

EDUCATION REFORMS

Curricula, technology, and the market are changing Serbian schools

SERBIA FACES THE CHALLENGES OF UPGRADING ITS EDUCATIONAL SYSTEM: FROM ADAPTING CURRICULA TO SOCIAL CHANGES TO IMPLEMENTING MODERN TECHNOLOGIES, DIGITALIZATION, AND THE USE OF ARTIFICIAL INTELLIGENCE

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In recent years, Serbia's education system has been in a state of constant upgrading and adapting to current social and technological changes. The key challenge is no longer just the curriculum content, but the way knowledge is transmitted and applied in a world of accelerated technological development. Digitalization, artificial intelligence, and new learning methods, such as digital classrooms, are increasingly influencing schools, imposing a need for education to adapt to generations raised in a completely different environment.

In this context, as experts explain, the reforms planned for the coming years include changes to curricula, restructuring classroom teaching, and a greater focus on developing functional knowledge and skills. Starting with the 2027/28 school year, students in the first year



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of high school (gymnasium), as well as the first and fifth grades of elementary school, are expected to begin working under new programs based on learning outcomes and a stronger connection between knowledge and real-life situations.

Simultaneously, authorities are considering changes to the teaching schedule, such as potential shortening of classes to 30 minutes and switching to a unified morning shift. This raises the question of how to adapt the teaching process to students' modern habits and their decreasing attention spans in a digital environment. Another significant change is the introduction of standardized textbooks at the national level. While the initial plan included six subjects, members of the Serbian Parliament voted to introduce only two: history and geography. Critics of these textbooks have largely pointed out that the public has been left without answers regarding the reasons for introducing textbooks of "national importance" and that the entire process was conducted without a genuine public debate.

Student performance on international assessments further confirms that education in Serbia requires serious commitment to systemic changes. According to PISA (Program for International Student Assessment) research, Serbia ranks below the average for developed countries in reading, mathematical, and digital literacy, further highlighting the need to improve educational quality. The 2022 PISA testing in Serbia showed that 15-year-olds remain below the OECD average in reading, mathematics, and science, ranking between 40th and 42nd out of 81 participating countries. Although slight progress has been noted compared to 2018, approximately 40 percent of students do not reach functional literacy, which indicates a need for educational reform geared toward critical thinking

CURRICULUM AND THE MODERN WORLD

Zlatko Grušanić of the Institute for the Improvement of Education points out that today's generation of students has grown up in a world of rapid changes,

unlike the generations educated during the more stable periods of the last century.

"In literature, we have a beautiful depiction of that span – between the peaceful 'grandfather's fire' and great human endeavors in the short story 'The Moon Quot' by Serbian writer Branko Ćopić. Similarly, education today must strike a balance between tradition and innovation, gradually introducing advancements that meet the contemporary demands of society and technology," says Grušanić.

In addition to rapid social changes and the increasingly intensive application of artificial intelligence, the education system faces various challenges that require constant reflection and adaptation.

"The public most often discusses working conditions, teacher workloads, staffing shortages, technical facilities in schools, teacher expertise, the quality of their initial education, as well as the professional development of education employees, and many other equally important issues. All of these are legitimate and important questions that deserve attention and continuous improvement," says Grušanić.

As he adds, it is important to understand that educational systems are complex by nature and that the quality of teaching cannot be explained by a single element. This is precisely why education needs to be viewed as a whole – as a system in which curricula, teacher competencies, working conditions, technological development, and societal expectations are interconnected. Therefore, it is only natural that education is constantly in a state of change.

"Sometimes changes come very quickly – as we saw during the COVID-19 pandemic, when the digital competencies of both teachers and students had to develop rapidly to ensure the continuity of learning. In other cases, changes are slower because it takes time to raise awareness of new ways of learning and trans-



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mitting knowledge. It is precisely in this continuous adaptation that the strength of the education system lies," says Grušanić.

However, he explains, an equally important challenge is understanding the changes occurring in society and the ways in which the role of schools is shifting.

"Digital technologies, and especially the development of artificial intelligence, are changing how information is accessed, how learning happens, and how knowledge is applied. Because of this, the teaching process must constantly adapt to new circumstances and student needs. This implies continuous professional support for teachers, the exchange of experiences among schools, monitoring results, and dialogue between all education stakeholders. It is particularly important to develop new approaches to learning, including the opportunities brought by AI and personalized learning, as they allow education to be tailored to the needs, interests, and pace of each student," he says.

Grušanić adds that curriculum development follows the general trends of advanced educational systems, with an emphasis on learning outcomes and functional knowledge; the key challenge is methodological – how to structure learning so that students understand, apply, and connect acquired knowledge to real-life situations. As he says, perhaps the most important thing is for the education system to constantly listen to its students. Regarding the implementation of the new curriculum, Grušanić explains that since 2017, teaching and learning programs have been based on outcomes and the development of key competencies.

Success indicators, he adds, include both strategic documents and action plans of the education system, as well as international assessments such as PISA, TIMSS, and ICILS.

"Our task is to develop an education system that will enable stu-

dents to prepare for the future. The curriculum is a sort of a vehicle we use to move toward that future. However, no such vehicle is ever final – it is constantly being upgraded and adapted," concludes Grušanić, noting that the improvement process has been ongoing for decades – from the introduction of achievement standards and programs based on learning outcomes, to digital classrooms and professional teacher training.

Asked about the starting point for education reforms in Serbia, Aleksandar Markov, president of the BDU Forum, says that he absolutely agrees that a curriculum overhaul is necessary. However, he adds, the only way to do this effectively is through collaboration with teachers.

"Curricula need to be revised based on feedback from teachers to the relevant authorities. The programs are overwhelming. Whichever subject we look at, everything is designed around the concept of 'covering as much as possible,' leaving little time for discussion or reviewing," points out Markov.

Both Grušanić and Markov agree that teachers are vital to implementing changes and that their creativity and adaptability are crucial for the quality of education. Serbia is currently experiencing a shortage of qualified teachers in key subjects such as mathematics, physics, chemistry, computer science, and foreign languages; this further complicates the implementation of reforms and underscores the importance of continuous professional support and resources for educators.

"We also need to improve the system for attracting and supporting new, talented teachers – both during their recruitment and as early as the enrollment level for teacher training programs. There is still a certain gap between theoretical education and the reality of the classroom," says Grušanić.

FROM THE CLASSROOM TO THE REAL WORLD

As Mijana Kovačević from the Serbian Chamber of Commerce explains to NIN, the monitoring they conduct, both independently and in collaboration with the National Employment Service, shows that schools across the country habitually offer educational programs that are not fully adapted to the times we live in or the needs of today's society.

"What schools offer is often not aligned with the needs of the economy. Although education is

undergoing changes – dual education, strengthening digital competencies, introducing new curricula and learning methods – the system is still predominantly focused on theoretical knowledge, while practical skills and the application of knowledge in real-world work situations are less represented," emphasizes Kovačević.

She adds that while schools develop key competencies, education still does not sufficiently develop critical thinking, teamwork, negotiation, communication, and entrepreneurial skills in young people.

"Some of these competencies can be developed more quickly and easily in a real-world work environment," says Kovačević, emphasizing that it is precisely hands-on experience that enables preparation for the actual needs of the labor market.

Speaking about future changes in education, Kovačević emphasizes that the traditional perception of school as the sole place of learning is no longer sufficient.

"Today, learning takes place in multiple settings – in schools, within companies, through hands-on experience, and via digital platforms. It is of crucial importance to measure learning outcomes – what someone actually knows and can do – while leaving the paths to those outcomes open and flexible," she says.

According to her, curricula and programs must be adapted to real-world needs more quickly and frequently, and learning methods and techniques must be improved. Increasing student engagement through projects, digital tools, and direct collaboration with the business sector is becoming essential.

"Various digital technologies must be recognized and made available to young people for acquiring new knowledge and developing skills – online platforms, digital content, simulations, virtual labs, AI tools, and a combination of online and in-person instruction," concludes Kovačević.