

**Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И
МЕЖКОНФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО
ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ**

UDK 377.4:001.895(497.11)

PhD Minic Lj. Vesna

Faculty of Teacher Education in Prizren – Leposavic,
University of Pristina – Kosovska Mitrovica, Serbia

Др. Минич Л. Весна

Факультет теории и методики начального образования
в Призрене – Лепосавич, Университет в Приштине – Косовская
Митровица, Сербия

**НЕПРЕРЫВНОЕ ОБРАЗОВАНИЕ И ТЕХНОЛОГИЧЕСКИЕ
ИННОВАЦИИ В СЕРБИИ В КОНЦЕПЦИИ ОБУЧАЮЩЕГОСЯ
ОБЩЕСТВА¹**

**LIFELONG LEARNING AND TECHNICAL INNOVATION IN
SERBIA WITHIN THE LEARNING SOCIETY CONCEPT²**

Annotation. This paper emphasizes the importance of technology since it brings changes to education, brings the need for permanent education, and the need to create a learning society as the general social tendency. Technology innovation carries endless possibilities to create knowledge, use it and transfer it. It demands the education to redefine the old and create new job descriptions, whose roles and tasks will change within the learning society concept, which sees the lifelong learning as a necessity.

Аннотация. В статье указывается на важное значение технологий, влияющих на изменения в образовании, отмечается необходимость непрерывного образования и создания обучающегося общества, как общей тенденции социального пространства. Технологическая платформа, как инструмент инновационной системы, предоставляет неограниченные возможности для создания информации, ее использования и передачи. В нынешних условиях перед образованием возникает необходимость пересмотреть устаревшие и создать современные профили профессионального обучения, чьи роли и задачи меняются в соответствии с

¹Работа является результатом исследования в рамках проекта: "Косово и Метохия между национальным идентитетом и европейской интеграцией" (III 47023). Проект финансируется Министерством образования, науки и технологического развития Республики Сербии.

²This paper is the result of the research within the project III 47023 "Kosovo and Metohija between national identity and European integration" funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И МЕЖКОНФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

концепцией обучающегося общества, в котором образование на протяжении всей жизни является насущной потребностью.

Key words: technology, innovation, lifelong learning, learning society, Serbia.

Ключевые слова: технология, инновации, непрерывное образование, обучающееся общество, Сербия.

Bearing in mind the fact that education is one of the most important factors in the global economy of the 21st century, it is quite obvious that there is a trend of intensive rise of the general educational level in Serbia. The amount of new knowledge under these modern conditions of living and working is increasing very rapidly, and the existing knowledge is becoming more and more obsolete. Learning and training has, therefore, become the need and necessity of every individual who wants to respond to the challenges of the new age. Therefore, permanent education is gaining importance, because it is well-known that no diploma is sufficient for a lifetime, and that education does not end when getting a diploma. The goal of the paper its analysis of the concept of lifelong learning in Serbia, which is becoming more significant due to the rapid technological innovation taking place in this learning society.

Lifelong education in a learning society

Life Long Learning (LLL) is the concept which refers to the learning that lasts during the entire life which is the key factor in increasing the level of knowledge and skills necessary to carry out the tasks of different complexity levels, in improving the quality of each individual's life, in ensuring equal opportunities and having social contacts, and the successful development of economy and democracy. The concept of lifelong learning originated from the idea and actual practice of adult education in the developed countries of the West. The phrase Lifelong Learning was internationally accepted at the international conferences on adult education, organized by UNESCO, back in the 1960's.

Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И МЕЖКОНФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

Lifelong education can be looked at from various perspectives - when it is a strategy, a vision, a rhetoric, the culture of education, or a policy that defines the strategic goals and objectives that lead to the successful lifelong learning. The need for continuous learning stems from the continuous changes taking place in society, and the continuous development of technology. Since new information, data and findings are coming up on a daily basis, continuous learning is necessary in order to follow new trends, improve the existing knowledge and live a quality life in a given social environment. Lifelong education is, therefore, related to social trends, and the scientific and technological revolution. They are tied to the beginning of the new century, when revolutionary changes took place in science, technology and production in general. They entirely change the position of man in the increasingly complex social relations, they also change in structure and character of work, the scope and purpose of education, the environment, the relation of man towards the environment, etc. Science and its achievements permeate all human activities and the whole production process, and thus become the decisive factor for social progress. Technological changes have the biggest impact on education, because these changes which allow for knowledge to become available to everyone put certain requirements in front of the education systems, both in terms of what is being learned and in terms of learning and teaching methods. One of the major changes which is affecting the education system now and it will continue affecting it in the future is the transformation of school into a knowledge society, which adults will also return to, who will have the need for continuous improvement and lifelong learning due to these new circumstances. Today we witness the transformation of the education system into the knowledge system, which the whole social system is switching into, and which is directly responsible for the transfer of knowledge, social norms, values, responsibility, tolerance and community affiliation, for the development of the principle of solidarity, joint work and progress, for the consciousness about the state and man as an integral part of

Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И МЕЖКОНФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

all this. School is an institution that is supposed to prepare future teachers for the jobs of the future, for keeping, applying and transferring knowledge to younger generations, because only in this way can the learning society be built, which the goal of the modern age.

The key skills required for lifelong learning are «communication in the mother tongue, communication in a foreign language, mathematics, science and technology skills, knowledge of information and communications technology, learning how to learn, skills related to social interaction, initiative and entrepreneurial spirit, to the promotion and development of culture» [1, С. 14]. At the end of the last century, the importance of lifelong education was reflected in the «need to respond to the increased educational needs, to the expansion and rapid change of new professions, increase in knowledge and technology, the shift to the Information Society, economic restructuring, organizational reforms and changes in the existing job positions, the need to find more effective ways to learn and transfer knowledge» [7]. At the beginning of the new millennium, the long-term goals of education in developed countries have been ed on the «improvement of the main dimensions of national development, on the economic, political, cultural and ecological development, all in order to improve the quality of life of all layers of the population» [8, С. 46]. With regard to the future goals of the education systems and the strategy on how to achieve them, the European Commission stated that education must enhance «the development of an individual, society and economy, in such a way that skills of the people on the labour market should correspond to the needs of businesses and employees - which is achieved through a lifelong learning strategy» [4, С. 3]. The concept of the learning society is in line with the goals, set both worldwide and in Serbia, and it implies that education is democratized and accessible to everyone.

It is, therefore, the right of every individual to build his or her own personality and identity and seize their potential. This means that they will be

Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И МЕЖКОНФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

ready and able to respond to the responsibilities and tasks that are set before them, not only the ones linked to an individual, but more often global ones. «A learning society is a knowledge society. Its entire organization and operation are based on knowledge» [6, С. 30-33]. The characteristics of a learning society are: permanent education, that is, lifelong education, self-education, and all those actions that are necessary for a person to be able to keep track of and participate in social progress. Lifelong education is organized through various types of formal, non-formal and informal education and learning, which are linked to the common interests of the country, the economy and the civil society. It is a widely known fact that formal education does not provide young people with enough knowledge for their future work, while non-formal and informal education create numerous opportunities for lifelong learning and better personality shaping. The ever-pressing need of a modern man to rely on self-education to solve the problems in life and at work, to solve personal problems and social affairs, proves that self-education is a very important aspect of education. Self-education «can help adults become more active participants in the scientific, technological and civilizational changes» [5, С. 142], which are the characteristics of the modern world whose product is the learning society. In order for a learning society to fulfil its purpose, it must insist on the development of the following knowledge and skills: «professional knowledge and skills, entrepreneurial skills, communication skills, social skills (interpersonal skills, critical thinking and logical reasoning, autonomous morality» [6, С. 30-33]. When it comes to professional development, it implies continuous learning, as well as knowledge and skills necessary to work and improve oneself. Teacher education is a priority task within the education system and a very important part of the education system quality improvement, so without its reorganization and reformation, it would not be possible to consider any significant changes to the education system in Serbia. The concept of professional development of teachers exists in the Law on the Fundamentals of the Education System, however, the

Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И МЕЖКОНФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

materialization of this concept is more important than the legal framework. Continuous professional development in Serbia is an obligation and an integral part of the professional development of teachers. Teachers are expected to apply the innovations that can bring value to the school. For this reason, professional development provides modern theoretical and practical knowledge and experience in the field of pedagogy, methodology, methodology of pedagogical research, psychology and many other related sciences and disciplines. Through professional development, teachers improve their existing knowledge, develop skills and abilities, and become open towards continuous learning through individual or group professional development. In order to organize continuous professional development, and to obtain and retain a license, a detailed Professional Development Catalog is published every school year in Serbia, offering teachers various pedagogical, didactic and methodological and more specific professional topics. It contains many programs relating to innovative teaching methods and integrated teaching. In order to implement different processes in educational institutions, teams which carry out certain tasks are organized in schools. The quality of professional development depends on: «the continuity and strategy of the development process; legal regulation of professional development; teacher motivation; programs, contents and types of professional development; tracking, identifying and applying innovation; professional development within schools as a concept» [10, С. 342].

Although there are numerous classifications of lifelong learning, it refers to the improvement of knowledge, skills and abilities of teachers, in order to provide students with good quality education, even though teachers are not the only source of information. Lifelong learning affects the advancement of teachers regarding their qualifications, which further motivates them. Visiting numerous international and national scientific conferences, seminars, round tables, etc. broadens teachers views, and allows them to grow into reflexive teachers who question and evaluate

Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И МЕЖПРОФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

their teaching practice, that is, they do not only use the existing results from other researchers. In this way, the gap that exists between theory and practice can be eliminated. When it comes to the types of professional development of teachers, individual and group improvement are most often mentioned. The efficiency of individual professional development is conditioned by the level of self-education skills, the ability to find the required professional literature, the ability to define problems, self-critical thinking, etc., while group professional development is organized through teachers' councils or working groups formed to work on specific professional issues or any other forms of group work. Moreover, there is also «collective professional development; research projects; sample lectures; innovation in teaching» [12, С. 43-58]. Collective professional development can come in different forms: seminar, symposium, congress, forum, round table. Research projects imply that teachers are improving themselves if they complete a particular project, if they manage the research team, if they are members of a project group, etc. Sample lectures contribute to the improvement of teaching, but also to the improvement of teachers' theoretical knowledge. Innovation in teaching implies new things that the teacher has theoretically devised, elaborated on and practically applied in the classroom.

Technical innovation and learning society concept

The main reason behind the concept of lifelong education is the ongoing technological and social changes that make the existing knowledge obsolete, while people's views and values are susceptible to re-examination and change. Modern technological innovations based on the digital revolution technology, on artificial intelligence, nanotechnology, and multifunctional mobile devices are seen as the Fourth Industrial Revolution. Alongside with the changes this Revolution has brought with it, the EU's national and global development strategies play an important role in understanding the future of education. The Lisbon Declaration is based on the belief that technological innovation creates new jobs and innovative

Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И МЕЖКОНФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

enterprises, and in that regard, its key segment was the development and improvement of knowledge, which implied more investment in education and professional development, as well as in scientific research. Europe 2020 Strategy primarily focuses on technological innovation, and it is seen as the extension of the Lisbon Declaration, which sees lifelong learning as very important. Currently, three out of seven leading initiatives, that is, the activities to be achieved at the EU level, are directly related to knowledge and technological innovation. The first and the most relevant is *the Innovation Union*, which «aims to improve conditions and access to finance for research and innovation, to ensure that innovative ideas can be turned into products and services that create growth and jobs, and at the same time enhance the competitiveness of the European economy» [2, С. 815]. The second most important initiative is *Youth on the Move*, which includes the measures and activities aimed at increasing the quality of European higher education institutions and increasing the employment rate of young people. The third initiative is *The Agenda for New Skills and New Jobs*, which aims to improve the skills and abilities of the workforce, to increase the employment rate and improve work conditions. When setting the education goals which should focus on smart, sustainable and inclusive growth, the EU has set two global goals: to reduce the number of those who leave their education early, and to increase the number of university ateesin the age group of 30 to 35. The Strategy for Education Development in Serbia by 2020 states that «all EU recommendations have been accepted and used to create specific long-term education goals» [11, С. 43-58].

Speaking of the changes brought about by technical and technological progress, we also have to mention the changes in work methods, as well as the changes in the production processes in general. These changes are reflected in automation and robotics, which rely on microelectronics that increases productivity. Under these circumstances, science has a new role which is crucial for the production processes and economy in general in this modern society.

Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И МЕЖКОНФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

Production is becoming more and more dependent on science and the application of its achievements, rather than on invested resources and human engagement, that is, physical work. Technological changes have also led to certain changes in ownership relations, therefore, shareholding is becoming more frequent than individual ownership (self-ownership), which further brings the transformation of enterprises into joint-stock companies. The main development resource is no longer material goods, but rather a scientific worker, who has knowledge and shares it. Both the economic and social dynamics of the modern society rely on knowledge and science. Therefore, the idea of sharing intellectuals among different countries is becoming more and more appealing, and the competition that would be achieved and stimulated by the transfer of experts from developing countries into the developed countries. Changes in political life resulting from the strong breakthrough of technology are reflected in the strengthening of the state and new forms of political engagement, including the economic development, increased employment, social security, better nutrition, housing, health and education for everyone. The changes to the social consciousness indicate a growing importance of education and the scientific view of the world, because the greatest wealth of a society is the intellectual potential that can ensure its balanced social development. Education has become the key factor in the strategies of all developed countries, which choose to invest in it since it brings progress unmistakably.

The main three dimensions of the open European education system that have emerged in the modern society are: knowledge (repetition of prior knowledge and its use), civil rights and liberties (the right to an equal education for all citizens) and skills (development of innovation skills and creative problem-solving skills). Under these conditions of the accelerating progress of technology, knowledge is becoming more and more extensive, so many authors try to «redefine knowledge and include within it not only theoretical, but also technical knowledge and skills, especially those necessary for the actual production process» [9, С. 184].

Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И МЕЖКОНФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

Nowadays, students' learning process primarily relies on the use of tablets and mobile phones, which enable the use of electronic books, video and audio learning material from numerous fields of science, making them interesting. New generations of mobile phones are very useful and allow us to access information anywhere in the world. They are useful to everyone: students, teachers and parents. Students have the opportunity to acquire knowledge and follow the latest technological innovations, teachers can keep track of student progress and analyse group work, and parents can communicate with teachers and receive information on their child's academic success in a timely manner. Thanks to modern telecommunication, students and teachers are able to use information-rich bases far away from their classroom. Active role of students in the classroom and the new role of teachers, who are no longer simply lecturers and assessors, «but rather organizers of the learning process and participants in direct communication» [3, С. 124] are the characteristics of the modern education process.

The most valuable type of knowledge that can be obtained by being computer-literate is the knowledge on how to find the information we need. In order to keep up with the times, it is necessary to improve the quality of education, with the rational use of staff, time and resources. Technological innovation has brought many obvious changes to all segments of the education system in Serbia. These are, primarily, changes made to the course curriculum at all levels of education (emphasis is on computer science at all levels, environmental protection, etc. This concept requires an openness towards the use of modern scientific achievements which can improve the curricula in our region. This takes into account the contemporary social achievements, such as democratization as the key principle that the entire teaching process is based on, which among other things takes into account students' opinion in choosing specific areas of study, curriculum correction, or the development of new curricula. With regard to this, society is becoming increasingly demanding. Under these conditions of rapid and extensive

Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И МЕЖКОНФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

change, if school wants to survive and keep up with social trends, it must be aware that it has to change and adapt to the new lifestyle. As a kind of oasis of knowledge, school is gradually turning into a research centre open to all students who want to acquire, innovate and improve their knowledge, because such innovated knowledge is a prerequisite for the school not to lag behind social and technological changes, which are increasing day by day. The most valuable knowledge a student can acquire in school relating to computer literacy is the knowledge of how, where and how he can find what he wants to know, and thus develop his own personality, and also the society he belongs to. Modern teaching, including technical and technological innovation, should provide students with creative freedom, which is reflected in the selected and prepared curriculum. These curricula should allow students to acquire and demonstrate their abilities, and form positive attitudes towards modern technical and technological creativity. Changes made to schools should rely on and depend on the requirements of the labour market, which demands greater efficiency and quality for certain jobs which students are being educated for. Therefore, the development of science and technology increases the volume of scientific and social information that is extremely relevant to people. Permanent education of all participants in the education process when it comes to the use of modern information technology creates the possibility and need for team work for the purposes of everyone's well-being. Every teacher's work method has to rely on innovation, and they have to be capable of applying innovation and innovative work methods in the classroom. This means that they need to have certain theoretical knowledge and practical skills for lesson planning, introduction to teaching, for tracking and evaluation of innovative work methods, which can only be achieved through continuous professional development and continuing education.

Creating a modern education system at the beginning of the new century is an important task for every country, including Serbia. It is affected by various

Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И МЕЖКОНФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

factors, but the most significant ones are the changes that have occurred in all segments of human life and work, which require continuing education, the understanding and acceptance of technological changes and, ultimately, the creation of the learning society. Innovation in education largely depend on social trends, and in no way can they be separated from them. Nowadays, knowledge that relies on and depends on information and communication technology is the source of social change, and it significantly affects the development of potentials and causes changes in all aspects of the educational process and the life of man in general. As a type of a knowledge institution, modern school should use technological innovation, meaning that all those engaged in educational work are required to pursue continuing professional development in order to effectively respond to the objectives that are set before them. This is the only way to innovate and improve the education system in Serbia to resemble the education systems in developed countries, and to improve the quality of education of every individual who is getting ready to live in the knowledge society.

REFERENCES

1. Babić V., Makojević N., Erić J. Doživotnoučenje, izazovzapojedinačaidruštvo. - Kragujevac: Univerzitet u Kragujevcu, 2010.
2. Bazic J. Ljubisavljevic M. Educational Challenges in the Fourth Industrial Revolution // Knowledge, International Journal Scientific. 2016. №14.2. С. 815.
3. Vlajkovic S. Inovativni modeli nastave i njihova primena u nastavi učenika mladih razreda osnovne škole. - Beograd: Zbornik radova Učiteljskog fakulteta, 2014.
4. Evropska Komisija Memorandum o cjeloživotnom učenju, 2000.
5. Kulić R., Despotović M. Uvod u andragogiju. - Beograd: Svet knjige, 2001.

Раздел 5. ФИЛОСОФСКИЕ, СОЦИОЛОГИЧЕСКИЕ И МЕЖКОНФЕССИОНАЛЬНЫЕ ПРОБЛЕМЫ СОВРЕМЕННОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ЭКОНОМИКИ

6. Kulić R., Despotović M. Uvod u andragogiju. - Beograd: Svet knjig, 2010.
7. Savićević D. Čovek i doživotno obrazovanje. - Titograd: Republički zavod za unapređivanje školstva, 1983.
8. Savićević D. Put ka društvu učenja. – Beograd, 2000.
9. Savićević D. Filozofski osnovi andragogije. - Beograd: Filozofski fakultet, 2001.
10. Stamatović J. Programi i oblici stručnog usavršavanja nastavnika. - Beograd: Institut za pedagogiju i andragogiju, 2006.
11. Strategija razvoja obrazovanja u Srbiji do 2020. godine. - Beograd: Ministarstvo prosvete, nauke i tehnološkog razvoja, 2012. URL: <http://www.mpn.gov.rs/strategije-2020/> (datum posete 13.04.2019).
12. Suzić N. Model doživotnog usavršavanja i napredovanja nastavnika. Obrazovanje i usavršavanje nastavnika-oblici i modeli. - Uzice: Učiteljski fakultet, 2008.