Review paper
UDC 37.01:001.18(045)
DOI: https://doi.org/10.21464/mo.33.1.3

THE SCHOOL OF THE FUTURE OR THE FUTURE IN THE SCHOOL – CHALLENGES OF THE TEACHING PROFESSION

Stanislava Marić Jurišin[1], Borka Malčić[2]

Received: 1 October 2025
Accepted: 7 May 2026

Education today represents a key factor in the social, economic, and cultural development of every country. The vision of the future directly shapes education and the concept of the school of the future. This paper aims to examine the contemporary challenges facing the teaching profession within the context of educational system transformations, and to identify the key teacher competencies required for the education of the future. Employing a qualitative, theoretical-analytical methodology — specifically a narrative systematic literature review and conceptual analysis of futurological, policy, and empirical sources — the study synthesizes evidence from international frameworks. The paper makes three specific contributions: it establishes a precise conceptual and paradigmatic distinction between "the future in the school" and "the school of the future"; it systematizes the teacher competencies — digital, socio-emotional, and lifelong learning — essential for Education 4.0 and the emerging Education 5.0; and it formulates evidence-based recommendations for educational policy and teacher professional development in the transition toward future-oriented schooling.

Keywords: *future; school; teacher; professional challenges; competencies*

[1] Faculty of Philosophy, University of Novi Sad, Dr Zorana Đinđića 2, 21000 Novi Sad, Serbia, stashamaric@ff.uns.ac.rs; https://orcid.org/0000-0002-4184-3309

[2] Faculty of Philosophy, University of Novi Sad, Dr Zorana Đinđića 2, 21000 Novi Sad, Serbia, borka.malcic@ff.uns.ac.rs; https://orcid.org/0000-0002-1862-962X

"The Romans were not bad mathematicians,
their system was already bad."
E.T. Bell

Introduction

The contemporary era reveals the dual nature of today's education. On the one hand, it is determined as a pragmatic instrument for achieving economic efficiency, competitiveness, and profit increase, while on the other, its role in the humanization of knowledge is emphasized—that is, knowledge directed toward the common good and the holistic development of the individual. Education represents a fundamental human right, as well as an indispensable element of a society's economic and social development. We are witnessing great, rapid, and uncertain changes that characterize the 21st century. In this light, education cannot be regarded as an exception, even though it resists and seeks to remain steadfast in the face of such a dynamic reality. Large and inert educational systems, still resting on the principles of Comenius, continue to create the illusion of a parallel reality, making them the target of numerous critics. The literature most often cites three traditional roles of the school: (1) the transmission of knowledge and cultural values; (2) the care and protection of pupils; and (3) preparation for future life (Vuksanović, 2018). While schools have proven successful in fulfilling the first two roles, the third has been only partially achieved, implying a permanent need for school system reforms. The rise in uncertainty, complexity, and the growing number of variables have significantly affected the perception of school reality, while simultaneously opening numerous questions concerning the school of the future, as well as the future of all its stakeholders.

The theoretical framework of this paper rests on three complementary perspectives. The first is a futurological-educational perspective (OECD, 2006; 2020; UNESCO, 2021), which reviews possible development trajectories of school systems in response to technological, economic, and societal transformations. The second is the perspective of educational paradigms (Education 1.0–4.0/5.0), which traces the evolution of educational models and the demands each paradigm places upon the teaching profession (Koseda et al., 2025; Šimunović & Vekić-

Kljajić, 2023). The third is the perspective of teacher competencies, integrating socio-emotional (Jennings & Greenberg, 2009; Lozano-Pena, 2021) and digital competencies (Delcker et al., 2025) as essential resources for future educational practice. The interplay among these three perspectives enables a comprehensive understanding of the challenges the teaching profession faces in the context of the transition toward the school of the future.

The modern educational system faces challenges affecting both students and teachers, as information often becomes outdated before the completion of a single educational cycle. In this context, the technological and informational revolution of the past two decades has shifted the focus from knowledge to the development of competencies. Educational policymakers and reformers often overlook the fact that the success of changes largely depends on teachers as practitioners. At such times, their implicit, personal pedagogy comes to the forefront, directly shaping the course and outcomes of reform processes. In this regard, the most effective approach is developmental, grounded in the belief that teachers proactively participate in and implement those changes arising from their personal and professional growth (Marić Jurišin, 2024). Accordingly, alternative visions of the future school—or the school of the future—bring with them numerous challenges for this Sisyphean profession.

Methodological framework

The aim of this paper is to examine the contemporary challenges facing the teaching profession in the context of educational system transformations, and to identify the key teacher competencies required for the education of the future through a systematic review and conceptual analysis of relevant theoretical and empirical literature. Accordingly, the paper seeks to address the following research questions: (1) What are the conceptual distinctions between the notions of "the school of the future" and "the future in school," and what implications these distinctions have for the development of educational systems? (2) Which scenarios of institutional education development predominate in contemporary futurological and educational policy documents? (3) Which teacher competencies are recognized as key priorities in the

framework of Education 4.0 and in the emerging perspectives of Education 5.0, with particular emphasis on socio-emotional and digital competencies?

The paper is grounded in a qualitative methodology, specifically a theoretical-analytical approach encompassing a systematic literature review and conceptual analysis. The primary research strategy employed is the narrative literature review, which facilitates the synthesis of diverse theoretical perspectives and empirical findings with the aim of building a comprehensive understanding of the phenomena under study (Snyder, 2019). This approach is particularly suited to research whose objective is theoretical grounding and the conceptualization of complex educational phenomena, rather than measurement or hypothesis testing.

Sources were selected according to the following criteria: (1) thematic relevance — works explicitly addressing the future of education, teacher competencies, Education 4.0, artificial intelligence in education, or teachers' socio-emotional competencies; (2) temporal scope — preference was given to works published between 2009 and 2025, with the exception of key foundational references (OECD, 2006; Jennings & Greenberg, 2009; Elias et al., 1997) included on account of their seminal significance to the field; (3) source type — peer-reviewed journals, publications of international organizations (OECD, UNESCO, the World Economic Forum, the European Commission), and relevant monographs.

The analysis of the collected literature was conducted in two stages. In the first stage, conceptual analysis was applied to delineate and operationalize the paper's key terms — "the school of the future" and "the future in school" — and to identify their constituent dimensions (institutional structure, the role of the teacher, modes of learning, and degree of transformation). In the second stage, thematic analysis and synthesis were conducted: the central themes emerging from the reviewed literature were identified (scenarios for the future of schooling, Education 4.0/5.0, artificial intelligence, lifelong learning, and socio-emotional competencies), and the findings were subsequently integrated into a coherent theoretical framework responsive to the research questions posed. The contributions of this paper are threefold: (1) a precise conceptual distinction and theoretical grounding of the terms "the school of the future" and "the future in school"; (2) a systematization

of the teacher competencies required for future educational contexts; and (3) the formulation of recommendations for educational policy and practice in the domain of teacher professional development.

School of the future or the future in the school?

Schools bear a Janus-faced character, simultaneously looking to the past and to the future, which provides them with reasons for dissatisfaction (the past). This dual orientation provides them with sufficient motivation and faith for new beginnings (the future) (Vrcelj & Mušanović, 2001). If we start from the assumption that education is a field in which change is not only inevitable but also necessary, the question arises: What will schools look like in the future? Should we reflect on what schools ought to become in the future, or on what they are *likely* to become? And is it more meaningful to speak and reflect on the "school of the future" or on the "future in the school"?

To get clearer understanding of the dimension of change, it is important to distinguish between the conceptual determinants of the "future in the school" and the "school of the future." The future in the school implies the continuation of the school in more or less its current form, with certain "cosmetic" changes relating to curricula, modes of work, and competence development, but without essential transformations (a process that has persisted since the very foundation of the modern school). The essence remains the same, with only minor adjustments to its form. On the other hand, the school of the future points to the possibility of a fundamentally new type of school—one based on novel, perhaps yet unknown principles, aligned with the needs and level of development of future society. Such a school, the school of the future, would correspond to a society of the future. This perspective implies a radical departure from tradition, as well as an understanding of that future society. What will it look like? Projections are numerous and often contradictory. Futurists point to potential directions of social development: accelerated economic growth, global population increase, globalization of activities, strengthened international cooperation, and the growing importance of political decision-making. Yet these processes do not necessarily lead exclusively toward prosperity; rather, they also generate new challenges for education. The globaliza-

tion of progress simultaneously entails the globalization of crises: rising poverty, rural-to-urban migration, increasing crime rates, social exclusion, and loss of identity. In the shadow of these global transformations stands the individual—confused and existentially threatened—while the world becomes at once safer and more insecure (Avramović, 2009). Researchers also point to another perspective, in which an alternative vision of modern society raises concern. According to some sociologists, a transnational elite is shaping global development toward a new form of totalitarianism. This process entails the privatization of public goods, the dominance of selfish interests, and the weakening of nation-states. Traditional values are being replaced by the figure of the "free-floating individual," for whom the state is merely a service structure. Aggressive individualism and hedonism, in this context, threaten the very foundations of human community (Avramović, 2009). For the purposes of theoretical clarification, this paper operationalizes the concept of "the future in the school" along four dimensions: (1) institutional structure — the school remains the dominant form of organized education; (2) the role of the teacher — the teacher retains a central, albeit redefined, position within the educational process; (3) modes of learning — new approaches and technologies are introduced within the existing system; (4) degree of transformation — evolutionary. By contrast, "the school of the future" is operationalized as a model in which: (1) institutional structure may be radically redefined or replaced by networked forms of learning; (2) the role of the teacher undergoes a fundamental transformation — from transmitter of knowledge to facilitator, mentor, and designer of learning experiences; (3) modes of learning are personalized, non-linear, and not limited by temporal or spatial boundaries; (4) the degree of transformation is disruptive and paradigmatic. This operationalization is consistent with Facer and Sprague (2024), who distinguish between evolutionary and transformative scenarios for the future of education, emphasizing that meaningful changes require not merely the adoption of new technologies, but a shift in the fundamental assumptions about what school is and what purpose it serves.

In the recent past, the concept of the future in the school anticipated several requirements. An effective school is one in which all students achieve success in accordance with their abilities. Through differentiated instruction and the application of appropriate methods, it is possible

to realize so-called "winning learning" for all. Schoolwork should be diverse and organized on a full-day basis, including curricular, extracurricular, and independent activities, with teacher support. The teaching process has to be systematically organized, with clear goals, a productive working atmosphere, and continuous feedback. Teachers should be able to teach multiple subjects, thus focusing more on the student while also assuming pedagogical, advisory, and evaluative roles. The dominance of frontal teaching reduces student interaction and engagement; therefore, it is necessary to introduce collaborative forms of work, group and individualized approaches, as well as problem-based and practically applicable instruction. Students should be able to understand the purpose of the material they are learning. In an effective school, there is a stimulating and visionary environment. Cooperation and partnership between management, teachers, and students replace the hierarchical model. Assessment is continuous and formative, recognizing student effort, interests, and value systems. A system of self-assessment is also developed. Teaching spaces and equipment must be adapted to contemporary needs—classrooms should be flexible, and schools equipped with modern information technology. Optimal conditions imply smaller classes (up to 24 students) and medium-sized schools (up to 650 students). Teachers' workloads should include other pedagogical activities in addition to lessons. All school stakeholders—students, teachers, and support staff—should engage in continuous learning and professional development. The school must have a well-developed pedagogical and psychological support service that fosters growth, collaboration, and a positive climate. Parents should act as active partners of the school, involved in goal implementation, improvement of practices, and collaboration with the community. In the school of the future, research and innovation are constant; quality has no upper limit. Instruction transcends the boundaries of the traditional paradigm and enters a new era, grounded in information technologies that are increasingly accessible, powerful, and adapted to the nature of the teaching process (Vilotijević, 2009).

Although the term school of the future is used here, from the evidence presented it is clear that what is actually being described is the future in the school. From today's perspective, one might even say the present in the school, with a clear tendency toward what the school "should" be. This brings us precisely to the question of the real and the

ideal in the projection of alternative visions of the future. The future of the school, and the changes that will determine whether we move toward the school of the future or the future in the school, will depend on the broader direction of social development. Since no tectonic shifts have yet occurred in this field, it is particularly important to analyse the scenarios proposed over the last two decades.

Imaginative alternative images of the future of schooling

One of the most significant international initiatives aimed at shaping education for the 21st century is the Schooling for Tomorrow project, implemented by the Organisation for Economic Co-operation and Development (OECD). Starting from the observation that long-term educational strategies are rare, the project's goal was to develop tools and frameworks for alternative and strategic reflection on the future of education, through the formulation of possible and desirable scenarios. These scenarios do not serve as predictions, but rather as logical and coherent descriptions of potential futures, grounded in a combination of past, present, and projected changes (OECD, 2006). Their value lies not in forecasting the future, but in opening space for innovative thinking and strategic planning.

It is important to emphasize that these scenarios are not precise forecasts but serve to explore possibilities and navigate change; they are not ready-made visions of education, but provide a foundation for their development; and they focus on the organization of learning rather than the school as an institution. A team of experts and futurists developed six scenarios for the evolution of education in the 21st century, ranging from the preservation of the existing state, through various forms of reform and deinstitutionalization, to the potential collapse of educational systems (OECD, 2006; Borovica, Kostović, & Oljača, 2015). This spectrum extends from an increasingly rigid bureaucratization (the least desirable outcome) to the transformation of schools into open learning centres and social networks (the least likely, but the most ideal outcome). These scenarios provide the backbone for understanding the concept of the school of the future, as presented in Table 1 (OECD, 2006; Borovica, Kostović, & Oljača, 2015).

Table 1. Features of the scenario – Schooling for the future

Scenario	Features	Implications
Scenario 1: School as a bureaucratic system (status quo)	In this scenario, schools are portrayed as strong, bureaucratically organized systems, resistant to change and governed by hierarchical administration. Educational institutions function according to established rules, with minimal interaction with the wider social environment. The system is structured into separate segments – schools, classes, teachers, students and content – and reproduces existing patterns, including social inequality. The scenario envisages further institutionalization, bureaucratization and politicization of the school, while retaining public funding. Although it will not become more open or humane, thanks to its stable structure, the school will continue to fulfil key social functions, such as selection and accreditation through the importance of the final diploma.	Analyses of this model in different cultural contexts indicate that it is the most undesirable, but also probably the most realistic scenario for the future of institutional education.
Scenario 2: School as a marketplace	In this scenario, education is organized according to market principles - supply, demand and competition. The state withdraws from the management of education, and schools function as autonomous units competing for students, resources and status. The choice of programs, teachers and methods becomes a matter of market logic, dominated by monetary value and measurable results. This model encourages innovation and dynamism, but at the same time deepens social inequalities. Privileged groups, who have greater access to resources, easily access quality education, while marginalized groups face even greater exclusion.	This approach may lead to the fragmentation of the education system - on the one hand, schools for the elite that offer creative and quality education, and on the other hand, schools with limited, narrowly specialized programs for the majority.

Scenario 3: School as an institution focused on learning	In this scenario, schools are transformed into dynamic institutions focused on learning, experimentation and innovation. Unlike traditional models, the school becomes an open system that actively collaborates with the local community and provides support to especially marginalized groups. It is characterized by the high expertise of the teaching staff, readiness for changes and clear orientation towards achieving high educational standards. The reputation and results it achieves provide it with stable financing, which additionally enables the hiring of quality professionals.	Such a school positions itself as a bearer of innovation and a leader in educational development. Although it requires significant investments from the state budget, it is believed that the effects of such schools will justify the investments through increased quality of education and social inclusion.
Scenario 4: School as a basic social centre	This scenario represents one of the most desirable models of the future school, envisioning schools as open and flexible institutions that actively cooperate with the local community, sharing educational goals, tasks and responsibilities. Special emphasis is placed on non-formal and informal learning, collective work and intergenerational cooperation. A high level of public support ensures a quality work environment, while teachers enjoy significant community trust. Although the idea is not new and finds a foothold in alternative school models, its full implementation depends on the further development of social conditions.	The significant contribution of this model is reflected in the potential for overcoming intergenerational divisions and creating new educational structures based on inclusion and joint learning. Nevertheless, although desirable, this scenario is assessed in the analyses as a less likely outcome of future education.
Scenario 5: Learning networks	This scenario predicts a radical transformation of education through the disappearance of the school as an institutional form and its replacement by networked learning models, aligned with the development of the modern information society. Learning takes place through a variety of networks – formal,	Numerous authors believe that digital technologies will have such a transformative power that schools, as we know them today, will not be able to survive. If

	non-formal and informal – that respond to individual needs, interests and available resources in the community.	traditional schools do not adapt quickly enough, parents - especially intellectual elites and interest groups - will turn to alternative forms of education. As a result, a gradual reduction in public school funding is possible, while increasing support for alternative learning models.
Scenario 6: The end of school - the collapse of educational systems	This scenario predicts the gradual disintegration of institutional education, initiated by a deep crisis of the teaching profession. The lack of quality teaching staff, dissatisfaction with working conditions and the mass outflow of teachers to other, more attractive sectors, lead to the collapse of the educational structure.	Due to public dissatisfaction with educational outcomes and the system's inability to respond to challenges, decision-makers are retreating, leaving room for fragmented and sporadic initiatives. The scenario does not predict the specific direction of education development after the crash, but it indicates the possibility of the emergence of new, non-institutional forms of education.

Where the future will take us globally remains an open question, although we can notice that locally we are currently moving towards the 6th scenario. It is evident that new tools by themselves do not bring changes in education - the key is to transform the educational paradigm while simultaneously reshaping society.

Education 4.0

In line with industrial and technological progress and its impact on education, the concept of Education 4.0 has emerged as an educational paradigm designed to respond to the needs of both society and individuals in the contemporary moment (Šimunović & Vekiž-Kljajić, 2023). Education 4.0 follows earlier stages—Education 1.0, 2.0, and 3.0. Education 1.0 was characterized by a traditional model in which the teacher was the primary, and often the sole, source of knowledge, with students in a passive role and learning limited to the classroom and school building. Education 2.0 redefined the teacher's role toward that of a mentor and facilitator, with increased access to educational content, the use of digital technologies, collaborative learning, and enhanced student autonomy. Education 3.0 emphasized the concept of open educational resources and globally networked learning that transcends geographical and institutional boundaries.

Education 4.0 is distinguished by the integrated application of artificial intelligence in educational processes, the removal of national, regional, and institutional boundaries in access to knowledge, and a stronger emphasis on student autonomy and responsibility for their own learning (Koseda, Cohen, McIntosh, & Cooper, 2025). This model underscores the importance of investment in lifelong learning and promotes highly individualized, often network-based learning, tailored to the needs and interests of each learner (Šimunović & Vekiž-Kljajić, 2023). It further establishes taxonomy of attitudes, knowledge, and values, with particular focus on the development of human capital. It is anticipated that, following Education 4.0, a new paradigm—Education 5.0—will eventually emerge, aligned with the needs of future societies. Building on this foundation, OECD (2020) outlines a seventh scenario for the future of education, characterized by extended formal schooling encompassing broader populations, alongside the strengthening of informal education. With the increasing role of technology, the teacher's role will shift toward fostering students' socio-emotional competencies, necessitating changes in teacher education. Traditional education systems will be transformed toward more flexible models that promote socialization and the development of new skills, such as leisure management. Educational institutions will increasingly connect with communities and social innovations, raising the crucial question:

which knowledge, skills, and attitudes should be transmitted through teaching, and which can be effectively acquired via communities or digital technologies?

Within contemporary education, the Education 4.0 paradigm brings a series of changes that redefine the role of teachers, approaches to learning, and curriculum design (Fisk, 2017). The key trends include flexibility in the time and space of learning, personalization of content to suit students' pace and needs, and the possibility of choosing learning methods and technologies. The teacher's role shifts from a traditional transmitter of knowledge to that of a mentor and facilitator of learning. Project-based and experiential learning are emphasized, fostering practical and interpersonal skills, while digital competencies, data interpretation, and analytical thinking gain prominence. Conventional assessment methods are increasingly replaced by formative and process-oriented approaches, and students actively participate in curriculum design. Central to these changes is the idea of enhanced student autonomy and responsibility for their educational trajectory, supported by teachers guiding the transition to digitally mediated, competence-oriented education (Hussian, 2018). Research on Education 4.0 has grown significantly in recent years, linking it with autonomous student learning, temporal and spatial flexibility, problem-solving skills, and the integration of Fourth Industrial Revolution technologies.

A special focus is placed on the application of artificial intelligence (AI), virtual reality (VR), augmented reality (AR), the Internet of Things (IoT), and virtual laboratories in the advancement of teaching, learning, and educational management (De Souza & Debs, 2024). In this context, teachers are expected to possess four core sets of competences: technological skills, learner guidance skills, lifelong learning competences, and certain personal attributes. Beyond general digital skills, teachers have to be capable of managing virtual groups and integrating technology into the teaching process. Essential personal attributes include curiosity, flexibility, and openness to change. Continuous professional development, driven by innovative learning approaches, is crucial. Above all, leadership competences are emphasized, including pedagogical and emotional guidance of students, motivation, fostering a supportive environment, and assisting students in setting educational goals (Hımmetoglu, Aydug, & Bayrak, 2020).

To prepare for Education 5.0, it is vital to assess the contributions of Education 4.0. Findings from the World Economic Forum and other relevant organizations highlight that the contemporary labour market increasingly values interpersonal and socio-emotional skills alongside technical knowledge, creativity, critical thinking, and digital competences. Socio-emotional skills include, among others, teamwork and the effective communication of ideas (World Economic Forum, 2023). Contemporary education must therefore prioritize the development of such competences to ensure that students are adequately prepared for complex social and professional challenges. Human values that cannot be replaced by machines—empathy, collaboration, and integrity—are becoming critical resources for the future. Within this framework, the question of the key teaching competences necessary for the future of education remains central. Examining all six OECD scenarios (2006) alongside the four scenarios presented in "Back to the Future of Education" (OECD, 2020) and the perspective of Education 4.0, a common denominator clearly emerges: regardless of the direction of societal change, the teacher remains the pivotal element of the system. In the bureaucratic scenario, the teacher serves as guardian of standards; in the market scenario, as a provider of services; in the innovative scenario, as a leader of change; and in the networked scenario, as a facilitator of learning. This analysis corroborates the findings of the UNESCO "Futures of Education" report (2021), according to which the future of education is not determined by technology, but by the choices that communities make regarding the role of teachers, the values they uphold, and the purposes they assign to learning. It is precisely this observation that constitutes the theoretical foundation for understanding teacher competencies as the central issue in the transition toward the school of the future.

Teacher competencies – challenges on the path to Education 5.0

Lifelong learning

The concept of lifelong learning has been part of political discourse for more than half a century (OECD, 2023). Although considered an imperative in the era of globalization (Islamović, 2022), it has brought

relatively few substantial changes to either policy or practice (OECD, 2023). The Memorandum on Lifelong Learning (2000) defines this notion as a continuous process of acquiring knowledge aimed at improving skills, knowledge, and competences within the personal, social, civic, or professional spheres of individual life. Lifelong learning may take the form of formal learning—within a profession or for personal development and general competence improvement, non-formal learning—in a professional context, or informal learning—through various activities and life roles.

According to Orlović Lovren (2023), lifelong learning can be defined through several key dimensions: equity in education—ensuring access for all; continuity—learning as a constant process oriented toward the future, with respect for the past; change—adaptability to ongoing transformations and capacity-building to cope with them; integrative approach—intergenerational knowledge exchange; community orientation—respecting the specificities of local and global contexts; responsibility—assuming an active role in personal capacity development; interdisciplinarity and cross-sectoral collaboration—learning not confined to subjects or fields but occurring across institutions, social sectors, and disciplines; and diversity—recognizing all forms of difference in access, content, and methods of learning. Each of these dimensions has potential for development within individual national contexts.

To achieve the European Union's goal of engaging at least 60% of the adult population in some form of learning, the European Commission (2001) identified six strategic priorities: (1) enhancing the recognition of learning outcomes, including non-formal and informal learning, and promoting greater mutual recognition of formal diplomas; (2) strengthening information, guidance, and counselling services to ensure equitable access to resources; (3) investing time and financial resources in education, with a call to member states to increase overall investment levels; (4) expanding access to lifelong learning opportunities, particularly through local learning centres; (5) ensuring the acquisition of basic knowledge and skills for all citizens; and (6) developing effective teaching and learning methods, alongside innovative pedagogy that shifts the focus from knowledge acquisition to competence development.

Lifelong learning has thus become not only a necessity but also a guiding principle for achieving personal and professional development (Malčić, 2016), as well as a driver of economic growth (Laal & Laal, 2012). Its benefits are manifold: cognitive improvement through mentally stimulating activities that enhance memory and cognitive functions; career advancement through continuous learning and upskilling; personal growth and increased well-being, self-confidence, and resilience, with a reduction in burnout; stronger social ties and community engagement through networking opportunities; and adaptability to life transitions and challenges (Pew Research Center, 2016; Xhensila, 2024).

When applied to teachers, lifelong learning—already recognized as a key competence in Education 4.0—can be viewed through the lens of continuous professional development, which includes innovative approaches to teaching and the adoption of diverse instructional methods; the enhancement of critical thinking and problem-solving skills (Himmetoglu et al., 2020); as well as the cultivation of personal qualities such as autonomy, self-efficacy, self-respect, and reduced job-related burnout. Nevertheless, lifelong learning represents not only an imperative but also one of the greatest challenges for Education 5.0. Its prospects and success largely depend on the economic, political, and cultural contexts of individual societies (Islamović, 2022). Despite the rhetoric, lifelong learning continues to remain a secondary priority compared to economic imperatives in most countries.

Artificial intelligence – a new digital competence for teachers

The definition of artificial intelligence (AI) refers to the capacity of digital machines to perform certain tasks by imitating human intelligence, reasoning, and learning (Chiu et al., 2023), as well as solving problems and making decisions (Simut et al., 2024). In recent years, AI has continuously transformed the way people communicate, learn, work, and live (Xia et al., 2022). However, its application has become practically dependent on expertise within social, creative, and emotional skills, which indicates an essential connection between AI and education.

In order to adequately use AI, teachers must be informed about its possibilities and scope, as well as trained in its appropriate use and application in teaching practice (Marić Jurišin, 2024). The responsible and efficient application of AI in educational processes is primarily based on teachers' competence to apply it. AI competence in the educational context represents a set of skills that enables teachers to ethically assess and apply AI in teaching preparation and learning processes (Delcker et al., 2025). A systematic review of the literature reveals the need for a holistic, multidimensional approach (Knoth et al., 2024; Sperling et al., 2024), which identifies six dimensions of teacher competencies in the field of artificial intelligence (Delcker et al., 2025):

1. Theoretical knowledge of AI – Understanding different AI technologies (machine learning, data mining, neural networks), recognizing AI characteristics, and identifying areas of application.
2. Legal framework and ethics – The ability to work in accordance with ethical principles and awareness of challenges arising from AI use, including data protection in compliance with specific legal frameworks.
3. Implications of AI – Recognizing the challenges and potentials AI brings to education, awareness of changing competencies, development of diverse learning formats, the risk of alienation, and the recognition that AI cannot solve every problem. Competent teachers must take all these aspects into account when applying AI.
4. Attitude toward AI – Teachers' openness to AI, active engagement in its use, and reflection on their own beliefs and relationship toward AI, with the aim of harnessing its potential for student growth.
5. Teaching and learning with AI – The ability to integrate AI into teaching (AI as a general topic, as support for individual or collaborative learning, or as an assessment tool). Teachers should act as role models in AI application for their students.
6. Continuous professional development – Understanding the necessity of continuous training, as AI is a rapidly evolving field requiring ongoing adaptation to teachers' needs. This also includes establishing professional networks and collaborations, as well as using AI in organizational processes.

To develop these dimensions, teacher training programmes aligned with the local teaching context are essential. Only in this way can AI tools be applied in ways tailored to individual students or specific classroom situations. The benefits of AI for enhancing teachers' competencies are numerous: more efficient and accessible information, simplified research, advanced translation and interpretation of facts, time and resource savings, personalized teaching, support in assessment, stimulation of student motivation (Stanić & Stanić, 2023), influence on curriculum modernization (Simut et al., 2024), assistance in organizing the teaching process, and evaluation of instruction. A major limitation of AI application in education remains the lack of teacher training, which hinders its understanding and implementation. Consequently, several initiatives have emerged within international institutions (OECD, 2021; European Commission, 2022), pointing to AI's potential but also its current underutilization in education.

Researchers in the field of artificial intelligence identify seven areas of concern and challenges (Simut et al., 2024) regarding AI's impact on educational systems (Malekos, 2023):

1. Insufficient technological knowledge among teachers and inadequate school infrastructure to support AI integration.
2. The limited role of AI in education due to teachers' lack of interest or biases that AI algorithms are not suited to their practical needs.
3. The risk of AI reinforcing discrimination and inequality through biased algorithms or inaccurate assessment of student performance, which may undermine trust in teachers (Qian et al., 2020).
4. Questions of trust in AI systems and their influence on teachers' judgment, autonomy, and ethical responsibilities.
5. Concerns that AI could degrade or replace the role of teachers. While some authors view this as overly pessimistic (Hrastinski et al., 2019), institutional support is needed to ensure that AI is framed as a tool designed to support and strengthen teachers' roles.
6. Risks of reduced human interaction, isolation, and detachment of students from peers and teachers if AI is used to substitute authentic social contexts. In this regard, the role of teachers in fostering students' socio-emotional skills is more important than ever.

7. The risk of content overload, intellectual passivity, and a decline in critical thinking. AI's capabilities may reduce intuitive analysis, autonomy, and creative problem-solving, potentially lowering learning outcomes.

Considering these aspects, recommendations for the adequate application of AI in education include: relevant professional development for teachers; access to AI-related resources and infrastructure; alignment of educational policies and curricula with AI; assessment of AI's impact on learning; ensuring data privacy and security; equitable access to AI education for all; maintaining a balance between AI use and human interaction; and preparing students for AI-driven labour markets.

Although in Education 4.0 technological skills—including AI—were already one of the four key sets of teacher competencies, AI has introduced "new rules of the game" in education and thus may become a central factor of Education 5.0. Artificial intelligence holds the potential to revolutionize education, transforming traditional modes of knowledge transfer and reshaping essential teacher competencies.

Teachers' socio-emotional competencies

Given the inevitable and increasing implementation of technology and artificial intelligence in the educational process, socio-emotional competencies (SEC) are becoming a central element of human development, primarily due to their predictive power in relation to variables connected to the educational context (Arens & Morin, 2016; Poulou, 2017). The European Union, OECD, United Nations, World Health Organization, World Bank, and UNICEF have all recognized their importance and joined forces in the explicit promotion of SEC development (Lozano-Pena, 2021; Muller et al., 2020; Schonert-Reichl, 2019).

In the context of education, the significance of teachers' socio-emotional competencies lies in their crucial role in ensuring quality education, safeguarding mental health, and fostering a positive classroom climate, as well as managing their own emotions and those of students, parents, and colleagues. In view of the increasingly complex demands placed on education—in terms of inclusiveness, interculturality, individualization, and technological progress—SEC have become an indispensable and essential component of teachers' professional com-

petence. Research shows that socio-emotional competencies are predictors of burnout in the teaching profession (Hernandez, 2018) and that teachers who participate in programmes related to SEC development achieve positive outcomes in their mental health, well-being, stress management, and sense of self-efficacy (Lozano-Pena, 2021; Oliveira et al., 2021). For these reasons, understanding this concept and providing systemic support for its development represent one of the priorities for researchers in the field.

One of the earliest definitions of general SEC described them as the knowledge, skills, and motivation necessary for mastering emotional and social situations (Elias, 1997). Over time, this interpretation has broadened, and one of the most recent definitions states:

> "SEC represent the effective management of intrapersonal and interpersonal social and emotional experiences in a way that promotes personal growth and the growth of others. SEC are operationalized through the fulfilment of basic psychological needs in the domain of socio-emotional functioning, as well as through individuals' motivation and behaviours." (Lozano-Pena, 2021, 7)

When it comes to defining teachers' SEC, the definition is as follows:

> "A comprehensive set of interrelated skills and processes, including emotional processes (understanding and regulating emotions, empathy, recognizing personal emotional strengths and weaknesses), social and interpersonal skills (positive interaction with others), and cognitive processes (stress management)." (Lozano-Pena, 2021, 7)

To better understand the definition of SEC within the field of education, one of the models of socio-emotional development is presented below.

In the literature, various theoretical models of SEC have been developed (e.g., the Emotional Intelligence Model, the Emotional Regulation Model, the Socio-Emotional Learning Model). The most relevant to our research is the Prosocial Classroom Model proposed by Jennings and Greenberg (2009). They emphasize the importance of teachers' social and emotional competence and well-being in the development and maintenance of supportive classroom relationships and in effective classroom management, alongside the successful implementation of socio-emotional learning programs. The factors that contribute to

creating such a classroom climate are five key competencies within the emotional, cognitive, and behavioural domains: teacher self-awareness, social awareness, responsible decision-making, self-management, and relationship management. The global areas in which teacher skills are essential, according to the Prosocial Classroom Model, include: (1) teachers' SEC and well-being; (2) supportive teacher–student relationships, in which teachers recognize and understand students' emotions and respond accordingly; (3) effective classroom management through proactive approaches and support; (4) the implementation of socio-emotional learning programmes, with teachers serving as role models and integrating emotions into daily teaching; and (5) classroom climate, shaped by the previously mentioned aspects. The authors of this model stress that these aspects of the prosocial classroom directly affect students' social, emotional, and academic outcomes (Jennings & Greenberg, 2009).

The space for developing teachers' socio-emotional competencies can be summarized through three dimensions: professional teacher development; school- and institution-level interventions; and potential changes in educational policy. Research has shown that SEC can be enhanced (Schonert-Reichl, 2017), and from a practical perspective, they must be integrated into teacher professional development programmes. This would enable teachers to better regulate their own emotions, build resilience to stress, create a stimulating learning environment, and develop higher-quality relationships with students, parents, and colleagues. Within the second dimension, interventions at the school level are recommended. Research results indicate that leadership that recognizes the importance of socio-emotional learning produces positive outcomes at the school level and acts preventively against problems such as violence, delinquency, and school dropout (Lozano-Pena, 2021).

The third dimension involves educational policy. There seems to be a deep gap between the SEC competencies teachers are expected to possess when they begin their careers and the extent to which they are taught or trained to develop them during initial teacher education. In this sense, educational policies should integrate courses that cover the entire study period and directly affect teachers' competence outcomes in the domain of SEC. Furthermore, recognizing SEC as a standard of

quality in education could, in the long run, contribute to building a more humane and sustainable educational system.

Conclusion

It is difficult to provide a definitive answer to the question of what the school of the future will look like. The findings of this research indicate that, for now, we are familiar only with the future in the school, with a strong emphasis on the ideal—that is, we are familiar with everything a school "is expected" to be. Whether we will reach the school of the future depends on numerous factors that are not solely aligned with global social changes but are much more contingent upon the local political, economic, cultural, educational, and technological context of a given country.

The OECD (2018), in its report Education 2030: the Future of Education and Skills, identifies three major challenges in education: ecological, economic, and social. In this regard, there is room for the development of the school of the future, but only through the active involvement of all stakeholders—responsible state and educational institutions, the local community, teachers, parents, and students. Without a long-term strategy that proactively shapes society, decentralizes the system, and supports innovation in teaching and assessment, there will be no foundation for the development of the school of the future.

A particularly significant element of such a vision of schooling is investment in teachers, as the key link and decisive variable in the contemporary educational context (Marić Jurišin & Malčić, 2022). For the development of their professional identity and adequate preparation for Education 5.0, it is essential to support teacher autonomy, foster motivation, and provide systemic and continuous professional development. This should primarily aim at enhancing competencies in two domains: digital skills—with the effective and critical integration of artificial intelligence—and socio-emotional skills, both of which are significant predictors of student success (Schonert-Reichl, 2017).

We may conclude that the school of the future requires not merely an educational reform, but rather a broader transformation of society—one that, through vision, collaboration, and long-term investment, will ultimately reach its goal. Returning to the research questions posed and

the analysis conducted, the following conclusions may be drawn: (1) The conceptual analysis has demonstrated that the distinction between "the future in school" and "the school of the future" is not merely terminological, but paradigmatic — it reflects a deeper question concerning whether the objective is the modernization of the existing system or its fundamental transformation. Evidence to date suggests that educational systems globally, and local systems in particular, are moving predominantly in the direction of the future in school. (2) The scenario analysis (OECD, 2006; 2020) reveals that none of the scenarios is unequivocally favourable or unfavourable — each carries both risks and potentials, and their realization depends on complex social, economic, and political factors. A critical appraisal of these scenarios further reveals that techno-optimistic narratives frequently underestimate institutional inertia and the significance of inequalities in access to digital technologies. (3) The teacher competencies identified — socio-emotional, digital, and lifelong learning competencies — are not mutually exclusive, but constitute an integrated profile of a professional capable of operating effectively within uncertain and rapidly changing educational contexts (Facer & Sprague, 2024; UNESCO, 2021). A limitation of this paper lies in the fact that it is grounded exclusively in theoretical analysis, without empirical verification in concrete educational settings. Future research should examine how teachers in diverse local contexts perceive and develop these competencies, as well as what institutional barriers and challenges stand in the way of realizing the school of the future.

Literature

Arens, A. K., & Morin, A. J. S. (2016), "Relations between teachers' emotional exhaustion and students' educational outcomes", *Journal of Educational Psychology*, 108(6), pp. 800–813. https://doi.org/10.1037/edu0000105

Borovica, M. T., Kostović, S., & Oljača, A. M. (2015), "Škola budućnosti – alternativne budućnosti institucionalnog obrazovanja", in: O. Gajić (ur.), *Kvalitet obrazovnog sistema Srbije u evropskoj perspektivi*, Novi Sad: Filozofski fakultet, pp. 61–73.

Chiu, T. K., Xia, Q., Zhou, X., Chai, C. S., & Cheng, M. (2023), "Systematic literature review on opportunities, challenges, and future research recommendations of artificial intelligence in education", *Computers and Education: Artificial Intelligence*, 4, 100–118. https://doi.org/10.1016/j.caeai.2023.100118

Delcker, J., Heil, J., & Ifenthaler, D. (2025), "Evidence-based development of an instrument for the assessment of teachers' self-perceptions of their artificial intelligence competence", *Educational Technology Research and Development*, 73(1), pp. 115–133. https://doi.org/10.1007/s11423-024-10419-0

De Souza, A. S. C., & Debs, L. (2024), "Concepts, innovative technologies, learning approaches and trend topics in education 4.0: A scoping literature review", *Social Sciences & Humanities Open*, 9, 100902. https://doi.org/10.1016/j.ssaho.2024.100902

Elias, M. J., Zins, J. E., & Weissberg, R. P. (1997), *Promoting Social and Emotional Learning: Guidelines for Educators*, Alexandria, VA: Association for Supervision and Curriculum Development.

European Commission (2001), *Making a European Area of Lifelong Learning a Reality*, Brussels: European Communities. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52001DC0678

European Commission. (2022), *Ethical Guidelines on the Use of Artificial Intelligence (AI) and Data in Teaching and Learning for Educators*, Luxembourg: Publications Office of the European Union.

Facer, K., & Sprague, T. (2024), "Education's Futures and Futures in Education", in: R. A. Slaughter (ur.), *Handbook of Futures Studies*, Cheltenham: Edward Elgar Publishing, pp. 157–169. https://doi.org/10.4337/9781035301607.00018

Fisk, P. (2017), *Education 4.0 ... the future of learning will be dramatically different, in school and throughout life*. Available at: http://www.thegeniusworks.com/2017/01/future-education-young-everyone-taught-together [15. 3. 2025.]

Hernández, E. T. (2018), "Competencias socioemocionales y creencias de autoeficacia como predictores del burnout en docentes mexicanos", *Revista de estudios y experiencias en educación*, 17(35), pp. 15–27. https://doi.org/10.21703/rexe.20181735hernandez1

Hımmetoglu, B., Aydug, D., & Bayrak, C. (2020), "Education 4.0: Defining the teacher, the student, and the school manager aspects of the revolution", *Turkish Online Journal of Distance Education*, 21(Special Issue-IODL), pp. 12–28. https://doi.org/10.17718/tojde.770896

Hrastinski, S., Olofsson, A. D., Arkenback, C., Ekström, S., Ericsson, E., Fransson, G. & Utterberg, M. (2019), "Critical imaginaries and reflections on artificial intelligence and robots in postdigital K-12 education", *Postdigital Science and Education*, 1, pp. 427–445. https://doi.org/10.1007/s42438-019-00045-2

Hussin, A. A. (2018), "Education 4.0 made simple: Ideas for teaching", *International Journal of Education and Literacy Studies*, 6(3), pp. 92–98. https://doi.org/10.7575/aiac.ijels.v.6n.3p.92

Islamović, E. (2022), "Neki izazovi obrazovanja u budućnosti", *Zbornik Islamskog pedagoškog fakulteta u Bihaću*, 14, pp. 159–187.

Jennings, P. A., & Greenberg, M. T. (2009), "The prosocial classroom: Teacher social and emotional competence in relation to student and classroom out-

comes", *Review of Educational Research*, 79(1), pp. 491–525. https://doi.org/10.3102/0034654308325693

Knoth, N., Decker, M., Laupichler, M. C., Pinski, M., Buchholtz, N., Bata, K., & Schultz, B. (2024), "Developing a holistic AI literacy assessment matrix – Bridging generic, domain-specific, and ethical competencies", *Computers and Education Open*, 6, 100177. https://doi.org/10.1016/j.caeo.2024.100177

Koseda, E., Cohen, I. K., McIntosh, B., & Cooper, J. (2025), "Internationalisation and digital transformation in HEIs: The impact of education 4.0 on teaching, learning and assessment", *Policy Futures in Education*, 23(1), pp. 1–9. https://doi.org/10.1177/14782103231194531

Laal, M., & Laal, A. (2012), "Lifelong learning elements", *Procedia – Social and Behavioral Sciences*, 47, pp. 1562–1566. https://doi.org/10.1016/j.sbspro.2012.06.873

Laal, M. (2013), "Key necessities for lifelong learning", *Procedia – Social and Behavioral Sciences*, 83, pp. 937–941. https://doi.org/10.1016/j.sbspro.2013.06.176

Lozano-Peña, G., Saez-Delgado, F., Lopez-Angulo, Y., & Mella-Norambuena, J. (2021), "Teachers' social–emotional competence: History, concept, models, instruments, and recommendations for educational quality", *Sustainability*, 13(21), 12142. https://doi.org/10.3390/su132112142

Malekos, N. (2023), *The Rise of Artificial Intelligence in Education: Will AI Disrupt eLearning?* [online] Available at: https://www.learnworlds.com/artificial-intelligence-in-education/ [20/02/2025]

Malčić, B. (2016), "Cjeloživotni programi učenja kao imperativ današnjice", *Pedagoška stvarnost*, 3, pp. 474–483.

Marić Jurišin, S. (2024), "Critical distance – A teaching competence that is (not) slipping away in the digital age", in: *ITRO – International Conference on Information Technology and Development of Education*, Zrenjanin, vol. 15, pp. 16–22.

Marić Jurišin, S., & Malčić, B. (2022), *Samoprocena nastavničke profesije u savremenom obrazovnom kontekstu*, Novi Sad: Filozofski fakultet.

Memorandum o cjeloživotnom učenju (2000), SEC (2000) 1832: Radni materijal Europske komisije, Bruxelles, 30/10/2000.

Müller, F., Denk, A., Lubaway, E., Sälzer, C., Kozina, A., Perše, T. V. & Jurko, S. (2020), "Assessing social, emotional, and intercultural competences of students and school staff: A systematic literature review", *Educational Research Review*, 29, 100304. https://doi.org/10.1016/j.edurev.2019.100304

OECD. (2006), *Think Scenarios, Rethink Education*, Paris: OECD Publishing. Available at: http://www.sourceoecd.org/education/9264023631

OECD. (2018), *Education 2030: The Future of Education and Skills*, Paris: OECD.

OECD. (2020), *Back to the Future of Education: Four OECD Scenarios for Schooling*, Paris: OECD Publishing. https://doi.org/10.1787/178ef527-en

OECD. (2021), *Recommendation of the Council on Artificial Intelligence*. Available at: https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0449 [15 January 2025]

OECD. (2023), *Building the Future of Education*, Paris: OECD Publishing. https://doi.org/10.1787/ae6a9a88-en

Oliveira, S., Roberto, M. S., Veiga-Simão, A. M., & Marques-Pinto, A. (2021), "A meta-analysis of the impact of social and emotional learning interventions on teachers' burnout symptoms", *Educational Psychology Review*, 33(4), pp. 1779–1808. https://doi.org/10.1007/s10648-021-09612-9

Orlović Lovren, V. (2023), "Lifelong learning and life-wide challenges: Toward the uncertainty of sustainable futures", in: K. Evans, W. O. Lee, J. Markowitsch, M. Zukas (ur.), *Third International Handbook of Lifelong Learning*, Cham: Springer. https://doi.org/10.1007/978-3-031-19592-1_57

Pew Research Center. (2016), *The State of American Jobs*. Available at: https://www.pewresearch.org/social-trends/2016/10/06/the-state-of-american-jobs/ [10/02/2025]

Poulou, M. S. (2017), "Students' emotional and behavioral difficulties: The role of teachers' social and emotional learning and teacher-student relationships", *International Journal of Emotional Education*, 9(2), pp. 72–89.

Qian, L., Zhao, Y., & Cheng, Y. (2020), "Evaluating China's automated essay scoring system iWrite", *Journal of Educational Computing Research*, 58(4), pp. 771–790. https://doi.org/10.1177/0735633119881471

Schonert-Reichl, K. A. (2017), "Social and emotional learning and teachers", *The Future of Children*, pp. 137–155. https://doi.org/10.1353/foc.2017.0007

Schonert-Reichl, K. A. (2019), "Advancements in the landscape of social and emotional learning and emerging topics on the horizon", *Educational Psychologist*, 54(3), pp. 222–232. https://doi.org/10.1080/00461520.2019.1633925

Simuţ, R., Simuţ, C., Badulescu, D., & Badulescu, A. (2024), "Artificial intelligence and the modelling of teachers' competencies", *Amfiteatru Economic*, 26(65), pp. 181–200. https://doi.org/10.24818/EA/2024/65/181

Snyder, H. (2019), "Literature review as a research methodology: An overview and guidelines", *Journal of Business Research*, 104, pp. 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039

Sperling, K., Stenberg, C.-J., McGrath, C., Åkerfeldt, A., Heintz, F., & Stenliden, L. (2024), "In search of artificial intelligence (AI) literacy in teacher education: A scoping review", *Computers and Education Open*, 6, 100169. https://doi.org/10.1016/j.caeo.2024.100169

Stanić, M., & Stanić, T. (2024), "Uticaj veštačke inteligencije na obrazovanje", in: *Sinergija – Veštačka inteligencija: inovacije, primena i etički izazovi*, Bijeljina: Univerzitet Sinergija, pp. 41–47.

Šimunović, Z., & Vekić-Kljajić, V. (2023), "Obrazovanje 4.0: Izgradnja ključnih kompetencija", in: *Društvo, znanost i umjetnost u (post)digitalnom dobu*, p. 441–449.

UNESCO. (2021), *Reimagining Our Futures Together: A New Social Contract for Education*, Paris: UNESCO Publishing. https://doi.org/10.54675/ASRG2104

Vrcelj, S., & Mušanović, M. (2001), *Prema pedagoškoj futurologiji: (škola budućnosti)*, Rijeka: Hrvatski pedagoško-književni zbor.

Vuksanović, N. (2018), "Značaj i primena metode scenarija kao sredstva planiranja u obrazovanju", *Andragoške studije*, 1, p. 105–121. https://doi.org/10.5937/AndStud1801105V

World Economic Forum. (2023), *Defining Education 4.0: A Taxonomy for the Future of Learning*, Geneva: World Economic Forum. Available at: https://www3.weforum.org/docs/WEF_Defining_Education_4.0_2023.pdf

Xhensila, A. (2024), "Lifelong Learning", *Interdisciplinary Journal of Research and Development*, 11(1), p. 27–32.

Xia, Q., Chiu, T. K. F., Lee, M., Sanusi, I. T., Dai, Y., & Chai, C. S. (2022), "A self-determination theory (SDT) design approach for inclusive and diverse artificial intelligence (AI) education", *Computers & Education*, 189, 104582. https://doi.org/10.1016/j.compedu.2022.104582

ŠKOLA BUDUĆNOSTI ILI BUDUĆNOST U ŠKOLI – IZAZOVI NASTAVNIČKE PROFESIJE

Stanislava Marić Jurišin, Borka Malčić

Obrazovanje danas predstavlja ključan čimbenik društvenog, gospodarskog i kulturnog razvoja svake države. Vizija budućnosti izravno oblikuje obrazovanje i koncept škole budućnosti. Cilj je ovoga rada ispitati suvremene izazove s kojima se suočava nastavničko zanimanje u kontekstu transformacija obrazovnog sustava te identificirati ključne kompetencije učitelja potrebne za obrazovanje budućnosti. Primjenom kvalitativne, teorijsko-analitičke metodologije – konkretno narativnog sustavnog pregleda literature i konceptualne analize futurologijskih, upravljačkih i empirijskih izvora – istraživanje sintetizira spoznaje iz međunarodnih okvira. Rad donosi tri specifična doprinosa: uspostavlja preciznu konceptualnu i paradigmatsku distinkciju između »budućnosti u školi« i »škole budućnosti«; sistematizira kompetencije učitelja – digitalne, socioemocionalne i kompetencije cjeloživotnog učenja – nužne za Obrazovanje 4.0 i nadolazeće Obrazovanje 5.0; te formulira preporuke utemeljene na dokazima za obrazovne politike i profesionalni razvoj učitelja u prijelazu prema obrazovanju usmjerenom na budućnost.

Ključne riječi: *budućnost; škola; učitelj; profesionalni izazovi; kompetencije*