspirational agenda to wishful thinking, a 'shopping list' that cannot really serve as an orientation to governments. The main job description of education authorities on the national level is to ensure the quality of education in all its aspects (what they do with or without success, depending on factors other than awareness of how important it is); confirming the importance of that role is not really helpful for the policy of quality insurance.

Ignoring realities

An additional problem is the very different reality of teaching and learning between the Global North and Global South. Global concerns about quality are a world away from education in the Least Developed Countries (LDCs) and in many developing countries, and the translation of global targets and indicators to their national realities may lead to an agenda that doesn't have much to do with its global origin. Its purpose would be thus reduced to a nice vision, out of which everyone will make what they can. But isn't this also what MDGs and EFA were about?

Striking oversight is obvious when it comes to the teachers, the bearers of quality in education.

Massive references to 'empowered,' 'well-trained,' professionally-qualified' teachers and educators are in strong discrepancy with numerous reports about the increasing number of unqualified teachers across the world, the significant teacher shortage across the world, the changing legal status of teachers and university teaching personnel (from stable employment to fixed-term contracts and part-time positions), low payments and poor working conditions, sufficient and often inaccessible professional development (Stromquist, 2018, pp. 90–91).

This discrepancy becomes even more striking when put in the context of the attributes of the quality learning environment: "...safe, healthy, gender-responsive, inclusive and adequately resourced environments that facilitate learning... Every learning environment should... have adequate resources and infrastructure to ensure reasonable class sizes and provide sanitation facilities... be environment-friendly and free of violence." (UNESCO, 2015, pp. 8–9, 22, 10). What kind of

educational leaders, managers and teachers can fulfil this criteria? Adding that "a focus on quality and innovation will also require strengthening science, technology, engineering and mathematics education (STEM)" (UNESCO, 2015, p. 11), plus the obsession with digital skills and a high-technology environment, one might wonder for which planet these quality criteria have been developed?

If there is one dominant feature of the Agenda, it is faith in Information and Communications Technologies (ICT) and digitalisation as magical solutions to most of problems in the field of education, including literacy. "It cannot be denied that digital technologies play an especially central role in the implementation of Education 2030 and SDG 4... Focusing on digital information and neglecting other types leads to the loss of wider areas and sources of information and knowledge. It should also be remembered that ready access to the internet and digital tools is still not a reality for a big part of the world, or of the human population. The spread of the internet has come with a "digital divide" between rich and poor. Claiming that it is universal, the 2030 Agenda risks seeing the world through the lenses of the reality of more developed countries." (Popović, 2019b)

Translation to the national level

The 'translation' process is fully in the hands of governments and Paragraph 63 of Agenda 2030 lays the foundation for this: "We reiterate that each country has primary responsibility for its own economic and social development and that the role of national policies and development strategies cannot be overemphasized." (UN, 2015, p. 28). Education 2030 is clear about the responsibility for education: "The heart of SDG4 – Education 2030 lies at the national level... Fundamental responsibility for successfully implementing this agenda lies with governments... The central aim of the SDG4-Education 2030 implementation mechanisms is to support country-led action..." (UNESCO, 2015, p. V, p. 25). Targets should take into special account different national realities, capacities and levels of development and respect national policies and priorities and "governments are expected to translate global targets into achievable national targets based on their education priorities, national development strategies and plans, the ways their education systems are organized, their institutional capacity and the availability of resources." (UNESCO, 2015, p. 12).

The difficulty about the process is the fact global goals should serve as a catalyst for national and local efforts, give guidance, orientation and support, inspire transformative practices and help achieve what wouldn't be possible otherwise. Instead, existing experiences at the local level are 'invited' to support the reports about the progress in implementation and are mostly used to 'justify' and illustrate global actions even if they were not 'moved' by them.

Certain targets and indicators might be managed following these recommendations, but in other cases they are not really helpful. An example is literacy, a foundation of any quality education. Target 4.6 says: "By 2030, ensure that all

youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy" (UN, 2015, p. 17). What 'proportion' means is left to indiviual countries to decide. Later, the strategy recommends literacy and numeracy programs that are of high quality according to national evaluation mechanisms (UN, 2015, p. 60). High aspirations about quality end up depending on national evaluation mechanisms, whose insufficiencies are one of the reasons to adopt such points in the agenda. While some targets are defined extremely precisely and can give a clear orientation and enable comparability, "the others are absolutely vague, there are no mechanisms to make sure that they will be embedded into national policies" (Orlović and Popović, 2018, p. 14).

Less measurable areas of education have even more fluid understanding of quality, with hardly any concrete point about them: global citizenship, peace, justice, sustainable development, all areas that touch on the social, humanistic and moral purposes of education. They are listed in crowded Target 4.7, which is "closely aligned with a lifelong learning framework, and does not specify the education levels or age groups to which its themes apply. The proposed global and thematic indicators mainly focus on children and adolescents in formal education. None of the proposed thematic indicators explicitly capture adult learners in non-formal and informal education." (GEMR, 2016, p. 51).

How are countries reacting to this dubiosity? Some countries integrate the global agenda into the existing strategies and continue with their own quality assurance mechanisms, evaluations and indicators, keeping global rhetorics and global policy language; others create new strategies, new paths, even new bodies or structures, and try to introduce more international mechanisms for quality assurance in education – either programs like PISA and PIAAC (and other types of testing), or international quality standards defined for organisations or staff. Very often, there is an attempt (especially in Europe) to adopt common cross-cultural programs, curricula and norms, mostly in vocational education and training, hoping that internationally defined standards and monitoring will guarantee the quality of education outcomes. This tendency is supported by mobility requirements, and by international organisations and companies who develop such standards for various sub-sectors of education.

Inconsistencies within the Agenda

There are further problems in the implementation of the global idea of quality, related to the internal inconsistencies of Education 2030. One of them is insisting on the quality of post-basic education before basic education is in place. "Quality education necessitates, at a minimum, that learners develop foundational literacy and numeracy skills as building blocks for further learning, as well as higher-order skills" (UNESCO, 2015, p. 9). Literacy and basic education belong to the category of eternal topics in global education programs: "For 25 years, since Jomtien in 1990, the international education priority of many

development agencies has been with an expanded vision of basic education. This was reinforced by the Education for All (EFA) Dakar Goals and by the MDGs. Now, quite suddenly, post-basic education and training are back on the world's development agenda. Arguably, this dramatic shift is being supported long before basic education of quality has been secured in many parts of the world, either through schools or through adult literacy and numeracy" (NORRAG, 2017, p. 7). In spite of the progress reported in some areas, literacy has remained one of the most important elements of 'unfinished business.' For example, adult literacy is seen as the key component of the SDGs (UIS, 2018), but despite the considerable benefits of literacy, many adults in low and middle-income countries are still functionally illiterate. "Literacy rates are rising – but not fast enough" (GEM, 2012). Many recent reviews and reports (including those by UNESCO) underline the huge financial gap for the implementation of the education agenda, and adult literacy belongs to the most neglected (both financially and strategically) sectors. How is quality in other education levels and sectors supposed to be achieved, if the quality of its foundation (which literacy without a doubt is) is so weak?

Further inconsistency refers to the central 'quality figures' of the agenda: teachers. Repeateadly and rightly put in the core of the quality improvement process, they are dropped in the abyss between high requirements and bitter realities. One group more than the others: teachers in adult education and in non-formal settings are in an extremely compromised position, with short work contracts and part-time work, slow and precarious payment, usually without any possibility for professional development. Often, they are not even recognized in the professional group of teachers, thus they remain out of the efforts of trade-unions and concerns of formal education authorities. Any discussion about the quality of non-formal education that doesn't take into account the reality of teachers in adult and in non-formal education is ignoring a crucial issue in its attempt to support the improvement of the field.

As the golden thread of Education 2030, quality is shifting from the mean to the goal, from input to outcome. For example: "Increasing access must be accompanied by measures to improve the quality and relevance of education and learning" – UNESCO, 2015, p. 10. It is not quite clear if it is the ultimate goal or the requirement, a specific quality that can be contributed to every dimension and aspect of education, or the highest, wannabe condition of the whole education system.

Quality education in the global economic architecture

It is not a new insight that quality education has to cost money and that adequate funding is one of the main preconditions for the sustainable improvement of quality in education. The famous saying: "If you think education is expensive

– try ignorance"[2] seems to be more valid than ever, and yet there is an estimation of a huge financial gap to implement the global education goal. The Global Education Monitoring Report estimated that low– and lower-middle-income countries would face an annual financing gap of US$39 billion in 2015–2030 (EFA GMR, 2015, p. 1) in order to achieve an inclusive, equitable and quality education for all. At the same time, investment in education is decreasing worldwide, both in the form of domestic spending and official development aid. The data prove that: *The Education 2030 Framework* calls for governments to commit at least 4% to 6% of GDP to education and/or at least 15% to 20% of public expenditure to education, but 1 in 4 countries do not meet both these targets (GEMR, 2019, p. 1). *The 2015 Addis Ababa Action Agenda* calls for DAC donors to allocate 0.7% of gross national income to aid, but in 2015, only 6 out of 29 DAC donors met this target (GEMR, 2017, pp. 2–7) and there are no indications that this will change.

Problem of the lack of funding is much more than just a discussion about the negotiable amount from the budget or better use of existing resources. The final test of the verbal commitment made by powerful global players turned out to be lip service paid to one of the cornerstones of the whole agenda, quality education. "Shortage of funds should not jeopardize the educational opportunities of the billions of learners entitled to receive a quality education. This commitment is even more important with the more ambitious SDG agenda." (UNESCO, 2015, p. 32). With a more ambitious agenda than MDGs though less financial commitment, and without having a clear financial target on education within SDGs, this sounds hypocritical. GEMR and UNESCO are showing it very clearly in their illustrations of lacking funds: "While the overall financing gap in education may appear large, it is equal to just 8 days of annual global military expenditure, which totalled US$1.75 trillion in 2013" (EFA GMR, 2015, p. 6).

Instead of support, there are recommendations; instead of solutions, there are initiatives. "In the past two years, two high-profile initiatives were expected to propose solutions to the financing conundrum: the so-called International Commission on Financing Global Education Opportunity, and the World Bank's World Development Report 2018. Bizarrely, both said more about why education should be financed rather than how" (Wulff, 2019).

Episodic examples of low-cost but quality education measures, efficient use of minimal education resources and inexpensive solutions in education are not showing the way to meet the needs of the implementation of SDG4. Finding innovative, less costly solutions and ways to use resources in a more efficient way might help sporadically, but this approach is more an excuse that hinders the search for a sustainable global solution for the financial gap in education.

2 See the discussion about the possible author of the saying: https://quoteinvestigator.com/2016/05/03/expense/

There is a lot of criticism of the United Nations' (UN) existing funding patterns, which may "draw the UN further from its original and ongoing purpose and further from democratic governance" (Adams & Martens, 2015, p. 5) and jeopardise the implementation of Sustainable Development Goals, and especially education goals, which are behind the other goals in terms of investments. "I am saddened by the decline of UNESCO and this community's inability to sort out the international education architecture... There is also vast under-financing and under-provision of global analyses and tools in education; only 3% of international spending in education goes to data or knowledge generation compared to 21% in health" (Burnett, 2017).

Referring to the gap in low income countries, UNESCO insists that, although international public finance including Official Development Assistance (ODA) will help to raise additional resources, public and private, "aid will... remain a crucial source of education finance over the next 15 years if the targets are to be met, and will be complemented by the growing contribution of middle income countries" (UNESCO, 2015, p. 32). In spite of that, there is a recent 'favourite' – new recommendation of how to close the gap in financing education: domestic resource mobilisation. The invitation to do more 'domestic resource mobilisation' puts the whole burden of implementation and education quality assurance on individual countries, while ignoring global tendencies such as tax evasion, tax dodging and debts crises that play an important role in their budgetary situations and influence directly investments in education on the national level.

One example is Oxfam's estimation that "corporate tax dodging costs poor countries at least $100 billion every year. This is enough money to provide an education for the 124 million children who aren't in school and prevent the deaths of at least six million children thanks to health care services." (Oxfam, 2017, p. 1). Could domestic resource mobilisation compensate for what developing countries are losing? "While aid amounts to around $70 to 100 billion per year, the poor countries pay some $200 billion to the rich each year" (Shah, 2014). Even aid is not targeting the real problems: "$37 billion – roughly half of global aid – is "phantom aid", that is, it is not genuinely available to poor countries to fight poverty: At least one quarter of donor budgets—some $19 billion in 2004—is spent in this way: on consultants, research and training ("technical assistance")" (Shah, 2014).

It is unreasonable to expect that countries that are most in need of higher investments for quality education can reach the needed budget through better domestic resource mobilisation, while their economies are at the same time plagued by economic injustice and inequalities. Another oft – recommended solution is the use of digital technologies that could improve the quality of some aspects of education, but this is very limited solution, not tackling crucial problems. Obsession with digitalisation and learning applications for mobile phones ignores the dimension of quality which was proclaimed crucial in all relevant

documents: teachers, their education, competencies, professional development and work conditions.

The quality of education is thus left to the single, less costly national initiatives and unrealistic, unsustainable national efforts, or to unfruitful discussions of the quality of private schools and questions around how to make them accessible and affordable to poor populations. The problem is more global and complex than that.

Conclusion

"Quality of education is the ultimate aim" is much more easily said than done. With more than 1.3 billion people around the world who live in extreme poverty (that is, on less than $1.25 a day), with almost 800 million that are unable to read or write a single sentence, the problems require more than a few measures here and there and some advocacy arguments about the benefits of education, in negotiations with governments' Ministries of finance. Quality is an attribute that subsumes numerous aspects of a certain phenomenon and reveals its true nature. With such a complex phenomenon as education, it becomes extremely complex to define, capture, measure and improve quality. At the level of global policy, it is even more complicated, since tackling the problem of quality education goes deep into the political and economic structures of world and requires structural and systemic transformation. Agenda 2030 and Education 2030 are proclaimed to be truly transformational agendas, but still, they remain superficial and don't intervene into the systems that are generating further problems and hindering systemic efforts to improve the quality of education. In order to start a real transformation towards quality education, serious rethinking of the current policies and structures is needed, accompanied by action: putting money where the mouth is.

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FROM ADULT EDUCATION TO LEARNING CITIES: THE CHANGING FACES OF UNIVERSITY LIFELONG LEARNING IN THE CONTEXT OF QUALITY EDUCATION AND SUSTAINABLE DEVELOPMENT GOALS

Balázs Németh*
University of Pécs, Hungary

Abstract

This paper will elaborate upon universities' roles in the development of adult education in the context of turning global goals of lifelong learning into local and regional actions in which higher education institutions play an important and cohesive role both in participatory and performance focuses. An overview of the UNESCO-led CONFINTEA progression is described as necessary frame to reach out for current roles and responsibilities in quality education. The 2030 Agenda for Sustainable Development has turned universities to reconfigure their lifelong learning policy orientations and, to help their member universities, influenced Eucen (European Universities Continuing Education Network), to recognise their roles in promoting quality education and learning communities in association with UNESCO Institute for Lifelong Learning. This leading UN body has recently turned its policy measures to combine global and local through its learning city initiative and has addressed universities to join this global network to develop learning communities.

Accordingly, this paper will argue for more cohesive policy formation and for profound actions of university lifelong learning by which the realisation of learning city concepts and models can provide not only attention, but also direct interventions, based on SDG4 goals, to fight back inequalities and several other challenges.

Keywords: Sustainable Development, University Lifelong Learning, Learning Cities, Global and Local

* E-mail: nemeth.balazs@pte.hu

The historical dimension – universities as agents of quality adult education and lifelong learning

In the history of modern adult and continuing education through the late 19th century Europe, universities were addressed to take a particularly important role in the dissemination of scientific knowledge towards the public and, according to simultaneously growing societal claims, to organise new forms of education for adults in newly set forms of further and continuing education. The formation of University Extension in Britain and the Urania movement in Germany served as concrete reaction to such demands. (Steele, 2007, Fieldhouse, 2000)

While most leading universities became the part of the socially driven work to get lower classes of the societies into educational activities, consequently, they arrived to the realisation that a new, formally a third mission was formed to provide courses, trainings, lectures and other newly recognised forms of knowledge transfer for adults so as to respond to surely growing claims of societies. In the socially and economically developed part of Europe and of North-America, such trends met with the emerging issue of professionalisation in adult education hit by challenging developments and disciplinary innovations in psychology, sociology and social work which constrained academic narratives upon the learning and education of adults to reach for more modern disciplinary structures and methodologies. (Lindeman, 1926, Yeaxlee, 1926)

Higher education institutions initiated strengthening their activities in the development of adult education by the following dimensions:

- opening new grounds for academic discourse and theoretical modelling by the foundation of new departments and institutes to research the teaching and learning of adults;
- initiating interdisciplinary research actions to investigate the changing nature of and practices in adult education;
- responding to governmental calls so as to develop the skills and methods of adult educators having been engaged in the development of schools, programmes and other identical community activities for adult learners;
- participating collaborative actions to extend the provision of adult education through extramural courses in regular and irregular forms of education and training.
- initiating local and regional events to collect and share valuable knowledge in the community. (Németh, 2017)

After World War II, it was UNESCO and its newly formed international conferences on adult education which recalled for the above historic role to be reconfigured and strengthened the roles of universities in the development of adult education in scopes of participatory actions to widen quality education

and research, professionalisation through emerging international platforms for collaboration.

Already in 1949, the declaration and report of CONFINTEA I, having been organised into Elsinore in Denmark, claimed for a strong connection in between universities and adult education:

> 'An urgent appeal should be addressed to universities and to the learned world in general to help adult education organizations to bring the sciences within the reach of all...Unesco should encourage all adult education bodies to work for the popularization of science through scientific centres and to seek, especially by means of discussion, a better understanding of the effects of science upon the life and growth of human society.'
>
> (UNESCO, 1949, p. 14.)

A second part of the Report of the Commission dealt with the roles of universities around the following questions to highlight some particularly challenging issues:

- Should their role be limited to their regular curricula or do they have broader responsibilities to the community as a whole? If so, what responsibilities?
  - (a) Extra-mural lectures and courses
  - (b) Seminars end short courses
  - (c) Leadership training
  - (d) Research
  - (i) Services to the community or to adult education agencies such as: documentation and information centre, circulating library, films, textbooks, study outlines, reading guides, bibliographies, drama, music and fine arts.
- What special training in adult education should be given to school and university teaching staffs?
- What should be the relations between a University Adult Education Department and the various Faculties or Schools of the University?
- How can the Universities and Schools secure adequate finance to meet their community responsibilities?

Those issues were reflected and elaborated upon in two different chapters of the Elsinore CONFINTEA I Report at the topic of *Effectiveness* and at the topic of *Division of Responsibility – (b) Universities and Schools*, were finally summarized into the Recommendations of the Commission referring to *Universities in Adult Education.*

Under the topic of Effectiveness, the Report highlighted that:

> 'It is agreed that, whatever teaching work they may undertake in adult education, universities have a particular function of carrying on research (preferably in collaboration with the free voluntary movements) into the effectiveness of agencies and methods in adult education.'
>
> (UNESCO, 1949, p. 17.)

Referring to division of responsibility, the same Report underlined that:

> '(b) Universities and Schools
>
> ..Turning to the universities, *two opposing views emerge*. One, represented best perhaps by the French spokesmen, sees the *university as a centre of distinguished academic teaching and research inappropriate to the educational needs of non-matriculated adult students*. This view does not exclude a contribution to adult education by the provision of training courses for teachers and community leaders. This contribution should be increased: *universities can direct students' attention to the community's needs and can provide courses to equip students to occupy a leading role in their communities.*
>
> ..Moreover, it is held that *this active role, particularly in work with educationally under-privileged groups, is of fundamental advantage to the universities themselves.* Through it, *real knowledge and experience are gained of social and economic circumstances whilst it develops support and respect for the university among the public* at large.'
>
> UNESCO, 1949, p. 18–19.)

It is outstandingly important to recognise that the international community provided a clear and detailed reference to exact aspects of potentially responsible actions of universities participating in the development of adult education with accessible programmes for future professionals and in community development, in adult education, with special educational provision and forms for under-privileged groups, based on effective partnerships with local-regional voluntary organisations. The Recommendations of the Report provided a conclusion on universities and adult education to emphasize the recognition of research, extra-mural teaching and direct co-operations with voluntary movements:

> 'We believe that *Universities have a special duty in promoting research* to establish the effectiveness of agencies and methods which are or might be employed in adult education throughout the world, *in training teachers for adult education*, and *in providing extra-mural teaching for adults from all sections of the community* who are capable of studying at an appropriate level, *in co-operation wherever possible with free voluntary movements*. We ask Unesco to bring this resolution to the notice of the Universities International Bureau.'
>
> UNESCO, 1949, p. 20–21.)

The impact of this approach was immensely strong in drawing a direction for higher education institutions having been engaged in adult and continuing education to develop their services and collaborative actions for adult learners with quality concerns both in the context of participation and in performance referring to learning. This focus was enlarged throughout the CONFINTEA process and almost all following declarations and reports pointed out the roles of universities in the development and research of adult education. However, the Elsinore Report concluded the essence of the roles of universities in a threefold way, namely, it really tried to orientate universities on research, professionalisation and to extramural teaching services.

CONFINTEA II in Montreal, Canada strengthened the roles of universities in adult education in the research and development of adult education to imply practice-oriented innovative methods, interdisciplinary focuses and technologically supported environment for learning and teaching based on socially supported emerging forms for adult and continuing education based on collaborative policies and structures. Therefore, the Report of CONFINTEA II stated that:

> '*These are some of the topics in which scientific research ought to be undertaken.* Since *universities* and other institutions of higher education carry in large measure the responsibility for leadership in educational thought and practice, they *may well be the most suitable agencies in some countries to initiate research; elsewhere this may more properly be a function of other institutions or organizations.*
>
> *Universities* will naturally wish to limit themselves to those kinds of education which they are fitted to undertake, but we believe that they *should regard the teaching of adults and co-operation with other adult educational bodies as a proper and an important function*.'
>
> (UNESCO, 1960, p. 15.)

The above paragraphs opened a wider discourse upon the roles of universities in adult education with specific attention to both quality and to partnership development. For higher education institutions each dimension indicated limitations having been reflected by the traditional approaches of academics upon extramural services of theirs beyond some limited actions.

The ongoing welfare reforms, based on linear economic development, provided a solid ground for the establishment of departments of adult education at many universities and by the introduction of special trainings for future adult educators, but turbulent steps of crisis in the economies and the societies soon turned attention away from educational policies based on formal structures more towards the non-formal sector.

This era was rather challenging because of those many regional conflicts, wars and tensions which lead to more difficulties and obstacles, but the biggest wall for adult learners to get through was the economic crisis of 1973, that put welfare programmes and reforms in education into brackets and turned adult

education and the roles of higher education directly towards new methodologies, towards non-formal and informal directions to result in less attention towards school-based adult education. In the Federal Republic of Germany this period was reflected in the introduction of more laws in adult education and structural planning to move adult education closer to non-formal grounds and training programmes be provided alongside labour market needs (Nuissl – Pehl, 2000).

Still in 1972, UNESCO directly geared up the role of higher education in the development of adult education and through its CONFINTEA III Declaration at its Tokyo World conference(UNESCO, 1972). The declaration made a clear signal that adult education would need the professional input of universities in order to reach for better performance in learning through quality education. Unfortunately, most governments of Western democracies thought that they should move most of their development funds from education to training programmes because of the impacts of the economic crisis and of obvious technological changes affecting industries, agriculture and the service sector too.

In the Summary and Main Conclusions part of COFINTEA III Report, it was concluded that:

> '17. *The role of universities in adult education should be widened.* Formal university entrance qualifications based on school examinations should be waived so that mature adults with the requisite knowledge and skills, acquired through mature age entry schemes or in other ways, should have an opportunity for study. *Universities should identify and carry out their research and training tasks in relation to the needs of the total society* and not only privileged segments.
>
> 18. *Adequate academic status should be afforded to adult education as a discipline. More professional adult educators must be trained and adult education research identified. Such research should be problem-oriented and multidisciplinary in its approach.*'
>
> (UNESCO, 1972, p. 18–19.)

It was the crisis-period of the early 1970s that made the sector of education, and higher education within that sector, respond to new needs of the society and those of economy by designing new and complex majors in order to educate and train professionals as adult educators, trainers and mentors helping adults to achieve quality adult learning in challenging learning situations. Another factor which accelerated professionalization in the field of adult education was the emergence of critical thinking which considered the problems of education as a result of overestimated beliefs in institutional constructions, the loss of learner-centred approaches and, as a rewind perspective, the devaluation of humanistic principles. We should recognise that the critical voices of Illich, Freire and later of the Club of Rome (Illich, 1973; Freire 1970; Club of Rome, 1979) resembled the rejection of over-institutionalised ways of education.

The Club of Rome and its learning centred paper, opposite to programs, systems and policies, critically signalled unlimited perspectives for learning to open new directions for educational and brain researches with a need to rethink human dimensions and benefits of education and learning.

The policy changes of European integration in the period between 1971–73, referring to education and training had helped to start concrete transnational research and development programmes in adult education with the participation and commitment of some distinguished universities across Europe in comparative studies. Such partnership for developing adult education research was collaborative action initiated by Franz Pöggeler, Aachen Hochschule and Walter Leirman from the Catholic University of Leuven and was joined by several other distinguished colleagues from universities across Germany, the Netherlands, Austria, Switzerland, Belgium, the United Kingdom, Denmark, Sweden, Finland and Italy (Pöggeler, 1994).This kind of collaboration helped the improvement and advancement of interdisciplinary studies and, furthermore discourses over both theoretical and methodological problems in adult education and curricular developments.

The Nairobi – Hamburg progression on the roles of universities to establish the focus of university lifelong learning

This period of adult learning and education was greatly influenced by the 1976 UNESCO Recommendation on Adult Education when UNESCO held a special session in Nairobi, Kenya to demonstrate a need for concentrated action both in fighting back illiteracies and in the further development of adult education programmes for special groups in adult learning having been marginalised by economic changes, political upheavals, civil wars or simply conflicts in the regions, local communities or settlements where they lived. This Recommendation highlighted the roles of higher education institutions in the professional development and institutional modernisation of adult education with dedicated position in research activities to be conducted by universities and other higher education institutions (UNESCO, 1976). Also, its part explicitly claimed the universities should carry out collaborative research in adult education:

> '35. Member states should actively encourage co-operative research in all aspects of adult education and its objectives. Research programmes should have a practical basis. They should be carried out by universities, adult education bodies and research bodies, adopting an interdisciplinary approach. Measures should be taken with a view to disseminating the experience and the results of the research programmes to those concerned at the national and international levels.'
>
> (UNESCO, 1976, p. 7.)

The UNESCO Recommendation of 1976 and the 'No Limits to Learning' paper of the Club of Rome accelerated nation-state attentions to the development of adult education and training (The Club of Rome, 1979). In Europe, the welfare orientations were formally extended, but VET-focuses and labour market claims successfully dominated policy discourses in which the OECD became a key player to determine actions referring to education and training with the European Economic Community. On the other hand, we have to recognise the influence of the special climate of that era, namely, that academic people were still strong and influential to move adult education research and development focuses in order to become an integral part of educational and training policy discourses, European and international conferences referring to opening access and opportunities to both traditional and to new groups of adult learners and, likewise, strengthening their social positions through the right to learning.

The 1985 UNESCO CONFINTEA IV helped some active and engaged nations and NGOs to fight expanding participation in education and learning. The Paris Declaration insisted on the role of universities in leading education, research and development work in adult education (UNESCO, 1985):

'The Conference recommends to Member States and to the higher education community:

(a) to broaden access to higher education for adults by developing more flexible administrative criteria for admission and then putting them into practice;
(b) to provide courses, seminars and educational opportunities of diverse types to adults near their place of residence;
(c) to permit access to higher education to adults in remote areas by expanding distance learning through correspondence courses, radio and other low-cost methods;
(d) to adapt the processes and structures in institutions of higher learning to meet the unique and diverse learning needs and experience of adults;
(e) to increase the quantity, quality and thoroughness of studies and research on issues related to adult education, in order to provide informed bases for the planning, implementation and evaluation of adult education activities.'

(UNESCO, 1985, p. 52.)

This was a very special period of time, since almost everything important, milestone action happened in Europe, and Europe did make use of this situational advance in order to get adult education be integrated to educational and training policy planning and programmes. That particular process was formulated by advanced leaders of UNESCO and its Institute for Education (UIE), OECD CERI (Centre for Educational Research and Innovation), both organisations' headquarters situated in Paris, the European Commission, led by Jacques Delors for two terms of office, and the leadership of EAEA (European Association for the Education of Adults). Many leading figures of those organisations,

especially professional experts working with those organisations represented a significant academic background of having known research and development practice well-enough to be aware of realities of adult education in different parts of Europe and different regions of the world.

The global context has not just enabled, but also reinforced us to recognise that today we are not simply talking about adult education, we are talking today about adult learning and education. This, a more inclusive way of understanding the acquisition and sharing of knowledge and skills, makes us reflect the importance of what universities and academic researchers and educators have done to raise the professional levels and research standards in adult learning and education.

UNESCO's famous Delors Report from 1996 and CONFINTEA V in Hamburg in 1997, resulted in the preparations for a new era with a special focus on learning and the adult learner. (Delors-UNESCO 1996 and UNESCO, 1997). The CONFINTEA V Report, and more precisely, the Agenda for the Future, resembled the special roles of higher education in the development of quality adult learning and education:

> '19. Opening schools, colleges and universities to adult learners:
>
> (a) by requiring institutions of formal education from primary level onwards to *be prepared to open their doors to adult learners, both women and men, adapting their programmes and learning conditions to meet their needs*;
> (b) by *developing coherent mechanisms to recognize the outcomes of learning undertaken in different contexts, and to ensure that credit is transferable within and between institutions*, sectors and states;
> (c) by *establishing joint university/community research and training partnerships, and by bringing the services of universities to outside groups*;
> (d) by *carrying out interdisciplinary research in all aspects of adult education and learning* with the participation of adult learners themselves;
> (e) by *creating opportunities for adult learning in flexible, open and creative ways*, taking into account the specificities of women's and men's lives;
> (f) by *providing systematic continuing education for adult educators*;
> (g) by calling upon the World Conference on Higher Education (Paris, 1998) *to promote the transformation of post-secondary institutions into lifelong learning institutions*, and to define the role of universities accordingly.'
>
> (UNESCO, 1997, p. 29.)

And again, the roles of universities were tied up to both lifelong learning and, especially, to adult learning and education. In this respect university lifelong learning started to mean that universities would have to step forward new dimension of education with a more profound use of ICT, having been signalled by Arnold in 1991, and the improvement of social dimensions of higher education, for example, with concerns towards sustainability, the context of

third age learning and in the scope of community and citizenship developments. (Arnold, 1991)

The MDGs and EFA goals as frames to set the perspectives for SDGs and university lifelong learning – the impact of UNESCO statements on lifelong learning

While CONFINTEA V Report connected the roles of universities with the quality development of adult learning and education, it openly emphasized that universities should turn to become institutions of lifelong learning in order to provide university lifelong learning. Likewise, the *Agenda for the Future*, a distinctive part of the Report next to the *Hamburg Declaration,* claimed that adult learning and education ought to be used as appropriate tools to get people concerned about environmental, health and demographic constraints and issues.

Together with the European perspectives of lifelong learning and its rising policy implications in the European Union and its member states, UNESCO and its Institute for Lifelong Learning made use of the Delors-report's four dimensions on learning and, together with CONFINTEA V Report, set further steps for education and learning within the Millennium Development Goals (MDGs)/ Dakar Framework for Action. The process was opened at UNESCO level in Dakar with the World Education Forum to discuss certain perspectives of communities referring, for example, to access to quality education and, consequently, to the roles of institutions of education.

Right at the eve of the Millennium itself, the issue of adult and lifelong learning was at the peak of policy discourse in Europe in order to reach, on the one hand, for economic growth and, on the other, to achieve social stability with active citizens to think and act in a critical way. It is no wonder that universities were strongly involved in this process and Eucen started to work on frames and Agenda on university lifelong learning by developing several project based tools within policy frames upon how universities can formulate their strategies of lifelog learning with principles and flexibility in accordance with the Dakar Framework, MDGs and, more closely, the European Memorandum of Lifelong Learning.

Many universities could build on the claims of relevant CONFINTEA goals so as to attain more learners. Accordingly, UNESCO also tried to help higher education institutions with some direct recommendation how to become places of lifelong learning. The famous Mumbai and Cape Town Statements indicated that not only the adult education scope, but also the lifelong learning dimension could merge universities, lifelong learning and active citizenship (Németh, 2015).

On the specific role of universities, the Mumbai Statement underlined:

'(9) The transformation to genuine lifelong learning institutions require a holistic approach which

(a) *supports the institution becoming a lifelong learning community itself;*

(b) integrates academic, financial and administrative elements;

(c) *provides structures which are responsible for organisational, staff, student and curriculum development and community engagement*; and

(d) aligns the various supportive structures such as academic information systems, library provisions and learning technologies to the *new mission of universities in learning societies.'*

(UNESCO, 1998, p. 362.)

The Cape Town Statement moved further with the familiar issues of lifelong learning and connected higher education, lifelong learning to active citizenship and it called for characteristic elements of a lifelong learning higher education institution. The following six such elements were outlined by participants of the Cape Town Conference discussing the characteristics elements of a lifelong learning higher education institutions:

(1) 'Overarching frameworks which provide the contexts facilitating and higher education institution to operate as a lifelong learning institution. These are: regulatory, financial and Cultural/social;

(2) *Strategic partnerships and linkages – to include the following. forming relationships internationally; forming relationships with other institutions; forming relationships within institutions as well as forming relationships with other groups in society;*

(3) *Research is understood in a broad sense and includes working across disciplines and/or across institutions.* Lifelong learning is regarded as an important and legitimate research area;

(4) Teaching and learning processes – *Educators encourage self-directed learning, engage with knowledge, interests and life-situations which learners bring to their education and use open and resource-based learning approaches*;

(5) Administration policies and mechanism – service to learners is top priority of the administration;

(6) Student support system and services – *Learners are supported to become independent learners in various ways.*'

(UNESCO, 2001, p. 6)

Those above Statements were formulated together by several adult education and lifelong learning experts, researchers with academic background, like Peter Jarvis, Alan Tuckett, and they moved the discourse over university lifelong learning into the quality dimension in order to prepare higher education

for an immensely changing learning environment from the angle of economic towards societal.

Higher education also joined the discussion over lifelong learning with a more intensive involvement through EUA (the European University Association, 2008) and, also, through ucen after 2002 as part of the well-known Bologna-process. A significant number of academic researchers indicated, from that time onwards, that a new and systemic framework has been under construction in education and training which aims to generate more quality, partnership-based development, and the dissemination of knowledge through ICT-based tools (Field, 2006). On the other hand, ucen was the strong promoter of finding tools and methods of more flexible higher education when implementing the Bologna-reforms. This approach was reflected and embedded into the BEFLEX project of the Network around 2007 and 2008 to underline the importance of shaping and developing university lifelong learning. The BEFLEX project highlighted the necessity of lifelong learning policies of universities in depth and details which was mirrored by the EUA Charter on Lifelong Learning in the early fall of 2008 and the Leuven Communiqué of Ministers in 2009. This later document gave a detailed description, within policy environment, what universities ought to demonstrate when trying to promote lifelong learning. The Communiqué vehemently urged for a new and innovative approach that higher education should help lifelong learning be realised by such concrete affairs as better accessibility, better quality of provision and transparent flow of information in order to raise the level of qualifications, levels of skills and competences of people living in Europe. Universities could help that process by engaging in offering flexible learning paths as part-time and work-based forms. Higher Education institutions should foster more concrete forms of collaborative actions with major stakeholders, like employers, chambers, etc., mentioned beforehand in the EUA Charter, so as to promote better learning performance and, at the same time, helping to recognize prior learning. This kind of approach requires genuine ways of tools of funding and structures of provision, and, holistic policies for action in national contexts.

Accordingly, this may encourage not only dialogue amongst stakeholders in the sector of education and, for example, those of the labour market, culture, sport, environment, health, etc.(referring to the issue of separation-integration), but the implementation of flexible services for learners as adults with different ages and to incorporate lifelong and life-wide learning through their educational provision for learners. Such changes and new approaches of universities' management may help a social inclusion to get strengthened in order to widen participation and to open higher education to non-traditional learners.

From CONFINTEA VI to SDG4 – a remarkable potential for universities to connect quality education of adults to learning cities, learning regions and to learning communities

CONFINTEA VI and its report entitled as *Belém Framework for Action* strengthened the academic focus on adult learning and education so as to raise quality:

> 'Quality
>
> 16. Quality in learning and education is a holistic, multidimensional concept and practice that demands constant attention and continuous development....
>
> To these ends, we commit ourselves to:
>
> (c) improving training, capacity-building, employment conditions and the professionalization of adult educators, e.g. through the establishment of partnerships with higher education institutions, teacher associations and civil society organisations;'
>
> (UNESCO, 2009, p 8–9.)

CONFINTEA VI was achieved in a time of global economic and financial crisis and it was a kind of miracle what governments agreed upon in the final document in order to raise quality of adult learning and education and, at the same time, to incorporate issues of equity, participation, inclusion and citizenship. In this particular climate, UNESCO Institute of Lifelong Learning (UIL) and its new director, Arne Carlsen, became proactive and started to provide, on the one hand, thematic *global reports on adult learning and education* (GRALE I in 2009, GRALE II in 2013. and GRALE III in 2016.) in which the partnership-based quality development of adult learning and education became enhanced in association with universities.

On the other hand, UIL director and his professional team initiated the topic of UNESCO Global Leaning Cities and, after 2010, stepped into the organisation of a global network of learning cities with a worldwide support, especially from Asia and South-Pacific region. After two years of preparations, the learning city programme of UIL became a platform of cities in 2013 which dedicated learning in the community to raise participation in genuine way, based on partnerships with educational providers like universities whom quality developments are essential in reaching up for the combination of participatory and performance side in learning (UNESCO Global Learning Cities, 2013). It is no wonder that the most of the globally advanced learning cities have universities as strongholds of lifelong learning embedded into the learning city mechanism as engines of this valuable initiative.

Not only the balanced focus on learning and education, but also the reflections to both economic and to social issues brought about a specific policy layer in lifelong leaning for UNESCO and, simultaneously, this particularly specific inter-governmental organisation fully supported the United Nations' general decision to prepare, in 2013, for the so called Post-2015 period with an overarching programme to continue MDGs with Agenda 2030 for Sustainable Development Goals (SDGs) with 17 representative goals and one, SDG4 especially dedicated to quality education and another, SDG11 to foster sustainable cities and communities (UN Agenda 2030 for SDGs, 2015).

Already in 2015, UNESCO Institute for Lifelong Learning provided its *Recommendation on Adult Learning and Education* in which research institutes and academia were addressed to be the part of multi-stakeholder partnership. Likewise, the same document called Member States to consider developing learning cities, towns and villages, based on key features of learning cities, by:

(a) 'mobilizing resources to promote inclusive learning;
(b) revitalizing learning in families and communities;
(c) facilitating learning for and in the workplace;
(d) extending the use of modern learning technologies;
(e) enhancing quality and excellence in learning;
(f) fostering a culture of learning throughout life.'

(UNESCO, 2015, p. 10.)

The same document highlighted that international co-operation would be needed in the promotion of development and strengthening of adult learning and education efforts in UN and UNESCO and in the attainment of UN SDGs (UNESCO RALE, p. 14.).

Sustainable development goals – a particular frame for universities to bridge social responsibility and lifelong learning

Already by 2015, ucen had been engaged in several project-based innovative works to identify the social responsibility of higher education institutions. Its projects, like COMMIT could build on several previous project results and, moreover, the Network established an annual policy platform into Brussels, called Policy Talks, so as to invite some distinguished stakeholders and discuss the roles of universities in the formation of lifelong learning and quality education. (COMMIT, 2015) Amongst some distinguished partners in adult and lifelong learning, UNESCO Institute for Lifelong Learning has been invited into the 2017 and 2018 Policy Talks to discuss Sustainable Development Goals and, based

on the rather thorough discourse, eucen provided a Position Paper upon those upcoming concerns. A very accurately set of conclusions reflected that university lifelong learning would have some distinctive roles and responsibilities in SDGs:

> *'eucen and its member universities share a common conviction that while lifelong learning has an important role to play in achieving all of the Sustainable Development Goals, it is at the heart of Sustainable Development Goal 4*, which aims at developing inclusive and equitable quality education and promoting lifelong learning opportunities for all, especially, *through university programmes and collaborative actions for higher learning* so as to respond to referring to economic, societal and environmental realities and challenges.
>
> Based on the various achievements and a variety of innovations and quality in European university lifelong learning achievements through structures, methodologies and content, *eucen stresses that the challenges of Sustainable Development Goals (SDGs) cannot be successfully addressed and answered without university lifelong learning since most SGDs claim educated people and educated citizens in order to reach out for progress.*
>
> *According to its 2017 Policy Talks,* based on the inputs and reflections from distinguished participating experts, policy advisers, representatives of special international organisations, *eucen has come to specific conclusions on lifelong learning, quality education and sustainable development goals:*
>
> - *integrated actions of HEIs are crucially needed in order to respond to SDG4 and the other relevant SDGs through concrete steps*
> - *eucen puts quality, professionalization and skills development into focus*
>
> *University lifelong learning is an integrating part of the lifelong learning domain and forms part of Sustainable Development Goal 4* (SDG4). It is however an under-represented area of higher education activities and therefore its position ought to be strengthened and well-recognised.
>
> *University lifelong learning,* through eucen's activities, *should include Education for Sustainable Development and Global Citizenship Education as two key concepts of today's lifelong learning focuses.*
>
> *eucen and its member universities are convinced that issues around Agenda 2030 for Sustainable Development and Education 2030 Framework for Action has to be continuously followed.'*
>
> (eucen, 2018, p. 1–5.)

Conclusion

In order to recognize the roles of higher education in the development of adult and lifelong learning, the conditions of three 'Ps' have to be tackled. Having scrutinized the evolution of how great minds representing universities tried to help adult education get modernised, one may come to the conclusion that

university engagement is relevant in research and development work in case they provide a good *Place* for collaborative actions and encourage academic people aspiring such work. A second aspect is *People*, without who there is no living place and good grounds for academic work providing adventurous intellectual climate. And the third aspect is *Purpose*, or in other words, *courage* that makes universities a mystical place of scientific advancement. Several recent developments have been collected by UIL in its recent collection to deal with the roles of higher education in promoting lifelong learning (Yang – Schneller and Roche, 2015). We can only hope that this special engagement will not be put to the margins of activities of higher education institutions.

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COMPETENCIES FOR SUSTAINABLE DEVELOPMENT

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THE ROLE OF PROBLEM-ORIENTED TEACHING IN THE PROCESS OF THE DEVELOPMENT OF CRITICAL AND CREATIVE THINKING[1]

Radovan Antonijević*
Faculty of Philosophy, University of Belgrade, Serbia
Nataša Nikolić**
Faculty of Philosophy, University of Belgrade, Serbia

Abstract

Intellectual development represents the process of progressive change and improvement of the individual's cognitive capacity. The way an individual observes, finds out and thinks about the world surrounding him reflects the level of his intellectual development. Intellectual education seeks to ensure the optimal intellectual development of each individual through conscious, deliberate, organized and all-purpose activities. The aim of this paper is to clarify the role of problem-oriented teaching in the process of intellectual education. It starts from the assumption that cognitively challenging activities that are an integral part of the problem-solving process favorably affect the realization of one of the primary goals of intellectual education, which is the formation of an intellectually independent person who can independently think and face the challenges of contemporary society. Considering the fact that the thinking of students is manifested and evolving in problem situations, and that problem resolution is regarded as a process in which, through the engagement of various thought operations, a problem solution is found, problem-oriented teaching is presented as a convenient learning environment for encouraging and developing students' intellectual potential. In this regard, they analyze the constituent elements of problem-oriented teaching and their role in the process of developing critical and creative thinking.

Key words: problem-oriented teaching, intellectual education, critical thinking, creative thinking

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* E-mail: radovan.antonijevic@f.bg.ac.rs

** E-mail: natasa.nikolic@f.bg.ac.rs

Introduction

Intellectual education seeks to enable the development of intellectual capacities of individuals by conscious, deliberate, organized and beneficial activities. It is, as well as education in general, a lifelong process that takes place at different ages, levels and through different models of upbringing. Intellectual education is carried out through a variety of mental activities. A group of authors states that the type and level of complexity of activities that individuals are continuously exposed to can positively or negatively direct the development of cognitive abilities and the way of intellectual functioning of individual's (Parisi et al., 2012). Accordingly, they emphasize that activities with low content of intellectual stimulation, such as watching television, are associated with an increased risk of cognitive impairment, while the participation of an individual in intellectually challenging activities can preserve or improve the cognitive potentials of an individual.

The key place for the development of the process of intellectual education at school is teaching. Developing cognitive abilities today, as before, is one of the highest goals in education. Still representatives of the theory of formal education, such as Rousseau, Herbert, Pestalozzi, Diesterweg and others, advocated that teaching materials and contents should be in the function of developing the thinking and intellectual abilities of students. Unlike the knowledge that the student can assimilate from the outside environment, the cognitive structures of the students cannot be transmitted in the finished form, but they must be developed by the students. In order to develop certain cognitive structures among students, it is necessary to provide a teaching context that will stimulate student activity through which the existing cognitive structures of students will be transformed and reorganized into a more complex one. All subjects, to a smaller or larger extent, attempt to realize and achieve the goals of intellectual education through various educational activities. The level of achievement of the goals of intellectual education in educational practice will depend not only on the individual intellectual potentials and capacities of the students, but also on the quality of the teaching process. Components of the teaching process, such as: teaching contents, teaching forms, teaching methods, teaching models, teaching textbooks and the like, define and determine the degree of encouragement of students' intellectual development in teaching.

Solving the problem is a complex cognitive process, which begins with a subjective experience of difficulties in a particular situation by an individual, and it should end up with a sense of satisfaction because of a successfully overcome obstacle. Since the solution of the problem requires the investing of mental effort, the role of problem-orientated teaching is particularly reflected in the process of intellectual education (Antonijević, 2011). The problem-oriented teaching, as a model of teaching work, represents a favorable context for the manifestation, development and improvement of students' intellectual potentials. Cognitive capacity determines the level of students' success in the problem solving process,

but also problem solving returns its progressive change and expansion. In such situations, an individual engages various thought operations, which serve as a means to develop cognitive abilities and skills in students. In this respect, it can be assumed that successfully organized problem-oriented teaching will be effective in achieving basic tasks in the field of intellectual education, such as: the acquisition of scientific knowledge and value systems; formation of necessary habits and skills; developing mental and logical knowledge and personality abilities (observations, attention, remembering, imagination, opinions – especially critical, creative and abstract thinking); developing a creative activist attitude towards nature, society, other people and yourself; training for further education, and in particular for permanent self-education (Trnavac and Đorđević, 2013). Solving the problem is one of the global imperatives of education in the 21st century. This claim is justified by numerous arguments. It is generally accepted that solving problems is one of the key skills of a modern man who permeates all the areas of his work. Consequently, today most education systems proclaim problem solving as one of the essential goals of educational activity. That the problem solving is skill which should be developed with young generations, is also recognized by some international research (PISA, TIMSS), in which problem solving is singled out as a separate area of monitoring and assessing the quality of student achievement. By developing problem-solving skills, students are prepared to be rational citizens in the future, who are able to independently and on their own think and act. Taking into account the importance of this topic, this paper will present the way in which problem solving can influence the development of the critical and creative thinking of students. The paper analyzes the constituent elements of the problem-oriented teaching and their role in the process of developing critical and creative thinking, and with the aim to point out the importance and necessity of applying the problem-oriented teaching in the process of intellectual education.

The constituent elements of problem-oriented teaching and intellectual education

The problem-oriented teaching is a way of teaching, which features lots of tasks and questions with problems. These problems were didactically designed to achieve certain educational goals (Nikolić, 2018). In the process of problem solving, students, with the adequate pedagogical guidance of teachers, are encouraged to be as active and independent as possible through all stages of the problem solving process. This requires from students to realize activities that are specific for solving the problem at a time, focusing on: getting to know and defining problems, analyzing problems, planning solving problems, forming problem solving strategies, discovering problem solving and verifying problem solving. Therefore, the constituent elements of problem-oriented teaching are

problems and activities of problem-oriented teaching. These elements have their own contribution and role in the process of intellectual education of students.

The word "*problem*" derives from the Greek word πρόβλημα and means a scientific task or a controversial question. In everyday speech, the word problem is used mainly to indicate an obstacle that the individual faces, which hinders his activity and achievement of the goal. The problem arises in a particular situation in which a particular goal for which a routine method of solving is not available (Mayer, 1992). In the teaching, the problem is the kind of teaching task that contains a cognitive impediment, which is a discrepancy between what the student is currently aware of and what he needs to know in order to solve a certain problem successfully (Nikolić, 2018). A cognitive impediment, that cannot be removed or overcome by the application of already acquired knowledge and habits, is responsible for the emergence of a problem (Đorđević, 1997). Facing the cognitive impediment a student experiences an unpleasant experience that he is trying to overcome. In order to overcome the cognitive impediment, students should make an adequate cognitive effort to solve the task. Cognitive effort is defined as the level of engagement of a variety of thought activities, the goal of which is to overcome the cognitive impediment (Antonijević, 2016: 2509). Based on the above, it can be concluded that in the process of solving the problem, the acquired knowledge and previous experience are not enough, which creates the need for acquiring new knowledge among the students, and therefore motivates them to search for the procedure whose application will lead to the goal, that is, the solution of the problem. The problem is usually characterized by a high level of complexity, an active position of students, as well as a research approach in the process of solving it.

In order to stimulate the cognitive capacity of students by the problems in teaching, they should be formulated so that there is a discrepancy between problems and knowledge about the problem. The group of authors points out that the goal of the problem-oriented teaching reflects in causing a cognitive conflict among students, which potentially leads to conceptual changes in the cognitive structure of students (De Grave et al., 1996). Problems should encourage students to make assumptions about possible solutions, argue them before other students, and come to a conclusion on their own. The need to collect knowledge from different sources allows students to gain insight that knowledge is a useful tool for solving problems, which stimulates the formation of habits and tendencies towards different forms of intellectual activity (Hmelo-Silver, 2004).

The individual's intellectual abilities are developed by their use. Problems that students solve at classes of problem-oriented classes, precisely, allow this. They inevitably require a higher level of mental activity. The problems in such teaching situations are the content of students' thinking, which when thinking about them lead to the engagement of various mental operations, such as: cognition, memory, evaluation, convergent and divergent productions, resulting in a solution to the problem, which arises as an end result or product of thinking. These mental activities have their place and contribution to the process of

solving the problem. Cognition participates in the identification, understanding and understanding of the information given in the problem. With the help of memory, the student retains and reproduces the information needed to solve the problem. By dealing with the problem, a student can respond by producing numerous ideas on how to solve the problem, for which divergent production is responsible. Convergent production allows the student to find the most acceptable answer in a multitude of ideas. The evaluation serves to assess the quality of the outcome of the problem-solving process.

An integral part of the implementation of problem-oriented teaching consists of the activities that the students accomplish in the process of solving the problem: (1) getting to know the problem; (2) analyzing the problem and gathering the facts that are necessary for resolution; (3) problem solving planning; (4) choosing or forming problem-solving strategies; (5) the discovery of the solution to the problem; (6) verification of the correctness of the solution (Nikolić, 2018). These activities require application, but they also encourage the development of thinking operations, such as: analysis, synthesis, abstraction, generalization, concretization and comparison (Wehrli & Nyquist, 2003). *The analysis* is a thought-out operation that is engaged when facing students with a problem. The student seeks to break the problem into pieces and inspect individual parts to gain insight into the whole problem. Often, the students change the overall problem into a simple problem by the analysis. The analysis usually ends when a connection is established between the set problem and the known facts (Kurnik, 1999: 55). Indirectly with the analysis, a *synthesis* takes place, which works reversely in relation to the analysis and is responsible for establishing a connection between the whole and parts of the problem. In the process of problem solving, analysis and synthesis do not exclude one another, but complement each other. Thus, they are most often applied in combination, giving a unique analytical-synthetic method. Abstracting the essential characteristics of the problem and separating relevant from irrelevant are accomplished by using the mental operations called *abstraction*. With abstraction, the student identifies the problem elements that are relevant to solving the problem by omitting others that are not relevant. In some cases, while solving the problem student needs to "revive (materializes) abstract concepts", to translate abstract concepts into concrete, and thought operation of *concretization* is responsible for that. On the basis of performed analysis, synthesis, abstraction, concretization and other thought operations, the student performs *generalizations*. Generalization is a thought operation that constructs more general terms and more general assertions (Kurnik, 2000a).

Intellectual development can also be positively influenced by social interactions in which a student participates at the classes of problem-oriented teaching. Baucal (2003: 540) points out the results of the study, which was carried out on a sample of 126 subjects of 8, 10 and 12 years who showed that the joint cognitive activity of a child and a competent partner has relatively lasting effects when it

comes to cognitive development of children, because, according to the author, the formation and internalization of new cognitive abilities leads to this.

Critical thinking and problem-oriented teaching

Critical thinking has its manifestations in many areas of human activity, and as such it is recognized as an imperative of the modern age (Pešić, 2003). Therefore, it represents a base for the interest of different scientific fields. In pedagogy, the interest in the study of critical thinking is manifested in the view of the need to answer questions about *what is and what is reflected in the importance of critical thinking in the development of the individual*, but above all *how to stimulate the development of this ability through pedagogical activity.* Critical thinking is a compound and complex concept, which is difficult to uniquely define and determine. In this paper, critical thinking is defined as "a reflexive, reason based opinion that aims to make a reasonable decision on what to believe and how to act" (Ennis, according to Pešić, 2007: 174). Critical thinking includes the ability to argue, conclude, and analyze and interpret the facts (Pešić, 2007). The basic properties of critical thinking are as follows: abstract, complex, not necessarily algorithmic, willingly disciplined (Krnjaić et al., 2000).

The problem oriented teaching positively influences the development of critical thinking (Antonijević, 2011; Kvaščev, 1968; Snyder & Snyder, 2008; Schoenfeld, 1992). Between the problem-oriented teaching and critical thinking there is a cause-effect relationship. Problem-oriented teaching is the means by which it achieves the development of critical thinking among students. While the problem, as an element of problem-oriented teaching, is the content or subject of critical thinking, which manifests itself in the process of its resolution. A group of authors regard the relationship between critical thinking and problem solving from two angles (Pavlović-Babić et al., 2001: 204). On the one hand, any solution to a more complex problem necessarily includes critical thinking, but it does not exhaust itself, but also engages other forms of thinking, above all, creatively. On the other hand, critical thinking, apart from solving problems, is also manifested in other areas of applied thinking, such as, for example, receiving and processing information, and it also appears as pure theoretical thinking (thinking for itself).

The realization of problem-oriented teaching appropriately engages the constituent skills of critical thinking. A person who has a high level of critical thinking is usually expected to have developed skills in argumentation. Therefore, argumentation is one of the basic skills of critical thinking. Pešić (2007: 176) points out that the skill of argumentation is the key skill of critical thinking because arguments precisely contain what someone is trying to convince us (thesis)into, as well as to assure us of the justification of such a court, attitude or procedure (the reasons). One of the basic didactic demands of the realization of the problem-oriented teaching is to encourage students to give their own opinion on the problem.

In doing so, the opinion of students should be supported and justified with arguments. If we encourage students as much as possible to master the critical thinking, this should not be the last step in their encouragement. It is necessary for students to be able to develop problem-solving skills through problem solving, to become wise to express their attitude with arguments, but also to analyze and evaluate other arguments. Often, about a particular problem, students can have different and even opposite viewpoints. Students should make a difference, while listening to others, between reasoned opinions and persuasions without arguments by identifying information that confirms the truthfulness, justification, and acceptability of an argument. Evaluation implies that the student determines whether the presented arguments are valid or whether they are related to the problem being discussed and to determine the strength of the argument, or whether they are true and reliable (Pešić, 2007). A group of authors states that the analysis of arguments consists of identifying the claim (thesis) about a problem – the opinion that is claimed and the identification of the reasons – the attitudes whose task is to support the thesis (Pavlović-Babić et al., 2001). Thus, the problem-oriented teaching puts the students into a situation where they can define verbal arguments, state the reasons that justify them, and be skilled to identify arguments and evaluate their strength from the presentation of others. In case they have not mastered the skill of argumentation, solving problems can easily slip into verbal persuasion, imposed thoughts and each other outvoting, which students will not lead to the goal. Therefore, students' independence in the problem solving process should be under the control of teachers, who will, depending on the students' abilities and the complexity of the problem, decide which way of applying problem-oriented teaching is the most appropriate.. This does not mean that students should not be put into situations where they are expected to speak with arguments, but when these skills are only at the beginning of their development, pedagogical guidance is necessary with the active participation of teachers in devising arguments and their analysis. Gradually, more freedom and independence in their work should be given to all students. Such an approach to teaching enables continuous work on the development of student argumentation skills, and indirectly improves critical thinking. Certainly the application of problem-oriented teaching in the form of an exchange of arguments about particular problems encourages students to actively question the justification of claims and actions, which contributes to the development of a critical attitude, which is responsible for consistency in critical thinking.

Conclusions are drawn on the basis of the arguments presented on a particular issue. *Conclusion* also represents the other constituent skills of critical thinking. The ability to carry out logically correct and justified conclusions is important not only in the context of argumentation, but also in the adoption of courts on the reality that is the subject of learning (Pešić, 2007: 177). By solving the problem, students form certain views or attitudes. The goal of any research, including the research at the classes of the problem-oriented teaching, is to

establish true opinion. This is the basis for making certain conclusions with the help of two or more opinions (premises). Different types of conclusions are used in the problem solving process. The three main categories are: inductive, deductive and analogical conclusions (Fischler & Firschein, 1987). A student in the problem-solving process uses inductive conclusions when the student makes a general conclusion on how to solve the problem based on more single examples, cases. Inductive conclusion is based on the application of the analytical-synthetic method, and is closely related to thought operations: concretization, specialization, analogy and generalization (Kurnik, 2000b: 11). A deductive conclusion is used when the general principle is applied to individual cases. Conclusion by analogy refers to the conclusions that are made when two objects are similar in some respects and on the basis of which they conclude that they are similar in other properties. Kurnik (2000b: 101) states that the conclusion by analogy is not strict and can lead to wrong conclusions, since matching objects in certain features does not necessarily have to be the same in other features.

Analysis and interpretation of information represent the third skill of critical thinking and refers to students' abilities related to understanding the meaning and meaning of what is thought, discussed or decided (Pešić, 2007: 178). In the context of problem-oriented teaching, the analysis and interpretation of information refers to the ability of students to permeate into the essence of the problem being analyzed. This ability of students is manifested in the way how student defines the unknown in the problem, how he selects important from the irrelevant information needed to solve the problem, whether he is able to see relationships and connections, and the like. Inadequacy of knowledge can be one of the obstacles in solving the problem. Students' skills are reflected in their readiness to identify what information they lack and how to reach them. By searching different sources, the student gets important information for solving the problem. The teacher should encourage students to consult a number of sources and compare the information they receive while using them. When selecting a source, one of the basic criteria governing students should be the relevance and reliability of the learning source. During the analysis of information, one of the essential mental activities of students is the selection of essential from irrelevant information. A group of authors states that every application and manifestation of critical thinking begins with a distinction of important from the non-essential, which indicates the need to encourage the development of students' sensitivity to distinguish important from the non-essential (Pavlović-Babić et al., 2001). Also, critical thinking participates in other activities involved in the problem solving process, such as: spotting the relationship between concepts, identifying patterns, predicting consequences, and so on.

The Structure is a significant feature of the problem, which determines the level of its complexity and determines the nature and types of activities that are realized in the process of solving. Unlike the structured problems in which the goal of solving is formulated in advance, in the case of unstructured problems,

the student should determine by analysis what is unknown. It is typical for unstructured problems to have multiple ways of solving and / or more accurate solutions. Although it is necessary to apply complex thought processes to solve both types of problems, unstructured problems represent the type of problem during which the student is more engaged in critical thinking (Pešić, 2007). To solve them it is required intellectual openness, flexibility and perseverance in work (Pešić, 2007). Students are expected to approach the problem as if there is no one, universally accepted and most appropriate method of solving.

By developing critical thinking among students, we encourage the development of intellectual qualities, such as: *truthfulness* – ensuring that beliefs are true, and decisions and actions justified; *intellectual honesty* in presenting both their own and other people's (and especially opposed) point of view, and *respect for humanistic principles* – "concern for the welfare and dignity of each person" (Ennis, according to Pešić, 2007: 187). By mastering the mentioned qualities, the student prepares to be a rational person in the future life and is able to think and act independently and absolutely.

A group of authors (Pavlović-Babić et al., 2001: 205) presented the role of critical thinking in each phase of problem solving graphically, through the steps of resolving (Table 1).

Table 1. Problem solving and critical thinking

Problem solving	**The Role of Critical Thinking**
(1) Spotting and defining problem	– Skill to see the problem and recognize it – Formulation of the problem; – Distinguishing the real problem from the quasi problem; – Differentiation of the solvable from the unsolvable problem;
(2) Analysis and collection of information	– Critical evaluation of different sources, information by relevance to the problem (source authority);
(3) Production of the hypothesis	– Formulation and reformulation of directions in problem solving; – Production hypothesis; – Production, analysis and selection of working hypotheses;
(4) Evaluation of the hypothesis	– Hypothesis testing – Final evaluation of the solution: further directions of thinking, anticipation, planning – Openness to new possibilities (flexibility) – (Re)defining the problem (process in the light of new information)

Data from Table 1 shows that there are multiple connections between problem solving and critical thinking. Critical thinking is an essential form of thinking at all stages of the problem-solving process. Between solving problems and critical thinking there is a correlation of action. In order to solve the problem it is necessary that the student has a developed critical thinking, and automatically with the solved problem the critical thinking is brought to a higher level.

The Creative Thinking and The Problem-Oriented Teaching

Although the creative thinking is often said to be the characteristic and the ability of an individual and that creative ideas arise suddenly and unexpectedly, it is still wrong to claim that creative thinking is given in advance as a gift to an individual, and that creative ideas arise from noting. On the contrary, they are the result of some previous and continuous work on them. Gallagher (2015) states that creativity arises as a result of multiple interactions between the inner characteristics of the individual and the characteristics of the external environment. If we want to develop the creative potentials of our students to a greater extent, it is necessary to achieve a continuous stimulation of these potentials. One of the often stated advantages of applying problem-oriented teaching is its role in encouraging and developing *creative thinking* (Antonijević, 2011; Kvaščev, 1968; White, 2001).

The creative thinking is manifested through students' readiness to associate mutually distant ideas, transpose solutions from one task to another, observe an object over another, mentally change the observed object to another, and outlines its essential aspects, and ignores the unimportant ones (Maksić & Đurišić-Bojanović, 2003: 49–50). Some of the attributes that describe the creative thinking are: excellence, originality, novelty, production, unconventionality, flexibility, fluency.

In teaching practice, it is also expected and required from students to use analytical approach for well-defined procedures in order to give the expected answers. In relation to this, although to a lesser degree, situations in which students can demonstrate their originality are also represented. If we strive to enable learners to think independently, make decisions, and act outside of preestablished templates, it is necessary to provide teaching situations where such creative thinking is expected from them. Problem solving is a creative activity, which is manifested in situations where the requirements are somewhat above and beyond the current experience of the student and his previous knowledge. In such teaching situations, students are required to access the problem in a new way and make unique solutions. Through problem solving, students have the opportunity to express their creative potentials, transform them into activities and experience the sense of discovering and creating original, new ones that contribute to the development of creative thinking functions.

Maksić and Đurišić-Bojanović (2003) point out that creativity can be explained by the interaction between the four key phenomena: problem, persona, process and product. Regarding problem-oriented teaching, it can be concluded that this method involves all four elements of interaction: an essential element of problem-oriented teaching is *the problem* that the student (persona) solves, the activities that a student takes from the moment he faces the problem to the evaluation of the result are called the *process of solving*, and as *a product* of this process, the discovery, the solution of the problem occurs. Therefore, problem-oriented teaching can be described as an optimal teaching environment, where students are given the opportunity to "plunge" into a problem situation, which requires creative thinking and it entails an authentic experience of creativity (Gallagher, 2015). Questions and assignments in teaching are a key element in encouraging creative thinking (Koludrović & Reić-Ercegovac, 2010). Regarding the nature of the problem, it is necessary for the problem to be a cognitive challenge for the student and to give the student the freedom to explore different ways of solving and thus engage his creative capacity. Problems that are more likely to encourage the use of creative thinking are: tasks of originality, fluency, flexibility and elaboration (Koludrović & Reić-Ercegovac, 2010). Solving tasks of originality students have the task to design unusual, new and interesting ways to solve the problem. Tendency tasks require from students to produce as many ideas as possible to solve a problem. The flexibility tasks involve encouraging students to differentiate the ways or strategies of how the problem can be solved and to analyze their mutual similarities and differences. The tasks of the elaboration require from students to transform, modify and adapt the content according to the requirement.

Gallagher (2015) states that a prerequisite for creative thinking is a good knowledge of the area from which the problem arises. Therefore, a wide knowledge base on the problem gives the student the opportunity to establish original relationships and correlations, and thus find different ways to solve. In addition, it is important that a broad knowledge base be organized and hierarchically arranged, that is, that the student has built a knowledge system. Students solve the problem by remembering the information that are relevant to its solution from the existing knowledge base on the problem. The process of recall is the procedural knowledge or fluency in which a person extracts elements from the knowledge base and links them to the problem, task, request, or other elements in the knowledge base (Maksić & Đurišić-Bojanović, 2003: 47). The ways, in which students draw information from the knowledge base, differ from one another. Accordingly, Maksić and Đurišić-Bojanović (2004) point out that the way creative people do this is unique for creative people. Apart from the fluency in thought, the flexibility, that represents student openness for different and new information, which can be put into the problem solving function, is significant (Maksić & Đurišić-Bojanović, 2003). Flexibility of thinking allows students to spontaneously change the direction of thinking during problem solving, as well as to reject established patterns of problem solving and search for unusual ways.

Gallagher (2015) points out that in teaching practice an effective way of stimulating creative thinking is to encourage students to visualize the problem, or to present the mental model of the problem in the form of pictures, diagrams, sketches and the like.

Some of the teaching activities that can be organized in the form of problem-oriented teaching, which influence the development of creative thinking are: departmental discussion, case study, the laboratory exercises, guest lectures, interdisciplinary teaching, research assignments, and so on. In addition, it is necessary that in each of the above activities there are contents of a problem character and that students participate actively in their realization (Ocon, 2012).

The openness of teachers to support creative ideas of students in the process of solving problems is important for creating an incentive climate for the development of creative thinking among students. Accordingly, Sternberg and Williams state that the way a teacher communicates with students is one of the key elements in encouraging creativity (Sternberg & Williams, according to Koludrović & Reić-Ercegovac, 2010). Teachers' incorrect access in the problem-solving process can be negatively reflected on the creative potential of students. The teacher will reduce the student's curiosity to solve the problem if he ignores student questions or explicitly or implicitly sends a message to the student that the questions asked are not appropriate (Koludrović & Reić-Ercegovac, 2010). The role of teachers in problem-oriented teaching is not reflected in teaching students how to solve the problem or in simplifying the problem, its role consists of giving instructions to students how to investigate, how to plan a problem solving, or how to organize their learning (Gallagher, 2015). Such an approach requires from students to take the initiative, show their wittiness, and hence necessarily engage their creative potentials.

Conclusion

The organization of problem-oriented teaching, which is reflected in the solution of cognitively demanding problems and the realization of activities involving the imposition of significant cognitive effort, unambiguously confirms that this method of teaching can be usefully used in the process of intellectual education. The starting point in learning during the problem-oriented teaching is the problem which is an obstacle for the current level of knowledge. Existing knowledge is not sufficient to overcome an obstacle, which motivates students to start from a familiar search to an unknown, that is, for the procedure whose application will lead to the solution of the problem. The actions that precede to the discovery of problems' solutions are focused at: defining and analyzing the problem; getting to know the structure of the problem; gathering facts to be used in the problem-solving process; establishing links between problems, collected

facts and the existing knowledge system; formulating problem solving strategies and so on. During their realization, different intellectual activities are present, such as: perception, memory, connection, generalization, and so on, which significantly influence the domain of intellectual development of students.

Problem oriented teaching promotes the development of critical and creative thinking. The level of students' success in the problem solving process is conditioned by the level of development of critical and creative thinking. The reverse process of problem resolution can also positively affect student capacities. Problem-oriented teaching allows students to be independent of stereotyped solutions, ready-made patterns and routine procedures, because classes create situations that enable students to express their opinions in the process of searching for correct solutions and review decisions made. Precisely then originality, flexibility and fluency in their mind become prominent.

The previous presentation unambiguously points to the multiple value and well-being of problem-oriented teaching in the field of intellectual education. The application of this method contributes to the realization of one of the primary goals of intellectual education, which is the formation of an intellectually independent person, who can think independently and face the challenges of contemporary society. However, it is important to emphasize that problem-oriented teaching should not be viewed independently of other elements of the teaching process. It will demonstrate its advantages only when there is, on the one hand, a connection between its implementation and the educational goals that we are trying to achieve through this way of work and, on the other hand, the coordination and harmonization of teaching contents with its application. As a part of that, Ausubel warns the expert public that the so-called interactive and problematic methods of work without a well-conceived connection with educational goals and teaching contents can easily turn into "school pastime" (Ausubel, according to Pešić, 2003: 415).

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EDUCATION FOR SUSTAINABLE DEVELOPMENT AND PRESCHOOL TEACHERS' COMPETENCIES[1]

Nevena Mitranić*
Faculty of Philosophy, University of Belgrade, Serbia

Lidija Miškeljin**
Faculty of Philosophy, University of Belgrade, Serbia

Dragana Pavlović Breneselović***
Faculty of Philosophy, University of Belgrade, Serbia

Abstract

Within the 2030 Agenda for Sustainable Development, inclusive quality education is defined as one of the main sustainable development goals (SDG 4). According to the UNESCO, education has also been recognised as the main vehicle for attaining all the other SDGs. In 2017 UNESCO published a guide for educational professionals (*Education for Sustainable Development: Learning Objectives*), identifying the key sustainability competencies to be developed by all learners of all age groups – meaning children and adults. Recognising teachers as learners as well, in this paper, we will explore the meaning of key sustainability competencies for the role of the preschool teacher and, by comparing them with *National Standards for Preschool Teachers' Competencies* and *National Curriculum Framework for Early Childhood Education and Care – Years of Ascent*, consider the issues and possibilities for preschool teachers' professional engagement in education for sustainable development in our national education policy.

Keywords: educational policy, preschool curriculum framework, standards for preschool teachers' competencies, sustainability competencies

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* E-mail: nevena.mitranic@gmail.com

** E-mail: lidija.miskeljin@f.bg.ac.rs

*** E-mail: dbrenese@f.bg.ac.rs

Introduction

As we write these lines, cities rise and social media burn in anger for devastated rivers, increasing poverty rate and endangered values of democracy and humanity. We are witnessing global crises on many levels – issues of politics, of economy and ecology, calling not only human dignity but the very possibility of survival in question. According to Wilkinson and Pickett (as cited in Pramling, Samuelsson, 2010:183), the main reason for inequality, deprivations and devastations in modern society is that democracy is excluded from the economic sphere. Both people and the planet are in urgent need of answers and solutions which would support economic progress without compromising human rights, equality, the culture of peace and nonviolence, as well as global citizenship and appreciation of cultural diversity, making future sustainable and development ethical.

Global policy perspective on education for sustainable development

In 1987 the United Nations published the *Report of the World Commission on Environment and Development* which called for changes to thinking and behaviour patterns to meet the need for sustainable solutions and actions (Croft, 2017) and, through the years and many global summits (according to *Sustainable Development Goals Knowledge Platform*, n.d.), struggled to set up an achievable, but comprehensive platform for policies which would enable that. The struggle was resolved in the year 2015, through 17 Sustainable Development Goals and 169 targets explained in *The 2030 Agenda for Sustainable Development* (UN, 2015). The Agenda accentuates values of democracy and outlines bold determination for transformative steps needed to end the poverty and other deprivations, improve health and education, reduce inequality, and spur economic growth while tackling climate change and working to preserve the environment (according to *Sustainable Development Goals Knowledge Platform*, n.d.).

In that context, empowerment of all vulnerable groups, children and young people mentioned among others, (UN, 2015: paragraph 23) is set by the Agenda as an imperative. Inclusive quality education is recognised as a crucial way to do so and defined as one of the main sustainable development goals (UN, 2015: Goal 4). All learners of all age groups must have access to education which allows them to develop values, knowledge and skills needed to live and promote a sustainable lifestyle (UN, 2015: paragraph 4.7), which makes education not only a sustainable development goal, but the main vehicle for attaining all the other

goals as well (UNESCO, 2017). However, as noted in *Education for Sustainable Development Goals: Learning Objectives*, published by UNESCO in 2017, not all kinds of education, be it inclusive or not, support sustainable development. For example, education focused on economic growth alone may well also lead to an increase in unsustainable consumption patterns (UNESCO, 2017:6). Education for sustainable development must not only include everyone without exception but ensure that all humans learn they are not independent of the environment and encourage them to work together and with the environment to ensure a secure world for future generations (Croft, 2017).

UNESCO has published learning objectives for education for sustainable development (UNESCO, 2017), focused on eight key competencies necessary for individuals to become sustainability change-makers. Key competencies include: systems thinking competency, anticipation competency, normative competency – as a competency for reflection on norms and values, strategic competency – as a competency for innovative actions, collaboration competency, critical thinking competency, self-awareness competency and integrated problem-solving competency (UNESCO, 2017:10). Recognised as crucial for understanding and constructively dealing with the complex world we live in, these competencies might offer a platform for democratic and sustainable individual and institutional practices. But the development of such educational practices might depend on the way we understand the term *competence* itself.

According to the *Education for Sustainable Development: Learning Objectives* (UNESCO, 2017), competencies are described as "specific attributes individuals need for action and self-organization in various complex contexts and situations. They include cognitive, affective, volitional and motivational elements; hence they are an interplay of knowledge, capacities and skills, motives and affective dispositions" (p. 10). Further, it is noted that competencies cannot be taught but acquired by the learners themselves through action, on the bases of experience and reflection (UN, 2015; Weinert, 2001). The given definition partially overcomes common understanding of competence as possession of fragmented knowledge, abilities, skills or qualifications to carry out a specific task, but stays in the misleading domain of understanding competence as exclusively in the domain of individual capacity and individual responsibility. Although competence might be noticed through the actions of an individual, it is always dependent on conditions in a particular context and requirements of a particular situation or problem (European Commission, 2005:11), which makes it more of a contextual ability and systemic responsibility than individual possession (Pavlović Breneselović, 2014). For key competencies for sustainable development, this implies the need for systemic solutions which enable, provoke and promote complexity, unpredictability, collaboration and

reflective and critical thinking on each organisational level (Miškeljin, 2016) and for every actor of the educational process – children and adults as well. Key competencies for sustainable development are at the same time a personal challenge for each and every individual learner across the globe and a global challenge for the settled notions of pedagogy and education. Therefore, they must be included not just as educational outcomes or content, but as the main principles for educational practice.

Early childhood education for sustainable development

From the very beginning of endeavours towards education for sustainable development, early childhood did not feature as a significant part of resulting governmental policies (Croft, 2017). Very few studies have recognised young children as agents of change in connection with sustainability – the main focus is on the children's relationship with nature and the children's understanding of various natural phenomena while studies in which children themselves are actors are lacking (Ärlemalm-Hagsér & Sandberg 2011:189)

Later research work has shown that early childhood education has enormous potential in fostering values, attitudes, skills and behaviours that support sustainable development and in supporting children to develop connections with nature and become active citizens within their communities (Pramling Samuelsson & Kraga, 2008; Croft, 2017). More important, research has shown that very young children have the ability to critically judge different options, form opinions about questions relevant to them and their communities and are able and willing to participate in actions for a sustainable society, making changes in their own lives and influencing the lives of their families (Pramling Samuelsson & Kraga, 2008; Somerville & Williams, 2015).

International workshop on the role of early childhood education for a sustainable society, held in 2007, provided policy, curriculum and pedagogical guidelines for early childhood education towards sustainable development based on the key competencies. Guidelines rely on: the notion of the child as a right holder and active participant in society, whose perspectives and meanings are listened to, considered and are shaping the content and approaches of learning; the opportunities for children and adults to engage in dialogue and concrete actions regarding sustainability, to think critically about things taken for granted and to find creative solutions; and the promotion of diversity, equality, solidarity, fairness and co-operation as the main principles in and through education (Pramling Samuelsson & Kraga, 2008). By changing the way we approach childhood, education and our own roles as adults in the educational process, these guidelines clearly require a shift from

the common notion of knowledge and education as an expertise and transmission, towards the notion of co-construction and transformation (McKeown & Hopkins, 2014), setting new standards and challenges for educational policies, but also challenges for every adult involved in educational practice (Krnjaja, 2016).

Education for sustainable development and preschool teacher's competencies

Qualified teachers are recognised as key agents of change for achieving Sustainable Development Goal 4: *Quality Education* and for establishing a broader practice of education for sustainable development, and the quality of their education and professional development is considered a key precondition for current practices advancement (UN, 2015: paragraph 4.c). Although it is noted that further research is needed on the kinds of knowledge and skills that early childhood educators need in order to provide early education for sustainability (Pramling Samuelsson & Kraga, 2008), it is expected that preschool teachers, as leaders for sustainability, promote values and beliefs grounded in connectedness with nature and other living beings, practice personal and professional ethics of engagement for making change (Ferdig, 2007), have a curious and humble approach to their own work and build their own practice on collaborative, creative and collective way with children, colleagues and families (Pramling Samuelsson & Kraga, 2008; Croft, 2017). These expectations require mobilization of knowledge, cognitive and practical skills as well as social and behavioural aspects such as attitudes, emotions, values and motivations (Rychen and Salganik, 2003). Further, these imply the understanding of the preschool teacher as a learner who, through his own actions and in particular contexts and relations, develops key competencies for sustainable development. It is important to notice that the approach to preschool teachers' competencies recognised by European Commission (2011) moves toward more relational and interactional understanding, but still dangerously focuses on responsibilities and characteristics of individual teachers. Settled as relational and interactional, competencies of a preschool teacher are practical wisdom which emerges from institutional and systemic preconditions for critical engagement, practical research, reflexion and life-long learning as creative and collaborative practice. Reorienting early childhood education and practice of preschool teachers towards this kind of pedagogy requires time, intentionality and effort on multiple levels (McKeown & Hopkins, 2014:5) and involves policy changes towards a coherent system of measures and activities which support preschool teachers' competencies (Pavlović Breneselović, 2014; Krnjaja, 2016; Miškeljin, 2016).

The current reform of preschool education in Serbia: preschool teachers' competencies for sustainable development

Working towards the achievement of sustainable development goals means setting justice, humanity and ethics – key democracy values, at the core of every political decision (Pramling Samuelsson, 2010). As per *The 2030 Agenda for Sustainable Development*, governments are expected to take ownership and establish national frameworks, policies and measures which support key democratic values and promote sustainable development (UNESCO, 2017:6).

In 2005 and with the amendments in 2007, The Government of the Republic of Serbia published the *National Sustainable Development Strategy* (The Government of the Republic of Serbia, 2008). The objective of the Strategy is to establish a balance between the three key factors of sustainable development: sustainable development of the economy and technology, sustainable social development based on social balance and environmental protection accompanied by rational use of natural resources, while at the same time joining these three factors into one whole, supported by appropriate institutions. However, throughout the Strategy, the economic factor is strongly emphasized and education for sustainable development is mainly introduced in the purpose of achieving a prosperous, innovative and competitive knowledge-based economy. The strategy highlights that through education creativity, innovation, collaboration, critical thinking and problem-solving have to be spurred through systemic measures of sectors integration and collaboration of all interest groups (ibid:21), accessibility of education and straightening of early childhood education. But, the vision of an educational system in the Republic of Serbia relies on its concurrency, adjustment to the needs of the labour market, attractivity and modern models of management and financing, all related to the economic factor. Education for sustainable development is seen as more than introducing contents on sustainable development into formal schooling, but as a system of education which supports a knowledge-based economy. In that context, teachers are recognised as part of the "modern staff" which would establish and enable the functioning of the system as such (ibid:38). Contradictorily, the only measure directly addressed to support teachers at all levels of the educational system in that role is the provision of adequate training for sustainable development (ibid:38). Even though creativity, innovation, collaboration, critical thinking and problem-solving are mentioned, said it all implies that teacher's competencies are seen as a set of knowledge and skills needed to produce what the market needs, which puts in question the autonomy and ethics of the teacher's profession and equals pedagogical work with working in the industry.

Considering the *Law on the Basis of the Education System* (*Zakon o osnovama sistema obrazovanja i vaspitanja*, 2017) such a conclusion for the teacher's role and position might be confirmed. Strong emphasis on the economy might be noticed yet again through the vocabulary of the Law and common usage of terms such as "efficiency" and "resources". According to the Law, competencies and professional development of all practitioners working in education are regulated by the standards which serve as criteria for quality rating – set of expectations which practitioners should satisfy and means for regulating their work by external institutions and organs which have the power to order, prescribe, control and punish based on the judgment of efficiency of practitioners work in relation to economically-pragmatic goals (Radulović, 2019). The autonomy of the practitioner is reduced to the question of how to achieve prescribed expectations in the best and most efficient way (ibid.). Although the main principles of the *Law on the Basis of the Education System* promote accessibility, democracy, openness, authenticity and progressiveness, suggesting that the system is responsible for providing conditions for high-level professional ethics, competency and professional development of practitioners working in the field of education, by further elaboration and operationalisation these very principles are brought into question. Practitioners are seen as implementers of requirements set by experts, detached from their personalities and decontextualised from their practices, passive and obedient towards authority. It is obvious that this kind of positioning of the practitioner in educational settings is inconsistent with developing key competencies for sustainable development.

For preschool education in Serbia, the process of comprehensive reform is underway. New policy documents for preschool education have been brought by taking into account all relevant legislature of the Republic of Serbia but paying attention to global strategies and recommendations as well. Although reforms are not initiated by the issues of sustainability as such, by the need for a paradigm shift towards more democratic, creative, transformative and community-oriented preschool education, a resemblance of the main principles implies current reforms as supportive of sustainable development.

By analysing the new *Preschool Curriculum Framework – Years of Ascent* (*Preschool Curriculum Framework – Years of Ascent*, 2018) and the new *Preschool teacher competency and professional development standards* (*Standardi kompetencija za profesiju vaspitača*, 2018), we will try to perceive if and how they support the development of preschool teachers' key sustainability competencies. Although key sustainability competencies are interrelated, so it is impossible to outline any aspect of these documents as supportive for exclusively one competence as such, and although analysed documents are written as part of the same reform movement and are based on the same educational theories, values and beliefs, for the transparency and clarity of further text we will organise the analysis in the form of a table, separating the documents and listing competencies one by one.

Table 1. Analysis of key policy documents of preschool education reform in Serbia in support of systems thinking competency

Key sustainability competencies (UNESCO, 2017:10)	***Preschool Curriculum Framework – Years of Ascent***	***Preschool teacher competency and professional development standards***
Systems thinking competency *The ability to recognize and understand relationships, to analyse complex systems, to think of how systems are embedded within different domains and different scales and to deal with uncertainty*	This document is designed in consultations with practitioners and to be used by them, as a support and empowerment in their deliberation and further development of educational practice, and provide a broad, systemic understanding of the preschool teachers' role and position in the educational system.	
	Educational practice is understood as a complex, transformative and ethical system of dynamic relations between children and their social and physical environment. The curriculum is understood as emerging from the context of practice, its institutional, cultural and social background, and developed through joint participation of all actors – including family and broader local community. The preschool teacher is always confronted with new questions and challenges which he deals with in complex interrelation of beliefs, knowledge and aptitudes.	A competent preschool teacher is understood as a practitioner capable of autonomous and responsible action in line with the ethical, complex, dynamic, context-conditioned nature of the educational practice. The competency of a preschool teacher is based on the creative use and review of professional knowledge, aptitudes and values in an ever-changing social and educational context and it is emphasized that the development of competencies is not a process for which the preschool teacher has sole responsibility, but also requires the support of a systemic approach.
	The professional role of the preschool teacher is presented through four areas: direct work with children, curriculum development, professional development and professional public engagement (*YA*, 2018:34).	Competencies of the preschool teacher are presented through three areas: direct work with children, development of cooperation and learning community and development of professional practice (*SKPV*, 2018:2).
	The practice of systems thinking competency is noticeable through requirements for preschool teachers' engagements with families and the local community and through the way in which educational practice is settled in space and time of concrete educational institution.	Systems thinking competency is underlined in operationalisation of competencies as knowledge, aptitudes and values preschool teachers should engage, specifically focused on the holistic nature of child development, integration of nurturance, caregiving and education; preschool education as mutually conditioned with community, culture and social and economic trends in society; and ability to work in complex and changing contexts of diversity.

Table 2. Analysis of key policy documents of preschool education reform in Serbia in support of anticipatory competency

Key sustainability competencies (UNESCO, 2017:10)	***Preschool Curriculum Framework – Years of Ascent***	***Preschool teacher competency and professional development standards***
Anticipatory competency *The ability to understand and evaluate multiple futures – possible, probable and desirable, to create one's own visions for the future, to apply the precautionary principle, to assess the consequences of actions and to deal with risks and changes*	As preschool education is directed towards long-term aims instead of short-term outcomes, the preschool teacher is provoked to deal with unpredictability and reconstructing daily practices, create and continuously evaluate and to develop their practice in accordance with it. The preschool teacher should be flexible and assertive while planning the rhythm and activities of their practice, connecting with emotions, issues, provocations and inspirations children experience in kindergarten through all activities they engage in, including play and common daily rituals. This further implies the need for the preschool teacher to let go of settled beliefs, predictions and expectations and continuously rethink and anticipate a further vision based on the real experiences in the group.	The preschool teacher is seen as an important model of anticipatory competence for children, empowering them to cope with conflicts, stress, problems and new situations and challenges by practising the ability to cope with them themselves (*SKPV*, 2018:4).

Table 3. Analysis of key policy documents of preschool education reform in Serbia in support of normative competency

<table>
<tr><th>Key sustainability competencies (UNESCO, 2017:10)</th><th>Preschool Curriculum Framework – Years of Ascent</th><th>Preschool teacher competency and professional development standards</th></tr>
<tr><td rowspan="6">Normative competency
The ability to understand and reflect on the norms and values that underlie one's actions and to negotiate sustainability values, principles, goals, and targets in a context of conflicts of interests and trade-offs, uncertain knowledge and contradictions</td><td>The affirmation of the preschool teacher as a profession which strongly relies on ethics and reflexivity is noticeable through promoting preschool education as a transformative and ethical practice (YA, 2018:9).</td><td>The affirmation of the preschool teacher as a profession which strongly relies on ethics and reflexivity is noticeable through promoting preschool education as essentially value-based and reflective (SKPV, 2018:3).</td></tr>
<tr><td colspan="2">Both documents promote a community of learning, devoted to democracy, solidarity, activism, creativity, welfare and personal fulfilment of all participants. For preschool teachers to be key actors in moving towards such a community, a democratic and inclusive approach to preschool education that respects diversity is a necessity.</td></tr>
<tr><td colspan="2">The preschool teacher is seen as someone who furthers reviews and builds values and beliefs about the child and learning and her/his personal practices. Preschool teachers should be able to develop inclusive practices that facilitate the participation and learning of children and involvement of the family, taking into account diversity, and should be sensitive to discrimination and injustice and be able to react in appropriate ways to overcome them (SKPV, 2018:8).</td></tr>
<tr><td colspan="2">Preschool teachers should hold proactive attitudes in promoting and protecting the rights of the child and the family as well as the rights of their own profession. Preschool teachers are obligated to respect child rights as citizens and strive to enable their full participation in the life of the kindergarten and in the social and cultural life of the community (SKPV, 2018:5).</td></tr>
<tr><td>The preschool teacher is responsible for developing democratic relations in the kindergarten group, empowering child's potential for solidarity and activism, and has the ability to help children understand unjust behaviours and how to constructively deal with them (YA, 2018:20)</td><td>The preschool teacher aims toward constant change in practices and improvement of the programme quality and engage in professional associations and expert bodies, connect with relevant institutions and organizations and participate in consultations on creating educational policies, launching child and family-related campaigns and promoting and protecting the status of his own profession (SKPV, 2018:8).</td></tr>
<tr><td></td><td>Environmental consciousness as integrated into daily activities and local projects which children participate in is explicitly recognised as a value and an aptitude of preschool teachers competence (SKPV, 2018:5).</td></tr>
</table>

Table 4. Analysis of key policy documents of preschool education reform in Serbia in support of strategic competency

Key sustainability competencies (UNESCO, 2017:10)	***Preschool Curriculum Framework – Years of Ascent***	***Preschool teacher competency and professional development standards***
Strategic competency *The ability to collectively develop and implement innovative actions that further sustainability at the local level and further afield*	As one of the goals, it is set that preschool teachers and other practitioners in preschool educational institutions have the ability to manifest their autonomy, creativity and professionalism and proactively advocate the best interest of child and family (*YA*, 2018:11).	In the area of direct work with children, the preschool teachers' autonomy and creativity are practised through project-based planning. The preschool teacher plans and implements projects and topics that are meaningful to the children, based on monitoring of children, learning through research, exchange and cooperation among children, focusing on the welfare of the child by supporting their abilities and involvement and promoting creativity as the essential human feature (*SKPV*, 2018:5).
	An important aspect of preschool teachers role is to connect children with the local community through different ways of mutual involvement (*YA*, 2018:34).	Preschool teachers implement the education programme through two-sided cooperation with the local community, keep track of activities organized by the local community, organize activities involving families and other members of the local community, involve children in local projects, events and activities and further assess the needs of families in the local community (*SKPV*, 2018).
	Preschool teachers educate for research work and critical reconsideration for continuous development of the curriculum, initiate and guide team activities and the process of developing kindergarten practices by starting joint practitioners research of issues relevant for their practice and by collaborating with other kindergartens, research institutions, institutions for initial preschool teacher education and other relevant institutions and organisations (*YA*, 2018:34).	The usage of digital technologies in planning, documenting, designing activities and materials and for information exchange amongst all relevant actors is an important aspect of strategic competency of the preschool teacher (*SKPV*, 2018:9).

Table 5. Analysis of key policy documents of preschool education reform in Serbia in support of collaboration competency

Key sustainability competencies (UNESCO, 2017:10)	***Preschool Curriculum Framework – Years of Ascent***	***Preschool teacher competency and professional development standards***
Collaboration competency *The ability to learn from others, to understand and respect the needs, perspectives and actions of others, to understand, relate to and be sensitive to others, to deal with conflicts in a group and to facilitate collaborative and participatory problem solving*	As one of the goals, it is set that kindergartens and other public institutions of a local community become commonplaces of joint learning, dialogue and mutual support (*YA*, 2018:11). The kindergarten is understood as a place of common life, the educational process as a process in which children and adults learn together by joint exploration and meaning-making, and curriculum development and evaluation as common endeavour, with *Preschool Curriculum Framework* itself, situated as an outline for dialogue between teachers, families and children (*YA*, 2018:3).	
	The very preschool teachers' profession is understood as reflexive practice, developing in the exchange and trust between all practitioners in the preschool institution. One of the main goals is for practitioners, researchers, policymakers and experts of different profiles to connect with the community which strives towards quality education through joint research and mutual support (*YA*, 2018:11).	Preschool teachers should be able to collaborate with peers from their own and others' institutions on exchanging experiences, sharing learning and research, to build a pedagogical knowledge through peer dialogue and consider differences in opinions and problems in practice as learning opportunities (*SKPV*, 2018:6).
	The key role of the family at an early age is recognised and supported through promoting partnership between families and kindergartens (*YA*, 2018:32).	The preschool teacher should stimulate open communication and interaction with families, build relationships with parents and other family members based on mutual understanding, trust and cooperation, involve parents in the decision-making process and develop pedagogical convictions and knowledge together with parents (*SKPV*, 2018:7).
	The child is promoted as a competent partner in curriculum development and the preschool teacher as sensitive to the child's needs and capacities and responsible for respecting them, adjusting and balancing all activities accordingly. Preschool teacher should be open to learning with and from children, building bonding relationships with them, developing a sense of security in the child, encouraging and supporting child's initiatives and choices and listening and supporting different forms of expression.	

Table 6. Analysis of key policy documents of preschool education reform in Serbia in support of critical thinking competency

Key sustainability competencies (UNESCO, 2017:10)	***Preschool Curriculum Framework – Years of Ascent***	***Preschool teacher competency and professional development standards***
Critical thinking competency *The ability to question norms, practices and opinions, to reflect on own one's values, perceptions and actions and to take a position in the sustainability discourse*	The *Preschool Curriculum Framework* is explicitly intended for preschool teachers as a starting point, a set of guidelines and a cause for rethinking and deeper understanding of their own practice (*YA*, 2018:3), emphasizing the need for constant re-reading, constant questioning of one's own values and beliefs and constant transformation of one's own practice through which both understanding of theoretical conception and real curriculum are developed. This constant learning in broadening the question of what it means to be a good preschool teacher and what a good curriculum might be is seen as subtraction of preschool teachers professional development (*YA*, 2018:34).	Supporting preschool teachers in critical reflexion and transformation, *Preschool teacher competency and professional development standards* are guidelines intended for use by preschool teachers in the evaluation of their competencies, planning and monitoring their professional learning and development with the aim of developing professional practices (*SKPV*, 2018:2).
	Preschool teachers' profession is understood as dynamic and relational, immersed in complex context and deeply grounded in ethical responsibility for critical reflection on theory, practice and ones' own beliefs and presumptions through dialogue with colleagues, families and children (*YA*, 2018).	Preschool teachers critically review the culture and structure of the kindergarten, critically analyse and examine the capabilities and capacities of the preschool institution and give and accept proposals for providing various programmes and forms, critically review the compliance of the real programme with the conception of the curriculum framework and critically examine and develop their own practice through personal research and self-reflection (*SKPV*, 2018).
	Through constant re-reading of the *Preschool Curriculum Framework* and critical awareness towards their own practice, preschool teachers are encouraged to explore the ways to support child's learning and participation in curriculum development, to question implications of their own actions and strategies of organising physical and social environment in curriculum development and to rethink compatibility of real practice with theoretical conception of the curriculum framework (*YA*, 2018).	Using pedagogical documentation preschool teachers are encouraged to engage in dialogue with children, family and peers, in the joint evaluation and programme development as in gaining new insights about the child, learning and the very role of the preschool teacher (*SKPV*, 2018).

Table 7. Analysis of key policy documents of preschool education reform in Serbia in support of self-awareness competency

Key sustainability competencies (UNESCO, 2017:10)	***Preschool Curriculum Framework – Years of Ascent***	***Preschool teacher competency and professional development standards***
Self-awareness competency *The ability to reflect on one's own role in the local community and global society, to continually evaluate and further motivate one's actions, and to deal with one's feelings and desires*	All settings from both documents already mentioned as support of critical thinking competency might be seen as supportive for self-awareness competency as well.	
	The need for self-awareness is most emphasized in direct work with children – in the need to adjust to the child, to balance with different ways in which the preschool teacher participates in different situations and activities, and in teaching through a personal example, modelling constructive approach and desirable behaviours in relations with others, in exploration, learning, in play and everyday-life routines in kindergarten (*YA*, 2018).	The child rights-based approach to preschool education and orientation towards lifelong learning of the children and adults as a professional and ethical obligation of preschool teacher should be reflected in the proactive attitude in promoting and protecting the rights of the preschool teachers' profession, the rights of the child and the family and in personal engagement in expert conferences and expert bodies, professional preschool teacher associations, in the media, through publishing professional papers and through personal actions and conduct in the daily practice (*SKPV*, 2018:7,8,9).

Table 8. Analysis of key policy documents of preschool education reform in Serbia in support of integrated problem-solving competency

Key sustainability competencies (UNESCO, 2017:10)	***Preschool Curriculum Framework – Years of Ascent***	***Preschool teacher competency and professional development standards***
Integrated problem-solving competency *The overarching ability to apply different problem-solving frameworks to complex sustainability problems and develop viable, inclusive and equitable solution options that promote sustainable development, integrating the above-mentioned competencies*	Through all the aspects of these documents regarding their systemic approach to educational practice and curriculum development, the integrated approach to problem-solving might be noticed as necessary on all levels and through actions of all actors of the educational system – just not with the narrow focus on sustainability issues.	
	For the preschool teachers, integrated problem-solving competency is activated on every-day level, in many ways they support the child in different activities and situations in kindergarten – through solutions, provocations, inspirations and modelling they offer in play, through organising and negotiating time, space and relations of everyday routines, through deepening child's questions and broadening possibilities for answers in organised learning activities (*YA*, 2018).	Preschool teachers creatively use and review professional knowledge, aptitude and values, develop a curriculum relying on different sources of content (authentic children's experiences, different life situations, culture, science, arts, technology, ecology, sports...), use various planning, monitoring, documenting and evaluation procedures and techniques in developing the programme – including digital technologies, and take into account the real context of the kindergarten's educational practices (*SKPV*, 2018).
	Integrated problem-solving competency is promoted through professional development and professional public engagement of the preschool teacher. Collaborative work of the preschool teacher with other practitioners from their own and others' institutions, as well as with researchers, policymakers and experts of different profiles (*YA*, 2018:35), requires a flexible and constructive approach to issues of educational practice.	Preschool teachers should be able to take initiative and guide team activities and the process of developing kindergarten practices, to plan and guide personal and collective professional development and training on the basis of an independent and shared review of practices, and to work with various databases for keeping and reflecting on different types of records (*SKPV*, 2018:7,8,9).

Conclusion

The risk of regarding the definition of competencies given in *Education for Sustainable Development: Learning Objectives* (UNESCO, 2017) lies in possibility of bringing sustainability just as a set of new outcomes and new contents into old teaching and learning practices, setting new requirements for students and teachers on top of tasks and responsibilities they've already had, without the shift in the core understanding of pedagogical processes and without adequate support through conditions in which these processes emerge. The risk is evident in the publication of the *Education for Sustainable Development Goals: Learning Objectives* itself. Through this publication, each of sustainable development goals is operationalized through recommendations of teaching content and techniques, so that it can be directed through separated activities in educational settings, and learning objectives are expressed as sets of expectations from individual students and through cognitive, socio-emotional and behavioural domain, compromising the very understanding of competence as an "interplay of knowledge, capacities and skills, motives and affective dispositions" (UNESCO, 2017:10).

In addition, one might ask if education for sustainable development is seen as a process in which teachers are already competent for sustainable lifestyles and in charge of students' key sustainability competencies development. In the official publication of the *Teaching the Sustainable Development Goals* (Hoffmann & Rajeswari, n.d.) by the UNESCO *Education for Sustainable Development Expert Net*, it is clearly stated that competencies cannot merely be communicated, but have to be developed by an individual or group which will irreversibly change the reality of schooling in general and the arrangement of individualized learning processes in particular (Hoffmann, & Rajeswari, n.d.:9). However, *Teaching the Sustainable Development Goals* is not a tool for teachers to help them rethink their own role, institution and actions in the context of supporting key sustainability competencies development. It is set as a tool for adjusting already existing teaching practice so that the teacher can "facilitate learning about, learning through and learning for the achievement of the SDGs" (Hoffmann & Rajeswari, n.d.:3), by suggesting sustainable development goals as final, predictable and already defined outcomes. This compromises the understanding of the contemporary world as complex and unpredictable and the need for innovation and critical reflexive engagement of every individual, and which suggests that the teacher is already an expert for both sustainability subject and educational process, compromising the need to rethink settled practices of pedagogy and education and makes us wonder, if teachers (and adults in general) are already experts on sustainability, then how come sustainability has become a global issue at all?

In the context of issues mentioned, it seems that although global agreement is achieved, policy documents established and even guidelines for development of good practices published, the question of education for sustainable development, being complex as such, remains on slippery slope and requires thorough

deliberation of our understandings not only of ecological and economic subjects, but of different ways in which power moves and might be more ethically moved through organisation and realization of educational practices themselves.

The analysis of the relevant policy documents in Serbia, the *National Strategy for Sustainable Development* and the *Law on the Basis of the Education System* shows that teachers' competencies are seen as a set of knowledge and skills needed to produce what the market needs. Strong emphasis on the economy might be recognised through the vocabulary of the *Law on the Basis of the Education System* and common usage of terms such as "efficiency" and "resources". Competencies and professional development of all practitioners working in education are regulated by the standards which serve as criteria for quality rating and means for regulating their work. Practitioners are seen as implementers of requirements set by experts, detached from their personalities and decontextualized from their practices, passive and obedient towards authority, which questions autonomy and ethics of the teachers' profession.

On the other hand, the analysis of two key documents of preschool education reform in Serbia – *Preschool Curriculum Framework – Years of Ascent* and *Preschool teacher competency and professional development standards* show that both documents are based on the understanding of education as a transformative and emancipatory process and directed at, according to Capra (1998), integrative values such as cooperation, protection, partnership and quality. The profession of a preschool teacher, as a relational practice, is perceived as an ethical practice based on the responsibilities and pro-activism of the teachers. This means that education for sustainability is recognized as a matter of the process of developing a "sustainability culture", rather than reducing it to issue of contents and separated activities associated with environmental protection. The analysis of these two documents also shows compliance with the *Education for Sustainable Development* document in terms of understanding the meanings and characteristics of competencies and the compatibility of defined competencies of preschool teachers with key sustainability competencies. But for transforming educational practice and the profession of a preschool teacher accordingly, it is necessary for all policy documents to be compatible in understanding competence itself, as well as for all policy measures, including initial education and professional development of preschool teachers, to adequately support established understanding.

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COMPETENCIES FOR EDUCATION FOR SUSTAINABILITY: STUDENT TEACHERS' PERSPECTIVES[1]

Nena Vukelić*
Faculty of Humanities and Social Sciences, The University of Rijeka, Croatia
Nena Rončević**
Faculty of Humanities and Social Sciences, The University of Rijeka, Croatia
Anamarija Vinković***
Craft School Bjelovar, Croatia

Abstract

One of the main priorities of the education for sustainability (ES) is the education of future teachers who are often referred to as the most important agents of change in achieving a sustainable future. Student teachers should develop key ES competencies in order to implement education for sustainability into their practice in a successful manner. This study investigates student teachers' perceptions of the role their education has in the development of their ES competencies. The research involved 152 student teachers at the University of Rijeka, who assessed to what extent their education: (I) contributed to and (II) should have contributed to the development of their sustainability competencies. A mix-method approach was applied. Results indicate a great discrepancy in the student teachers' perceptions of expected and obtained contribution of education in the development of their ES competencies. The insight into qualitative data has revealed that future teachers recognize the need to promote sustainability in their future work, and that teacher education should empower them to respond to this challenge readily. The results obtained in this research reflect the need for placing a greater emphasis on integrating sustainability education within the existing teacher education.

Keywords: education for sustainability, higher education, ES competencies, teacher education, student perception

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* E-mail: nvukelic1@ffri.hr

** E-mail: nena.roncevic@ffri.uniri.hr

*** E-mail: anamarija.vinkovic2@gmail.com

(Future) Teachers in education for sustainability

Education for sustainability (ES) is competence-based transformative education focused on developing key, cross-cutting competencies needed for an individual to transform their lifestyle and contribute to transition towards sustainability. In the process of education for sustainability, students should acquire competencies, skills, values, and attitudes that will enable them to lead healthy and fulfilled lives, as well as empower them to reflect on their own behaviours, actions, and responsibilities. Namely, they would consider current and future social, cultural, economic, and environmental factors while making informed decisions and responding to challenges at the local and global level (UNESCO, 2016, p. 4). People who act according to the aforementioned guidelines are referred to as "sustainability citizens" in recent literature (Wals, 2015; Wals and Lenglet, 2016), and the main goal of education for sustainability is educating such future members of our society – "sustainably" accountable and active citizens (UNESCO, 2015; 2017). According to the UNESCO Guidelines (2015, 2017), the sustainability citizens ponder the influence of their own behavior regarding the ecological, social, political and economic aspects of the world. There is a consensus among experts in the field that sustainability citizens must possess certain competencies that enable them to constructively and responsibly act in today's world. Those include cognitive, affective, volitional and motivational elements, and can be seen as the interplay of knowledge, abilities, skills, motives, and affective dispositions. Sustainability competencies represent what a sustainability citizen needs to constructively and successfully deal with the complex challenges of today: the critical thinking skills and the knowledge needed for a better understanding of sustainable development goals and challenges in achieving them (cognitive domain), social skills that enable cooperation, negotiation and communication for the purpose of promoting sustainable development goals, self-reflection abilities, values, attitudes and motivation for sustainable development (socio-emotional domain), and the ability to act accordingly (behavioral domain). These key competencies represent the priority competences needed by citizens of all ages. They can be viewed as transversal, multifaceted, and context-independent.

Regarding the role of teachers in the context of education for sustainability, the question is what competencies teachers should possess to successfully implement education for sustainability in both their practice and education of future sustainability citizens. This challenge, as well as the need to respond to similar issues, was emphasized by UNESCO through the Global Action Program (GAP). The GAP strives to make a significant contribution to achieving sustainable development goals by redirecting education and learning, aimed at providing everyone with the opportunity to acquire knowledge, skills, attitudes, and values that would empower them to contribute to sustainability. To provide strategic focus and encourage the commitment of all stakeholders, five priority

action areas have been identified through the Global Sustainable Development Action Program, one of which is directed at current and future teachers, *i.e.*, "capacity building of teachers, educators, and trainers" in education for sustainable development (UNESCO, 2014). In other words, one of the key priorities of education for sustainability is the education of student teachers, as they are often referred to as the most valuable actors of change towards the sustainable future (UNESCO, 2015; 2017).

In order to achieve the transition towards sustainability, there is a need for competent and committed (future) teachers who would have not only the desire but also the ability to contribute to the change in different educational sectors. To achieve this, the actors should have the opportunity to develop the necessary competencies along their educational path. Hence, the role of developing teacher sustainability competencies is twofold. First and foremost, to possess the capacity needed to adequately integrate and successfully facilitate ES, teachers themselves must be the citizens of sustainability with developed key sustainability competencies (Albareda-Tiana et al., 2018; Cebrián and Junyent, 2015). Sustainability competencies represent what a sustainability citizen needs to constructively and successfully deal with the complex challenges of today. Namely, they include the critical thinking skills and the knowledge needed for a better understanding of sustainable development goals and challenges in achieving them (*cognitive domain*), social skills that enable cooperation, negotiation, and communication aimed at promoting sustainable development goals, self-reflection abilities, values, attitudes, and motivation for sustainable development (*socio-emotional domain*), as well as the ability to act accordingly (*behavioural domain*). Thus, these key competencies represent the priority competencies needed by citizens of all ages, which can be viewed as transversal, multifaceted, and context-independent. Secondly, apart from acquiring sustainability competencies, teachers should also adopt specific ones related to the ability to help students develop sustainability competencies through a number of innovative learning and teaching practices (e.g., transformative pedagogy, self-directed learning, student-centred learning, self-regulated learning, etc.). These elements of teacher's sustainability competence are explained by several conceptual models, such as The Curriculum, Sustainable Development, Competences, Teacher Training (CSCT) model, (Sleurs, 2008), Learning for the Future Model: The Competencies in Education for Sustainable Development model (UNECE, 2012), KOM-BiNE model (Rauch and Steiner, 2013) and the approach devised by Bertschy et al. (2013). Within the aforementioned models, teachers are not only seen as professionals but as individuals bearing social responsibility.

Although the inclusion of sustainable development in the teacher and lecturer education programs is an internationally promoted goal (UNESCO, 2017), experience differs widely from country to country. This comes as no surprise, given that the clear directives for universal education of teachers in the context

of education for sustainability have not yet been provided (Wolff, Sjöblom, Hofman-Bergholm and Palmberg, 2017). Notwithstanding that some countries, such as Australia (Ferreira et al., 2006; 2007; 2009), have defined sustainable education of teachers as a priority, the education of teachers for sustainable development remains at the level of individual efforts of enthusiastic individuals in most other countries (Green, Medina-Jerez and Bryant, 2016).

Within the Croatian higher education framework, there is insufficient systematic data on the integration of sustainable development contents into the undergraduate and graduate levels of studies aimed at educating future educators, that is, primary and secondary school teachers. In its first report on the implementation of the 2010 UNECE Strategy for Education for Sustainable Development, the Ministry of Science and Education discovered that the sustainable development was covered in more detail on the postgraduate level. Taking into consideration that the decisions related to the study programs are made by the University Senate, the experience in Croatia vary widely from university to university (MSES, 2010). The analysis of data collected during 2010 on the state of education for sustainability has shown that there are still insufficient individual and systematic programs of teacher and lecturer education implemented as part of formal education. Between 2011 and 2016, through the Action Plan for Education for Sustainable Development, the Government of the Republic of Croatia worked on defining and developing competencies for education for sustainability of (future) primary and secondary school teachers, as well as teachers at higher education institutions and decision-makers. However, the outcomes of the Action Plan have yet to be evaluated.

Research aim

In the near future, student teachers will be responsible for leading and implementing educational programs, which is the reason why it should be determined whether they are prepared to be the educators for sustainability. Also, there is a need to conduct evidence-based research that can provide information on teacher education and higher education policy and practice in ES. It is evident that exploring student teachers' perceptions of (competencies for) ES is of crucial importance. To date, numerous studies have been focused on student teachers' perceptions, understanding, knowledge, and attitudes related to sustainable development (e.g., Anđić & Tatalović Vorkapić, 2017; Boon, 2011, 2016; Borg et al., 2012; Keleş, 2017; Peʾer, Goldman & Yavetz, 2007; Spiropoulou et al., 2007; Summers & Childs, 2007; Tomas et al., 2017). However, few studies have placed focused on student teachers' perceptions related to the ES competencies (Cebrian & Junyent, 2015; Nikel, 2007).

Hence, the main objective of this study was to investigate student teachers' perceptions of the role of their higher education in the development of their sustainability competencies. More specifically, the objective was to determine differences in student teachers' perceptions of to what extent their higher education: (I) contributed and (II) should have contributed to the development of their sustainability competencies. In addition, a specific goal of the study was to identify student teachers' view on promoting sustainable development in their future work as teachers, as well as their recommendations for improving education which would, in turn, strengthen the sustainability competencies of future teachers.

Method

A mixed methods convergent parallel design was applied. It consisted of one single phase in which researchers used concurrent timing to implement both the quantitative and qualitative strand of the research. The purpose of applying a mix-method design in this research is expansion, or in other words extending the range of inquiry by using different methods for different inquiry components. The quantitative data and their analysis provide an understanding of differences in student teachers' perception of impact that their education had and should have had on their sustainability competencies. The qualitative data and their subsequent analysis allow a more in-depth analysis of student teachers views on what can be improved in (their) higher education in order to efficiently develop student teachers' sustainability competencies, as well as a perception of their own future in relation to the education they have obtained. Both quantitative and qualitative methods had an equal priority and played an equally important role in addressing the research problem. A questionnaire was developed for the purpose of assessing both the obtained and expected contribution of higher education to the development of student teachers' sustainability competencies. To discover student teachers' view on promoting sustainable development in their future work as teachers, as well as their recommendations for improving the initial teacher education, participants answered two open-ended questions, and a thematic analysis was applied. The two sets of results are merged into an overall interpretation.

Sample

The study involved non-random sample of 152 (of which 42 male and 109 female) student teachers enrolled in the initial teacher education program (graduate level) at the University of Rijeka, Faculty of Humanities and Social Sciences. The average age of participants was 22,95 (SD=1,24).

Data collection

A questionnaire was developed for the purpose of the quantitative part of the research. A list of derived competencies was generated from the Handbook for Education for Sustainable Development (Education and Teacher Training Agency, 2011, pp. 23), based on certain aspects from UNESCO Guidelines (2015, 2017). Namely, they are the following: critical thinking skills and the ability to ask analytical questions, the ability and courage to overcome obstacles and solve problems, thinking holistically and interdisciplinary – the ability to connect the knowledge, thinking creatively – thinking outside of the box, challenging stereotypes and being oriented towards the future, the ability to manage changes that presupposes the ability to define problems, the ability to apply knowledge in real-life situations, the ability to handle crises and risks, decision-making in uncertain circumstances, the ability to express oneself (viewpoints, interests, aspirations, principles) and to communicate, the ability to overcome stress, the ability to cooperate and work in teams, readiness to accept the division of tasks and take responsibility, participation in democratic decision-making, the ability to identify social partners and their interests, negotiation skills, and the ability to reach a consensus. The participants had to assess the contribution of their university education to the development of their sustainability competencies, as well as to estimate to what extent it should have contributed to the development of their sustainability competencies. The assessment was conducted via the Likert Scale, where 1 means *Strongly disagree*, and 5 means *Strongly agree*. Moreover, participants answered two open-ended questions that required them to describe their opinion on promoting sustainability in their future work as teachers and to declare their recommendations aimed at improving teacher education that would, in turn, develop future teachers' competencies of promoting ES in their future work.

Results

The data were analysed by using the software program IBM SPSS Statistics 23. and MAXQDA 18. The paired sample t-tests were conducted to determine whether there were statistically significant differences in estimates of how much the university education contributed and how much it should have contributed to the development of sustainability competencies. *Table 1*. shows descriptive data for all the variables, as well as the results of the tested differences in estimates of expected and obtained contribution of education in developing ES competencies.

Table 1. Descriptive statistics mean (M) and standard deviation (SD) and differences in participants' estimates of obtained and expected contribution of higher education in the development of their sustainability competencies

Sustainability competence	Obtained contribution		Expected contribution		t	df	p
	M	SD	M	SD			
Critical thinking skills and the ability to ask analytical questions	3,62	,855	4,71	,611	-15,08	146	,000
The ability and courage to overcome obstacles and solve problems	3,63	,843	4,63	,693	-12,94	147	,000
Thinking holistically and interdisciplinary – the ability to connect the knowledge	3,56	,828	4,55	,674	-12,13	146	,000
Thinking creatively – thinking outside of the box, challenging stereotypes, and being oriented towards the future	3,47	1,055	4,64	,630	-13,36	146	,000
The ability to manage changes that presupposes the ability to define problems	3,38	,857	4,52	,667	-14,67	145	,000
The ability to apply knowledge in real-life situations	3,33	,921	4,74	,513	-16,01	147	,000
The ability to handle crises and risks	2,94	1,068	4,38	,762	-14,05	146	,000
Decision-making in uncertain circumstances	2,95	1,019	4,24	,799	-13,93	146	,000
The ability to express oneself (viewpoints, interests, aspirations, principles) and communicate	3,72	,985	4,69	,617	-10,96	146	,000
The ability to overcome stress	2,66	1,204	4,30	,931	-13,41	147	,000
The ability to cooperate and work in teams	3,61	,987	4,43	,809	-9,09	147	,000
Readiness to accept the division of tasks and take responsibility	3,64	1,027	4,54	,761	-9,82	146	,000
Participation in democratic decision-making	3,36	1,120	4,34	,869	-10,36	147	,000
The ability to identify social partners and their interests	3,21	1,002	4,08	,969	-10,07	146	,000
Negotiation skills and the ability to reach a consensus	3,31	1,023	4,27	,930	-9,96	147	,000

The statistical analysis has shown a statistically significant difference between estimates of expected and obtained contribution of higher education to the development of each sustainability competence of student teachers. More specifically, student teachers have estimated that their education contributed to the development of sustainability competencies significantly less than needed (*Table 1.*).

Estimates of the contribution are positioned around the middle values, as the student teachers believe that their education has very mildly contributed to the development of their ES competencies. A review of descriptive data suggests that students' estimates indicate that their education has least contributed to the development of their ability to overcome stress (M=2,66; SD=1,204), their ability to handle crises and risks (M=2,94; SD=1,068), and their decision-making in uncertain circumstances (M=2,95; SD=1,019). Although one of the key education goals in the 21st century is to educate and enable individuals to deal with the complex challenges of today constructively and successfully, it seems that current national education system fails to respond to these needs.

On the other hand, students do recognize the importance of ES and ES competencies and believe that their initial teacher education should contribute to the development of all sustainability competencies to a greater extent. Estimates of the expected contribution are quite high, with the greatest emphasis being placed on the development of the ability to apply knowledge in real-life situations (M=4,74; SD=0,513) and the critical thinking skills and the ability to ask analytical questions (M=4,71; SD=0,611).

At the end of the questionnaire, participants answered two open-ended questions that required them to describe their opinion on promoting sustainability in their future work as teachers, and to declare their recommendations aimed at improving teacher education that would, in turn, develop future teachers' competencies of promoting ES in their future work. To analyse participants' answers, thematic analysis was applied.

With respect to the promotion of sustainable development in their future work, student teachers' attitudes can generally be divided into three categories. The first category, to which most of the students' responses belong, refers to the attitude that it is possible to implement education for sustainability in the teaching. The second category comprises students' responses according to which the integration of education for sustainability is possible, but is not their task to do, as they think it should be implemented only within a specific school subject. The third category consists of answers of students who have no opinion on this issue or generally feel that they know little about it.

Furthermore, despite including the answers of students who advocate the implementation of sustainability in their future work, the first category also displays a range of responses. Therefore, some of the future teachers consider that they can contribute to achieving sustainability goals through education to a slight

extent. However, the majority has a strong positive attitude and state that it is possible to implement ES and that they would promote it in their everyday work.

Some participants also reflected on how the ES could be integrated into teaching. Hence, most of the identified starting points for ES integration are recognized with respect to the content of the course/subject they will teach. There is, therefore, a wide range of predicted topics, such as recycling and responsible use of natural resources. For instance, one of the participants said: *"I think that my obligation as a physics teacher is to alert students about the impact of technology development on the environment"*.

In addition, different attitudes exist on how to integrate SD into teaching. While some students assume the integration is possible only within certain subjects, others believe that it is not only possible but also necessary to integrate sustainability into all school subjects.

In the responses, a dominant view is the opinion that SD is of crucial importance for the survival of mankind, that is, their most important task is to make youth aware of what their future holds. This attitude is best reflected in one of the following statements: *"I think sustainable development is something that should certainly be taught from the lowest to the highest level of education, as it is the underlying concept (and, in some ways, a prerequisite for success) of the future to which we are headed. As a future teacher, I think it is important to teach how to treat the environment in a responsible and respectful manner, for it is something that concerns us all, not just the individuals*". However, a fear that it is too late for changes is noted as well: *"I think the promotion of SD is essential to the preservation of planet and future life on Earth (it concerns the present generations too), which is why it is particularly important to promote SD in all aspects of life, starting with education. Unfortunately, I think it is too late for a change."*

The second open-ended question required participants to write their recommendations for improving teacher education, aimed at developing the competencies of future teachers needed for the promotion of ES in their future work. Given that they value ES and acknowledge the importance of ES in achieving the sustainable future, as it is evident in their previous responses, it is apparent that student teachers possess a clear vision of how to improve initial teacher education to prepare themselves for the implementation of ES in their future work in a better manner.

Once again, their responses can be summarized on a several levels. On the first level, their proposals relate to the need for a greater representation of sustainability content and the introduction of additional (mandatory and/or elective) courses on sustainable development in initial teacher education. As one of the participants said, *"to introduce additional courses in the university programs that deal not only with grammar and literature but also with the current state of affairs in the world"*. A particularly high emphasis is placed on the introduction of different teaching methods. Namely, it is required to abandon frontal lecture

teaching and introduce dialogue, development of critical thinking, experiential learning, practical work, creativity encouragement, interdisciplinarity, etc., while teaching sustainable development.

Student teachers emphasize the importance of raising awareness among other student teachers and their university professors of the possible impact of education on creating sustainable future: "*University professors should encourage understanding of the relationship between human activity and the changes that it makes to the environment*". Some student teachers' responses reflect the fear that there is not enough time for any change, and some of them believe that they would not have enough time to include topics on sustainability in their teaching, due to an immense amount of other ("regular") topics that should be covered. Some participants advocate a radical change in the national education system, that is, the education reform, for they believe it would not be possible to integrate the contents of sustainability into teaching without a change.

Discussion and conclusion

Quantitative results indicate a great discrepancy in the student teachers' perceptions of expected and obtained contribution of education in the development of their sustainability competencies. Student teachers have estimated that their education contributed to the development of sustainability competencies significantly less than needed. Also, the insight into the qualitative data has revealed that student teachers recognized the need for the promotion of sustainability in their future work, as well as that teacher education should empower them to respond to this challenge readily. However, attitudes of some student teachers are that teaching for sustainability should not be their obligation as they would not have enough time due to the primary subject of their teaching, along with the opinion that the education on sustainability should be incorporated in other subjects, such as geography or biology. It is interesting to note that student teachers possess a very clear idea of how their initial teacher education should change in order to provide them with sustainability competencies and empower them to implement education for sustainability in their future work. In line with almost every ES guideline (UNESCO, 2015; 2017; Rieckmann, 2018), student teachers recognize the need for a shift from the traditional approach to education, which includes input orientation and focus placed on the lists of essential educational content, to a transformative, competence-based education with an action-oriented, transformative pedagogy aimed at facilitating this process.

Emergent research of sustainability in higher education and initial teacher education has explored the competencies that student teachers should develop by the help of educational programs in order to become the agents of change towards sustainability in their workplaces and personal lives. An increasing number

of researchers are examining the numerous interconnecting aspects of ES and their associated competencies (e.g., de Haan, 2010; Glasser and Hirsh, 2016; Rieckmann, 2012; Wals, 2010; Wiek, Withycombe and Redman, 2011; Wiek et al., 2016). While different authors pointed out different sustainability competencies and categorized them as the key ones, some competencies were universally recognized as essential for individuals, needed to both transform their lifestyles and contribute to the social transformation towards sustainability. Namely, some of these competencies include system thinking and critical thinking, as well as the ability to handle uncertainties, crises, and stress (Rieckmann, 2018). Taking that into consideration, the results of this research are thought-provoking, as they have shown that student teachers recognized the need for developing particularly these competencies and, at the same time, stated that they did not develop them sufficiently during their initial teacher education. As it could be seen, there has not been enough effort addressed to the implementation of global guidelines for achieving sustainability goals into a local educational context.

The results obtained in this research clearly reflect the fact that more emphasis should be placed on the competence-based education within the existing teacher education curriculum. The findings are in line with the work of Barth & Rieckmann (2016), who have warned that, in the educational research area, the analyses are focused on finding potential solutions aimed at integrating education for sustainable development into study programs and colleges (e.g., Bürgener & Barth, 2018). However, there is an insufficient number of studies focused on educational outcomes, which would offer answers to the questions related to what student teachers are really learning and which competencies are acquired in the context of education for sustainability. There remains a large research space for the operationalization of competencies and the development of instruments for monitoring and evaluating the development of competencies of student teachers (Wiek et al., 2016). This is not surprising, as clear directives for the universal teacher education in the context of education for sustainability still do not exist (Wolff et al., 2017). What is more, in most countries, teacher education for sustainability remains reliant on the individual efforts of enthusiastic individuals (Green et al., 2016).

It is important to emphasize that competencies in the analyses do not replace specific competencies necessary for a successful action in certain situations and contexts, but include them and are more targeted. There is a consensus among the experts in the field, according to which these competencies cannot be easily taught, but can be developed during a learning process which involves participation, experiential learning, personalized engagement, and reflection (Rychen, 2003).

If we are serious in the attempt to empower future teachers to become the agents of change towards sustainability in their workplaces and personal lives, the results of this study undoubtedly contribute to the fact that the improvements in

teacher's education are necessary, especially those directed at sustainability development. This is particularly important, as the majority of participants in this study stated that they value ES to a great extent and expect their initial teacher education to provide them with competencies necessary for the implementation of ES in their future work. In other words, during their university education, student teachers should be able to acquire ES competencies that would enable them to cope with uncertainty and increasing sustainability challenges.

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TEACHERS' PERSPECTIVES AND PROFESSIONAL DEVELOPMENT

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SUSTAINABLE DEVELOPMENT: BETWEEN GLOBAL POLICY AND TEACHERS' CONCEPTIONS

Violeta Orlović Lovren*
Faculty of Philosophy, University of Belgrade, Serbia

Danijela S. Petrović**
Faculty of Philosophy, University of Belgrade, Serbia

Nataša Simić***
Faculty of Philosophy, University of Belgrade, Serbia

Abstract

Adopting Agenda 2030 and Sustainable Development Goals (SDGs), countries around the World agreed that education plays vital role in achieving sustainability as a new global ideal. Following achievements of the United Nations Decade on Education for Sustainable Development (UN ESD), new global documents (such as Aichi Nagoya Declaration) call for further increasing of conceptual understanding of sustainable development and ESD. It is highly recommended to further work on "re-orientation" of education, including education of teachers, who are seen as key players in this process.

Starting from the premise that "what teachers know, think and believe directly affects classroom content and pedagogy" (Evans et al., 2012, p. 3), qualitative research of teachers' conceptions of sustainable development was undertaken, comprising 223 class and subject teachers from primary and secondary schools from Serbia. Collected teachers' personal definitions of sustainable development were analyzed using evaluative content analysis, which results are presented in this paper, and discussed from the perspective of global theoretical and policy framework, taking into consideration specific local context and issues related to integration of sustainability into education and teaching practice in Serbia.

Keywords: sustainable development, education for sustainable development, teachers' conceptions

* E-mail: violeta.orlovic@f.bg.ac.rs

** E-mail: dspetrov@f.bg.ac.rs

*** E-mail: nsimic@f.bg.ac.rs

Introduction

After the concept of sustainable development 'entered through the big door' in late XX century, there are numerous attempts of authors to find the most comprehensive and yet clear and precise definition of this phenomenon. Following the Report of the Brundtland Commission, bringing today largely quoted statement that "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" ("Our Common Future", 1987, p. 43), as well as the agreed declarations from the Rio Conference in 1992, there is rapidly increasing volume of definitions in literature. As identified by Dobson, only few years after the Rio Summit, one could find more than 300 different definitions (Dobson, 1996; Scott, 2002).

The concept of sustainable development is generally seen today as "an overlapping of four pillars, dimensions or components, namely environment, society, culture, and economy" (Makrakis, 2012, p. 84). While early definitions recognize mainly environmental, societal and economic dimensions, newly integrated, cultural component, makes "inter-connections between the other three pillars of sustainable development" (UNESCO, 2008). Within the global policy approach, culture is promoted as "both an enabler and a driver of the economic, social and environmental dimensions of sustainable development" (https://en.unesco.org/themes/culture-sustainable-development), and thus incorporated in majority of Sustainable Development Goals (SDGs). Within the globally adopted SDGs, separate goal (four) is "reserved" for the quality, inclusive and lifelong education (UN, 2015). Education is 're-discovered' as a powerful tool for achieving sustainable future. But, as argued by Scott, "...it is not enough to say that sustainable development and learning need to go hand in hand. Sustainable development is a learning process through which we can (if we choose) learn to build our capacity to live more sustainably." (Scott, 2002, p. 2)

Diverse impacts that influence sustainability as a desired condition and as a concept, increase the need to develop "clear and inclusive definition", which is "especially important for teaching and learning" (Timpson et al., 2006, p. 1). On the path of achieving this demanding goal and 'translating' multidimensional concept of sustainability through education, teachers are seen as the key 'change agents'. They are invited to build their own 'capacities to live more sustainably', but also to contribute to development of sustainable competences of their students. For decades now, and in particular during the UN Decade of Education for Sustainable Development (DESD, 2005–2014), numerous publications and programs have been launched in order to provide guidelines for teachers and education institutions to meet those expectations (UNESCO, 2005; UNESCO, 2015). Under the influences of reflexive and participatory learning theories and their didactic implications, teachers are expected not only to support "development of citizens who contribute to ecological, social and economic well-being" (Santone, Saunders

& Seguin, 2013, p. 5), but also to critically reflect on their own role, asking themselves didactic questions "how" instead of "what" (should be taught) only. Despite the variety of different views and meanings of sustainability/sustainable development, it is expected from teachers to 'translate' this concept into their teaching practice and life of the school. This is not an easy task: as rightly noted, this translation may be understood as "translation from one context to another – as in translating from one language to another, with the necessary transformation of meaning that this always implies" (Madsen, 2013, p. 3775).

Therefore, as evident from number of research findings nowadays (some of it presented in the next chapters), such a 'translation' varies not only within the specific local and institutional (school) contexts, but also depending on teachers' own understanding of sustainable development (hereinafter SD) and education for sustainable development (hereinafter ESD). Using sustainability here in terms of the development goal and sustainable development as a concept referring to set of processes leading to it (Scott, 2002), we are interested in teachers' conceptions of sustainable development which, together with their perspective on teaching and the subject matters, have crucial impacts on integration of SD into curricula, teaching practice and education at general.

Integration of sustainable development into education

In addition to variety of interpretations of sustainability and sustainable development, there are numerous terms often used as synonyms, such as: environmental and sustainability education, education for sustainability and education for sustainable development. Even more misunderstandings may occur when translating these into different local languages. Close analysis of literature shows that, while searching for teachers' conceptions of SD, authors often focus actually on their understanding of ESD. What relations between those concepts are seen and how are they described by authors?

Analyzing approaches of different authors, Wals concludes: "Some emphasize the SD in ESD – stressing ecological, socio-cultural, economic sustainability both in time (present and future) and space (here and elsewhere) and others emphasize the E in ESD stressing new forms of learning, competence and skills development to create a new kind of citizen and a new kind of educational system." (Wals, 2009, p. 26).

In other words, number of authors focusing on integration of sustainable development into education, talk about the 'infusion' of environmental, social and economic (expanding it lately by cultural, political, even spiritual) issues – not only in terms of the content, but the aims and objectives of the learning and teaching processes as well (Badjanova et al., 2014; Makrakis, 2012). While considering ESD, it is stressed that it is not about "an add-on to existing curriculum" (UNESCO,

2014), but rather "an umbrella for many forms of education that already exist, and new ones that remain to be created" (https://en.unesco.org/themes/education-sustainable-development). Focusing more on pedagogy, ESD is also considered as the approach to teaching, oriented towards "an action-oriented, transformative pedagogy, which supports self-directed learning, participation and collaboration, problem-orientation, inter and transdisciplinarity and the linking of formal and informal learning (UNESCO 2017, p. 7).

Holistic approach to understanding of ESD means, as suggested by Daniela Tillbury, that ESD is "brought to life not only in the curriculum or educational programmes but also in institutions and organisations which facilitate these learning processes." (Tillbury, 2011, p. 22). As further elaborated, "ESD touches every aspect of education including planning, policy development, programme implementation, finance, curricula, teaching, learning, assessment, administration." (McKeown et al., p. 33). In accordance with such a vision, the "whole school approach" is recommended in applying ESD, comprising not only changes in curriculum, school policy and management, but also engagement of students and community members in learning, education and collaboration (Ibid., p. 46).

Having all that in mind, integrating SD into education is seen in the context of our research, as incorporating of issues and principles of the concept into curriculum, while ESD is understood as the process of transformation of learning and teaching based on transformative, participatory and learner centered pedagogies, as well as on engagement of community, thus improving school policy, collaboration of all actors and quality of education. Seeking to find about teachers' conceptions in that context, means getting an insight into their personal perspectives, based on understanding of the concept of sustainable development, which, together with their teaching competences, makes foundation for their involvement in applying ESD as an approach and the process, as described above. If we want to enable integration of sustainability in schools, then, as we agree with Madsen, "it seems crucial to consider teachers' perspectives, their everyday lives and the socio-economic context for their work" (Madsen, 2013, p. 3772).

Teachers' conceptions of sustainable development and education for sustainable development

As noted, research of teachers' conceptions and beliefs should be the first step in the reforming of teaching practice (Van Driel, Bulte & Verloop, 2007). Having in mind requirements from teachers to implement principles of SD and the approach of ESD in their everyday work, it is not surprising that many authors today direct their research attention towards teachers' conceptions of SD.

For example, research of such conceptions of 3229 high school teachers from Sweden, shows that the most of them do not define it from holistic point

of view, meaning that they do not recognize its three dimensions, often overlooking the economic one. One of interesting tendencies is that social science teachers emphasize social dimension of SD, while those teaching natural sciences underline its environmental dimension (Borg, Gericke, Hoglund & Bergman, 2014). Another study with Swedish teachers revealed following categories of teachers' conceptions of SD: knowledge about SD (its environmental, social and economic aspects), values (beliefs about the importance of teaching about SD and readiness to teach about it at the school and the local level) and social practice (the way one teaches about SD). Most of the teachers from this research identified only environmental dimension of SD (Gustafsson, Engstrom & Svensson, 2015).

Similar findings were revealed by studies done in Greece, where teachers again emphasized environmental dimension of SD, particularly recognizing the need to focus on local and national, rather than on global issues – such as climate change or challenges related to the energy deficiency (Spiropoulou, Antonakaki, Kontaxakaki & Bouras, 2007). Yet another example, provided based on the research of Summers and Childs, shows that 72% of teachers recognizes first of all environmental dimension, 53% of them economic, 31% social, while 15% of them include three key dimensions in their definitions of SD (Summers & Childs, 2007). Considering particular issues, teachers select population growth, human rights, international trade and pollution as the most important, while the least important, according to their personal perspectives, are topics related to biodiversity and global warming (Elshof, 2005).

The survey initiated in Latvia was focused on primary school teachers' understanding about the sustainable education, comprising 86 respondents. As concluded by researchers, teachers' responses reflect their awareness about the diverse aspects of sustainability – social, economic and environmental – but also lack of awareness of the political and cultural aspects, as well as about interconnectedness between those issues (Budjanova et al., 2014).

The research of university teachers' definitions of sustainable development performed in Serbia, comprised 109 of respondents, employed by faculties from the four scientific groups of the University of Belgrade. Qualitative analysis, using the recognized dimensions of the concept as the criteria, resulted in identification of seven following categories: social, economic, environmental, socio-environmental and socio-economic, comprehensive and one which was named 'unclassified'. The last category was obviously made out of the answers which couldn't be classified into any of previously mentioned. According to the analysis, almost 40% of teachers understand sustainable development as multidimensional concept (three dimensions). The smallest number of responses point out economic dimension. Though statistical analysis of the relations between the scientific groups of faculties and type of personal definitions did not show statistical significance, there are tendencies that, for example, after the comprehensive

(multidimensional), second biggest number of definitions in faculties that belong to social science group underline social dimension of SD, while those from technical-technological field prefer socio-environmental dimensions in their definitions. It is also interesting that the highest percentage of responses belonging to the multidimensional category, comes from the teachers working in faculties from natural scientific field (54,5%) (Orlovic Lovren, 2016).

If there is one common point in all those analyses and studies made in different countries and at the varying levels of education, it would be insight into generally limited understanding of sustainable development reflected through teachers' conceptions. A recent study conducted with 56 academics from all over the world specialized in the academic field of ESD, also confirmed that holistic understanding of SD is lacking (Sinakou, Boeve-de Pauw, Goossens& Van Petegem, 2018). It clearly asks for improvements, both in terms of pre-service and in-service education of teachers and teacher educators. As concluded in different parts of the World, issues related to SD and ESD are not adequately incorporated in teacher education yet (Santone et al., 2013; Evans et al., 2012). Having in mind the complex nature of SD and the fact emphasized by authors that in this field there are no "ready-made answers" (Badjanova, 2014) for implementation, it is not surprising that teachers who are not knowledgeable in this field, might feel confused, expecting more support in planning, teaching and provision of teaching materials. Being "nurtured through disciplines at school and in higher education" (Scott, 2002, p. 10), they face requirements to incorporate interdisciplinary concept in their work, within the institutions which are also very often not enabling this process.

Context of the research

The research of teachers' conceptions of SD was performed within the Project "Support to Human Capital Development and Research – General Education and Human Capital Development" (a.k.a. 'Razvionica'), supported by EU and carried on by Hulla & Co., Human Dynamics (2012–2015), in cooperation with the Ministry of Education, Science and Technological Development of Serbia.

Within its four components, the Project was aimed at:

- Development of National Curriculum Framework (NCF) in primary and secondary general education in Serbia, following competence based and learning-centered approach.
- Raising the professional standards of teachers across Serbia, through professional development organized within training program and study tours.
- Strengthening the use of research-based evidence in future educational policy development.

- Development of an infrastructure framework — a network of Practice Schools (http://www.humandynamics.org/en/project/serbia-human-capital-development-and-research).

Following one of objectives of the first Component of the Project, to improve teachers' competences in applying interdisciplinary issues in curricula and their teaching practice, training included workshops on integrating sustainable development, delivered to all the teachers from involved schools. During those workshops, teachers were asked to formulate their own definitions on sustainable development. All teachers were informed previously that their answers are going to be used for the research.

For better understanding of the research results, it is necessary to point to some characteristics of teachers' educational path and National Curricula[1] they were required to comply with in their everyday work at the time when the Project and the workshops were realized.

Class teachers in Serbia are educated at the teacher training faculties and they work with children age 7–10. During their studies they acquire knowledge and practical skills in several scientific disciplines, but also, they have many courses and school practices aimed at improving their teaching competences. Once they start working in schools, they are required to comply with the National Curriculum which is comprehensive and which entails subjects: Serbian language, Mathematics, Nature and society, Foreign language, Music, Sports, and elective subjects.

For the purpose of this research, in order to determine what expectations regarding SD the educational system placed over class teachers, a brief content analysis of the National Curricula was done. It was determined that SD was only extensively discussed in the curriculum for the subject Nature and society – in the main goal of this subject, in tasks and topics (content of the curriculum). It was present only laterally in the goals and tasks of the Serbian language and Foreign language (e.g. 'to develop the values of humanism and solidarity' or 'to enable better understanding of other cultures'), but it was not visible in the concrete topics. Curricula for Mathematics, Music, Arts and Sports did not contain even the slightest indications of the topic of sustainable development.

Unlike class teachers, subject teachers are mostly educated in their scientific discipline, having only a few courses aimed at fostering teaching competences during their four– or five-year education. The educational path is the same for those who would work in upper grades of primary school, with 10–14 years old students, and those who would work in secondary schools with 15–18-year-olds. Given that our sample consisted of subject teachers of different scientific discipline

1 http://www.cerez.org.rs/wp-content/uploads/2016/01/7-Nastavni-program-za-osmi-razred-osnovnog-obrazovanja-i-vaspitanja.pdf;http://www.cerez.org.rs/wp-content/uploads/2016/01/6-Nastavni-program-za-sedmi-razred-osnovnog-obrazovanja-i-vaspitanja.pdf;https://zuov.gov.rs/nastavni-planovi-i-programi/

(Biology, Chemistry, Physics, Geography, Mathematics, Languages, Sociology and Psychology), working in both primary and secondary schools, a brief content analysis of the curricula for all the subjects they tech in primary and secondary schools will be presented in the following lines.

The content analysis revealed that only Biology Curriculum for primary education addressed explicitly the concept of SD at the level of goals, tasks and content. In Geography and Chemistry sustainable development is implicitly present in the goal and tasks (e.g. "...to develop accountability for their country and the entire world and tolerant stance towards different nationalities and cultures" or "...to develop the responsible attitude towards the natural environment"), but not in the content, so one can doubt such goals can be achieved in real classes. In the Foreign languages Curriculum, there is no mention of SD, but there are several topics (e.g. on human rights) through which teachers can promote intercultural values and social equality. The Physics and Mathematics Curricula do not address the concept of SD, nor its values.

Concerning secondary education curricula, the analysis showed that the main goals of the curricula for all subjects (except Mathematics) addressed the SD either explicitly (e.g. "... to apply the concept of sustainable development and acknowledge future generations' rights on preserved environment") or implicitly (e.g. "...to develop responsible relationship toward oneself, others and environment"). In the cases of Biology, Geography and Sociology, there were many topics implicitly related to SD (e.g. air/ water/soil pollution, regional economic groups and EU, social power and inequalities), whereas in other subjects SD was present only at the abstract level – the level of goals and tasks, but not in the topics that should be covered with the students (especially in the case of Physics). Moreover, curricula did not contain the guidelines for teachers about the possible ways of integrating SD in their everyday work.

Although there are no insights about the specific knowledge on SD Serbian class and subject teachers may gain through their formal pre– and in-service education, the analysis of their curricula (valid at the time when the research was conducted), showed that they are either not required to discuss sustainable development with students, or not supported with detailed guidelines on the most effective ways of incorporating sustainable development in their everyday work.

Along with the findings from other national and international studies, results obtained through this research are later discussed in the light of these contextual factors.

Research aim

The research that is going to be presented further on, was aimed at finding out about primary and high school teachers' perspectives of the SD concept, as a basis for the discussion of current needs and possible future directions in the

field of teacher education and professional improvements, within the framework of sustainable development goals and education policy and practice that should contribute to its achievement.

Method

Sample

Participants in this research were teachers from primary and secondary schools throughout Serbia, who participated at the workshops on sustainable development within the project Razvionica. There were 38 class teachers and 185 subject teachers (see Table 2).

Table 1. Number of participants according to the type of school and subject they teach

	Primary school	Secondary school	**Total**
Class teachers	38	/	38
Social science and Humanities teachers	37	57	94
Science teachers	32	59	91
Total	107	116	223

Data collection

At the very beginning of the workshop participants were asked to write their definitions of sustainable development, that is what they subsume under sustainable development. No constraints regarding the length of that definition were set. Workshop moderators collected the participants' answers and the authors of this paper typed the answers in the software for qualitative data analysis MAXQDA.

Qualitative text analysis, that is, the combination of content and evaluative or "scaling" text analysis was considered the best way of approaching data (Kuzkartz, 2014; Mayring, 2010). Both deductive and inductive approaches were applied, which is usually recommended in the literature (Suddaby, 2006). Authors started with a clear understanding of what a comprehensive scientific definition of sustainable development is and strived to determine to what extent teachers' concepts of sustainable development correspond to that definition. That means that at the beginning of data analysis process, deductive or directed approach was applied (Hsieh & Shannon, 2005), through the

categorizing of participants' answers along the continuum *Lack of understanding–Full understanding* of the concept of sustainable development. However, since different variants of incomplete understanding appeared, one needed to apply inductive content analysis and add relevant categories between the two poles of the continuum, that differed not only in "amount" of understanding, but in "nature" of understanding.

Participants' answers consisted of one word, several words or one sentence. Two coders started data analysis by classifying answers as either representing full understanding or not. Those answers that reflected some kind of incomplete understanding of the concept sustainable development were subjected to content analysis. Coders were searching for recurring themes in participants' answers and defined main thematic categories. After consultations with the third author subcategories in the category reflecting complete lack of understanding were created. The entire data set was approached again and slight modifications in classification were made, so all three authors could agree upon each answer's assignment to a certain category. All participants' answers were analyzed together and no comparison between teachers of different subjects and from different school types was made.

Since there were no opportunities to apply data triangulation, authors strived to achieve the credibility of results by applying investigator triangulation and self-reflection (Denzin, 1970; Lincoln & Guba, 1985). Given the number of participants, this research laid no claim to generalizability, but it can give some insights into the ways school teachers of different educational and scientific background and with different teaching experience, understand the concept of sustainable development.

Data analysis

Content analysis of teachers' answers revealed four types of conceptions of sustainable development. The first, most frequent category (33.2%) was labeled *Complex and comprehensive definitions of sustainable development.* This category contained teachers' answers that demonstrated both partial and complete understanding of the notion of sustainable development. The second, also very frequent category (31.3%) was labeled *Broad definitions of sustainable development* signifying a blurred understanding of the concept of sustainable development. The third category was labeled *Narrow definition of sustainable development* (26.5%). The fourth category – *Lack of understanding*, comprised answers (9%) which reflected participants' un-familiarity with the concept of sustainable development or incapability to define this concept. Within each previously mentioned category, two or three subcategories were distinguished (see Table 3).

Table 2. Teachers' conceptions of sustainable development (SD)

Category and subcategory	Frequency	%
Complex and comprehensive definition	**74**	**33.2**
Complex	69	31
Comprehensive	5	2.2
Broad definitions	**70**	**31.3**
SD as learning, improvement and goals orientations	33	14.8
SD as a lifestyle and spiritual goal	29	13
SD as a way of satisfying one's needs	8	3.6
Narrow definitions	**59**	**26.5**
Slogans	33	14.8
Simple associations	26	11.7
Lack of understanding	**20**	**9**
Tautology	13	5.8
Non-familiarity with concept	7	3.1
Total	**223**	**100**

In the following lines each of the categories with their subcategories, sorted by their frequency, will be further elaborated and the typical teachers' answers will be presented.

Results

Complex and comprehensive definitions of sustainable development

The subcategory, ***Complex definitions*** (31%) included the answers that reflected understanding of one or two aspects of sustainable development. Participants provided meaningful, complex definitions that covered environmental, in fewer cases – social, and in the lowest number of cases – economic pillar of sustainable development. They pointed to the harmonious interaction between humans and nature, stressing on responsible behavior toward the environment, development of the society without harming nature, careful and

controlled use of natural resources, etc. Participants expressed global and future orientation.

The following examples illustrate this category: *"Use of resources in a way that does not endanger the environment"* (Science teacher, Secondary school); "*Investing in renewable energy sources*" (Social science and Humanities teachers, Secondary school); "*Developing awareness of the active role of human kind in the preservation of the environment.*" (Science teacher, Secondary school); "*A planned and an efficient system of maintenance and progress of human society in accordance with existing resources together with their maintenance and preservation*" (Social science and Humanities teachers, secondary school); "*Protection of natural resources, prevention of major conflicts and wars*" (Social science and Humanities teachers, elementary school); "*Preservation and maintenance of nature and human resources, as well as, conservation, redirection and re-utilization of energy*" (Social science and Humanities teachers, Primary school).

The answers included in this subcategory often pointed to a global orientation ("global conservation of planet Earth") and future orientation. In that way, teachers' answers were similar to the definition of sustainable development stated by the Brundtland Commission (1987). For example: *"Sustainable development is responsible for the relation towards nature in the presence, in order to preserve nature for the future"* (Class teacher, Primary school); *"A system in which we can realize our needs and take advantage of the potentials, but at the same time, we do not jeopardize the continuity and duration of everything that surrounds us"* (Social science and Humanities teachers, Primary school*); "Consciousness/attitude, knowledge and skills on the necessary investment for preserving resources for the purpose of general well-being in the future"* (Social science and Humanities teachers, Secondary school).

The subcategory, ***Comprehensive definitions*** (2.2%) included teachers' answers which demonstrated a complete understanding of the notion of sustainable development. They either cited the Brundtland Commission's definition, or listed all three aspects of sustainable development in a meaningful and comprehensive definition. For examples: *"Development which meets the needs of the present in the way that does not jeopardize the possibility of the future generations to meet their needs"* (Social science and Humanities teachers, Primary school); *"Long-term planning of the social, economic, cultural, educational development of a society, while preserving natural and human resources for the next generation"* (Social science and Humanities teachers, Secondary school); "*An idea that implies lifestyles, social and economic order in a way that preserves rational use of the natural resources of the planet. Sustainable development implies civilization and its development, so that the planet is preserved for future generations. It is a developed economic consciousness and a moral obligation to preserve the planet, that what we as a generation of people receive is transferred in the same way"* (Social science and Humanities teachers, Primary school).

Broad definitions of sustainable development

The subcategory, ***Sustainable development as learning, improvement and goals orientations*** (14.8%), reflects teachers' understandings of sustainable development as an effort, work and learning from previous experience. The following examples illustrate this category: "*Planned and focused work*" (Social science and Humanities teachers, Primary school); "*Achieving certain goals in life*" (Social science and Humanities teachers, Primary school); "*Achieving crucial social and individual goals*" (Social science and Humanities teachers, Primary school); "*Personal development*" (Social science and Humanities teachers, Secondary school); "*Power of thinking*" (Social science and Humanities teachers, Secondary school) and "*Formation of existing knowledge that can be successfully upgraded and applied*" (Science teacher, Secondary school).

The subcategory *Sustainable development as a lifestyle and spiritual goal* (13%) reflects teachers' conceptions of sustainable development as a positive worldview, as positive emotions (like love) and values (such as tolerance, cooperation and care for others). The typical answers included in this category are: *"A healthy lifestyle, preserving inner peace fostering a good relationship with other people*" (Social science and Humanities teachers, Secondary school); *"Optimism and self-esteem"* (Class teacher, Primary school); *"Educate children to respect true values*" (Social science and Humanities teachers, Secondary school); *"Encourage others to share mutual respect and support, encourage curiosity"* (Social science and Humanities teachers, Secondary school); "*Cultivate a good relationship with other people*" (Social science and Humanities teachers, Secondary school).

A small number of answers were included in the subcategory *Sustainable development as a way of satisfying one's needs* (3.6%). For examples, "*Satisfaction of human needs*" (Class teacher, Primary school); *"Satisfying as many needs as possible depending on the opportunity"* (Science teacher, Primary school) and "*Satisfaction of own needs and struggle with temptations*" (Class teacher, Primary school).

Narrow definitions of sustainable development

Under the subcategory *Slogan* (14.8%) were subsumed teachers' associations that had a form of a parole, slogan or saying, like: "*You take from the nature the same amount that you give*" (Class teacher, Primary school) or "*Live and let the others live*!" (Social science and Humanities teachers, Primary school). These teachers expressed future orientation and a concern for the nature and/or humankind.

A number of slogans have an evident value and activist component – they "invite" every individual to act preventively in order to avoid apocalyptic scenarios (represented in words like self-destruction, collapse, devastation or

destruction). For example: "*The desperate measures in order to save the earth from the destruction of humankind, in order to awaken a humankind who thinks that it can do everything without the consequences of undertaken action*" (Social science and Humanities teachers, Secondary school) or "*The last straw of salvation – "to be or not to be*"" (Science teacher, Secondary school). Based on the answers from this subcategory, it can be concluded that the respondents have a clear orientation towards the future, have an idea of what sustainable development means, but most often only reduce them to an ecological dimension such as protection of the environment.

Simple association (11.7%), reflects teachers' narrow conception of what sustainable development stands for – participants expressed some ideas about what key notions are related to sustainable development (like *Earth, nature, future, equilibrium*, etc.), without attempting to relate these notions and provide a comprehensive definition.

A small number of teachers (3.1%) have explicitly stated that they do not know what sustainable development means or that they "can only guess" the meaning. These answers are incorporated in a category named *Lack of understanding*. Additionally, a small number of answers (5.8%) were included in the subcategory *Tautology*, because they reflected teachers' efforts to define sustainable development by providing the meanings of the words sustainable and development, without understanding what the whole notion refers to. For examples: *"Advancement or development that will integrate all of what is known from before with the aim of improving what is coming"* (Science teacher, Secondary school); *"The development that someone actively maintains, pre-planned development, development with a vision and goal"* (Social science and Humanities teachers, Secondary school).

Discussion and conclusion

Results obtained in this study show that among elementary and high school teachers in Serbia prevailed one or two – dimensional conceptions of SD while economic dimension is usually overlooked. On the other hand, comprehensive and multidimensional definition of the concept is very rare – only five out of 223 teachers demonstrated a complete understanding of the notion of SD by citing the Brutland's commission definition (1987), or by listing environmental, social and economic aspects of SD. These results are in accordance with study conducted by Borg and associates in Sweden which demonstrated that most teachers do not define SD from holistic point of view (do not recognize even its three dimensions) and often overlook the economic dimension (Borg et al., 2014). Similar to previous international studies (for example, Gustafsson, Engstrom & Svensson, 2015; Spiropoulou et al., 2007; Summers & Childs, 2007), teachers

from this research emphasized environmental dimension in their conceptualisations of SD. Additionally, comparing with university teachers in Serbia (Orlovic Lovren, 2016) primary and high school teachers in this study understand SD as multidimensional concept to a lesser extent.

Almost one third of teachers' conceptions of SD outlined broader understanding of this notion. Some of SD definitions tackle even spiritual aspect which is in line with scholars who expand notion of SD to cultural, political and spiritual issues both in terms of the content and aims, objectives of the learning and teaching processes (for example, Badjanova et al., 2014; Makrakis, 2012). Other broader definitions of SD emphasize learning, improvement and goals accomplishment which is complementary to the orientation of some scholars towards the educational aspect of SD stressing new forms of learning (Wals, 2009). Nevertheless, same of subcategories of broader definition of SD, especially *SD as a way of satisfying one's needs,* stress teachers' anthropocentric point of view seeing human beings as the most important entity in the universe and considering the world in terms of human values and experience.

Teachers narrow definitions of SD classified in subcategory *Slogan* contain an activist component suggesting that teachers recognize the value and the importance of teaching about SD (Gustafsson, Engstrom & Svensson, 2015). However, even not so obvious, anthropocentrism is present in these narrow definitions of SD, as well. For example, although "catastrophic slogans" at first glance seems to express worry about planet and invite human to act preventively in order to avoid apocalypse they actually pay attention only to the urgent need to protect humanity.

Additionally, it is important to consider teachers motivation to participate in this study. Namely, the key concepts used by teachers to explain the notion of SD, such as *nature*, *future*, *equilibrium*, *Earth,* apart from pointing to the narrow conceptualization of SD, can be seen as expression of teachers' lack of motivation to deal with a more detailed elaboration of their personal definitions of SD.

Results obtained in this study, similar with results from previous international studies, support conclusion about generally limited understanding of sustainable development reflected through teachers' conceptions which raises concerns regarding teachers' competences for advocating and for realizing education for sustainable development. Another constrains are expectations and demands that Serbian educational system place over teachers regarding SD, along with the lack of guidelines and support through professional development program.

However, it is worth mentioning that some changes regarding ESD have been introduced recently. Three years after completion of the Project, as a segment of the curricular reform undergoing in secondary general education, high schools in Serbia were offered to include elective subjects in curricula for the first class, since the beginning of the school year 2018/2019. The table below shows type of subjects and number of schools opted for each of it:

Table 3. Selection of elective subjects by schools in Serbia in 2018/2019

Subject title	Number of schools
Language, media and culture	127
Applied science	103
Sports and health	102
Individual, group and society	77
Art and design	76
Sustainable development	58

Source: Ministry of Education Science and Technological Development, 2019

As it can be seen, most of the schools opted for the Language, media and culture, while least of them selected Sustainable development. As reported by schools, two following criteria determined such a choice: preferences of students and competences of teaching staff. (Ministry of Education, Science and Technological Development, 2019). This statistics confirms the conclusion that the process of integration of SD into curricula in primary and secondary schools in Serbia, as well as application of ESD as an approach to transformation of teaching and learning, requires support to teachers at many levels: from deeper understanding of the concept itself, through improvement of capacities for applying ESD, joint development of teaching materials – to sharing of best practice examples in order to enable transformative and participative processes within and between institutions and communities. It is of particular importance in the times of curricular reform, and in the context of the lowest interests in high schools shown for 'sustainable development' subject, explained by the 'lack of interests of students as well as of teachers' competence'.

In addition to programs of professional development for teachers that are carefully planned, based on actual training needs and continuously performed, which should be coordinated by the respective Ministry and other public institutions in charge, it is of utmost importance to support and increase capacities of teachers' associations and networks, in order to encourage the exchange of best practices, experiences, information and dilemmas regarding SD and ESD. Their cooperation as well as partnership with civil society, academic community and parents, might significantly contribute to rethinking of values and practices embedded into day to day life in schools, families and society – for the sake of quality education and more sustainable future for All.

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DIDACTIC ASPECTS OF THE PROFESSIONAL DEVELOPMENT PROGRAM – CASE STUDY OF THE PROGRAM FOR IMPROVEMENT OF UNIVERSITY TEACHERS' COMPETENCIES[1]

Vladeta Milin*
Faculty of Philosophy, University of Belgrade, Serbia
Milan Stančić**
Faculty of Philosophy, University of Belgrade, Serbia
Lidija Radulović***
Faculty of Philosophy, University of Belgrade, Serbia

Abstract

Article presents an analysis of the didactic aspects of the professional development program created for university teachers from faculties in healthcare field. The program was created and implemented in 2018 as an integral part of the Erasmus+ project ReFEEHS. In this article we provide an evaluative review from the perspective of its creators and implementers, whereas classroom-level factors developed within the Dynamic model of educational effectivenes were used as a framework for the analysis. The aims of this analysis was to identify characteristics of the program for university teachers according to this model, to offer insights that could be used for development of similar educational programs, and to understand the scope and limitations of this approach to program evaluations. Results of our analisis showed that various qualities and didactical aspects of our program could be identified using Dynamic model, that numerous activities we conducted are in line with this model's recommendations while certain aspects of program could be improved, and that this approach to evaluation has strong points, but also some important limitations. Finally, implications of our findings are presented regarding teacher professional development and its importance for improvement the quality of education.

Keywords: teachers' professional development, university teachers, higher education didactics, program evaluation, Dynamic model of educational effectiveness.

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* Email: vladeta.milin@f.bg.ac.rs

** Email: mstancic@f.bg.ac.rs

*** Email: liradulo@f.bg.ac.rs

Introduction

University teachers were for a long time respected mostly for expertise in their scientific discipline, whereas focus on their competencies for teaching and, consequently, trainings for improvement of such competencies, has recently become a trend in many European countries and wider (European Comission, 2011; Postareff, Lindblom-Ylänne, & Nevgi, 2007). As McLean & Bullard (2000) point out, changes in higher education in the past few decades, such as expansion in number of institutions and number of enrolled students, diversification of educational offer, introduction of quality assurance mechanisms in university teaching and research etc., also led to redefining the identity of university teachers. This redefinition was followed by a greater focus on education, training and accreditation of university academics as *teachers*.

Starting from the real world need to raise quality of higher education and pedagogical trend to make education more student-centred, new demands were being placed on university teachers regarding their activities in teaching (Biggs, 1999; Prosser & Trigwell, 1998; Ramsden, 2003). Concurrently, programs for training university teachers for their teaching roles began to be developed, given that professional development of university staff is seen a fundamental part of building quality culture in higher education institutions (Hénard, 2010). Along with comprehensive system of evaluation, support to professional development of university teachers and institutional policies that foster quality in teaching are recognized as core mechanisms of quality assurance and sustainability in higher education (European Commission/EACEA/Eurydice, 2017, 2018; European University Association, 2018; Hénard, 2010). In different countries pedagogical tranining programs for unversity teachers vary in many of their features: *obligingness*[2] (compulsory pedagogical trainings or voluntary programs), *duration* (in terms of months-years and work hours), *format* (extended modules and courses, intensive short programs, seminars and workshops, part-time courses etc.), *target groups, certification requirements, aims, contents, methodology* (Chalmers & Gardiner, 2015; European University Association, 2018; Kreber & Brook, 2001).

Along with the development of various programs for higher education teachers' education, there is also a significant number of evaluation studies dealing with the quality of these programs. In overall, studies show that trainings had a positive impact on some of the *student-centred aspects of teaching*, both in terms of teacher self-reports and as perceived by their students (Cof-

2 Some authors, such as Baume (2006), described such situation as absurd since teachers at elementary and high schools do have to get certified for their competence to teach, which is seen as a way to establish teaching as a profession. Thus, university teachers really might be the last non-profession among teachers, as things are slowly changing towards putting systems of their professional development in place.

fey & Gibbs, 2000; Gibbs & Coffey, 2004; Hanbury, Prosser, & Rickinson, 2008; Ho, Watkins, & Kelly, 2001; Postareff, Lindblom-Ylänne, & Nevgi, 2007, 2008; Postareff & Nevgi, 2015; Stewart, 2014; Trigwell, Caballero Rodriguez, & Han, 2012; Van den Bos & Brouwer, 2014; Weurlander & Stenfors-Hayes, 2008). Also, teachers report that the trainings helped them increase their *confidence in teaching* and in their role as teachers (Hanbury, Prosser, & Rickinson, 2008; Ödalen et al., 2019; Stewart, 2014; Van den Bos & Brouwer, 2014; Weurlander & Stenfors-Hayes, 2008), made them more aware of their approach to teaching, which resulted in increased *sense of self-efficacy* (Postareff, Lindblom-Ylänne, & Nevgi, 2007, 2008).

As pedagogues, we recognize the importance of programs for the university teachers and the potential they have for improving the quality of the education overall. However, being the experts in the field of didactics, we were especially interested in examaning didactical aspects of these programs. Hence, in this paper we used our first-hand experience as co-creators and implementators of one program for university teachers, which was realized in Serbia in 2018, in order to explore its didactic foundation. We conducted evaluation based on a contempory theoretical model, wanting to find the implications for developing, implementing and evaluating similar educational programs, but also to recognize the importance of these programs for improving the quality of education. Before we present the results of this evaluation we will provide a brief description of the program.

About the Program

Within the Erasmus+ project ReFEEHS[3] (Reinforcement of the Framework for Experiential Education in Healthcare in Serbia) multidisciplinary team of teachers from the field of pedagogy and andragogy, medicine and pharmacy developed the *Program for improving teacher and mentoring competencies for the education of health professionals* (hereinafter: the program). Overall aims of the program were to: improve teaching and mentoring competencies of staff at faculties from the healthcare domain and mentors who are working with students in clinical practice; improve quality of study programs in healthcare education; foster inter-professional cooperation in healthcare education. It was accredited as a program of continuing education at the University of Belgrade in 2018 and it's first pilot implementation started in March 2018. Pilot included 40 teachers from faculties in healthcare domain (medicine, dentistry, pharmacy) from four state universities in Serbia (Belgrade, Novi Sad, Niš, and Kragujevac). Program was implemented through direct instruction (face-to-face workshops) and online learning (on Moodle platform) and it consists of five modules, each worth

3 See: https://refeehs.com/

30 hours of work, i.e. three ECTS. In this paper analysis is based on three modules that we will present very briefly.

The module dealing with *Teaching, learning and evaluation in healthcare education* consisted of two face-to-face workshops. One was introductory, dealing with reasons for interactive teaching and it included lectures by module trainers, but also group work and discussions among participants. The second workshop was at the end of the module (one month after the first workshop) and it was focused on participants' reflection on the process of work and learning. Between two workshops participants were required to follow weekly lectures and tasks on the Moodle platform and to participate in the forum discussions on topics initiated both by module trainers and other participants. The final assignment on the module was in a written form and required participants to provide as many ideas as possible on how to implement principles of interactive teaching.

In a way, continuation of this module were succeeding two modules *Teaching healthcare in academic context* and *Teaching and mentoring in clinical education,* which were focused on applying principles of interactive teaching in planning teaching in specific healthcare education domains, such as academic context and clinical context. These modules also included one introductory face-to-face workshop, mainly related to teaching planning, and one in the end of the modules (one month later). In the period between the workshops participants had weekly lessons and assignments, as well as forum discussion on the Moodle platform. Final assignment on these modules was to individually or in pairs plan one interactive class, implement it and write a reflection about it.

Research aims

The aim of our analysis was to explore didactical aspects of three modules of the program for university teachers, according to a theoretical model – Dynamic model of educational effectiveness (Creemers & Kyrakides, 2008). We expected that insigths about didactical aspects of the program for university teachers could be used for developing and realizing various educational programs and for estimating their quality. Based on this analysis we also wanted to understand the scope and limitations of this approach to program evaluation.

Method

Our research approach to this evaluative study was based on introspection and collaborative reflection about our experiences as co-creators and implementers of one specific educational program.

Data collection

Since we wanted to explore very broadly defined didactical aspects of an educational program, the selection of the data was not predetermined, i.e. it was not very strict or rigid. In order to gather as much relevant data as possible we relied on written documents (anecdotal notes creators of the program recorded during the realization of the program, meeting minutes, and materials from the Moodle platform), different program products, alongside various oral contents and all recollections we found useful for our evaluation. Thus, we also relied on numerous discussions that were organized during the realization of the program and even after the program ended, when we exchanged impressions and notes, analyzed materials, and build a common understanding of the program. In these discussions all co-creators of three modules had an active role, but also most creators of other modules participated as well.

Data analysis

Gathered materials were analysed collaboratively by authors of this paper. Deductive thematic analysis was used based on *Dynamic model of educational effectiveness* as the conceptual framework. We decided to rely on this model because it allows the analysis of didactic features of education, it is sufficiently comprehensive, but also flexible to adapt to different situations of learning and teaching.

Dynamic model of educational effectiveness (hereinafter: DMEE) was created by Bert Creemers and Leonidas Kyriakides and it is based on empirical evidence in the field of educational effectiveness with the goal to understand why specific factors are associated with student achievement (Teodorović, 2016). The authors stress the generic nature of their model, so it is argued it could be used in different educational contexts.

The model recognizes education effectiveness factors at four different levels: context-level factors, school-level factors, classroom-level factors, and student-level factors. In this paper, we will focus on the factors that are recognized at the *classroom-level*, since we want to analyze the quality of *didactc aspects* of the university teachers' program. At classroom level, the authors identified eight factors that influence the quality of education, which are viewed as interconnected and interdependent (Creemers & Kyrakides, 2008). Here we will point out only the most significant characteristics of these factors as they are defined in the DMEE.

Management of time refers to the time spent on cognitive engagement in relevant teaching activities for most of the students. With the recognition that keeping all students fully engaged during the whole class is unattainable request, this factor is aimed at preventing unnecessary waste of time on secondary or irrelevant activities.

Classroom as a learning environment implies the positive climate in the classroom that will support students learning. This factor includes five components: student-teacher interaction, student-student interaction, students' treatment by the teacher, positive aspects of the competitive atmosphere, and classroom disorder.

Structuring can be defined as organizing the content of teaching in order to help students understand curricular topics. Therefore, this factor does not only concern the structuring of teaching work, but refers to all activities aimed at strengthening students mental structuring. In this sense, it is advocated that before teaching new topic there should be a reminder about what has been done on previous class; that it is important to announce next activities, to highlight key ideas and concepts, as well as to summarize what was done.

Orientation is a factor that deals with the purpose and importance of teaching contents and teaching activities. This factor involves not only looking at the value of certain teaching areas or lessons for a subject, science field or general education, but also the immediate benefit that students can recognize in acquired knowledge and skills, as well as linking teaching content with students' everyday life.

Application implies the immediate and direct application of acquired knowledge in the activities of solving problems and tasks. Impairment of practicing and application stems from the insight that this prevents the forgetting of learned contents, overcomes the problem of teaching contents being too abstract and decontextualized, but also encourages higher mental processes.

Questioning refers to the frequency and quality of the questions that are being asked in the class. This factor includes not only teachers' and students' questions, but also manner in which these questions are addressed. Taching should include questions of different levels of complexity, of a different type and form, as well as to envisage enough time for students to think before they answer, and that teachers should react and respond to students' answers in a supportive way, etc.

Teaching-modelling implies mainly the help that teachers provide to students in terms of developing and using different strategies of learning, understanding of topics and problem solving. Although this factor also includes the use of different teaching materials and aids to explain the content, the focus is on encouraging students' thinking and their holistic development.

Assessment is a factor that covers the situations of summative and formative evaluation. Although the importance of grading is not neglected, the emphasis is placed on monitoring students' progress, giving students appropriate feedback, opening up directions for further development. Within this factor, the importance of teacher including students in planning of the forms, criteria and ways of evaluating work in the class, as well as empowering students to develop self-evaluation competences, is recognized.

Reseach findings and discussions

In the text that follows it will be presented how we, as creators and implementers of the program, percieve certain factors of the DMEE model in the modules of this program dealing with didactic problems.

1) *Management of time.* The issue of time planning and engagement of the participants was very complex, since it demanded a search for a balance between having a respect for significant burden of the participants in regular activities at their workplaces (which in the case of health professionals includes obligations at faculties and in health institutions), and the extent of the contents which are planned for these modules. The combination of face-to-face workshops and online training was introduced as an attempt to address this problem. Even though workshops were seen as necessary for the success of the module, we have decided to have only two per module, especially given that many participants were not from Belgrade. One of the main challenges with preparing the contents and activities of the module was to harmonize the level of workload on the face-to-face workshops and on the Moodle platform. This meant, first of all, to identify activities that would have to be done through face-to-face workshops, and to reconsider meaningfulness of certain activities on the Moodle platform, but also to find meaningful link between what is being done in these two modes of training. We have tried to avoid overloading of participants with materials on the Moodle platform, but at the same time, Moodle platform included sections that contained additional information and literature for those who were motivated to learn more about specific topics. With such an approach, we have tried to take into account the real context and the needs of participants, but also to show flexibility – by providing the opportunity for participants to do their tasks when they are able to and, depending on their needs and interests, to study more or less literature.

2) Bearing in mind the spatial limitation of this work, as well as the differences in the realization of our module compared to the work in the regular teaching, we will focus on only a few of the most prominent aspects of the stimulating *learning environment* factor. In the realization of the workshops we have used different methods of social organisation: frontal work with the whole group of participants, group work and work in pairs, individual work. These methods of work required different types of communication between the trainers and program participants, as well as among the participants. Interaction of trainers with individual participants was foreseen for the Moodle platform, through participation in forums (starting topics for discussion, participating in discussion that were initiated by participants) and by providing feedback for their assignments. There were fewer situations in which participants directly addressed trainers at the Moodle platform and a few discussions that were not mediated by module content, except related to technical problems with the platform.

In order to ensure the interaction between the participants in the group activities and work in pairs during the workshops, in the first activities of this type, participants could choose persons with whom they will cooperate. However, in the later phases of the training there were more frequent situations in which the module trainers formed groups so that the participants could get to know each other better and so that, by leaving their comfort zone, they could develop not only social skills, but also enrich the repertoire of possible approaches to the problem. The interaction among the participants was also supported by creation of forums on the Moodle platform, and the participants were obliged to make at least three posts during the module's implementation. Although it can be noticed that a significant number of participants were engaged in the forum discussions, the question of the justification of the "external" conditionality and the effects it has produced remains.

3) *Structuring* within the module we have realized can be identified in the efforts to organize the thematic units prepared for face-to-face workshops in a logical order, to find a balance between lecture activities and participants' activities. Additionally, we have tried to first get familiar with personal and professional experiences of the participants regarding a certain topic, and then offer insights from the field of pedagogy and didactics, and to find the ways to connect these two. In addition, through the emphasis of the module trainers, as well as through the activities of the participants, connections between the face-to-face workshops' content and those intended for work on the Moodle platform were made, but also between the activities within the related modules. Thus, the activities on the Moodle were typically a follow-up to the face-to-face workshops' content, and were conceptualised so as to allow participants to broaden and deepen the understanding of learned contents by reading new materials, to discuss with other participants and module trainers on forums, and to apply that content in a real context in which they work and to connect it with their experiences.

When it comes to fostering content structuring on mental level, the main challenge was the relatively wide variety in the professional experiences of participants who teach at various healthcare faculties, which differ in terms of years of work experience, titles, professional duties, etc. In addition, there were certainly differences in the level of participants' knowledge related to the field of pedagogy and didactics, since some of them had already attended various programs and trainings of this type, but there were also participants with very few or no such experience. We have tried to solve this problem by inviting participants to explicitly share their experience, views and starting points.

The second problem was to highlight key ideas and messages. Namely, the task to present the basics of interactive teaching within a one-month module for us, whose main field is the didactics, required a very careful selection of the most important topics and contents when planning this module. An additional problem was the respect of the principle of distinguishing the most important

concepts presented in the module, which should enable participants to identify key ideas. Although we did this partly during the workshops, we decided to use primarily the Moodle platform to fulfill this task. At the same time, the Moodle platform was a place where we performed a kind of summary of the work done, since, besides the new lessons, we also provided participants with a summary of the previously processed content during the workshops.

4) The representation of the *orientation* was based on the intentions we had in terms of empowering the insight into the importance of professional development of university teachers (general level), encouraging the recognition of the application of content and activities during the program (practical level), and in some cases in the inclusion of personal experiences and perspectives of individual participants (individual level). When focusing on orientation at the general level, the incentives we planned relied on the strong initial motivation of the participants (which was demonstrated during their application for this program, in their motivational letters). However, even in such situations, it is important to provide additional support and strengthen positive beliefs that already existed.

A distinctive challenge was to devise the orientation activities for the module, through which participants would become familiar with the theoretical and conceptual framework for teaching improvement. Knowing that it is very difficult to follow abstract content without concrete examples, but also without visible use value, we tried to find examples of the manifestation of the foreseen topics in teaching practice for each content area (medicine, pharmacy, dentistry). Often, participants were invited to provide examples or to disclose specific situations from their own practice. Since they were eager to respond to these calls and offered interesting and relevant examples, we gained the impression that the orientation at this level was manifested through exchange, and not through the declarative instruction of the possible application. We are convinced that this was the right approach, through which a higher quality of orientation was achieved.

Orientation at the individual level, however, within this module was only partially met. Namely, the time constraint and the relatively large number of participants, as well as number of the core topics that we were trying to cover, prevented more direct involvement of the individual needs and interests of the individual participants. This has been particularly pronounced during workshops. Given that we expected this to be a limitation in our work, we anticipated that the exchange that trainers had with the participants on the Moodle platform was a way of compensating for this shortcoming. However, we had an impression that within the initial month of the program's implementation this interaction could not reach its maximum, so that the individual interests of the participants in these circumstances were not fully addressed.

5) During the design of the training, we anticipated different situations in which the participants will think about the planned topics through the activities

of exercising and the *application* of previous experiences and new knowledge. For this purpose, various materials were prepared (printed work materials, posters, blank papers for recording experiences, etc.), and exercise activities were implemented through various forms of social organization. The difficulty of the tasks varied depending on the topic and the phase of the work, so that in the initial activities of acquaintance there were less demanding activities, primarily based on the previous experience of the participants, while the tasks were more complicated with the course of the program. At the same time, the nature of the tasks was varied, since some activities involved relatively easy recognition of similarities and differences, while other tasks required analysis and synthesis, and occasionally divergent thinking. Certain solutions to activate participants during workshops can also be characterized as "pre-lecture exercise", based on the efforts to take into account the participants' previous knowledge and experiences, but also to make the connection with the contents that are planned for later presentation.

When it comes to applications that were featured on the Moodle platform, the participants had tasks ranging from demonstrating basic knowledge of key concepts and ideas to linking what was learned with their professional experience. Also, final assignments on the modules required the application of knowledge in a real context. Since attaining the main goal – achieving a basic knowledge of contemporary didactic approaches at university level teaching – implied the need to adjust the workload, we took into account the number of tasks offered and the level of commitment attributed to individual activities on the Moodle platform. It was necessary to find a balance between what has been estimated that all participants should master and what might be incentive for those who were particularly interested in certain topics.

6) When preparing particularly important segments of the module, we used to formulate *questions* that were in the function of encouraging the involvement of participants in further exchange and sharing personal and professional experiences. However, many of the questions we asked during workshops were also spontaneous, arising from the interaction, with the aim of deepening the understanding of a particular topic, reconsideration of certain points of view and participants' utterances. During the implementation of the module, we have tried to forward participants' questions addressed to us to the other participants, and thus encourage the discussion that we will monitor and in which we will take part as equal participants. By doing so, we purposefully reduced our position as "teacher expert" and demonstrated that knowledge is created in a joint work, through co-construction of meaning.

In addition, a special space for participants' questions was provided on forums created on the Moodle platform. In order to start the exchange and to model an approach to this segment of work we, as module trainers, set the first few topics on a forum in the form of questions. The initial responses of par-

ticipants to our questions were supported by additional posts and calls for other participants to express their views. The success of this idea was recognized in the situations that followed, and which emerged in the initiation of new topics based on the questions posed by the participants themselves. Our level of engagement in these discussions was decreasing and shifting from the role of facilitator and moderator to the role of equal participant in the discussion.

7) One of the forms of *modeling* could be identified in the way we prepared and realized modules based on the team work. Thus, during the workshops, all module trainers were present and were engaged in the work. Although there were segments for which certain trainer was in charge, the other team members followed the presentation, asked questions and offered additional comments, which contributed to the dynamics of the work, but also served as a model that could be used by the participants in their teaching. At the same time, taking on the role of trainers, we tried not to position ourselves as experts who "deliver didactic knowledge", but as university teachers who continue to question their professional beliefs and re-think the decisions they make. This type of modeling is not directly focused on developing concrete learning styles, but it contains elements of developing thinking strategies and, as an immediate example, it models the stance towards teacher profession.

During the workshops, a variety of working materials were presented, as well as teaching methods and techniques, ways of organizing learning activities, which could be considered as an incentive for participants to reflect on their own teaching practice, compare it with the approach they could experience within these modules, and it can also be seen as an enrichment of their methodical repertory. Additionally, the program content itself also contributed to the goal since, besides learning about basic didactic concepts, it included concrete solutions that can be used in teaching. In this way, the connection between content and teaching methods during workshops was further enhanced, as well as the connection between theoretical knowledge and teaching practice.

Finally, the mere application of the Moodle platform as a supplement to face-to-face workshops could be understood as another way of expressing the diversity of approaches to teaching. Additionally, participating in the work on the Moodle, participants were able to understand the scope and limitations of this approach. This experience also helped them to examine the positive and negative aspects of the contents on the platform, the way they are displayed, etc. This experience could therefore be understood as the basis for the design and development of "technical" solutions that they could apply in their teaching.

8) During the face-to-face workshops, *evaluation* activities could only be recognized at the "micro level" in cases where the results of individual work or group of participants were acknowledged, in attempts to recognize what is worth, but also to indicate possible steps for further improvement. Activities on

the Moodle platform provided more space for getting to know the individual participants by reading and commenting on their forum posts. Although the final assignment of the participants received a numerical grade, emphasize was put on individual written feedback where positive aspects of the work done and suggestions for improvement were pointed out.

Bearing in mind that it was planned that the entire program, as well as the attendance of individual modules, result in obtaining the certificate, the assessment of final assignments could be considered as a summative evaluation of the participants' work. In order to ensure respect for the dedicated work of all participants, expectations were set, i.e. the "indicators" that the participants were supposed to meet in order to gain confirmation that they had successfully completed all the tasks. The assumption is that these predefined expectations have positively influenced some of the participants, providing external motivation, producing the impression of monitoring and evaluating their work. Therefore, although the application for the program was on a voluntary basis, the quality of the participants' engagement was ensured partially through these expectations.

It should also be noted that some issues related to the accomplishment of the final assignemnt were decided together with the participants and that part of the program in this way became somewhat flexible: the participants decided whether they will work individually or in pairs, what would be the role of each member of the pair, in which classes they will realize the activity, and they were also consulted about the deadlines for certain tasks.

Conclusions and implications

In this part of the paper, we will provide a reflection on the lessons we have learned through the analysis that we have performed. Firstly, we will discuss on desired qualities of programs for pedagogical training of university teachers. Subsequently, we will provide a critical overview of the performed analysis of didactical aspects of our program, for which we used classroom level factors of the DMEE. Finally, we will offer some implications that could be drawn about the improvement of the quality of education based on development of the university teachers' teaching competencies.

Qualities of the programs for pedagogical training of university teachers. Based on the analysis that we have performed three modules we focused on in this paper allowed us to identify various qualities and didactical aspects. In another words, we have recognized numerous situations where activities could be seen in line with the basic recommendations derived from classroom-level factors DMEE. At the same time, we identified some situations that could be improved according to DMEE. The insights we gained on important didactical aspects of programs for pedagogical training of university teachers we will briefly discuss

in order to point out possible suggestions for designing and implementing similar programs in the future. Even though these are not novel findings (similar ideas are found in findings about programs for teacher professional development and in didactics in general), it is important to mention that our analysis showed that it is possible to make use these features in programs for training of university teachers too.

Firstly, combining face-to-face workshops and online learning through Moodle platform, showed to be a good solution for implementation of this kind of program since it provides a *flexibility* to a certain extent – participants can perform learning tasks when it suits their time and at their own pace. However, our analysis also assured us that face-to-face interaction in teacher education and training cannot be completely replaced with online activities. A good feature of our program was also flexibility related to the extent of learning content, which was achieved by providing reading materials for those who are eager to learn more. Flexible approach was also present in terms of communication modes and forms. We have learned that it is also important to find a *balance* between lectrure activities and participants' activities, as well as between different contents – theoretical knowledge, practical examples, and practical activities of participants themselves.

So as to ensure that participants recognize program's contents as *relevant*, it is useful to practice *interdisciplinary and team approach* when choosing topics and finding examples. For that matter, it is also useful to organize activities which serve for participants' orientation in the program and for pointing out to meaning and applicability of what is being learned in the context in which participants work. Tasks that participants perform should be *challenging and diverse*, and should include various channels for sharing experiences and ideas among the participants and between participants and trainers. It is important to note that role of the trainers should shift from expert to a more partner role, thus fostering partner role of the participants too. When it comes to programs for development of teacher competences, such approach should be demonstrated throughout the program, as an approach that we would like to *model* for our participants to practice in their own classes and with their own students. In line with that, it is important to plan *evaluation* of the process and results, which would have both formative and summative functions.

Based on our experience from implementation of the program, and analysis presented in this paper, we could also raise questions regarding some hardships and challenges, which require further reflection about the ways to address them, some of them being: how to create safe environment in which teachers would feel free to participate in discussion; how to provide support to different participants so as to ensure chances for their experimenting with new knowledge and skills, reconsideration of those experiences and reflection about them with their colleagues. These challenges are typical for short training programs and call for a search for qualitatively different forms of professional development.

Furthermore, we can argue that it was not enough that we, as creators and implementers of the program, were aware of the importance of different didactical aspects of the program and had active stance towards adjusting the program to the needs of our participants. For example, our awareness that participants are already too busy with their regular work led us to plan face-to-face workshops at times that we assumed will fit their schedule and to allow participants to choose by themselves when they will perform tasks on Moodle platform. However, decisions related to time management could be made together with participants. Similarly, when it comes to the factor related to characteristic of the learning environment, it would mean that we should consult and rely more on what is incentive for the participants themselves, rather than solely on our knowledge from didactics. In terms of assessment, such approach would include participants in decision making regarding obligatory assignments, means for performing them etc. In overall, *teachers' participation in decision making on important aspect of the program* is particularly important for programs of teacher education and training, given that it models an approach to education that we would like the participants to use in their own practice.

Overview of the limits and scope of the performed evaluation of the program. First of all, we should acknowledge that for the evaluation of the program it is not enough to present solely the perspectives of its creators and implementers and that it should include the *perspective of its participants*. Also, we were focused on the features of the program design itself and process of its implementation, while *results of the program*, primarily in terms of its contribution to participants learning and changes in their understandings and approaches to teaching and learning, were not included, although they could be useful for accomplishing a more comprehensive evaluation and perspective on qualities of the program. In addition, the evaluation of the program could be conceived within *different research approaches*, e.g. data could be collected by external researchers through systematic observation, video and/or audio recording, monitoring of the process, as in ethnographic studies. In our evaluation, we have wittingly chosen to use one perspective – the one of program implementers. By doing so, not only we provided one important perspective on the program, but we have tried to be self-critical about our own practice. Starting from the postulates of qualitative methodology, defying positivistic notions on "objective knowledge" about the reality which is achieved through researcher's distance from what is being researched, in this paper we aimed to provide a sort of self-evaluation of one program in whose creation and implementation we actively participated. Hence, by the paradigm we have chosen we did not seek for comprehensive evaluation so as to reach an objective knowledge about the qualities of that program. Our aim was not to perform evaluation of such kind, but to enquire into possibilities to analyze didactical aspects of the program, by using one specific theoretical model.

Trainings for university teachers and improvement of quality of education – could there be a link? The connection between improvement of university teach-

ers' competencies and quality of education as a whole surely is not a direct one, especially not causal. It seems more reasonable to perceive these competencies as an integral part of overall quality of education, alongside with many other very important factors. However, we think of the university teachers as specifically important actors who have great influence on other levels of educational system, but also on pedagogically relevant notions, values, ethos etc. That is why we believe that investing in development of their pedagogical competencies should be one of the pivotal areas of educational efforts.

In order to strengthen university teachers' pedagogical, i.e. teaching competencies it is crucial to enable them to experience during the training the practice we want them to adopt and develop. One of the key facets of progresive educational approach is to emphasize the importance of participation and ownership of the educational process. Learners' participation in decision making regarding various aspects of the program, and program's flexibility and openness, could be used as distinct factors of quality, especially when it comes to programs for teacher education and training. The ways to include perspectives of different actors about the program should be found, but also to include participants in the final evaluation of the program's effects, in the process of program development etc. If we allow teachers to experience all the benefits of this approach, we are increasing the probability they will practice that with their students. In that way, relatively small change we make at the beginig could end in massive change, as a snowball effect.

Clearly, participation is not the only aspect of quality teaching, or quality education; we use it in this paper just as an example for the effect university teachers' professional development could have in educational sphere. Also, we want to stress that improving teaching competencies of university teachers should not be seen just as a particular change in education, since programs of this kind have a great potential to change teaching practice in a long run. If their competencies are truly developed, university teachers will continue to reflect on and improve their teaching, even after program ends. However, if we want to make substantial and sustainable educational changes, wider activities have to be initiated and coordinated on all levels, in different segments.

Finally, we believe the insights we offer in this paper could go beyond the context of our program and serve as an impetus for creation, realization and evaluation of the vast number of educational programs. However, this does not mean our findings could be seen as universally applicable for all types of education programs. On the contrary, we advocate that local context and all the specific condition have to be acknowledged when educational program is developed or implemented. But shared experiences – like the one we offer in this paper – could help to reconsider whether some similarities can be found, or some solutions could be used, adopt or modify in order to achieve certain educational goal.

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RELATIONS AND COMMUNITIES OF TEACHERS

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THE CULTURE OF RELATIONS – A CHALLENGE IN THE RESEARCH OF EDUCATIONAL PRACTICE IN EARLY EDUCATION INSTITUTIONS

Lidija Vujičić*
Faculty of Teacher Education, University of Rijeka, Croatia
Akvilina Čamber Tambolaš**
Faculty of Teacher Education, University of Rijeka, Croatia

Abstract

The theoretical part of the paper explains the complexity of the culture of early education institution, the role of the preschool teacher, the specificity of official documents (the Croatian National Curriculum for Early and Pre-School Education, the Slovenian Curriculum for Kindergarden, the Serbian General Principles of Preschool Program). The aim of the research was to gain insight into the preschool teachers' assessment of the relationship between people in early education institutions as one of the dimensions of the institutional culture, considering the country in which they live and work (Croatia, Serbia and Slovenia).

For data collection, we used the *Questionnaire for the assessment of the culture of the educational institution* designed for the needs of the scientific research project *Culture of the educational institution as a factor of co-constructing knowledge,* conducted by the Faculty of Teacher Education, University of Rijeka, Croatia.

Based on the research results, statistically significant difference was found between the preschool teachers' assessments of the relationship between the members of the staff in the institutions of early education considering the country in which they live and work. As the weakest segment of relations in institutions, Croatian, Serbian and Slovene preschool teachers estimated giving and receiving constructive criticism without anger and harm, and respecting other (different) opinions.

From this it is evident that it is not enough to state in the official documents reflective practice, action research and the culture of relations among the members of the institution, but rather that they need to revive in practice.

Keywords: culture of relations, culture of institution of early education, official curriculum, reflexive practice

* E-mail: lidija@ufri.hr

** E-mail: akvilinacambertambolas@gmail.com

Theoretical framework

Every institution of early and pre-school education (hereinafter referred to as early education institution) has its own specific culture. In accordance with the (co)constructivist understanding of education, we consider the culture of the institution of early education as one organization, emphasizing the need for research, a deeper understanding of educational practice, the need for two-way communication and reciprocal relationships among children, adults and learning environments, as well as emphasizing the importance of sharing knowledge and the coexistence of all the participants.

"Prosser (1999) sees the culture of the institution as a useful, but complicated and elusive idea."The culture of the early childhood education institution determines the focus (what is considered important), commitment (the degree to which an individual identifies with what he/she is doing), motivation (desire for work), and productivity (achieved level of work)." (Vujičić, Kanjić, Čamber Tambolaš, 2015, p. 18).

Brust Nemet and Velki (2016) point out that many definitions proposed by different authors studying school culture (Bruner, 2000; Datnow, Hubbard and Mehan 2002; Fullan, 1999; Henting, 1997; Hopkins, 2001; Jurasaite-Harbison and Rex, 2010; Kinsler and Gamble, 2001; Peterson and Deal, 1998; Prosser, 1999; Stoll and Fink, 2000) consider that understanding culture means knowing their organization, while defining culture as a set of values, norms, beliefs, rituals and traditions of educational institutions which are a part of the general culture and the value system as a whole. Vrcelj (2018) emphasizes that, while there is no consensus on the term school culture in the pedagogical discourse because different views on the content and structure lead to different definitions and unclear boundaries among concepts such as school life, quality, climate, atmosphere, there are still definitions of this complex term: "School culture is a set of norms, values, beliefs, ceremonies, rituals, symbols and stories that make up the persona of the school (Peterson, 2002, McCabe, Michelli and Pickeral, 2009 according to Vrcelj, 2018, p. 141).

After studying the works of various authors with the aim of formulating as comprehensive a definition as possible of the culture of the educational institution, we chose the one according to which the culture of the educational institution represents an expression of common, basic settings, beliefs of educators/teachers, expert associates, administrative and auxiliary staff, parents, the principal, that are characteristic for the functioning of the educational institution, and are recognized by the interpersonal relations among people, their joint work, management of the institution, organizational and physical environment and the degree of focus on learning and research (Vujičić, 2011).

In the discussion on the kindergarten culture, we emphasize the importance of cooperation as a prerequisite for the development of common responsibility

for children, space and the entire educational process, starting from the fact that quality practice is always a collective, not an individual, achievement. Kindergarten culture includes certain contextual factors (the spatio-material and the social environment of the kindergarten), as well as kindergarten management. Without a culture of dialogue, teamwork and a climate of trust, changes in culture can only be temporary and superficial. Therefore, we are interested in the better understanding of educational practice in which a child is an active, constructive creator of his/her development and education, and the adult is an assistant who helps and supports their development, upbringing and education.

Cooperative relations as a dimension of the culture of the early education institution

It is precisely the cooperative relations that change and modify the culture of the institution (Hopkins et al., 1994, according to Stoll, 1999). In other words, the cooperative culture of the institution develops based on the interactions of its members with one another, and the interaction of members and the community. In doing so, the creation of a common vision within the institution of early education gives the sense of purposefulness and understanding of the process and the goal that is to be achieved, which results in the harmonization of the educators' actions, as well as the actions of all the employees of the institution. This vision is created, shaped and changed through the dialogue among all members of the institution, therefore it is important that communication is open and respectful, and the atmosphere is stimulating. We want to point out that in order to create a culture of open discussion and dialogue it is necessary to create a safe atmosphere of mutual trust, i.e. a sense of psychological safety of all employees, which is a characteristic of the cooperative culture. Or, as Čulig (2004) states that desirable features of the culture of institution are found to be open, inclusive, accepting, based on trust, cooperative, innovative, allowing for free choice, holistic, less hierarchical, decentralized, and with a large capacity for control and self-control. The leaders introducing the changes are by Fullan (1997, according to Hinde, 2008) considered initiators who work closely with employees to clarify and encourage changes, develop a positive organizational environment, consult, monitor and strengthen the process of change. Peterson (2002) states that the principals and other persons in the leading positions within institutions can and should shape the culture of the institution through the processes of "reading" culture, perceiving and understanding the existing culture, then assessing what they observed, and shaping and determining positive aspects of culture.

Understanding the institution's culture is of paramount importance when it comes to changes within the institution. The changes that come "forcefully" or "from above" will almost surely be met with disapproval and resistance of the members of the institution. Such changes do not penetrate deeper into the tissue

of the institution, but only superficially change the current state. Donahoe (1997, according to Hinde, 2004) agrees that empowering educators through decision-making and consensus building results in the creation of a culture of change within the institution. It is therefore important to create conditions for the culture of an institution of early education that is such that its members feel accepted and unthreatened, equally and mutually supported and develop respectful communication among each other. After creating such a culture, the institution can start introducing changes which include planning and implementation of said changes by all the members of the institution, constructing the knowledge on the basis of which they build and improve their practice, and responding to the current requirements of the society.

Culture is shaped by the interactions of its participants, and the actions of participants are under the influence of culture. It is, according to Hinde (2004), a repeating cycle, and the introduction of changes requires an interruption of that cycle. Therefore, "we emphasize the importance of cooperation as a prerequisite for the development of shared responsibility for children, space and the entire educational process, and that emphasis stems from the fact that quality practice is always a collective achievement" (Vujičić, 2016, p. 70). Culture, therefore, includes educators, principals, expert associates, parents, and interpersonal relations, interaction and communication among them. Relations based on dialogue and trust regarding all of the involved persons can bring about changes in the culture of the institution of early education.

Institutions should be "recultivated", not just reformed and restructured (Hargreaves, 1997, according to Hinde, 2008). "Investing in learning, continuous professional development and research of personal practice becomes the main driver of self-organizing processes as an institutional development aimed at continually changing the institution's culture and harmonizing it with human nature" (Vujičić, 2016, p. 78).

The development of cooperative relations within the institutions is a prerequisite for the development of reflexive practice, as a form of professional development of an individual and of the institution. Through such practice, the educator critically contemplates their work and self-perpetuation, but also discusses it with their associates who become reflexive friends (Miljak, 2015, Vujičić, 2011 and others). The relationship is based on trust and respect, and comments are given (and received) in order to foster growth and development rather than solely represent criticism. It is through these comments and discussions that mutual understanding is developed, that is, a common reality is created.

Šagud mentions educators as a key segment of change, where they"... in an active relationship with a specific educational practice, strive (together with other professionals within a specific institution) to identify, critically explore and eventually develop such strategies and environments that will affect the quality and create the optimal conditions needed for a child's development" (2011, p.

266). In order for the educators to realize the importance of developing such relationships they must understand what such relationship imply or what is expected of them and what are the benefits of creating such a cooperative culture within the institution.

Fundamental principles of the curriculum

In line with the thesis and the discussions of many contemporary authors (Johansson & White, 2011; Krnjaja, 2016; Maleš, 2011; Miljak, 2015; Pavlović Breneselović, 2015; Rinaldi, 2006 and others) in the field of early and pre-school education worldwide; the existence of a national curriculum as a binding official document does not at the same time guarantee the increase in quality of educational practice in early and pre-school education institutions. We are witnesses to the fact that the practice in kindergartens across the country differs considerably, not only in different cities but also within the same institution of early and pre-school education under the guidance of the same principal, team of experts and equal or almost equal working conditions. Dahlberg et al., (2007) especially criticize those who equate early education institutions with "factories to produce predetermined, normative outcomes and create future generations of workers." Alternatives regarding the conceptualization of early and preschool education institutions have been offered in the form of referring to said institutions as "places for children", "forums" or "spaces for gathering and connecting" children and adults, the value of which is not in the physical environment itself, but in the "social space and the space of relations", in the context of culture creation. "The program, the document, the curriculum is always created in a certain philosophical, social, cultural and temporal period. Each of the dominant ideas expresses the way in which the world, man and the educational process is understood at a certain period in time, and the curriculum is interpreted depending on these views" (Petrović-Sočo, 2009, p. 126). Education and upbringing should not necessarily be divided into the production of workers and the advancement of man. As the time in which educational documents are created changes, and so does the state of the society, education and upbringing can perform both functions, if necessary, as is the case in the contemporary society. Perhaps Robinsohn (1967, according to Previšić, 2007) presented the most appropriate idea when he stated that the curriculum cannot be designed to last forever in a certain form, but is linked to the reform of education, as a kind of constant revision of the tasks and contents of education.

Since the curriculum itself is based on the contemporary understanding of the child as an active and competent being from birth, one should bear in mind the role of the early education institution, within which important processes important for the child, their family, and the society take place, which requires a holistic approach to organization and planning. For the same reasons,

Miljak stands for the grounded theory according to which the curriculum coexists alongside the building of knowledge "among all members of the community, starting with a child, educator, parents, and other members of the narrower and wider community in a particular culture" (2009, p. 129). Since the post-modern pluralistic, humanist-oriented approach is advocated in the curriculum, the curriculum itself is open and forms the basis needed by educators to design of the executive curriculum (Previšić, 2007).

In different countries and different social structures there were also different methodological approaches to the curriculum development. It is not surprising that the curriculum is influenced by the people's tradition, the political climate, the scientific achievements, the state of consciousness of the society in which it is created, and what is by that society considered crucial at that moment, their set of values and principles. It could be said that the curriculum mirrors the current state of the society and the direction in which it wants to go.

For the purposes of this work, we will not go into the complete analysis of official documents of the three countries, because we do not have room for that, but we will, by interpreting the results of the research, try to show some specificities of every document.

Research aims

The aim of the broader research as an integral part of the scientific project *Culture of the Educational Institution as a factor in the co-construction of knowledge* of the Faculty of Teacher Education at the University of Rijeka (grant number: 13.10.2.2.01) was to examine the relationship between the different dimensions of culture within the institution. For the purpose of this research we will focus on determining the existence of differences in educators' assessment of the relationship between people in early education institutions in relation to their country of residence and work (Croatia, Serbia and Slovenia). In accordance with the set goal, the following research task is formulated: Identify the existence of differences in the assessment of relations among institution members in relation to their country of residence and work (Croatia, Serbia, Slovenia).

Due to the same starting point of the curriculum which is in all three states derived from the humanistic orientation of education which positions the educators as the ones who follow, document and support the development of the child, independently and in cooperation with other participants in the educational process (other educators, team members, parents), it is assumed that there will be no difference in the educators' assessments of the relationship among institution members depending on the country in which they live and work.

Method

Data collection

For the purpose of data collection, we used the *Questionnaire for the assessment of the culture of the educational institution* designed for the needs of the aforementioned scientific-research project. The questionnaire consists of three scales: 1. *Scale of the state of the preschool culture* (Cronbach's alpha = 0.764), 2. *Scale of professional development* (Cronbach's alpha = 0.823) and 3. *Scale of educator's educational paradigm* (Cronbach's alpha = 0.620). In all three scales, the respondents provided responses on a five-point Likert scale. For the purpose of this paper we will analyze the particles from the *Scale of the state of the preschool culture*, particularly those that reveal more about the relations among institution members in the three countries, Croatia, Serbia and Slovenia.

Sample

The survey was conducted in 2015 on a random cluster sample of N = 680 educators from the region of Croatia 238 (35%), Serbia 275 (40.4%) and Slovenia 167 (24.6%). The age of respondents ranges from 21 to 62 years, with the average age being 42 years. The total sample constitutes of 2.1% of male educators, and 94.6% of female educators. The highest percentage of respondents (50.9%) have finished upper secondary school, vocational studies or undergraduate studies, while the lowest percentage of respondents have finished secondary school (15.6%). 29% of respondents have finished university (graduate studies).

There are visible differences in the level of education between Croatia and Serbia on one hand, where the smallest number of respondents have completed secondary school (5% in Croatia, 5.5% in Serbia), while the majority of respondents have completed upper secondary education (in Croatia 65.1 %, in Serbia 60.7%), and Slovenia on the other hand, where the majority of respondents have completed secondary school (47.3%) and the smallest number of respondents have completed upper secondary school (14.4%). By law, education of early and pre-school educators in Slovenia lasts for 3 years, which ends the first round of vocational programs, i.e. completes the undergraduate (vocational) level of education and sets the foundation for the graduate level. It is the same in Croatia where, after three years of university study, one acquires a university bachelor's degree in early and pre-school education, i.e. acquires the educational prerequisites for employment and further education (graduate and doctoral studies). In Serbia, educators receive initial education at vocational education institutions or at the Faculty of Teacher Education. The difference between Slovenia and the other two countries is the existence of the job of an assistant educator in Slovenia, which requires a secondary education in the field of pre-school education

(or a general secondary school + 1 year of pre-school education). The assistant educator works with other educator in the educational group (who has completed an undergraduate or a graduate level of the Early and Preschool Education studies) in the preparation and planning of work and work-related materials and in the educational work itself.

Results

In order to examine the difference between the educators in assessing the relations among people in early and pre-school institutions in relation to the country in which they live and work (1 – Croatia, 2 – Serbia and 3 – Slovenia), we conducted a one-way ANOVA on all particles of the *Scale of the state of the preschool culture* related to the assessment of interpersonal relations in early education institutions. These particles represent dependent variables, while the country of residence and employment is an independent variable according to which the groups of respondents differ. All analyzed variables that did not meet the condition of homogeneity of group variables were subjected to the Welch test (WF), while Dunnett's C test was used as a multiple-comparison post-hoc procedure in pairs.

There was a statistically significant difference in assessment of receiving and giving constructive criticism between educators from Serbia and Croatia (W_F(2, 418,560) = 4,691, p<0,05) with Serbian educators' ability to receive and give constructive criticism being more highly estimated (M_2=3.47; SD_2=1.013) than that of the Croatian educators (M_1=3.21; SD_1=0.901). The effect index η2=0.013 suggests that only 1.3% of the variance of the respondents' assessment of the readiness to receive and give constructive criticism can be linked to the country of residence and employment of the educator.

There was a statistically significant difference in the assessment of mutual support and respect within the collective among all three groups (W_F(2, 422,056)=14,120, p <0,001), whereby educators from Serbia are the ones with the most positive estimate of the mutual support and respect within the collective (M_2=4,18; SD_2=0,842), followed by the educators from Slovenia (M_3=3,98; SD_3=0,703), while the educators from Croatia are the ones who made the most negative estimate of the mutual support and respect within the collective (M_1=3.78; SD_1=0.858). The low effect index η2=0.044 suggests that the country of employment and residence can only explain 4.4% of variance estimates of the educators on said variables.

Furthermore, there was a statistically significant difference in the estimation of the availability of assistance and support of the expert associates between Slovenian educators on one side and Croatian and Serbian educators on the other(F(2,674)=4,647, p> 0,05), where the Slovene educators estimate

the availability of assistance and support of expert associates more positively (M_3=4,14; SD_3=0,741) than Serbian (M_2=3,93; SD_2=0,916) and Croatian educators (M_1=3,89; SD_1=0,906). There is a low level of correlation η2=0.013 between the country of employment and residence and educators' estimation of the availability of assistance and support of expert associates, whereby the countries of employment and residence can explain 1.3% variance of their estimates on the dependent variable.

There was a statistically significant difference in the assessment of teamwork in the context of designing and implementing new ideas, activities and projects among educators from Croatia in comparison to educators from Slovenia and Serbia (W_F(2, 426,322)=15,972, p<0.001). Educators from Serbia (M_2=4.04; SD_2=0.917) and Slovenia (M_3=3.98; SD_3=0.759) evaluated teamwork more positively than educators from Croatia (M_1=3. 61; sd_1=0.911). The level of correlation η2=0.047 between the country of employment and residence and assessment of teamwork in the context of designing and implementing new ideas is small, whereby the country of employment and residence can explain 4.7% variance of their estimation on the mentioned variables.

Additionally, there is a statistically significant difference in the assessment of the levels of respect for different opinions among the members of the collective even when they are completely different from one's own among the educators from Serbia on one hand and Slovenia and Croatia on the other (F(2,670) = 8,880, p<0,001). Serbian educators (M_2=3.72; SD_2=0.942) evaluated the levels of respect for the different opinions of others more positively than the Slovenian (M_3=3.51; SD_3=0.815) and Croatian educators (M_1=3.40; SD_1=0.848). There is a low level of correlation η2=0.025 between the country of employment and residence and the educators' estimate of the levels of respect for different opinions, where the country of employment and residence can account for 2.5% of the variance of the educators' estimation on said variable.

There was a statistically significant difference in the assessment of the lack of communication among the educators from Croatia and Serbia (F(2,655)=12,086, p>0,05), with educators from Croatia evaluated lacking in communication within the collective (M_1=2.70; SD_1=1.148) more than Serbian educators (M_2=2.19; SD_2=1.175). The level of correlation η2=0.042 between the country of employment and residence and the assessment of the lack of communication among the educators is small, with the country of employment and residence of the educator being able to explain 4.2% variance of their estimation on the mentioned variable.

Furthermore, there was a statistically significant difference between the educators in their assessment of work-related helpfulness among the educators among all three groups of respondents (W_F(2,414,77)=14,680, p <0.001), with Serbian educators making the most positive estimate (M_2=4.35; SD_2=0.753), followed by Slovene educators (M_3=4.17; sd_3=0.645), while Croatian educators had

the most negative estimate (M_1=3.99; SD_1=0.755). There is a low level of correlation η2=0.044 between the country of employment and residence and interpersonal assistance among the educators, whereby the country of employment and residence can explain 4.4% variance of their estimates.

It was found that there is a statistically significant difference in the educators' estimation of the absence of mutually opposing "clans" between Serbian educators on one hand and Croatian and Slovene educators on the other hand (F(2,664)=13,124, p>0.05). Serbian educators (M_2=3.84; SD_2=1.313) estimated the existence of mutually opposing "clans" to be present to a lesser degree than the Croatian (M_1=3.29; SD_1=1.111) and Slovenian (M_3=3.55; SD_3=1.163) educators. There is a low level of correlation η2=0.038 between the country of employment and residence and the educators' estimate of the existence of opposing "clans" in kindergartens, whereby the country of employment and residence of the educators can explain 3.8% of variance of their estimation on said variable.

Furthermore, there was a statistically significant difference in the assessment of democratic decision-making by utilizing expert arguments between Serbian and Croatian educators (F(2,669)=4,359, p> 0,05), with Serbian educators making more democratic decisions (M_2=4.06; SD_2=0.808) than Croatian educators (M_1=3.85, SD_1=0.802). There is a low level of correlation η2=0.012 between the country of employment and residence and democratic decision-making, whereby the country of employment and residence can explain 1.2% of the variance of the educators' estimation on the said variable.

There was a statistically significant difference in assessing the principal's assistance at all times between Serbian educators on one hand and Croatian and Slovene educators on the other hand (W_F(2,408,037)=11,252, p<0,01). Croatian (M_1=4.32; SD_1=0.897) and Slovenian (M_3=4.27; SD_3=0.966) educators evaluated the availability of the principals assistance more positively than their Serbian (M_2=3.90; SD_2=1.162) peers. The level of correlation η2=0.035 between the country of employment and residence and the availability of the principals assistance at all times is small, with the country of employment and residence being able to explain 3.5% of variance of their estimation on said variable.

There was a statistically significant difference regarding the clearly defined vision of the kindergarten which the members of the collective feel as their own among the Slovenian educators on one hand and Croatian and Serbian educators on the other hand (W_F(2,419,377)=30,356, p<0,001), with Slovene (M_3=4.28, SD_3=0.799) educators having a more positive attitude towards the clearly defined vision of the kindergarten than the Croatian (M_1=3.69; SD_1=0.825) and Serbian (M_2=3.72; SD_2=0.946) educators. There is a low level of correlation η2=0.074 between the country of employment and residence and a clearly defined vision of the kindergartens, whereby the country of employment and residence can explain 7.4% of variance of the educators' estimation on said variable.

Finally, no statistically significant difference between the educators from Croatia, Serbia and Slovenia was found in the three particles: in assessing the degree to which they can expect to be treated as equal partners in the educational process, without the expert associates asserting themselves as their superiors who control and teach "how to work with children"; in assessing the encouraging of educators who try new ideas, educational methods and approaches, and in evaluating the support of their working environment (colleagues, principal) in their professional development.

Discussion of the obtained results

Differences between groups of examinees/educators from different countries on the examined particles are statistically significant, but with small size effects. We notice that in all the particles with statistically significant differences between the respondents, the estimates of Croatian educators differ from Slovene (five particles) and Serbian educators (nine particles). Despite the statistically significant differences between the educators from Croatia, Serbia and Slovenia in their assessment of relations within the educational institutions, the small size effect on all 11 variables for which statistically significant difference was established, suggests that the small proportion of variance of the estimation of relations within said institutions can be attributed to the country of residence and employment of the educator. In addition, there were no statistically significant differences between the educators of the three countries on three particles. Compared to Croatian educators, Serbian educators are more positively assessing relations within institutions concerning mutual support, assistance and respect. Compared to Croatian and Slovene educators, Serbian educators are more positively evaluating relations within institutions that involve the collective and a sense of community, especially among educators. According to this assessment, we can conclude that relations between educators are of extreme importance in Serbian early education institutions.

Serbian educators agree more strongly with the inexistence of mutually opposing clans within the collective than the educators from Croatia and Slovenia, although in all three countries we see a dispersion in the responses (M_1=3.29; SD_1=1.119; M_2=3.84; SD_2=1.313; M_3=3.55; SD_3=1.163) which may signify how sensitive of a subject the content of the particles is for the respondents.

Compared to the Slovenian and Serbian educators, Croatian educators more positively assessed the relations within the institution which include the support and assistance of the principal. In attempting to explain the results obtained, we are starting from the thesis that the implementation of the NCEPE could change the thinking of the educator. The educator becomes a reflexive practitioner who continually explores and improves his/her own practice, and in order to achieve

excellence in their work, they need cooperation with other members of the institution. The role of the educators is spreading and they are becoming representatives of their institution and the ambassadors of early and pre-school education within the wider community. Thanks to the professional development, which is listed as a separate section in NCEPE, the educators are trained for new roles. Also, the results show that the Croatian respondents are most appreciative of the assistance and support of the principal, as well as the support of their working environment in their professional development. In order to gain a more concrete insight into the educators' understanding of the principal's and expert associates' assistance and support, it would be useful to further explore the ways in which those involved in the educational process assist and support the educators in their work and the ways and forms of support that the educators consider to be good and desirable.

In all three countries, around 3/4 of the surveyed educators (Croatia 72.7%, Serbia 78.2%, Slovenia 74.9%) estimate that collective decisions are made in a democratic manner, utilizing expert arguments, suggesting that relations among members of the collective are acceptable, collaborative, less hierarchical, decentralized, with a range of control and self-control. The aforementioned are, according to Čulig (2004), the desirable characteristics of the organizational culture. In view of the positive assessment of particles, we can conclude that the shifts in the power dynamics in the area of decision-making concerning the collective are visible.

On the other hand, the particles related to giving and receiving constructive criticism to each other without anger and hurt feelings (M_{Srb}=3.47; SD_{Srb}=1.013; M_{Slo}=3.39; SD_{Slo}=0.865; M_{Cro}=3.21; SD_{Cro}=0.901;;) and respect for others' different opinions (M_{Srb}=3.72; SD_{Srb}=0.942; M_{Slo}=3.51; SD_{Slo}=0.815; M_{Cro}=3.40; SD_{Cro}=0.848) are the leest agreed with in all three countries. It is interesting to note that 20.4% of educators in Slovenia, 17.5% in Serbia and 28.2% in Croatia have estimated the particle assessing the lack of communication among educators as neither something they agree nor disagree with. The quality of relations mentioned in the three mentioned particles requires well developed communication and social skills of both parties in the communication process, the message sender/critic and the recipient of the message/criticism. Since curriculums/early and pre-school education programs of all three countries (in the Serbian General Principles, model A only) emphasize reflexive practice, educators as reflexive practitioners and reflective friends as an element of progress in the educational practice, the results of these claims indicate the need to invest more effort needed to foster changes in the field of communication within the kindergartens in all three states. Vujičić (2007) states that a reflexive practitioner is characterized by "reflexive openness", which occurs when we are willing to rethink our own opinion and realize that any position that we can conceive is, at best, just a hypothesis about the world. Regardless of how convincing it is, regardless of how

much we are in favor of "our concept", it is always subject to re-examination and improvement" (Senge, 2003, according to Vujičić, 2007: 232).

What is interesting is that Slovene educators agree the most with this claim of equal partnership between educators and expert associates (M_3=3.96; SD_3=0.968), although they are the only ones, unlike Croatia and Serbia, to have a secondary school that specializes in early education after which the former students can be recruited as assistant educators, which could, because of the difference in the level of education between them and their associates, contribute to the creation of imbalances in the power dynamics between them.

In a statement regarding the educators being encouraged to try new ideas, methods and approaches in educational work a statistically significant difference among educators from three countries was not found, but the high values of arithmetic means (M_{Cro}=3.98, M_{Srb}=4.06, M_{Slo}=4.08) suggest a socio-constructivist approach to understanding early education in all three states, where the educator changes and improves the educational processis in constant interaction with children and other professionals.

Serbian and Slovene educators perceive the relations within the institutions as better than is the case with Croatian educators. The reason for this may be that Croatian educators are "more demanding" regarding the quality of the relations because they are more receptive, they understand the importance of mutual cooperation and cooperation with other experts in early education institutions in order to advance the quality of the educational process. The importance of said relations in the context of quality of the educational process is emphasized in the official curriculum, as well as other official documents in the field of early education in the Republic of Croatia. In addition, some of the kindergartens in Croatia participated in the (self)evaluation process in cooperation with the National Center for External Evaluation of Education (Antulić, 2012). Their participation in this process has possibly contributed to greater appreciation of quality relations and they have thus possibly become more critical in assessing quality. In the official EPE documents in Croatia, it is emphasized that the modern educator is a researcher of their own practice with the aim of promoting quality work and relations within the institution. The long-term nature and completeness of this process requires the involvement of all members of the institution, which also implies the readiness and expertise of all members – the educators, the expert associates and the principals – to fulfill their role in this process, which also includes equality, support and understanding. Higher education and university courses in the field of early and pre-school education, educate the educators and prepare them for new roles in accordance with the contemporary definition of early and pre-school education, according to which they are equal participants in the educational process, alongside the expert associates. Hence, a possible explanation of the greater degree of criticism present in Croatian educators regarding the relations that we have within the collective

can be justified by their awareness and competences gained to assume a new role as reflective practitioners.

Based on the results of the research we reject the null hypothesis and conclude that there is a difference between the educators of the three countries in their assessment of the quality of relations in early education institutions.

Concluding remarks

Although the assumption was that there will be no difference between the educators' assessment of the country of residence, since all three countries have the same legally prescribed level of education required to become an educator, and promote the humanistic concept of upbringing and education of pre-school children, the results of the research have shown that the educators' assessment of relations among members of the institution are affected by the country of residence, including official documents concerning education that a certain country implements.

Differences in the culture of relations among members of the institutions have also been shown in those particles that require additional efforts to improve the quality of relations in all three groups of educators. Thus, Croatian, Serbian and Slovene educators assessed giving and receiving constructive criticism without anger and hurt feelings, and respecting others' different opinions as the weakest segments of the relations within the institutions. Taking this into account, it can be seen that it is not enough for the official documents to indicate reflexive practice, action research and the culture of relations among the members of the institutions, but that these changes should be implemented in practice. Namely, the Croatian NCEPE lists the above-mentioned segments of progress regarding the quality of the early education institutions, but the results of the assessment do not significantly differ from the other two countries in the official documents of which this is not explicitly mentioned.

The results obtained can serve as guidelines for further research on the culture of relationships in the institutions of early education. At the same time, they can serve as an insight into the current educators' assessment of the culture of relationships within institutions, and provide guidelines for further work on improving the quality of the relations and the culture of the institutions.

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BUILDING COMMUNITIES AMONG TEACHERS: THE EXPERIENCES OF TEACHERS FROM MACEDONIA OF ENGAGEMENT IN EXTENDED COMMUNITIES

James Underwood*
University of Northampton, United Kingdom
Majda Joshevska**
Foundation Step by Step, Skopje, Republic of North Macedonia

Abstract

This paper is based on the findings from three related studies into the perceptions of teachers from Macedonia of the extended professional communities that they belong to. All these studies involved as participants teachers who can be defined as globally engaged, extended professionals. By this we mean teachers who were engaged of their own volition in communities of professionals that extend beyond the school that they work in. The nature of the communities that these teachers have engaged in is varied: ranging from formally created initiatives run by universities, to NGO led training and development projects to self-generated online communities of teachers. The research that the two writers have conducted and which is referred to in this article has explored the motives that teachers have for engaging in such communities, the ways engagement shaped their professional identity, the forms of relationships built, and the affordances and obstacles these teachers faced.

Keywords: professional identity, professional development, learning community, knowledge building, extended professionalism

Introduction

As the paradigm of teaching has shifted from what and how the teacher teaches, to how they can help a student to learn, so have the models of professional learning changed. Teaching and learning are no longer perceived as

* E-mail: James.Underwood@northampton.ac.uk
** E-mail: majda.josevska@gmail.com

separate activities, where participants in the process assume the 'active' role of one transferring knowledge (teacher) and 'passive' role of the recipient of that knowledge (student). Instead a more constructionist, Bourdieu-an concept of education that emphasises the co-constructed understandings of the world that establish shared assumptions about reality. In that sense, means of expanding and diversifying professional learning have also changed. The most profound changes in the world play out in the classroom, therefore requiring teachers to engage in continuous learning on how to answer the education needs of their students. Continuous learning in the form of trainings, workshops, desk research and other forms has been part of the job description of the modern teacher for a long time now. However, training in new skills, teaching methods or other novelties in education often generate competencies and/or knowledge that have limited utility in the reality of the school. Teachers often go to various trainings and end up teaching in a rather unchanged way and moreover rarely having the opportunity to professionally collaborate or connect in the fashion of doctors, lawyers or other professionals.. Therefore many countries in the world recognizing the importance of knowledge creation as a co-constructed process which generates knowledge relevant to the professionals involved, have promoted the idea of teachers' professional communities.

Research aims

This paper explores related aspects of teachers' knowledge sharing, communities and teacher empowerment. It consists of a synthesis of the two authors' research findings, from a range of studies that they have conducted (Underwood, 2017; Joshevska, 2012; 2016; 2017). The research aims in this paper is to explore the commonalities and links that the two writers found when comparing these studies regarding professional learning within a learning community and how that reflects aspects of teachers' professional identity.

Method

The principal methodology employed in this paper is secondary analysis of the existing qualitative and quantitative data sets derived using unstructured and semi-structured interviews, focus groups and survey as primary research techniques. The studies entailed discrete research questions and foci in line with the objectives of the projects they were a part of.

One study that has been synthesised into this document was a doctoral study (Underwood, 2017). This study was conducted via interview. Five participants from Macedonia were interviewed all of whom had taught in Macedonia, still worked in education and who had engaged in networking projects with

other teachers that extended beyond their school community. The technique used was semi-structured interview. A better term for these though may be Rubin and Rubin's (2012) term 'focused' interview which more accurately describes the very loosely structured and wide-ranging nature of the conversations that were enabled. These interviews were then coded using NVIVO, with codes emerging from the data. These codes formed the basis for the analysis and discussion in the original larger study and have also informed this paper.

Another set of data referred to in this paper is derived from the implementation of the USAID funded "Readers are Leaders" project. The project was implemented between 2013 and 2018 in 90 primary schools in Macedonia where one of the undertaken activities was the creation of teacher-leadership (TL) based professional learning communities (PLC) in 90 schools following the teacher leadership methodology[1]. During the implementation of the project two data sources were generated: the project monitoring and evaluation (M&E) report and an online survey conducted mid-implementation (2016) of the project only for learning community members. Data that informed the M&E report included a survey (on 800 teachers) and focus groups with the PLC members and mentors. These focussed on benefits, opportunities and constraints of membership of a school-based, extended, learning community. The data from the M&E used in the context of the paper is to demonstrate the benefits of belonging to a PLC for professional development and interschool cooperation. The other set of survey data (2016; 2017) where 314 PLC members responded, was used to argue that TL based PLCs could be a model to redefine teachers' professional identity (Joshevska, 2012), and promote 'extended professionalism' as defined by Hoyle (2018), through 12 domains of teachers' professional life (Joshevska, 2016; 2017). In this context the data was used to formulate characteristics and behaviours of extended professional identity.

Conceptual framework

The communities of practice model, has influenced almost all research into the nature of professional communities since it was first introduced in 1998 (Wenger, 1998). This model describes how community members begin in a peripheral role as gainers of the knowledge that the community holds and move over a period of time towards a more central role in which they define the knowledge of the community (Wenger-Trayner & Wenger-Trayner, 2015). One role that a community of practice has, according to this model, is that it is a place of affirmation. Those who hold central roles affirm the newer members by demonstrating an understanding and appreciation of the expertise of more

1 Developed under Leadership for Learning Network at Cambridge University as part of the International Teacher Leadership Initiative (Frost, 2011)

peripheral members, thus enabling them to move deeper into the community. Simultaneously those in peripheral roles reinforce the acknowledgement of the expertise of more experienced members by learning from them.

This model was shaped by research into workplace communities. However, it does not fully address what happens next with those community members who have attained this central position of mastery, a role in which they primarily affirm and shape the knowledge of others. It is unclear from this model whether the attainment of mastery in a community is simply the end point or whether a proactive seeking of other additional, alternative communities and roles then takes place. Whether once this position of mastery has been attained, professionals join other extended communities to receive knowledge and affirmation themselves.

The benefits of community membership for teachers has been stressed by both the UK and Macedonian government (Underwood, 2017; Joshevska, 2017). Positive traits attributed to it include a presumption that it will build resilience, enable creativity and lead to the sharing of expertise. Belonging to a professional community, where knowledge is being shared and co-constructed is a formative element of teachers' professional identity and teachers' professionalism. An affiliation to a community of practice is one of the characteristics that has been used to define an 'extended professional', which is a classification Hoyle (2008) uses to describe teachers who have a more rational approach to teaching, voluntarily expand their role beyond classroom practice and place their professional contribution into a more global professional community (Joshevska, 2012).

On the opposite side of this spectrum is the identity of the 'restricted professional' who, despite the slightly inferior allure of the term, also describes a dedicated professional, but one who is more of a natural-born teacher, intuitive practitioner whose sanctuary is the classroom and for whom teaching is closer to an art or craft, rather than a deliberate activity constantly improved through professional development outside the realm of their classroom (Joshevska, 2012).

Building from this definition of an extended professional, there is considerable evidence that suggests that those teachers who embrace collegiality most strongly are often most resilient (Baker-Doyle et al., 2012). Teachers for example, even when developing a strong individual identity may simultaneously find it helpful to share stories about the process of teaching, which then might help to fuse an individualistic experience into a collective process (Lingard, 2009; Biesta, 2012). Research has also described how experienced teachers often choose to belong to more than one professional community at any given time, including both locally based communities and more disparate ones (Nishino, 2012).

The local community may well be the one that teachers identify with most strongly and may be the one where practice and meaning are most deeply shared (Kinman, Wray & Strange, 2011). However, the professional gains in terms of improvement in practice or affirmation may also be potentially limiting and narrow. On the other hand engagement with a more broadly defined extended com-

munity may potentially break the inherent limitations of the local (Lee, 2011). Affirmation and imagination may have a greater role and it may be these rather than practice that can be sustained and developed in this context. Envisaging a larger community with a broader vision may potentially empower teachers to perceive themselves as part of a community that exists beyond those that they are directly involved with on a day to day basis and to value themselves and their professional role more.

However, others while not rejecting the possibility of this have raised concerns regarding risks that may emerge if collegiality is enforced or contrived (Hargreaves et al., 2014; Frost, 2015). Also even if perceived as a positive, this ideal of collegial working described above is not consistently enabled by the reality of teachers' working lives in many countries. In terms of sharing knowledge by observing, this is for most teachers a relatively rare experience. In many countries including both England and Macedonia, which form the focus of this paper, teachers are frequently observed in their earliest training years but even in this circumstance beyond the earliest stages of training rarely teach together.

After this initial period, teaching is an unusually isolated profession with teachers working alone in individual classrooms, typically observed just once a year or at most a handful of times (Pedder & Opfer, 2013). Whilst it is true that schools internally and in conjunction with universities often create some opportunities for peer observation or other shared learning experiences, these are likely to form a very small proportion of any teacher's professional working year and only impact on a small minority of teachers (White, 2013). Therefore, the experiential aspect of a teacher's professional learning and identity building happens as much in isolation as it does collegially (Taber, 2009).

As well as these structural limitations, there are also further conceptual limitations to the possibility of teachers building knowledge collegially. The complex nature of teachers' knowledge means that it is not necessarily the case that this knowledge can be easily shared with others (Guzman, 2009). However, if an extended community of teachers is perceived as a community of empowerment or affirmation rather than of practice then the relatively infrequent contact or, the difficulties of directly transferring practice become less significant issues.

To this extent it is also possible that exactly who we build a relationship with also becomes less important. The particular teachers from other countries may be more significant as representatives of a broader community enabling teachers to envision their own place and value rather than as specific individuals with specific practice to share or meanings to co-create (Paik et al., 2015). These 'boundary encounters' (Wenger-Trayner & Wenger-Trayner, 2015) between those distinct enough in their professional context to challenge our personal meanings but related enough in their professional role to make this challenge comprehendible, can perhaps have an impact on defining our own professional identity. However, this may be without necessarily leading to the building of a community of practice (Paik et al., 2015).

In conclusion to this section, the challenges presented in developing and sustaining different types of professional community vary enormously depending on the type of community being referred to: local or distant, small or large, created for a specific purpose or naturally occurring. In terms of an international community of teachers it is possible that rather than a community of practice it could be a community of shared affirmation that can be recognised, developed, and sustained. In which case the definitions of success, the significance of different activities and the role this community plays in people's working lives would be significantly different as would the challenges involved in sustaining and developing it. The strength of such a community may not be that meanings are shared but rather that personal meanings are reflected upon and clarified in an independent way.

Impact on local communities

In this section we discuss extracts from the findings from the different studies mentioned earlier as regards the perceptions teachers had of the impact that they could potentially have on local communities via membership of extended professional communities. As this paper is a synthesis of larger studies brief extracts have been presented from each.

In the study conducted by Underwood (2017) the participants consistently described how the communities that existed beyond the workplace that they had sought membership of were significant as they enabled them to innovate and exercise leadership. We have included two quotes below from this study. The quotes, below, illustrate the local impact, that being members of these extended communities, had enabled the teachers to have. Both quotations illustrate how through being part of a community that stretched beyond the workplace, region and in some cases even national boundaries these teachers had found a local, community of more innovative and globally engaged teachers. In the participants' cases, across this whole study, this community often did include teachers within their own school but it did not include all of them and it also included others working in other schools in Macedonia and even in other countries:

> *There is a group within the school that is more open minded and they just don't have problems with their experience and knowledge and everything, they discuss, they are asking just as I am discussing and asking, so we are on the same level, we can talk about it but it is not all of them and in many ways my school is a bit closed, not supportive. But most of my experiences, I don't know. I think that I am taking ideas away from innovative and creative teachers that I am meeting all around: in my school or at some different event where I am meeting them. 'Step by Step', things like that.*

As this quotation illustrates, this teacher welcomed the opportunity to meet with peers to share creativity rather than simply to learn new teaching strategies. Similarly this quotation reveals how membership of extended com-

munity went on to inform the nature of the local and school based community in empowering ways.

> *With the first group, with the pilot group we had a lot of that kind of change, we had testimonials from a lot of people that say I have learnt to love my profession again, or I have realised why I became a teacher in the first place, which are very powerful and show a change in self-perception, or identity. And I think, that it had a lot to do with the fact that teachers were free to choose whatever they wanted to work on, they are not simply told: you are going to work on literacy and numeracy. That was a factor, maybe it wasn't the most important thing, but it was an important thing. So one of the things we also do in the component is that we set up networking meetings in several schools. They really enjoyed these, because they get out of the town or the villages. We especially have been most successful with, smaller rural schools and such. After this then the connections are with the teachers nearby and in the same school too but it starts by getting out of the school.*

In this paper, a secondary analysis of the studies by Joshevska (2015; 2016) was conducted to look at professional identity of belonging to a professional group as described in the section above underpins the possibilities to network and share experiences. Part of the objectives of the creation of learning communities in Macedonia was organizing networking events. These were meetings of several learning communities from different schools where teachers were asked to showcase their activities. They were also places where the teachers were given the opportunity to discuss strategies for improvement or scaling-up of certain activities on a school or community level. Both mentors and teachers reported finding the networking events very useful for strengthening the cooperation between teachers and establishing cooperation with the wider community. The open-ended structure of the events allowed all participants to present their accomplishments in a creative way, promote teachers' personal and collective successes on a larger level and ultimately gain professional self-confidence.

> *It is not only about networking; the event is important for the entire region. Everyone is involved and engaged. In this way, the networking event brings the school closer to the community (Learning Community Mentor)*
>
> *(Networking event) is the crown of our achievements – now we shall show what we have done! (Learning Community Mentor)*
>
> *After the networking event in Gostivar, the municipal sector of public affairs said the event was very interesting and they propose to become part of the municipal program, (Learning Community Mentor)*

As has been illustrated by these quotations, this interaction between strengthening the local community through involvement in an extended community was revealed in the interview study conducted by Underwood (2017) and also in the focus group research conducted by Joshevska (2015). This possibly suggests that while one outcome of extended communities is strengthening the extended community itself an equally important outcome may be connecting,

affirming and re-invigorating local communities including those within a single workplace. Teachers may discover commonalities with teachers next door and the confidence to exercise leadership within a localised context by initially breaking the boundaries of the local.

The opportunities of community membership

This section builds on the last by focusing further on the opportunities that teachers' perceived as available to them through involvement in extended professional communities. The perceived benefits that come from belonging to a learning community, as described by the participants in the study by Joshevska (2015, 2016) include, above all others, improved cooperation. This broad concept in turn can be broken down into: initiating conversations among teachers about pedagogical practice (64%), an increased sharing of teaching techniques (55%) and an increase in the number of joint projects (43%). This is revealed in the graphic below, along with other further opportunities that teachers perceived. Interestingly as this illustrates, the exchange of knowledge was largely facilitated by a process of discussion rather than direct observation. There was a significant increase in the sharing of ideas and enabling of each other as professionals via communication but not via observation. This fits with Frost's (2015) view that the knowledge of experienced teachers exists and is created in the discourse between teachers.

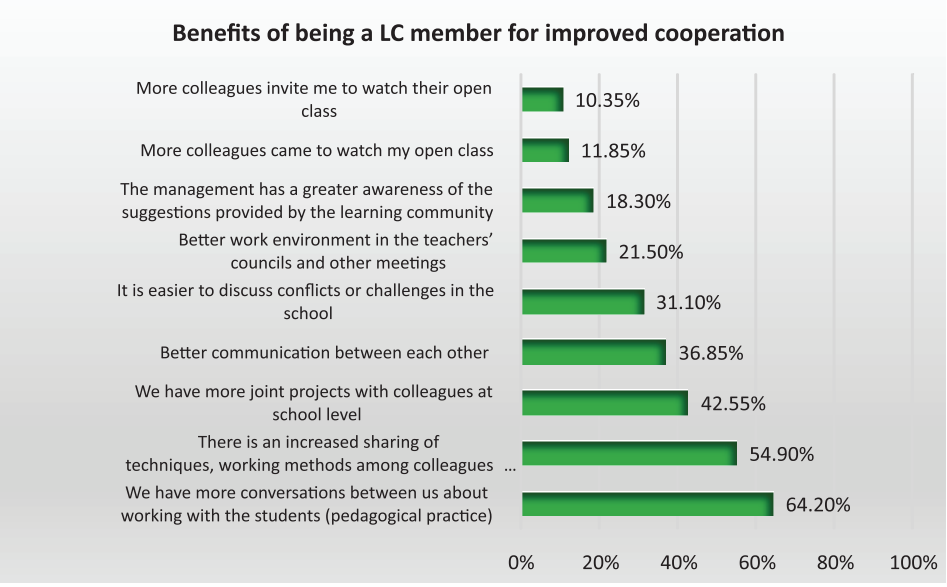

Figure 1. Survey results on the benefits of being a learning community member for improved cooperation in the school

Regarding their professional development, the surveyed teachers described how through community membership they were finally able to feel that what they did for improving student learning was important and appreciated (51%). As well as this they described how planning was easier as members of such a community and how teachers within these communities had more courage to solve practical challenges (40%), while the advice from fellow teachers was perceived as more useful (31%). Furthermore, teachers also preferred turning to their colleagues for advice rather than expecting advice from other places.

These quotations illustrate this further through the teachers' voices:

> *At the beginning there was some resistance. However, membership of the Learning Communities is on a voluntary basis, so only teachers that really wanted to be part of it were involved. For the first time, teachers understood they could do something for themselves. Previously, no one asked them about the challenges of their work and now they can detect problems, discuss issues and expand their network through Facebook, (teacher, Learning Community member)*
>
> *The main benefits are personal and professional development, improved cooperation among the colleagues in one school and the colleagues from other schools, applicable knowledge, great satisfaction. We never had before such cooperation, but now we talk about our common problems, (teacher, Learning Community member).*
>
> *The project allowed us to feel as teachers – leaders, to be able to identify a problem, to research it, to work on it and to think of practical solutions in a certain time. This gave us self-confidence, (Learning Community teacher)*

Similarly in the study by Underwood (2017) within the extended communities that these teachers had sought and had become members of, all the teachers felt that there were commonalities which led to mutual recognition of each other as professionals. These two quotations below describe this well:

> *There are a lot more commonalities then there are tensions. In fact, once you disclose to each other that you are teachers, it is as if you know you are sisters from another mother. The frustrations are the same, what is interesting is that we usually end up discussing the same things (Macedonian Teacher)*
>
> *It may well be the case that teachers want to establish themselves as individuals within their own space of the classroom, to have a perception of self-efficacy and also want to build positive collegial relationships. It is also possible that membership of a professional community enhances practice on an individual level even if practice isn't directly copied (Macedonian Teacher)*

As all these studies reveal belonging to a local or an international professional community can provide an opportunity to practice leadership and to embody 'extended professionalism'. This is useful for both the empowerment of teachers and for improving the quality of education. Teachers in all three studies expressed the need or desire for forging cooperation with other teachers in a positive, stable, trusting working environment where teachers are treated equally

with regards to their value in the school. Therefore, this suggests that schools should nurture a learning culture where shared knowledge is valued, viewing different professional experiences as valuable in order to inspire creative solutions to classroom issues.

Opportunities and non-positionality

One of the ideas behind the success of such collaboration, in the Macedonian context, is the non-positionality of the leadership within such communities (Frost, 2015). Non-positional leadership as defined in this context refers to the enabling of teachers to be able to lead and demonstrate leadership through their own agency, self-efficacy, beliefs, and professional confidence. In the study by Underwood as the quotation below illustrates this was a circular process whereby the confidence to initiate leadership and the affirmation that came from this then led to the building of identity as a leader and to embed leadership in practice.

> *Because the group, the environment is different with this initiative that we are working on, that is the great thing we are offering teachers we are asking them for opinions and to make many other suggestions. And that is how I can see that the teachers are thrilled. They are thrilled because we ask their opinion, putting them in a position to cooperate with others, to find solutions ..... so yes to be a teacher and a leader (Macedonian Teacher).*

The studies by Joshevska (2015, 2017) similarly described teachers who had initiated innovation as a process which is beneficial for their whole school and not merely as a vehicle that serves self-promotion. This reflects a solution to a concern that is frequently voiced by Macedonian teachers. The second important formative aspect revealed in Joshevska's (2015, 2017) studies lies in the co-construction of knowledge by teachers who have different experiences with regard to the same context and thus are equally capable of leading innovation based on experience rather than position. Within the Macedonian context, promoting school-based professional development opportunities that are teacher led is potentially an opportunity to strengthen teachers' professional identity in two ways. Firstly, it provides a connective tissue between the fragmented training of teaching strategies, learned through incidental and sporadic professional development opportunities. By doing this it creates shared understanding and adapted practices that are relatable to their professional reality (Frost, 2015). Secondly, contextualized forms of professional development that are based on collaboration and collegiality promote mutual trust, collective self-efficacy and teachers' agency (Frost, 2014). These together move teachers towards reclaiming their professionalism. Furthermore as a more established professional body, teachers could become more vocal about their profession and put themselves on the map regarding shaping the policies that define teachers' roles in the system.

Obstacles and constraints

There are however, significant obstacles to embedding a culture whereby teachers belong to extended professional learning communities as an expected norm. Belonging to a professional learning community is currently somewhat viewed as a professional luxury for many teachers in Macedonia. This is partly because of government reforms that happen on an annual level and are seemingly always accompanied by additional administrative work, which leaves little space for intrinsically driven improvement which is the objective of professional collaboration.

Also despite many initiatives that have been initiated with the intention of creating an almost exclusively collaborative knowledge base, several dangers arise from indiscriminately collectivising the profession. Firstly, the Macedonian system is a system in which there is very little formal recognition of professional development, meaning most teachers are equally appraised (gain similar salaries) despite different levels of engagement. In these circumstances it becomes difficult to be enthused about committing to such a potentially labour intensive endeavour as belonging to a professional learning community is. In other words, the goal to be the best professional lies almost exclusively in the intrinsic motivation of a small percentage of people who are more often than not, a minority within a school. This would not be such a significant issue had it not been the case that several interviewed teachers (Underwood, 2017; Joshevska, 2012) reported being shunned by their own colleagues because undertaking more classroom innovation, or establishing a new school practice was perceived with distrust as an unnecessary attempt to 'raise the bar' for quality teaching.

> *Sometimes my colleagues don't accept it* [*classroom* innovation] *because it means that they would have to do the same, it raises the criteria. And sometimes, I know it's not a nice thing to say, but I feel like they envy me..." (Teodora, primary school teacher)*

Secondly, the previously mentioned distrust that overshadows relationships within many sectors of Macedonian society (due to a legacy of political and, at one point, ethnic tensions) casts doubt for many teachers regarding the process of co-constructing knowledge in itself. Learning communities represent a fine balance between empowering the individual teacher and creating a stronger, more relevant knowledge base for the whole profession. However, the operative aspects of maintaining this fine balance, of how individual recognition and collective attribution will be divided and appraised creates confusion and reluctance among teachers to contribute generously towards the co-development of others.

Possibly the solution to the fear that somebody will run away with all the credit, so to say, lies in the fact that learning communities are (or at least should be) comprised of 'extended professionals'. This should mean that they are small,

close-knit groups of colleagues whose communication is amicable and primarily for the purpose of improving the school learning culture. Most importantly, at least in the initial phases until the learning community becomes embedded in the school culture, is having leadership in the school, that the teacher works in, which recognises and rewards professional collaboration. Macedonian learning community mentors and teachers asserted that a key element for learning community sustainability is the engagement of school directors. Whenever the school director was supportive and diligent regarding the work of the learning community in their schools, so were the teachers.

> *When the learning community were established almost all teachers applied to participate as members. However, as the meetings progressed teachers slowly withdrew. The key was the director. When the school director did not participate, teachers gave up. When the school director had a positive opinion and supported the teachers, they were all involved in it. (Learning Community Mentor)*

These quotations above are all from the USAID Readers are Leaders, Monitoring and Evaluation study (2018). However, the interview study by Underwood (2017) revealed similar viewpoints. This quotation below illustrates how these participants had retreated from her school community, in order to innovate, whilst simultaneously being prepared to engage in communities that extend beyond the school:

> *The sad circumstances is that nowadays a lot of phenomenal teachers who after twenty, twenty-five years, you know how salaries work, right, who have checked out, who are saying 'ok, if this is what the local ministry, what the sort of verification agency wants, we will do that', and who treat their job sadly as if they work in a bank, or as if they are a civil servant, checks in and then checks out, which is very, very sad (Macedonian Teacher)*
>
> *The thing is that I set up my mind not to worry about what is going on in my whole school and that is why I am working in my classroom and everything, my energy and creativity and everything, is focused on my classroom (Macedonian Teacher).*

These two quotations are illustrative of how most, although not all, the participants in the study by Underwood (2017) described how they themselves and the teachers who they worked with were distinct from their whole school community. In all cases though, even when they perceived the school more positively, they still perceived themselves as part of a smaller community of 'innovative' or 'outward looking' teachers, distinct from the school community as a whole.

Conclusions and recommendations

It is clearly the case that the workplace community is significant for teachers. In all the studies referred to in this paper those participants who described working in positive and conducive workplaces were pleased to do so. Therefore,

this article is not suggesting that striving to improve the quality of collegiality and professional community within a workplace has no value. However, those teachers who did not work in workplace contexts that they saw positively still retained self-efficacy and an identity as, expert professionals, as long as this was affirmed by membership of alternative professional communities not bounded by the workplace. This research therefore suggests that to emphasise the quality of the workplace community above all others would be over-simplistic.

None of the participants described their workplace as being the most important professional community that they belonged to and therefore this suggests that neither should this be the only community that positional leaders and policy makers in education should focus on. It may be that in order to develop approaches that would lead to such universally acknowledged positive outcomes as staff retention and school improvement, strategies need to be devised that enable teachers to engage in communities other than the workplace in positive and affirming ways. These could potentially include ways that enable them to exercise leadership and to co-construct purpose as well as share strategies.

Recommendations for policy

Key partners in this endeavour are the school, and the various structures within it, as well as educational authorities outside the school. It is crucial that school management, county officials and governments realise that school-based leadership in innovation and professional development is favourable for everybody involved. If teachers are in charge of the creation and sharing of knowledge, professional development becomes: more cost-effective; addresses better the specific needs of the school and is more likely to become effectively embedded in the school ethos. Furthermore, this would increase teachers' control over their practice and would create a sense of ownership and protection for their profession, which is crucial for maintaining a positive professional identity.

Such processes do already exist but they tend to be small scale, impacting upon only a few schools or teachers within a school, and often requiring a significant commitment from teachers in terms of time or resources. There would be practical implications to this, if this were to be enabled for more than a few. This would be a distinct process to manage compared to improving the community within a workplace. It would involve a high level of professional trust and also acknowledgment of this in the opening up of space to develop such communities. This is because if there is an emphasis placed upon teachers to be part of structures that facilitate dialogue within a school then the effect may be that it limits the space and time for teachers to find and create the alternative community that this research suggests they will find most affirming.

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QUALITY ASSESSMENT AND EVALUATION IN EDUCATION FOR SUSTAINABLE DEVELOPMENT

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QUALITY SHOULD NOT BE EQUATED WITH EFFECTIVENESS – GLOBAL RECOMMENDATIONS AND THEIR IMPLEMENTATION IN THE CONCEPTS OF PRESCHOOL QUALITY ASSESSMENT AND ASSURANCE IN SLOVENIA

Mojca Kovač Šebart*
Faculty of Arts, University of Ljubljana, Slovenia
Andreja Hočevar**
Faculty of Arts, University of Ljubljana, Slovenia

Abstract

The global recommendations and measures on assuring preschool education quality published by international institutions (UNESCO, IMF, World Bank, OECD and European Commission) foreground the profitability of preschool investment with regard to human capital. Preschool education quality assurance is predominantly related to the society's economic development, and its added value is primarily measured with children's (pre) school achievements, learning outcomes and successes in adulthood. There is no consideration of the fact that formative processes and effects differ when the central goal of education is the child's holistic development and a subject who is capable of critical judgement and action. Knowledge should be understood as a value in itself, without a directly applicable value, but as a precondition for individuals' understanding of the world, their freedom and autonomy. This seems to be the reason why the recommendations pay little attention to developing the quality of the educational process for its own sake and for the sake of the life quality of the children who attend preschool education programmes. Implementing the measures involves a risk of scholarizing preschool programmes, making their prime goal preparing children for school and equipping them with the knowledge and skills they will need in the labour market. These issues are reflected in the emerging model of assessing and assuring preschool quality in Slovenia, too.

Keywords: global recommendations in preschool education, effectiveness, scholarization, process quality, Slovenia

* E-mail: mojca.kovac-sebart@guest.arnes.si
** E-mail: andreja.hocevar1@guest.arnes.si

Introduction

The role of institutional preschool education (hereafter preschool education) in reducing dropout rates and encouraging social inclusion makes it a priority in the *Europe 2020* strategy (European Commission, 2013, p. 3). Accordingly, the European Commission emphasizes that investing in high-quality preschool education is very important, because it is the foundation of an effective and equitable education system: it prepares children for primary education and boosts their academic performance. Furthermore, it has a particularly positive impact on children from disadvantaged and migrant backgrounds, at all levels (ibid., p. 7). The documents endorsed by a number of global organizations (cf. UNICEF, 2012; UNESCO, 2000; UN, 2015; IMF, 2015; World Bank, 2015; OECD, 2012, 2015) set the following goals that countries should achieve by systematically strengthening preschool education: "decreasing inequalities in learning and development between different groups of children; [...] tackling poverty [...]; improving child development, educational achievement and attainment in general" (OECD, 2012, pp. 297–298). Consequently, they examine preschool education quality in relation to effectiveness in terms of the economic development, economic strength and "added value" stimulated by children's participation in preschool education programmes. They perceive it as, on the one hand, an opportunity for reducing differences among children (originating in unequally stimulating environments) in achieving higher formal levels of education and, on the other hand, a factor aimed at decreasing budget deficits and at economic growth.

These considerations are strongly based on the findings of the Nobel-Prize winning economist James J. Heckman, who has studied the impact of investment in preschool education in the USA and who is a much-cited author in the documents. He shows that funds invested in the inclusion of children from disadvantaged groups in preschool education bring a return on investment in preschool education of 13% per annum (Heckman, 2017, p. 2). Other long-term effects of preschool education have also been stressed, such as easier employability, higher average income, less need for social services as well as preventive effects in terms of health, crime, etc. (Heckman and Masterov, 2007; Heckman et al. 2010; Heckman, 2017).

Investing in preschool education is therefore understood as an investment in people "as early in life as possible" (Economist Intelligence Unit, 2012, p. 31), because it brings the "highest return on investment for individuals, particularly the most disadvantaged, throughout the entire process of lifelong learning" (Heckman, 2012, p. 1; cf. Guerin, 2013, p. 6; Barnett and Nores, 2015, pp. 75–76). It also generates "the highest medium and long-term returns for public budgets" (Education and Culture DG, 2008, p. 1).[1] In this spirit, policy-makers in different

1 Investment in preschool education has significant implications for future state and local government budgets. Higher taxes paid by the children who attended preschool education when they grow up mean more revenues for the government coffers (Lynch and Vaghul, 2015, p. 9).

countries aim at identifying the most productive investment in intentional preschool education while following the model of economic effectiveness (cf. Hočevar and Kovač Šebart, 2018).

Many authors (Mahon, 2010, p. 180; White, 2009, p. 9; Woodhead, 2012, pp. 35–36) therefore justifiably warn that preschool education in the global context and in the context of the European Union is understood above all as a factor in the formation of the future labour force. If investment in the education of children is "investment in human capital" (Pressoir, 2008, p. 58), preschool education institutions become predominantly institutions that manage this capital. Rianne Mahon (2010) stressed already some time ago that the idea of preschool education as "investment in human capital" is closely "associated with the diffusion of ideas and practices underpinning neo-liberal globalisation (ibid., p. 172). This is also confirmed by the findings of Maria Herczog (2012), whose analysis of European Commission documents reveals that preschool education has been seen as an investment in the child's *well-becoming*, rather than an opportunity for the child's current *well-being* (ibid., p. 552). Verity Campbell Barr and Mikael Nygård (2014), who conducted a comparative analysis of changes in preschool education in two EU countries (Finland and England), arrived at similar findings: following th-e logic of the market disregards the fact that access to preschool education programmes is necessary in order to ensure the child's optimum development of all potentials concerning the "child's personality, talents and mental and physical abilities" (UN Committee ..., 2003, p. 13), rather than merely the child's better preparedness to enter school and the (long-term) economic effectiveness of investment in it.

Global empirical research studies that are the foundation for considerations of the rationality of investment in preschool education – more precisely, in the development of "human capital"

In the context of these introductory comments, it is no surprise to learn that in 2018 the OECD started conducting the *International Early Learning and Child Well-Being Study* (IELS) (OECD, 2018). Some authors (e.g. Goddard, 2017; Ochshorn, 2017) and organisations (e.g. ACEI, UCL) refer to it as *Baby Pisa*. The *IELS* recognizes that the first five years of children's lives are crucial to their development. During this period, children develop and learn at a faster rate than at any other time in their lives, developing basic cognitive and socio-emotional skills that are fundamental for their future achievements in school and later as adults. These skills also affect how individuals "cope with future successes and setbacks, professionally and in their personal lives" (OECD, 2017, p. 6). The study will examine the "early learning outcomes and development through a wide scope

of domains, including cognitive, social and emotional skills" of the children who participate in preschool education (ibid., p. 14).[2] Children are assessed in the early learning domains of emergent literacy, emergent numeracy, self-regulation or self-awareness with an emphasis on locus of control, executive functions and social skills. These domains are recognized[3] as predictors of later academic and other life outcomes. The *IELS* will also give insight into what preschool education practices equip children with the skills they will need in the labour market and in life (Williamson, 2018, p. 4). This will establish a basis for directing educational practice towards the development of "suitable" i.e. effective skills. Frank Furedi (2016) calls this "soft social engineering" that is devoted to "altering the behaviour of schoolchildren" (ibid., p. 149) in which it is not "what people know" that is important (in the sense of knowledge as a value in itself), but the possession of the capacity to "adapt and respond to new circumstances" (ibid., p. 49).

The intention of the study becomes readily understandable if compared to two other OECD studies that include research of the knowledge and skills of children and adolescents. In 2015 the *PISA* study (OECD, 2018a) assessed and measured three sets of skills – problem-solving, cooperation and social skills – for the first time (Williamson, 2018). Cooperation and social skills are also measured by the *IELS*. A new international study, the *Study on Social and Emotional Skills* (*SSES*; OECD, 2018b),[4] set to begin in autumn 2019, with the first results due in 2020, will, according to the OECD (2017, p. 9), facilitate understanding of the dynamics of the development of social and emotional skills and their impact on socio-economic outcomes in the lives of individuals. This study, like the *IELS*, will measure and assess skills such as cooperation, self-regulation and self-management. The authors of the study believe that these skills are significantly linked to academic and other social outcomes. Among other things, they affect individuals' entry to and participation in the labour market and the general quality of their lives (ibid.). These skills are considered a major driving force of growth through their effect on labour productivity (OECD, 2018c). They emphasize that the young people who enter the labour market should have access to good-quality jobs and embark on successful careers. In order to do so, it is crucial that they "keep abreast of technological developments and maintain their employability in a rapidly changing and inter-dependent world" (ibid.).

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2 The *IELS* sample includes 3,000 children aged between 5 and 5.5 years in at least 200 preschool settings per country and with up to 15 children per setting. The children are assessed 4 times 15 minutes per day over two days (Goddard 2017). The study began in autumn 2018 and its results are expected towards the end 2019 (OECD, 2018).

3 Children's abilities and skills in these domains are measured/assessed using indirect and direct assessment methods. Children's emergent literacy, emergent numeracy, self-regulation and empathy will be assessed directly, with children completing tasks based on simple and fun stories and games. Children's cognitive, socio-emotional and social skills will be assessed indirectly by teachers and parents through questionnaires (OECD, 2017, p. 17).

4 The study will include children aged 10 and 15 years, and the OECD aims to use the study to build on the findings of *PISA* (ibid.).

The three above-mentioned studies will thus look at learning outcomes and the "non-cognitive" aspects of learning. The results of the studies will enable a comparison of the knowledge, personality characteristics and skills of children and adolescents that affect the lifelong learning and life outcomes of adults at the global level, especially in the labour market (OECD, 2017, p. 9). In addition, data interpretation will answer the question about how to invest in people and places, supporting business dynamism, and creating more inclusive labour markets and thus lay foundations for more sustainable growth and productivity (OECD, 2018d).

With the design of the *IELS*, the OECD is following the objectives it set itself in 2012, namely to collect information on early learning in individual countries that will support an improvement in preschool education programmes, enabling a comparison with the outcomes of "those achieved at age 15, as measured by *PISA*" and their interpretation "in the light of information from the *IELS*" (OECD, 2015, p. 103; cf. OECDa, 2015a, p. 55). The countries included in the study will have "earlier and more specific indications" that will enable reflection on "how to lift the skills and capabilities of their young people" (OECD, 2017, p. 14). The considerations are also in line with the aims of the European Commission (2010), which wishes to increase the effectiveness of member states' education systems and make it easier for young people to enter the labour market and "ensure smart, sustainable and inclusive growth" (ibid., p. 5).

We have emphasised that the *IELS* (OECD 2018) will measure personality traits and skills that are important indicators of children's later academic and other life achievements. A problem pointed out in this connection by Hans-Peter Blossfeld, Jan Skopek and Moris Triventi (2017) is that a practice is being established that focuses on the formation of individuals who are adjusted in terms of "personality" and "skills" to the dominant social conditions, which above all encourages the development of abilities and skills that are geared towards the labour market (cf. Hočevar and Kovač Šebart, 2018; Krnjaja and Pavlović Breneselović, 2017).

The devisers of the *IELS* underline the fact that countries will also be able to exchange "best practices" in preschool education, while the collected data will show "what systemic solutions are most effective ... in what areas and for what groups of children" (OECD, 2018; Goddard 2018). This will facilitate insight into what preschool education can achieve at the level of children's learning outcomes and what factors are connected with these outcomes (OECD, 2015a, p. 103). It will thus be possible to seek answers to the question of "how to improve the effectiveness, equity and efficiency [in terms of use of resources invested] of the systems" (ibid., p. 96).

Studying the findings of all the three studies mentioned above will serve as a basis for integrating findings on children's performance along the entire education vertical, enabling comparisons of data (Williamson, 2017, pp. 4–5) and an

assessment of how successful investment in people is (has been) at each individual level of education (OECD, 2009, p. 2). In other words, how much "added value" this investment has brought in terms of human capital. According to Williamson (2018), "the inevitable consequence in countries with disappointing results will be new policies and interventions to improve students' personalities to ensure competitiveness in the global race." (Ibid., p. 3).

The OECD website states that "the Study is not an assessment of school readiness" and that "the Study is focused on children's longer-term outcomes in a wide scope of life domains" (OECD, 2018). At the same time, however, the devisers of the study emphasize that "the information from this study will assist decision-makers to better understand the further contribution that their ECEC systems can make for improving children's learning, in relation to the possible further contribution that early primary schooling can make" (OECD, 2015a, p. 103). Since the effectiveness of preschool education is measured by learning outcomes that include the knowledge and, above all, the skills that children need in their further schooling and (professional) life, some authors (Otterstad and Braathe, 2016; Paananen, Kumpulainen, and Lipponen et al., 2015; Paananen, 2017; Vallberg Roth, 2014) warn about the danger that highlighting these dimensions leads to a scholarization of preschools, since attention is focused on "academic" contents (Paananen, 2017; Otterstad and Braathe, 2016, p. 3028). Didactic approaches are adopted "in which active teaching by the teacher takes the central role" (ibid., p. 3028; cf. Vallberg Roth, 2014), and decision-makers call for "more distinct learning goals, preparation for assessing/testing all children from 3 years of age" (ibid., p. 3029). Other critics (Mahon, 2016; Moss et al., 2016; Pence, 2017) claim that the studies encourage developing human capital as a basis for successes in the labour market and they also draw attention to the instrumental purpose of the study. Also, they point out that they neglect to take a holistic view of the child into account.

We can conclude that the presented concept and, consequently, the practice of quality assessment and assurance in preschool education result in expectations of the formation of individuals who will find their place in the labour market and adopt everything that the market brings with it (flexibility, competitiveness, etc.). The door is open to the "homogenisation" and "effective management" of preschool education (Soler and Miller, 2003, p. 60). Knowledge and skills (social, emotional, etc.) are listed here in the sense of their instrumental usefulness, a utilitarian sense of a tool which the individual needs in the process of adaptation to the labour market.

It has become obvious that international policies on quality assessment and assurance do not reflect (or are not interested in reflecting) the fact that the formative process and the effect of preschool education are different when the key goals are the holistic development of the child and the formation of a subject capable of critical judgement and behaviour, where knowledge is reflected

as something inherently valuable without always having a directly useful value. It is a condition for the individual's understanding of the world and a condition of his or her freedom and autonomy (cf. Egan, 2009; Furedi, 2016; Gauchet, 2011; K. Šebart and Kovač, 2018). Freedom and autonomy are not given to the individual, they require an educational process in which the child gains increasing self-control and becomes a civilised being in a wide range of senses, from simple politeness to the most complex reflection. The goal of education in the educational institutions that set themselves the goal of optimal development of autonomous individuals would have to be, as Claudine Leleux (1997) points out, that the individual transcends his or her particularity and reaches a level of universality and a capacity for critical thinking that follows the general rules of argumentation and is expressly connected to the understanding of abstraction and abstract knowledge. This should also be the guiding principle when thinking about solutions regarding a high-quality education system from the preschool level upwards.

Following global recommendations in the area of quality assessment and assurance in preschool education in Slovenia

Slovenia follows global recommendation on preschool quality assessment and assurance, which is obvious from the analysis of the documents adopted by the responsibly ministry and the projects conducted in recent years. In the 2017 the board of the Minister of Education, Science and Sport adopted the *National Framework for Assessing and Assuring Quality in Education* (Ministrstvo za izobraževanje ..., 2017; hereafter the *National Framework*). It states that the need to assess and assure quality in the area of education is influenced by increased sensitivity to the effectiveness of education systems and the awareness that high quality education is essential for employability, social cohesion and overall economic and social success in Europe (ibid., p. 4). The views are consistent with those presented in the introduction: in the area of preschool education, policies in Slovenia perceive quality in relation to effectiveness. At the forefront of such expectations is equalizing the entry conditions for children's school performance and general economic and social success (cf. Kovač Šebart and Hočevar 2018).

The document lists the obligatory self-evaluation areas for each educational institution. They follow the recommended areas as specified in the project the *Concept and Implementation of the System for Quality Assessment and Assurance in Educational Institutions (Preschools and Schools)* (hereafter the *KVIZ Project*) undertaken between 2008 and 2014 and in the project the *Establishment, Complementation and Pilot Test of the Model of Quality Assessment and Assurance in Education* (hereafter referred to as the *OPK Project*) conducted between 2016 and 2020. Both

projects have been financed by the EU, and their main objectives are two: the establishment of a national quality assessment and assurance system with relevant indicators at all levels of education and the preparation of a draft of "standards and indicators for the area of *learning and teaching* (subsections: *students' achievements* and *children's development and learning*)" (Šola za ravnatelje, 2016).

The *National Framework* (Ministrstvo za izobraževanje ..., 2017) specifies the areas and sub-areas that educational institutions should focus on. Their descriptions will be based on the acknowledged needs of the institutions, enabling "a better development and well-being" and "achieving the best outcomes of working and learning" in children (ibid., p. 24). The document includes the requirements for compulsory monitoring of children's achievements in the process of self-evaluation in preschool. The achievements are monitored through the results that children achieve in national knowledge assessment tests and the Matura examination (ibid., p. 27). The documents build quality assessment and assurance on the extraction of "data from existing databases, while ensuring their integration into a whole" (ibid., p. 10). They should take into account "various guidelines and documents" (ibid., p. 29). Preschools will thus be able to obtain the data collected by national knowledge assessment tests (the National Knowledge Assessment Test, general and vocational Matura examinations) and international knowledge assessment tests that are conducted by the OECD and the IEA (ibid., p. 13–14). The document does not specify the achievements of preschool children or their monitoring, but it suggests that systemic solutions are established to enable comparisons of results at national external and international knowledge assessment tests with children's preschool achievements.

The basis for the national framework for assessing and assuring quality in education

When planning the *KVIZ Project* (2008–2014), the *Human Resources Development Operational Programme* served as a source (Služba vlade RS ... 2008). It underscored "improving the quality and efficiency of education and training" (Javni razpis ..., 2008, p. 1). The goal of the project was the "development and implementation of a quality model of preschools and schools, and the definition of quality indicators at the national level (external evaluation) and at the level of preschools and schools (self-evaluation)" (ibid., p. 2). The self-evaluation model (and its concept) that was developed during the project lets schools and preschools define data and criteria on the basis of which they will make improvements in the area that they plan to self-evaluate (Brejc and Koren, 2011, p. 23). Self-evaluation focuses on learning and teaching, that is, on students' achievements in the broadest sense (ibid., pp. 18–19). For us, it is important that the area of *learning and teaching* is also *the central area of the self-evaluation* of preschools and that the documents concerning the project specify both the

terminological use of "prevailing school" terminology and the significant non-differentiation in how the role if preschool is understood (cf. Brejc and Koren, 2011; Brejc and Poličnik, 2012).

The materials prepared by the *OPK Project* (2016–2020) state that they plan to pursue the goal of "unifying the understanding and approach to the self-evaluation of schools and preschools by taking into account sectoral specifics" (Brejc, 2016, str. 7), but the specifics of approaching preschools are not evident from the materials available today: although we come across terms such as "pre-school, school" or "school, preschool," the content does not draw attention to the differences between the two institutions. The term "the child" is only used in one section, stating that the task force for the preparation of quality indicators in the priority area of *learning and teaching* and the sub-area *students' achievements* will try to answer the question: "What do we want children, pupils, students to achieve (knowledge, skills, relationships, values ...)?" (Ibid., p. 11).

In this context an example of a goal in the area of *learning and teaching* in the *KVIZ Project* (2008–2014) is telling: to improve functional literacy and to improve reading for understanding. Indicators for this area can be qualitative (e.g. description of a phenomenon, characteristics, processes or relationships) and quantitative (e.g. counting and measuring, data from the National Knowledge Assessment Test), and they are shown as "indicators of knowledge, which are usually expressed in the form of taxonomic levels or standards of knowledge" (Brejc et al., 2014, p. 14). There are also instances of quality indicators: the quality or correctness of students' responses, how the student compares, relates and evaluates specific learning content, etc. (ibid., pp. 12–14). When evaluating this priority area and during the improvement planning stage, educators follow the principles of better *learning and teaching* and *students' achievements* (children are not mentioned): they have to define an improvement plan for the next three years as well as more long-term goals that need to be specific and measurable and the educational institutions selects them itself.

In order to monitor and evaluate students' achievements and introduce improvements, educational institutions use "the results of national knowledge assessment tests (the National Knowledge Assessment Test, the Matura examination) and international knowledge assessment tests (PISA, TIMSS)" (ibid., p. 68). To start from, they can employ "formal bases (e.g. general goals of education from the Organization and Financing of Education Act), objectives from sectoral legislation (e.g. the Primary School Act), results of national and international knowledge assessment tests (e.g. the National Knowledge Assessment Test, the Matura examination, PISA or PIRLS), the school's concept of moral and character education, the school's development programme and documents at the national and transnational level (e.g. the Lifelong Learning Strategy, the Literacy Strategy in Slovenia, Key Competences or Future Work Skills 2020) (ibid.).

Subsequently, during the last stage of the self-evaluation process, educational institutions will prepare a report in which educators reflect on the results of the self-evaluation process, answering the questions: "What are the *concrete results* at the level of the implementation of the activity and at the level of the results (achievements) of *students*? How do we know this? What do the data show? Can they be compared to previous years? Can the results be linked to the data of national knowledge assessment tests (the National Knowledge Assessment Test, the Matura examination)?" (Ibid., p. 48). Here, neither preschools nor preschool children are treated separately.

The documents open up many further dilemmas: preschools in Slovenia, for example, cannot pursue the goals or monitor the knowledge indicators as children in preschool are not taught reading; instead, their pre-reading and pre-writing skills are developed. Moreover, there are no defined knowledge standards for preschool children. Quality assessment and assurance in preschools should therefore be based on the monitoring and progress of individual children rather than comparing children with predetermined standards (e.g. development norms, standards of knowledge) that all children in preschool should reach at a certain age (Marjanovič Umek, 2011, p. 65). Only such understanding of children's achievements would allow for a reflection on whether the preschool has created opportunities for the development and learning of each individual child in different areas of development and learning.

According to the agenda of official guidelines, documents and projects carried out by the competent institutions, it seems sensible to question whether the (self-)evaluation of preschool quality really is based on the understanding of children's achievements as presented in the current *Preschool Curriculum* (1999): the *Curriculum* rejects teaching in the school sense of the word. Therefore, the suggested analogy with school in measuring *children's achievements*, which concerns the main area of the self-evaluation of educational institutions, is professionally unacceptable. Moreover, the scholarization of preschools is another immanent problem.

Conclusion

In conclusion, Slovenia has been gradually but consistently fulfilling the expectations of international financial and other organizations in the area of preschool education as we have presented them in the introduction to this article. Slovenia "draws" research funds and follows "development" directions which, as far as all available documents attest, see preschool education as preparation for school. It is approached as a factor of "human resource improvement" that has a long-term impact on economic development and, thus, on the development of the entire society. In all of this, structural and process quality as well as children's optimum development remain in the background. It seems that Slovenia is one

of the countries that the *OECD Report* (2007) refers to where governments are paying increasing attention to "creating incentives to increase the effectiveness of education" (OECD, 2007 cited in Curristine, Lonti and Joumard, 2007, p. 2).

This is evident from the obvious direction towards quality improvement bound to the effectiveness of preschool education and the tendencies towards measuring learning outcomes and children's achievements in preschool and their comparison to children's learning outcomes in schools. In the Slovenian education system – with regard to developing a common model of assessing and assuring the quality of educational institutions – we come across the "globalized discourse" that "lacks critical potential for an analytical overview of the concept" (Barle Lakota, 2011, p. 68). At least as far as preschools are concerned, we follow without reflection "international trends" and requirements for a quality concept that is "sufficiently universal precisely because it has never been adequately defined" (ibid.).

Various international research studies have developed numerous strategies for measuring the quality of educational institutions through children's achievements. Indirectly this has created standards and indicators that have (to some degree, at least) combined national systems into a virtual community. This belief in the universal concepts of the virtual community has obviously not raised any questions about who defines the standards, how internationally comparable indicators are created, etc. (cf. ibid., pp. 68–69). The model of quality assessment and assurance completely lacks any consideration of how to implement the goals and principles of the *Curriculum* (1999). The latter foreground the child in the educational process that has a value in itself – the process has priority over the "results" that preschool children are supposed to achieve. Children's "academic" readiness to enter school or their accommodation to the labour market are not part of the concept of the *Curriculum* (1999), its planning or implementation (cf. ibid.). The emerging model of quality assessment and assurance pays no attention to any of this. Moreover, it seems it is not going to evaluate what it should with regard to preschool curricular solutions. Rather, it is going to adjust preschool practice to the goals that are not part of the current curriculum at all.

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PARTICIPATORY APPROACH TO EVALUATION IN EDUCATION FOR SUSTAINABLE DEVELOPMENT[1]

Dragana Purešević*
Faculty of Philosophy, University of Belgrade, Serbia
Živka Krnjaja**
Faculty of Philosophy, University of Belgrade, Serbia

Abstract

In this paper we are reconsidering which approach to evaluation suits the best to education for sustainable development. We approach the evaluation in education for sustainable development through mapping key points in a technical and participatory approach to evaluation. In the central part of the paper, based on outlined characteristics, we propose a sketch of the potential model of a participatory approach to evaluation. The proposed model is based on interconnection between reflection and action. The principles that shape the model are flexibility, listening, multi-perceptivity, trust, negotiation and participation which emerge in a complex context. In the final part of the paper, we are highlighting the necessary steps for achieving a potential model of participatory approach to evaluation as a support to education for sustainable development. For establishment of such a model we need to reach a consensus in understanding the purpose and expectations of education, to reconsider the previous approach to evaluation in education and to increase number of researches on different approaches in evaluation.

Keyword: evaluation in education, evaluation for sustainable development, technical approach to evaluation, model of participatory approach to evluation

Introduction

The world is rapidly changing in the last few decades. According to the social, cultural, and environmental changes, the focus of education is changing (Barnett and Eager, 2017, p. 293). Education is changing from a traditional

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* E-mail: puresevicd@gmail.com

** E-mail: zivka.krnjaja@f.bg.ac.rs

approach where the focus is on the prescribed in advance and designed contents that need to be transferred from an expert on students, towards education for sustainable development, in which the focus is on the lifelong learning and on the knowledge built in the learning community. The education for sustainable development is becoming a global trend, and there are more and more scientific studies dealing with this subject. Many organizations, with its research, projects and publications, seek to support the education for sustainable development. Among them the most prominent is UNESCO.

UN 2030 Agenda of sustainable development (hereinafter Agenda 2030) represents the continuation of the implementation of the Millennium development goals and promotes 17 global goals of sustainable development (World health organization, 2000). In the Agenda 2030, education is recognized as one of the goals (goal 4), that by promoting opportunities for lifelong learning refers to the inclusive, high level quality education (UN, 2015, p. 17). Besides the fact that education is seen as a specific objective, it is also recognized as a part of discourses of the global education policy, or of the national and local policies aimed at strengthening all 17 goals of sustainable development through education for sustainable development. UNESCO has published the book *Education for Sustainable Development Goals: Learning Objectives*, that acknowledge education as a mechanism to support the objectives set out in Agenda 2030. Therefore, education for sustainable development is defined as holistic and transformative education, that is interdisciplinary, value oriented, focused on solving problems, based on multi-methods, participatory and locally relevant (UNESCO, 2017, p. 7).

According to the publication *Education for Sustainable Development Goals: Learning Objectives*, education for sustainable development should empower individuals by specific knowledge and competencies for the purpose of achievement of the goals of sustainable development. "Education for sustainable development enables all individuals to contribute to achieving the goals of sustainable development by equipping them with the knowledge and competencies they need, not only to understand what the goals of sustainable development are about, but to engage as informed citizens in bringing about the necessary transformation" (ibid, p. 8). The competences stated in this publication, that are crucial for the sustainable development are: systemic thinking, strategic, anticipatory, normative, self-awareness, collaborative competences, competencies related to critical thinking and solving problems (ibid, p. 10). They cannot be "prefinished packages of knowledge which have to be transmitted to individuals" (as it appears to some extent in the publication!). Over more, it is not enough that competencies are only individually directed and reduced only to the responsibility of the individuals, because the issue of sustainability of development is not only an individual's matter, but a systemic issue that depends on both individuals and groups, institutions and on the entire socio-political context (Urban et al., 2012, as cited in Pavlović Breneselović, 2014, p. 9).

Education for sustainable development as a holistic and transformative education, because of its comprehensiveness and complexity, is most often described

through its three supporting elements: 1. educational outcomes, 2. educational content, 3. pedagogical prism (RootAbility, 2019).

Educational outcomes relate to the proactive relationship of the individuals and to the development of critical thinking. This leads to a dilemma whether they should be reduced to individual aspects of development (cognitive, socio-emotional, behavioral) as it is shown in the UNESCO publication *Education for Sustainable Development Goals: Learning Objectives* (UNESCO, 2017, p. 11).

Educational content. The question one could be pose related to the educational content is "What we learn?" Learning is perceived as an integrated process, in respect to the sum of individual teaching subjects. By learning the competences necessary to respond to the challenges of sustainability, in professional and personal development arise (UNESCO, 2014, p. 67)

Pedagogical prism. The third element that describes education for sustainable development, that is our knowledge base for understanding of evaluation, is a pedagogical prism. The pedagogical prism is not the tool for explication of the content that will be taught, but the way for development of strategies: How we do it? Whose voice is heard? How do we create an environment that supports sustainable development?

Based on the notion of understanding of education for sustainable development and based on the mentioned publication, in this paper we deal with the question: What kind of approach to evaluation in education is necessary to support education for sustainable development?

What is certain and with what authors of the Agenda 2030 agree is that a more resolute evaluation strategy is necessary. That evaluation strategy should be able to recognize and appreciate the role of the evaluator as a contributor to the change. The role of the evaluator cannot be reduced to the collection of data, but it should be extended to the proactive inclusion as moral obligation to society, to the reflection and to the reexamination, with which we form a sustainable future (Bearnett and Eager, 2017, p. 293; UNESCO, 2017, p. 53). The continuous evaluation that is in the function of development and support could be an important factor of sustainability (Elmor and Burni, 1998, as cited in Florian, 2000, p. 4).

In the continuation of the paper, we will show the differences between the two most common approaches to evaluation, a technical and participatory approach, by examining their potential to support education for sustainable development.

"Tensions" between the technical and participatory approach to evaluation

The approaches to evaluation in education were changed and positioned in accordance with certain socio-historical circumstances and needs, with certain understanding of education, and in line with the development of science and

scientific thought (Booth et al., 2001, p. 27). Evaluation in education has been developed and interpreted differently, for its historical development it can be said that each phase of development has its significance and that it is "a field with many models, approaches and purposes" (Patton, 2010, p. 23).

The "tensions" can be identified as key points (ontological, epistemological, contextual, tensions related to the power, methodological and organizational) that help us to make a clear distinction between the technical and participatory approaches to evaluation, but also to indicate challenges that can arise during the process of evaluation (Chouinard, 2013, p. 243). Different authors (Chouinard, 2013; Mack, 2010; Carter and Little, 2007; Cousins and Chouinard, 2012) as "tensions" between these two approaches distinguished:

- *Ontological tensions* – they deal with the issue of relationships among evaluators and other actors of the process, often referred in the literature as stakeholders. Some of the questions raised within this "tension" are: What is the relationship among them? and What is the role of evaluator? From the attitude of evaluator involved in the process of evaluation depends what kind of relationships will form in the community in which the evaluation is carried out.
- *Epistemological tensions* – they deal with issue of the origin of knowledge. Is knowledge something that exists outside of individuum, is it something that is finished and preset, or is it a construct built through relationships in a community? Crotty (1998) defines epistemology as "a theory of knowledge that is embedded in a theoretical perspective, and therefore in a methodological one" (Crotty 1998, as cited in Mack, 2010, p. 5).
- *Contextual tensions* relate to non-engagement of context in the process of evaluation. The term context is explained through the micro and macro context. The micro context refers to *us* in the local community and to the evolving program, while the macro context implies a wider sociopolitical context.
- *Relational tension of power* –deal with the tensions related to the power: Who has the power in the process of evaluation? Is the power being "shared" or is it the right of "one side"? How is the power distributed and controlled in the relationships that exist among those involved in the process of evaluation?
- *Methodological tensions* – include a methodological solution, i.e. a philosophical assumption that provides a framework for processes of social research, and helps to establish questions, goals and design in the research process (Carter and Little, 2007, p. 1316). Methodological issues mostly relate to the practicality and applicability of what we are dealing with.

- *Organizational tensions* – imply that the success of the evaluation depends on the organizational structure and availability of resources (time, financial, and spatial support) (Cousins and Chouinard, 2012).
- *Pedagogical tensions* – deal with access to learning, i.e. whether based on an explanation through learning terms evaluation is seen as a "technical endeavor" or as a "conceptual practice" (Schwandt, 2003, as cited in Chouinard, 2013, p. 244).

By mapping key issues, we try to examine which of the two approaches to evaluation has more potential to support education for sustainable development. The relationship between a technical and a participatory approach is presented in Table 1.

Table 1. Tensions between the technical and participatory approach to evaluation

Tensions	Technical approach to evaluation	Participatory approach to evaluation
Ontological	Stakeholders are involved in the final phase of evaluation. Absence of dialogue among those involved in the process of evaluation. **Role of the evaluator:** more independent, objective, neutral approach, external control. Evaluators work according to predetermined indicators that are inconsistent with the propagation of their independent role (Gauthier et al., 2010, p. 8).	Evaluators and stakeholders are not separated, they are in unity, related and create the "inter-space" (Heron, 1996, as cited in Chouinard, 2013, p. 243). Trust among them is evident. **Role of the evaluator:** to create conditions that will enable and empower interested parties to participate through the process of evaluation (Trickett, Espino, 2004, as cited in Chouinard, 2013, p. 243).
Epistemological	*Instrumental knowledge.* Knowledge is constructed by experts, professionals, while "objective" evaluators are those who provide "guidance" toward knowledge. Accordingly, knowledge can be measured and controlled. The role of the context is ignored.	*Critical knowledge* is emancipatory knowledge (Habermas, 1971). Knowledge is a social construct that is conditioned socially, politically, historically, and by context. "Knowledge is perceived as something that is constructed collectively with all actors through the process of social interaction." (Long, 1992, as cited in Chouinard, 2013, p. 244). All parties participate in the construction of evaluative knowledge (Rebien, 1996).
Contextual	It is more focused on the macro context and how to fulfill all the obligations and universal standards that are passed from the state "top", than to what happens in the environment in which the process of evaluation takes place.	Evaluation is related to the political, social, historical, program and to the context in which it takes place. Micro and macro contexts are included.

Tensions	Technical approach to evaluation	Participatory approach to evaluation
Relational tension of power	Focus is on the external control, there is no "sharing of power". Existing power structures are strengthened further, while other participants in the process of evaluation have an executive role.	Evaluation is a political as much as a methodological process (Gaventa, Creed and Morrissey, 1998, as cited in Chouinard, 2013, p. 246). It is based on democratic principles, sharing power and taking responsibility. The responsibility is shared based on the competencies of participants in the process, that is constantly being built through interactions with others and with the environment, in accordance with the situations in which they are involved. The emphasis is on shared leadership grounded in relationships, build on ethical principles in a particular community.
Methodological	Predetermined methodology, usually with quantitative design. All methods that do not meet the "gold standards" (objectivity, neutrality) are expelled from further use. It runs linearly according to the established recipe.	The choice of methods depends on the context and involves all interested parties. Usually with qualitative design. It runs circularly and many phases cannot be viewed separately from each other. It primarily emphasizes the importance of the clear value base on which a methodological design is based.
Organizational	Top-down access. The hierarchical structure has central control, driven by effectiveness rather than by democratic principles (Behn, 1998, as cited in Chouinard, 2013, p. 247). The organization is designed "externally" and as such implies that the direction of change occurs from the outside to the inside.	Bottom-up approach. Collaboration is strengthening that empowers participants to organize themselves according to the situation and context. All parties are involved in the process of organization from the very beginning.
Pedagogical	*Technical venture* Evaluation as a set of tools that if used properly can improve practice with the tendency of generalizing the obtained results. (Schwandt, 2003, as cited in Chouinard, 2013, 244). Evaluation is focuses on proving the efficiency and effectiveness of what we are evaluating. Learning takes place through repetition of established forms.	*Evaluation as a conceptual practice* Evaluation is grounded through dialogue, situational learning and learning through practice. Through evaluation, it seeks to changes. The knowledge is created through the dialogue of the participants in the evaluation as a response to the questions of what works best in the given practice and what helps us in a certain context to co-create a better future (Purešević, et al., 2019, p. 110).

Starting from the understanding of education for sustainable development as "a holistic and transformative education" (UNESCO, 2017, p. 7), one can notice that to the such understanding of the education correspond the evaluation based on a participatory approach.

In accordance with given understanding and based on the analysis of various sources, we will try to outline an evaluation model based on a participatory approach. We are aware that creating a model based on a participatory approach to evaluation requires more longer-term and fundamental researches of a participatory approach to evaluation, that goes beyond the scope and purpose of this paper. In our article, outlining the model has the function of "litmus test" for recognizing different models based on a participatory versus the technical approach to evaluation, which we will deal with in the forthcoming researches.

Through "tension" to the model of a participatory approach to evaluation

For the purpose of this paper, we defined participatory approach to evaluation in education as a "learning system through which social groups build knowledge oriented towards action on their reality, clarifying and articulating their norms and values and reaching a consensus on further actions" (Brunner and Guzman 1989, as cited in Garaway, 1995, p. 87).

The foundation of model based on a participatory approach to evaluation is a process of continuous learning based on interconnection between of reflection and action (Figure 1). Reflection and action are supported by the principles of flexibility, listening, multi-perspectivity, trust, negotiation and participation. Evaluation based on a participatory approach is firmly linked and consistent with the context in which it takes place.

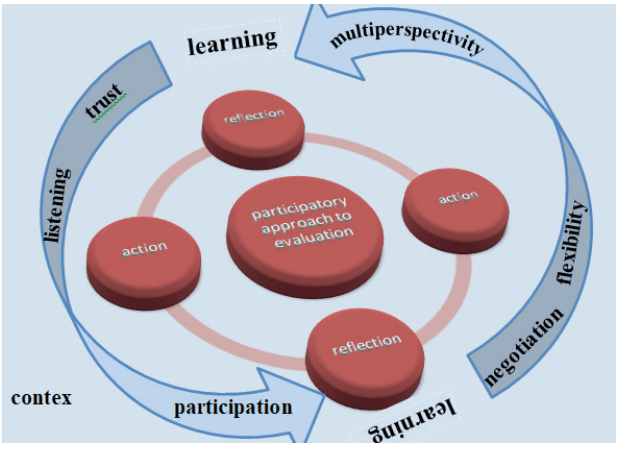

Figure 1. Model of participatory evaluation approach

Learning

In this model learning is considered as a collaborative process through which participation changes qualitatively, participants are being transformed, but also the way of learning in a community (Rogoff et al., 2001; Mac Naughton, 2003; Krnjaja, 2014a; Pavlović Breneselović, Krnjaja, 2017). The knowledge that arises in the learning process is a co-constructed meaning, where each participant authentically contributes to his own experience. It is not "flowing" of knowledge from experts (in this case, an evaluator), as something outside of man, universally given; on the contrary, it is social co-construction (Bandura, 1977, 1986, as citad in Cousinse and Earl, 1992, p. 401). In accordance with this reflection, Estrella and Gaventa gave a figure that show a circular learning process in a participatory approach to evaluation (Figure 2) (Estrella and Gaventa, 1998, p. 30).

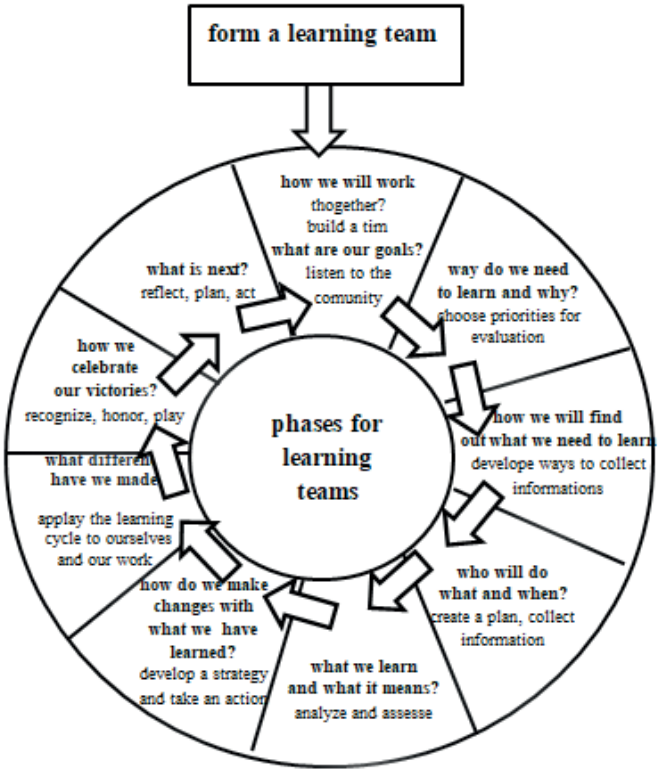

Figure 2. Circular learning process (Estrella and Gaventa, 1998)

Through the demonstrated circular process, learning is realized from the very beginning of the process of evaluation. By forming a team, by listening to the community and by team efforts, actions are being designed, followed by

analyzing, making strategies and reflecting in order to understand, and then, based on acknowledgement, actions are re-designed. "The transformative nature of learning means that through the process of learning we change ourselves, our understanding of the world, our relationships, and thus the community in which we live and work" (Pavlović Breneselović, 2015, p. 272). The transformation we aim for can be achieved *with* and *through* an evaluation based on a participatory approach, because it leads to "the consolidation of new practice" (Engeström, 2001, p. 152).

Creation of a new practice and opening new possibilities leads to the collective development zone (ibid, p. 137). The transformative nature of learning in a participatory approach to evaluation can be monitored at the levels of individual participant, educational program seen as a practice, and at the level of community of participants.

Personal level – By participating in a participatory approach to evaluation, we learn to negotiate, to develop empathy and understanding, to plan and accept new roles, to accept responsibility, to build confidence and to strengthen our competencies based on the confidence that other participants point to. In this way, we become co-researchers in the evaluation, who plan actions and transform their initial roles.

The educational program – educational program in a participatory approach to evaluation represent a practice based on the quality of the participants' relationships, their knowledge, beliefs and experiences (Krnjaja, 2014, p. 198). Continuous reconsideration through evaluation gives us the opportunity to understand as participants values on which our practice is grounded, to monitor how practice changes through action, and how the evaluation contributes to changing practice.

Community of participants – is changing by strengthening confidence in individual strengths, as well as by development of the strengths of the entire community and by development of a culture of dialogue. The key mechanism for connecting members of the community is realized through dialogue (Pavlović Breneselović, 2015, p. 273). Evaluation based on a participatory approach enables us as participants to share ideas, proposals, to build a community that is open to researches and changes.

Reflection and action

In the participatory approach to evaluation reflection can be defined as relation of the participants *in evaluation* and *toward evaluation*, that enables them to reconsider a certain event or situation from several perspectives, to pose questions and to develop new ways of thinking and understanding of themselves and their actions (Miller, 2011, as cited in Krnjaja, 2016, p. 96). The reflection we practice in the evaluation implies intellectual engagement, in order to change

practice by transforming knowledge (MacNaughton, 2003, p. 3). Understanding why something is in progress and how it takes place is a continuous process by which we examine and change practice through what we do in practice. Reflection is in synergy with action, and therefore, they are inextricably displayed and shifting in a model based on a participatory approach to evaluation. Through them, we learn in the process of evaluation, but also, we follow up our own learning, we reconsider what has been done, we understand our position in that process, we understand the position and the role of others, and we determine the priorities for improvement. We do all of this in order to initiate the following actions and to make a change, while we resist routines and support reflexive action (Miškeljin, 2016, p. 396). The learning through evaluation without action and reflection is monotonous, clichéd and alienated from the participants in the process of evaluation.

Principles

For continual interconnection between action and reflection to lead to change, it is essential that their interconnectedness and interaction are supported by certain principles. Estrella and Gaventa (1998, pp. 17–27) have established principles as a basis for a participatory approach to evaluation, which we extend with the principles of trust and multi-perspectivity. All principles are dynamic and interconnected:

- *Negotiation.* Each participant in the process of evaluation brings their own values, which do not have to match the values of other participants. That is the reason why there is a need for negotiation, through which are formed common meanings. This does not mean that once "negotiated" is forever established. Since evaluation is a process, this means that negotiation is constantly going on and that what we negotiate can be changed, shaped, upgraded. Participants work together and reach the focus of evaluation together, they participate in the process of evaluation outlining, they decide together what will be done with the data and what actions will be undertaken. This often results in different opinions, but that is the essence, that by the process of negotiation we come to a common view. The basis of the negotiation is the dialogue, that is realized between the different parties, and its basis is the word. It is more than an instrument that allows dialogue, because through the word action and reflection are achieved (Freire, 2005, p. 87). However, as Freire states, if a dialogue is devoid of reflection, then it becomes just pure activism, and if it is devoid of action, then it becomes just "rambling talk" and "pure verbalism" without the desire to do something (ibid, p. 87)
- *Listening*. Listening is not a passive reception of information, but an active exchange process consists of discussion, dialogue, interpretation and

constructing meaning (Clark, 2005, as cited in Pavlović Breneselović, 2015, p. 18). Listening is closely related to negotiation and these two cannot be separated, because if there is no negotiation in the listening process, and if there is no listening in negotiation, then there is no building up of a common meaning. This process is not easy, because it requires the absence of biases and judgment. Listening is open and welcome differences, recognizes the values of a different viewpoint and interpretations (Rinaldi, 2001, as cited in Pavlović Breneselović, 2015, p. 288)

- *Flexibility.* As flexibility, many authors consider only the flexibility that relates to the methodology in a participatory approach to evaluation: "Flexibility involves the use of a creative methodology to respond to the skills, needs and available resources of participants (US Agency for International Development, 1996 and the Institute of Development Studies, 1998, as cited in Zukonski and Luluquisen, 2002, p. 2). However, flexibility is much more than that, it doesn't encompass only methodological "creativity", but also the consistency of the entire process of evaluation with the context in which it takes place. Therefore, a participatory approach to evaluation cannot consist of a set of fully predetermined steps to be taken, because evaluation is the process inseparable from the sociopolitical, historical, cultural and from the context, as well as from the educational programs (Pavlović Breneselović, 2014a).
- *Trust.* Trust is developed through the open communication of community participants, through the joint planning, through the mutual support in action and through the reflection on changing practice (Krnjaja, 2016, p. 160). To give confidence means that evaluators provide support to those involved in the process of evaluation. Each of the parties has its own competencies at its disposal, that in the process of evaluation should be respected; for further development of these forces it is necessary to have confidence in them.
- *Multi-perspectivity.* In the evaluation that is based on a participatory approach, we have a lot of different perspectives and here we can say the more perspective involved, the better. By intersection of different attitudes, views, values, it is possible to get a more complete impression of what is being evaluated and supported in further development through the process of evaluation. Multi-perspective examination and participation in change means that "no one is excluded" (Segone and Tateossian, 2017, p. 26).
- *Participation*. It implies participation of all involved in process. Besides, we tend to include those who are "quiet" and have something to say. The participation is "opportunity and possibility to provide and to contribute to the community, by overviewing own activities as

efforts that environment considers valuable and important" (Pavlović Breneselović, 2010, p. 262).

Context

Consider that the micro and macro context form an approach to evaluation, a participatory approach to evaluation cannot be developed without taking into account the nature of the context; and reversing, for a participatory approach to evaluation it is necessary to build the context in which participatory evaluation is possible. The micro context includes everything that happens in the relationship between us and our environment (local community) and the relationship between us and the educational program that we are creating. The macro context implies the wider picture, it refers to the socio-cultural, political, historical circumstances (Choinard, 2013, p. 245). What will happen at the micro level depends greatly on the macro level, but also the changes on the micro level could significantly affect the macro level.

Snowdon and Boone (Snowdon and Boone, 2007, as cited in Cousins et al., 2012, p. 16) designed *Cynefin* (the Welsh term for a habitat) for easier planning and decision-making, depending on the different contexts. Subsequently, Paton (Patton, 2010, p. 108) adapts that design by examination of the process of evaluation in different contexts. Acknowledgement of the existence of different contexts is necessary to emphasize those in which it is only possible to develop a participatory approach to evaluation.

A simple context – the context in which evaluators collect all information according to a well-established procedure, categorize them and make a conclusion. In this situation, well-founded procedure is embraced, according to the principle "what has worked in many cases will function in each of the following ones".

A chaotic context – the context in which the evaluators take responsibility to "establish order" by focusing on the examination of practice by keeping the set of norms in the evaluation, while ignoring all unexpected and unforeseen circumstances. The evaluator, with limited role in introducing a change in practice, immediately makes a recommendation or decides to normalize the practice in accordance with a pre-set evaluation procedure (Snowdon and Boone 2007, as cited in Cousins et al., 2012, p. 17).

A complicated context – there are more than one correct statement. The evaluator should analyze the situation and to examine all possibilities. The context cannot be controlled as is the case with a simple context, but it has a certain degree of predictability. "Good practice" here works more than the only possible "best practice" (Cousins, et al., 2012, p. 17).

The complex context is dynamical and not fully predictable. The obtained information is based on the perspectives of different participants. Practice is emergence; because it is built through the whole process of evaluation, it is not

"prescribed". In such context, there are many opportunities for creativity and innovation. Therefore, instead of imposing the existing method or to jumping into a conclusion, practice of evaluation is explored, and taken into consideration. Evaluators focus on identifying the current situation, providing feedback, documenting and tracking in the function of changing practice. Reflexive practice is introduced among the involved parties in the process of evaluation to bring a common reflection on change in practice (Patton, 2010, p. 110).

Just in a complex context, we initiate a complex thinking that drive us to change the metaphor into education from the system as a "machine" to the system as a "living entity" (Zimmerman, 2000, as cited in Cousins, et al., 2012, p. 18). In the field of evaluation, Paton welcomes complexity as a "big unexplored rug" (Patton, 2010, p. 106), while evaluations based on a participatory approach are embedded in such a rug.

Instead of the conclusion: an overview of a participatory approach to evaluation in education for sustainable development

Approaches to the evaluation in education differentiated depending on the understanding of education and on the attitude toward education that is supported in the micro and macro context. In this paper we have followed the definition of education for sustainable development according to the UNESCO publication *Education for Sustainable Development Goals: Learning Objectives*, as the education that "empowers those who learn to take decisions and responsible actions ... for present and future generations, with respect to cultural differences" (2017, p. 7).

From this understanding of education, one can conclude that, consequently, approach to the evaluation based on continuous learning through evaluation and based on the mutual relationship of action and reflection is necessary. It is an approach that is participative, multi-perspective, flexible, based on dialogue, listening, and trust relationships. Therefore, we highlight the considerations given by Barnett and Eager (2017), pointed to the increasing evaluation practice based on a participatory approach. In the years ahead, access to evaluation will increasingly require:

1. methodological pluralism with cohort evaluation design,
2. systemic thinking and complexity,
3. increased engagement and flexibility, and
4. step forward in relation to previous understanding and use of data that are mainly used for the purpose of confirmation of a certain practice, rather than in the purpose of making changes in the practice (ibid, p. 303).

In order to keep up with such understanding, it is necessary to develop a strategy at the level of education policy to strengthen and to support education for sustainable development, and thus a participatory approach to evaluation.

For start, we offered a sketch of a model that represents initial considerations of possibilities as well as potential constraints of evaluation based on participatory approach. For establishment of such a model, it is necessary to step forward in reaching a consensus in understanding the purpose and expectations of education, to reconsider the previous approach to evaluation in education and to increase number of researches on different approaches in evaluation.

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INFORMATION ABOUT THE AUTHORS

Radovan Antonijević is a full professor at the Faculty of Philosophy, University of Belgrade (Serbia) – Department of Pedagogy and Andragogy. He teaches various courses in the field of general pedagogy, at undergraduate, master and doctoral studies. His main fields of research interest are general pedagogy, epistemology of pedagogy, intellectual education and evaluation in education. He has been engaged as a researcher or project manager in various projects of national and international scope. He is author of 4 books and many articles.

Akvilina Čamber Tambolaš holds the title of Master of Early and Preschool Education and works as an Assistant Lecturer at the Faculty of Teacher Education, University of Rijeka, Croatia. She is a doctoral student at the Department of Pedagogy, Faculty of Arts and Social Studies in Rijeka and an associate in the team working on the scientific project entitled 'The Culture of Educational Institutions as a Factor in the (Co)construction of Knowledge'. Her scientific interests include: early and preschool education; the culture of educational institutions; new paradigm of the child and childhood; (co)construction of curriculum; action research. As a co-author she published several research papers and actively participated in a few international and national conferences. She participates in teaching at the undergraduate and graduate study of early and preschool education at the Faculty of Teacher Education in Rijeka.

Andreja Hočevar is assistant professor of Preschool and family education at the University of Ljubljana (Faculty of Arts, Department of Educational Sciences). Her professional interests include early childhood education and care, structural and process quality of preschools and living of children in various forms of family life. She is author and co-author of several articles published in internationally recognized journals. She is currently implemented research (with Mojca Kovač Šebart) on international tendencies in the field of determining and ensuring the process quality of early childhood education and care.

Majda Joshevska is a psychologist by profession and holds a Master's in Education Research from University of Cambridge, UK. Currently she is employed as a Programme Manager for the EU "Community-Led Inclusive Partnerships" Project at 'the Foundation for Education and Cultural Intitiatives, Step by Step' – North Macedonia. As a Programme Manager she leads professional development programmes for teachers, on a variety of topics: teacher leadership, innovative teaching methodologies, social-emotional learning, inclusion of marginalised children and children with disabilities. Her professional and research interests include: models of continuous professional development, teacher leadership based learning communities, social-emotional learning, and inclusion of people with disabilities within education systems and society.

Živka Krnjaja is full professor at the Department of Pedagogy and Andragogy of the Faculty of Philosophy at University of Belgrade and Senior Researcher affiliated to the

Institute of Pedagogy and Andragogy. Fields of interest and research: early childhood education, curriculum development, curriculum evaluation, practitioners' research, children's play and creativity.

Vladeta Milin is an Assistant Professor at the Faculty of Philosophy, University of Belgrade (Serbia) – Department for Pedagogy and Adult Education. He is teaching various didactic related courses at undergraduate and doctoral studies. His main fields of interest are didactic theories and models, teaching methods, dialogue in class, and educational effectiveness. He was engaged as a researcher in various projects of national and international scope aimed at: exploring and improving the quality of teaching/learning in schools; exploring factors of educational effectiveness; exploring student achievement in mathematics and science; exploring educational reforms in Serbia etc.

Lidija Miškeljin is an Assistant Professor at the University of Belgrade – Faculty of Philosophy, Department of Pedagogy and Andragogy and researcher at the Institute of Pedagogy and Andragogy. *Field of interest*: early childhood education, systems and programs of preschool education, contemporary childhood studies, teacher professional development. *Research topics*: action research; diversity and diversification in early childhood education; childhood studies. Has been participated in many research and applied projects of Ministry of Education, UNICEF and IPA. She has published two books (one as the sole author), several articles, mainly from the field of early childhood education, in relevant Journals and scientific conference proceedings.

Nevena Mitranić is Teaching Assistant at the University of Belgrade – Faculty of Philosophy, Department of Pedagogy and Andragogy and a junior researcher at the Institute of Pedagogy and Andragogy. *Field of interest*: early childhood education, child's play and creativity, teacher professional development, non-representational research methodologies. *Research topics:* play in educational policy, theory and preschool curriculum. She has participated in several projects of Ministry of Education, UNICEF and IPA. She has published several articles, mainly in the topic of rethinking child's play, in relevant Journals for educational studies.

Balázs Németh is a researcher on European adult and lifelong learning policy development and comparative adult education. He is an associate professor and reader in Adult Learning and Education at the University of Pécs and a founding member of the Hungarian Universities Lifelong Learning Network (MELLearN). Further research topics of his are: Politics and Adult Education; Comparative Adult Education; History of Modern European Adult Education and Learning City-Region Developments in association with the global network of learning cities programme (GNLC) of UNESCO Institute for Lifelong Learning. He is a member of Steering Committee of EUCEN for 2015–19 period being responsible for policy affairs and talks. He is a vice-Director of PASCAL International Observatory for Central-East Europe, Executive President of MELLearN and the current president of the Adult Education Sub-Commission of the Hungarian Academy of Sciences.

Nataša Nikolić is a teaching associate at the Faculty of Philosophy, University of Belgrade (Serbia) – Department of Pedagogy and Andragogy. Her main fields of interest are general pedagogy, intellectual education, education of the gifted and out-of-school

education. She is engaged as a researcher in project of national scope aimed at exploring and improving the quality of education.

Violeta Orlović Lovren is Associate professor in Department for Pedagogy and Andragogy, University of Belgrade. Her fields of teaching are strategies and methods of adult teaching, professional development of teachers in adult education, environmental adult education and sustainability. Fields of recent research interest: teachers' perspectives and strategies in adult teaching; sustainable development at universities; didactic aspects of teaching for sustainability.

Dragana Pavlović Breneselović is Full Professor at the University of Belgrade – Faculty of Philosophy, Department of Pedagogy and Andragogy and researcher at the Institute of Pedagogy and Andragogy. *Field of interest*: early childhood education, complex systems and systemic change in education, teacher professional development. *Research topics*: family-school partnership; research with children; child well-being. Has been participated in many research and applied projects of Ministry of Education, OSI, UNICEF and IPA. Author and co-author of eleven books, mainly from the field of early childhood education.

Danijela S. Petrović is an Associate Professor at the University of Belgrade – Faculty of Philosophy, Department of Psychology. She has more than 20 years of professional experience in university teaching, professional training and research in the field of educational and school psychology, intercultural and inclusive education, communication skills and mediation. Her main research interests are intercultural sensitivity, competence and beliefs of teachers, professional development of teachers, equity and quality of education, educational leadership, and communication and interpersonal conflicts.

Katarina Popović is Associate Professor at the Department for Andragogy, Faculty of Philosophy in Belgrade and Secretary General of ICAE (International Council for Adult Education, visiting professor for adult education and lifelong learning at few European universities, and president of the Serbian Adult Education Society. She is the member of International Adult and Continuing Education Hall of Fame, several relevant European and international organisations, editor in chief of the journal "Andragogical studies" and author of numerous publications, articles and books in the field of adult education and lifelong learning.

Dragana Purešević is Teaching Assistant at the University of Belgrade – Faculty of Philosophy, Department of Pedagogy and Andragogy and junior researcher at the Institute of Pedagogy and Andragogy. *Field of interest*: early childhood education, evaluation in education. *Research topics*: participatory approach to evaluation in ECE, dialogue and democracy in education.

Lidija Radulović is an Associate Professor at the Faculty of Philosophy, University of Belgrade – Teacher Education Center. She is teaching various didactic and teacher education related courses at undergraduate, master and doctoral studies. She's area of interest and research are: Teacher education and professional development, Reflective practice of teachers, Evaluation and self-evaluation in education. She was engaged in a several research and action projects, as researcher, team member or coordinator (topics: teacher

education, equality of higher education, self-evaluation in preschool education...). She is author or co-author of 4 books, few handbooks and many articles.

Nena Rončević is an Associate Professor at the Department of Education, Faculty of Humanities and Social Sciences, University of Rijeka in Croatia where she teaches courses on the methodology in social sciences, statistics and education for sustainable development. She was Head of Department for Education Faculty of Humanities and Social Sciences, University of Rijeka and a project leader on: "Academic Profession in Knowledge Society (APIKS-HR) from 2016 until 2018. Currently, she is a project leader on "Academic community from within: the challenges of changes in the academic profession" funded by University of Rijeka, a researcher on a project "Formal education in service of sustainable development" funded by Croatian science foundation and has recently been appointed as a National Project Manager for PIAAC research in Croatia.

Nataša Simić is a research associate at the Institute of Psychology, Faculty of Philosophy, University of Belgrade. Her main fields of expertise are teacher professional development and inclusive education. She participated in many national and international projects, including eSchool4S, aimed at developing online learning materials for teachers on sustainable development.

Milan Stančić is an Assistant Professor at the Faculty of Philosophy, University of Belgrade (Serbia) – Department for Pedagogy and Adult Education. He is teaching various didactic related courses at undergraduate and master studies. His main fields of interest are teaching methods, evaluation in teaching, quality and evaluation of teachers' work, teacher education and professional development. He was engaged as a researcher in a few projects of national and international scope aimed at: exploring and improving the quality of teaching/learning in schools; improving the quality of teacher education in Serbia; exploring educational opportunities of students that are underrepresented in university education in Serbia (e.g. Roma students, students from socio-economically disadvantaged families and local communities, etc.).

Anamarija Vinković graduated in pedagogy in 2017 at the Faculty of Humanities and Social Sciences, University of Rijeka. During the study, the area of interest was education for sustainable development and andragogy. In 2015 she actively participated as a student coordinator in the "Action for 5!" Delta Association, created within the project "Think Globally, Work Local". Anamarija currently works as a pedagogue in Crafts School Bjelovar and she's a coordinator for the "Eco School" project in which the school participates.

Lidija Vujičić is a pedagogue, a Full Professor and a current Dean of the Faculty of Teacher Education, University of Rijeka, Croatia. She is the founder and the head of the Centre for Childhood Research at the same Faculty. Her scientific interests include: early and preschool education; new paradigm of the child and childhood; the culture of educational institutions; (co)construction of curriculum, initial education of preschool teachers; professional development of teachers/preschool educators; action research. She teaches at the postgraduate doctoral study of pedagogy, held at the Faculty of Arts and Social Studies in Rijeka.As a researcher, she participated in several research projects, published a series of research papers and participated in numerous international and national conferences. She is currently leading the scientific project entitled 'The Culture of Educational Institutions as a Factor in the (Co)construction of Knowledge'.

Nena Vukelić earned her master's degree in Psychology in 2013, at the Faculty of Humanities and Social Sciences, University of Rijeka. From 2014 to 2018 she was appointed as a teaching assistant (external associate) at the Department of Education and the Department of Psychology (University of Rijeka), where she's assisted in various courses on graduate and undergraduate level in the field of statistics and methodology of research in social sciences. In 2013 she enrolled in the Postgraduate doctoral study program in Psychology, and in 2017 in the Postgraduate doctoral study program in Pedagogy. Since 2018 she is employed as a research assistant (PhD student) on the scientific research project "Formal Education in Function of Sustainable Development (forOR) ", funded by the Croatia Science Foundation.

Mojca K. Šebart is full professor of Sociology of Education at the University of Ljubljana (Faculty of Arts, Department of Educational Sciences). Her research topics include preschool and family education, authority, moral education, citizenship education, classroom and school culture, assessment in education and textbook publishing. She is author and co-author of several articles published in internationally recognized journals and author and co-author of several books, among others (with M. Kovač) *Knowledge, Values, Equity: Contemporary tendencies in education* (2018).

James Underwood is a Principal Lecturer in the Faculty of Education and Humanities at the University of Northampton, UK. His professional and research interests include: teachers' continuing professional development, teacher led research for school improvement, professional communities, non-positional leadership, qualitative and auto-ethnographic research methods, mentoring, and using the arts to achieve change in schools and communities.

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