PROBLEMS AND PERSPECTIVES OF CONTEMPORARY EDUCATION
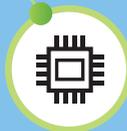
EDITORS   Nikoleta **GUTVAJN**   Jelena **STANIŠIĆ**   Vera **RADOVIĆ**

Series
„PEDAGOGICAL THEORY AND PRACTICE”

52

ipi

PROBLEMS AND PERSPECTIVES OF CONTEMPORARY EDUCATION

PROBLEMS AND PERSPECTIVES OF CONTEMPORARY EDUCATION

Editors

Nikoleta GUTVAJN
Jelena STANIŠIĆ
Vera RADOVIĆ

Belgrade
2021.

INSTITUTE FOR EDUCATIONAL RESEARCH
BELGRADE, SERBIA

FACULTY OF PHILOLOGY, PEOPLES` FRIENDSHIP UNIVERSITY OF RUSSIA
(RUDN UNIVERSITY), MOSCOW, RUSSIA

FACULTY OF TEACHER EDUCATION, UNIVERSITY OF BELGRADE
BELGRADE, SERBIA

CONTENTS

FOREWORD

The invention of the steam engine and the shift from manual to mechanical production in the second half of the 18th century marked the beginning of the First Industrial Revolution, which was to significantly change the existing political, economic, and social systems in the greater part of the world. After 1870, the use of new energy resources began, along with the steady development of existing industries. This marked the beginning of another industrial revolution known as the Technological Revolution. The use of electrical energy increased and its power was used to facilitate mass production. A third industrial revolution – the Digital Revolution - began in the middle of the 20th century. It marked the transition from mechanical and analogue electronics technology to digital electronics. Today, the world is on the threshold of a new industrial revolution marked by a fast-paced development of technology. The Fourth Industrial Revolution is a fusion of modern technological innovations in various fields, all based on the digital revolution and focused on artificial intelligence, nanotechnology, and mobile devices.

The innovations in all three preceding industrial revolutions led to a series of changes in the structure and dynamics of society, which affected the economy, culture, education, politics, and everyday life. Changes in the field of education occurred in all segments, from defining the curriculum to acquiring key competencies required for life and work in particular technological and social contexts. Accordingly, new occupations arose while some existing ones disappeared. We assume that the Fourth Industrial Revolution will have similar implications. In modern society, digitalization has become crucial for economic and personal development and digital technologies keep penetrating the field of education (for example, e-learning and distance learning as a means of acquiring skills and competencies). The extraordinary circumstances caused by the COVID-19 pandemic have revealed the extent of digital development of today's society and its readiness to face all challenges of this technology. For now, the effects of the Fourth Industrial Revolution on the character of education are apparent in the changes that occurred in several important segments, such as: social networks, multifunctional mobile devices and educational software, teaching content, new educational profiles and occupations, lifelong learning, and

a new concept of educational politics (Bazić, 2017). Considering that we are on the threshold of the Fourth Industrial Revolution, it is essential to reconsider the role of education, given that the new technological industries that exist today only appeared about ten years ago. The traditional educational system is undergoing transformation as it prepares the young for working in a structured industrial system, i.e. in the environment that changed years ago. Today's jobs mostly include teamwork; they are multidisciplinary and interdisciplinary, so education must match. It should prepare young people for life by encouraging their curiosity, critical thinking, creative problem-solving, cognitive flexibility, and teamwork, expressing their own opinion and emotions. New generations of students are pursuing flexible educational pathways, repositioning of schools, and knowledge which is not necessarily guided by teachers.

Is modern education encouraging development of key skills, attitudes, intuition, experience and creativity? It is obvious that modern education is experiencing profound changes, whose goal is the more direct participation of education in the development of society. This requires remodelling of the existing value structure towards perceiving knowledge as an economic resource that contributes to sustainable development, productivity increase and encouragement of an entrepreneurial culture. Modern technological innovations impose on education a need for new occupations, encouraging at the same time meaningful changes within the educational process.

The aim of the book *Problems and perspectives of contemporary education* is to look at the problems and perspectives of modern education development in our country and worldwide. The book contains twenty texts by authors from ten countries (Serbia, Russia, America, Poland, Greece, Mongolia, Croatia, Slovenia, Macedonia, and Bulgaria), with topics focused on elaboration of a number of issues important for the development of modern education, such as: examining the role of obsolete education forms in modern society, teaching and learning, linguistic development and functional style, professional development of teachers, information technology and the possibilities of online teaching, motivation and learning strategies, environmental literacy, position of juvenile delinquents in the educational system, and models for preventing problem behaviours.

Paulo Freire, the acclaimed Educational Historian, Philosopher, and Activist is credited with the observation that "Any situation in which some individuals prevent others from engaging in the process of inquiry is one of violence. The means used

are not important; to alienate human beings from their own decision-making is to change them into objects." In the introductory paper *A modest ambitious proposal: envisioning an education system that works for everyone*, the authors Kornelija Mrnjaus and Jason Laker discuss the history of progressive education movements and the emergence of human-capital theory as the prevailing educational framework, critically arguing that even with the best of intentions such models are inherently limiting to students, communities, and nations alike. Accordingly, they challenge the persistent notion that inclusive education is inefficient or economically prohibitive, and propose a vision of education that works for everyone and which provides exponential returns for students, communities, nations, and the world.

The paper *Knowledge in shadow - misconceptions related to light phenomena that are retained in spite of education* by Gordana Miščević, Sanja Blagdanić and Marija Bošnjak Stepanović emphasizes the need to point out the importance of initiating science education at an early age. In both children and adults, knowledge related to natural phenomena is created through interaction with the environment and through social interaction (with adults and peers), as well as through formal and informal learning situations. The aim of this research is to identify the frequency of various misconceptions related to light phenomena in fourth-grade students and primary school class teachers. Findings of this research reveal that the majority of students show a misconception related to the apparent change of the Sun's position during daylight. Teachers mostly show no dilemma regarding shadow shape, and the same holds true for approximately two thirds of students. Additional findings are presented and discussed in the paper. Teachers should have an insight into the most frequent and typical misconceptions of students in order to identify them and react to them adequately. One of the main roles of the educational system is to identify these misconceptions and help students overcome them.

The Paper *Project-based learning: challenges and implementation support* by Ivana Đerić, Dušica Malinić and Rajka Đević presents the characteristics of three similar approaches in learning: 1) Inquire-Based Learning/Inquire-Based Scientific Education; 2) Problem-Based Learning; 3) Project-Based Learning. The similarities and differences between these approaches are pointed out, as well as the criteria that should be considered when choosing them in teaching practice. Then, initiatives in the preparation and implementation of project-based

learning in the education system of Serbia are presented. A critical review is given of systemic trainings and manuals that were created as forms of support to teachers and school counsellors in the implementation of project-based learning in our country. It was pointed out why facilitating the work of teachers, getting acquainted with the importance and ways of formative evaluation, and monitoring in projects, techniques/methods for conceptualization of research questions can be effective ways to prevent difficulties in project-based learning. It was concluded that the implementation of project-based learning is a complex and challenging task for the educational system, teachers, and students, which requires additional professional, emotional, and organisational support.

Author Janja Zmavc in the chapter *Teaching rhetoric in primary school – towards modernization of society with classical techniques and practices* presents the characteristics of teaching rhetoric as a compulsory elective subject in the ninth grade of elementary schools in Slovenia. It represents a unique education feature, since in other European educational systems (as well as elsewhere in the world) at elementary level stakeholders are not familiar with an independent subject where pupils could systematically learn the principles of successful public persuasion. After a brief presentation of the circumstances surrounding the placement of the subject of rhetoric in the Slovenian elementary school curriculum, the author outlines its characteristics and presents some particularities of teaching this skill from 1999 to the present day. The main focus in the second part of this paper is the presentation of partial results of the project *Developing of theoretical bases and practical guidelines for teaching rhetoric in primary and secondary schools* which has been conducted at the Educational Research Institute Slovenia from 2018. The author demonstrate the main (content and didactic) directions of developing a new version of the subject-curriculum for teaching rhetoric in the primary school. Thus, the author tries to show that rhetoric seen as an integral part of the elementary education does not represent an additional ballast or burden but precisely because of its unique (i. e. classical) features, it enables a critical reflection of knowledge and promotes democratic processes within the school environment, which represent one of the key elements in the development of students' competences for effective participation in modern democratic cultures.

In the paper *The importance of language culture in contemporary education*, the author Jelena Stevanović, points to the status of functional style in the curriculum for 4th (final) grade of high school (gymnasium and secondary vocational school),

and analyses the results which high-school students and students from non-philological universities achieved in a functional style test. Her analysis highlights two important points. First, it is necessary to create a new curriculum which would not marginalize functional style - one of the three basic fields of the entire Serbian language curriculum for the secondary education - but organize it in a systematic, precise, and detailed manner. Since both high-school graduates and university students displayed insufficient knowledge of functional style in this test, and since practical application of a functional style was their main problem, it is crucial that students, especially in teacher education faculties where the language of the profession is virtually inevitable, have a mandatory subject which would teach the rules of Serbian literary language, i.e. its functional style, all in order to end the decline in the quality of oral and written discourse of young speakers of Serbian language.

The paper by Emilija Lazarević and Jelena Stevanović *Definitions and defining as indicators of language development of preschool children* deals with the issue of defining and definitions which, from a theoretical point of view, represent an example of decontextualized use of language that enables the understanding and internalizing of information; this correlates with the acquisition of new knowledge and improvement of language competences and language development in general. The paper presents research results on language development regarding the ability to define as one of the dimensions of metalinguistic awareness and indicators of lexical and semantic level of language in preschool children. Bearing in mind the observation that one of the most obvious effects of education is manifested in language behaviour and its diversity, the obtained results indicate a need for, as early as in preschool education, creating opportunities that would contribute to a more advanced metalinguistic (especially semantic) development which would encourage both the consolidation and improvement of children's language development, as its connection with the academic achievement of students has been recognized and confirmed.

The authors of the paper *Primary school and preschool teacher motivation for horizontal learning: the challenges and perspective of professional learning communities development,* Isidora Korać, Jelena Đermanov and Danijela Šćepanović reflect on a number of issues related to the motivation of primary school and preschool teachers to participate in the process of horizontal learning, stressing the importance of the role of these actors in such process. As one of

the main questions the authors discuss is the understanding of horizontal learning as phenomenon by practitioners, while emphasizing that the core of the process of horizontal learning constitutes a dialogue, as a basis for group context building, knowledge gain and relations between participants, (self) reflection, mutual examining of theoretical perspectives, as well as practices based on selected theoretical approaches. Relying on the research findings and combined analysis, the authors conclude that the motivation and participation of primary school and preschool teachers in horizontal learning depends on: recognition of learning benefits by participants; belief that what is being learned will be relevant to their professional work; developing the necessary competencies and empowering participants to take an active role in the learning process; a supportive school principal; and a sense that learning and professional development are highly valued both in the institution and society. Discussing various possibilities of intensifying horizontal learning, the authors point out the need to build a discourse of a professional learning community in which employees have a sense of connection and belonging and where there are common agreed values, visions, and development goals.

In the chapter *How to integrate coaching into teacher training programs* authors Nikoleta Gutvajn and Jelena Pavlović introduce an approach to teachers' professional development that combines traditional training with coaching as an intervention. In the first part of the chapter, the authors elaborate on the differences between the terms professional development, training and coaching. The authors also articulate some of the guiding principles for integrating coaching into teacher training programs. A model of integration of training and coaching is exemplified with an accredited professional development program in Serbia. Finally, the authors offer some concluding remarks regarding integrating coaching into teacher training programs.

The theoretical rationale for the paper entitled *The problems of teacher's professional development in ICT context: an andragogical view*, by Kristinka Ovesni and Vera Radović, found in reflections of conceptions that view teachers' professional development (TPD) in information communication technology context as an alternative to the traditional process of TPD. A shift from traditional to ICT contexts opens many issues in design, organization, performance, and evaluation of the process of TPD. Accordingly, the aim of this research is to explore some features and to identify potential issues in teacher's usage of and participation

in different professional development activities in ICT context. For this purpose, the authors adopted quantitative descriptive methodology. The research was performed online, from August to October 2020, on the population of teachers employed in primary schools in Republic of Serbia. From data collected from purposeful sample (N=354), using canonical correlation analysis, authors distinguished some features of TPD in the ICT context (broadening knowledge, peer support, time and cost efficiency, availability of resources, enjoyment in activities), tightly connected to transformative, self–directed nature of teachers as adult learners, to changed locus of control of learning, and specific TPD in ICT context related issues (experience of alienation and cyber–bulling, lack of direct communication with moderators, to feel overwhelmed by information).

In the chapter *Building teacher competence: the role of university teachers and mentor teachers*, Tina Štemberger and Sonja Čotar Konrad address the question of building teacher competence within the system of initial teacher education in Slovenia. It first focuses on the concept of teacher competence and on the system of initial teacher education in Slovenia, with a particular focus on teacher educators' role. Teacher educators — university-based teachers and mentor teachers—are regarded as role models to prospective teachers and an important factor in the process of developing teacher competence. Therefore, strong cooperation and partnership between these two groups should be established, including the design of pre- and in-service programmes for (future) teachers.

In the chapter *Methodology for the collection of social media data about experiences on the frontline of education provision* authors Mihaylo Milovanovitch, Tijana Jokić Zorkić and Maia Gelashvili describes a methodology for the collection of content data from social media, which communicates the experiences of education participants with policies on the frontline of education provision. Grounded in a sociocultural approach to education policy, digital ethnography, and social media research, the chapter first outlines the conceptual underpinning of the methodology. It then explains in detail a string of methodological decisions which help with the framing, defining, and collecting of samples of relevant content data. The chapter concludes by illustrating the potential of the methodology on the example of social media data harvested with its help in several countries in Eastern and South-Eastern Europe, the Caucasus, and Central Asia.

The authors of the chapter *Implementation of distance technologies in Euro-Asian universities during the COVID-19 pandemic* are Sergey Kokhan, Ariunsanaa

Byambaa, Elena Romanova, Batbaatar Gunchin and Witold Kowalski. The aim of the study is to conduct a comparative analysis of the organization of the transition to the distance education (DE) during the coronavirus period in the universities of Mongolia and Russia and to identify problems that need to be addressed by the administration of universities and academic teaching staff. The study object are students of the Mongolian National University of Medical Sciences (MNUMS, Mongolia) and Trans-Baikal State University (TBSU, Russia). The main research method was questioning. The total number of respondents was 271 people. The research carried out at the universities in Mongolia and Russia showed a certain difference in approaches to solving alternative problems which were connected with the transition to DE and the identification of problems among students of the two countries. In the period of pandemic, the transition from the traditional system to DE was the only correct way to save education all over the world. Nevertheless, the emergency transition showed both its positive aspects and the problems of the system. It is possible to solve these problems but they can only be solved with the interaction of all interested sides, starting with state level, the administration of universities, the teaching staff, and ending with student youth, the consumers of DE.

In the chapter *Online studying at the University during the period of covid-19 virus pandemic: students' motivation and resilience* author Olga Mikhailova considers the problems of organizing distance learning at universities during a pandemic, as well as the characteristics of the motivation and resilience of students studying remotely. The paper presents a theoretical analysis of the phenomena of motivation and resilience, as well as the results of empirical research. The survey involved 84 students aged 18 to 22 years, studying for a Bachelor's degree at the humanities and technical departments of various Moscow universities. The results obtained reflected the characteristics of the motivation and resilience of students in the first months of the pandemic and revealed a number of problems in the conduct and organization of distance learning at the university.

In the chapter *Student motivation and learning strategies from the perspective of self-regulated learning,* the authors Milja Vujačić, Jelena Stanišić and Snežana Mirkov start from Pintrič's model of self-regulated learning and examine the relationship between student motivation and learning strategies, and whether they are related to academic achievement (current average grade at studies), field of studying, and gender. The research included 520 respondents of all years of

study from the faculties of arts and faculties of natural and social sciences of the Universities of Belgrade, Novi Sad, Niš and Kragujevac. For collecting data on motivational orientations of students and strategies they use while learning study programs, the authors used the Motivated Strategies for Learning Questionnaire (MSLQ). The results obtained in this research confirmed that for achieving learning success it is important for students to be motivated and to achieve a certain level of self-regulation by using different learning strategies; individual forms of motivation have importance in prediction of different self-regulation strategies; at University level, rehearsal as a learning strategy has a lower potential of leading to success than learning strategies that require higher level of cognitive engagement; and female students, when compared to male students, use different cognitive and metacognitive strategies to a greater extent. The authors see the key implications of research in the need for teaching practice at faculties to be based, as much as possible, on modern theories of development and the learning process, which lie in the basis of self-regulation as a necessary aspect of the learning process, personal development, and success of an individual.

The paper *University Students' Beliefs About Learning and Knowledge and Their Approaches to Learning* by Snežana Mirkov presents the results of research based on SAL (Students' Approaches to Learning) perspective and understanding of the multidimensional nature of epistemological beliefs. Its starting point is a learning model where the factors of personality and situational factors are connected in such a way as to create three approaches to learning: surface approach, deep approach, and achievement approach. It was presumed that different beliefs about learning and knowledge lead to different ways of performing academic tasks in higher education. The results regarding relations of some beliefs with particular goals that students set and specific cognitive and metacognitive strategies they adopt in learning were analysed in a broader context. Certain beliefs, through the goals related to mastering, influence of deep processing, and accordingly, academic achievement. The author concludes that changes in teaching style directed to perfection of a learning process can influence the development of sophisticated beliefs if the students are assisted in becoming aware of their own beliefs and reinterpreting them in the context of their own educational experiences.

In the chapter *Psychology of learning in adulthood: Cognitive processes and motivation for a foreign language learning* authors Olga Mikhailova and Karina Avagyan presents a theoretical analysis of the development of cognitive

processes during adulthood and substantiate the didactic direction in the specifics of teaching a foreign language for an adult audience. The authors identified the specific characteristics of the motivation of an adult's educational activity and the main principles in the construction of technologies for teaching a foreign language.

In the chapter *Pro-environmental values and education authors* Milica Marušić Jablanović and Andreas Oikonomou indicate that the state of the environment 45 years after the acceptance of the Global Framework for Environmental Education makes us wonder not only if societies, taken globally, have tried hard enough to achieve the proposed educational objectives, but also what the reach and influence of the education actually is. The theories of values and empirical research of the correlation between values and behavior make a valuable source of information because they offer insight into the kind of values that should be developed through education. On the other hand, we learn as well what values constitute barriers for such behaviour. The paper presents the good practices that prove that the adoption of environmental values is possible through interesting activities that introduce many alternative teaching and learning techniques, quite far from the frontal teaching of the classical school. It is a necessary for all the students to be properly introduced to environmental values and not just those who participate in the usually limited number of volunteer groups operating in schools. Even then, however, the school work will not have the expected results if other factors do not support it. For example, if the family or wider community are not imbued with similar values, constant conflict and obstacles for developing pro-environmental values will occur. The authors propose a strategic choice of an alternative, sustainable school, with a well-designed curriculum and a school culture inspired by constant concern for the preservation of the environment, with respect for all living beings, prudent use of natural resources, open to the community, to the outdoor activities and experience-based learning.

The purpose of the chapter *Students' environmental literacy in the Republic of North Macedonia* by Mile Srbinovski is to collect and analyse the research on environmental literacy for elementary and secondary schools in the Republic of North Macedonia, published over the years 2000-2020. Environmental literacy was measured from three aspects: environmental knowledge, environmental attitudes. and environmental (conative) behaviour. A content analysis method was utilized both for designing the study and for the review and analysis of the selected studies. The mean environmental literacy scores indicate the Macedonian

students have a low (environmental knowledge) to moderate level (environmental attitudes and conative component) of environmental literacy. Schools appear to have a modest effect on environmental literacy among Macedonian children. Having in mind the overall situation in the field of environmental education in our country, there is a need for developing a model for environmental education, an environmental literacy plan, and a National strategy on education for environmental education and/or education for sustainable development.

In the paper *The educational status and schooling problems of juvenile delinquents,* the authors Marija Maljković, Nikoleta Gutvajn, Marina Kovačević Lepojević and Ljeposava Ilijić analyse legal statistics on registered juvenile delinquency in the Republic of Serbia, and present the results of empirical research regarding educational status and problems in the education of juvenile delinquents who are currently in the procedure of criminal sanctions execution. The research results show that juvenile delinquents who are excluded from the education system more often report low affiliation to school, absence from school, being labelled by teachers, belittling, and threats. Juvenile delinquents who are in institutions of non-institutional type are more likely to leave school than those with non-custodial sanctions. The authors propose applying the good practices that affect improvement of cooperation between the judicial and educational systems in criminal proceedings against juveniles, improvement of the school climate, informal education of juvenile delinquents, and mentoring programs.

In the paper *Developmental assets model: Implications for educational practice* authors Branislava Popović-Ćitić, Lidija Bukvić Branković, and Marina Kovačević Lepojević address the role of one of the leading frameworks derived from the Positive Youth Development perspective in fostering positive development outcomes and preventing different problems in the school context. Results of an assessment of developmental assets (DA) in the population of Belgrade elementary school students are presented and discussed, with special focus on different elements of the model relevant for the educational practice, as well as on the implications of the research data for developing a community that fosters external and internal strengths in young people and supports their overall positive development. The authors discuss the use of the DA model as a tool for assessing the educational community and prioritizing the assets that are underdeveloped in a specific geographic locality, for assessing risk groups of students, as well as a basis for the creation of a network of providers by mapping various community

resources that can contribute to the positive development outcomes of young people. The paper shows that the DA model offers many advantages and practical opportunities for empowerment of the educational community and is often recognized in this setting. The DA model provides educational practice with the opportunity to implement the strength-oriented approach into their practice and support the transformation of the school paradigm in reaching not only good school achievement in students but supporting the development of successful, thriving and problem-absent individuals.

The book *Problems and perspectives of contemporary education* represents a broader view of problems and perspectives of modern education. The book is intended to appeal to researchers and practitioners in the field of education who are interested in studying and improving the quality of education. We believe that the book can be useful reading for students of psychology, pedagogy, special education, sociology, as well as for future educators and teachers. We would like to thank the reviewers, professor emeritus Djuradj Stakic, professor Marina Mikhailovna Mishina and professor Teodora Stoytcheva Stoeva, for careful reading of the manuscript and useful recommendations.

Editors

Nikoleta Gutvajn
Jelena Stanišić
Vera Radović