The Role of AI Assistants in Supporting Teachers

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Abstract: The topic of this research is the role of AI assistants in supporting teachers within contemporary education. The primary aim is to examine how teachers perceive the potential of AI-based tools, which specific tools they use, in which instructional contexts they apply them, what challenges they recognize, and which ethical concerns they consider crucial for their safe and responsible integration into the educational process. The study was conducted through a survey among primary and secondary school teachers, followed by a combination of quantitative and qualitative data analysis. The findings indicate that most teachers use AI assistants occasionally or are only beginning to consider their use, while regular and systematic implementation remains limited. A positive relationship was observed between the level of digital literacy and the frequency of AI use, whereas the most commonly identified barriers include insufficient knowledge, fear of misuse, and the absence of clear guidelines. Overall, attitudes toward AI are generally positive, particularly among teachers with more experience in using such tools, who highlight time-saving effects and improvements in instructional quality. These findings are consistent with patterns described in current research literature and point to the need for targeted professional training and clearly defined ethical frameworks for the use of AI in education.

Keywords: artificial intelligence, education, teachers, AI assistants, digital literacy, educational ethics

Introduction

The digital transformation of education increasingly involves the use of artificial intelligence (AI) tools, which are now becoming accessible not only to students but also to teachers in their everyday professional practice. Among the most widespread applications of AI in education are so-called AI assistants—tools based on large language models such as ChatGPT, Copilot, Grammarly and similar systems—which can support lesson preparation, the development of instructional materials, test construction, content differentiation, and the professional development of teachers. Although AI assistants offer significant potential for enhancing the efficiency and overall quality of teaching and learning, their integration into teachers' work raises a number of important questions. These relate to the level of technological competence, frequency and purpose of use, motivational factors and perceived barriers, as well as ethical concerns, trust, and responsibility in the context of AI-supported instruction. In addition to technical and pedagogical considerations, issues of academic integrity, the potential for misuse, algorithmic bias, and data protection remain particularly relevant.

Despite the growing presence of AI tools in education, research shows that many teachers remain uncertain or cautious regarding their broader adoption. A Pew Research Center study reported that only 6% of teachers believe AI brings more benefits than risks in education, while 35% remain undecided, indicating a need for deeper examination of teachers' perceptions and needs [6]. A systematic review conducted by Labadze [5] highlighted that AI chatbots can save teachers' time, improve communication, and provide access to personalized learning resources; however, concerns remain regarding the accuracy of generated information, the potential for misuse, and ethical dilemmas in instructional environments. Similarly, Tan [9] emphasized the increasing use of AI in lesson planning, while also noting a pronounced lack

of structured professional training for educators.

The multi-layered impact of AI on education—ranging from personalized learning and automated assessment processes to teacher support—requires an ethically grounded, inclusive, and transparent approach to its implementation [8]. Elsayed [2] found that combining AI with thoughtful pedagogical guidance can increase student engagement and reduce anxiety in learning contexts, yet they also warn of risks associated with uncritical reliance on AI, such as dependence on the technology and reduced development of authentic competencies. This aligns with broader concerns regarding privacy, algorithmic transparency, and responsible data practices. AI can significantly support academic writing and research [4] but studies also warn that extensive reliance on generative AI systems may negatively influence cognitive independence and critical reasoning [11]. Finally, emerging research highlights that while generative AI offers considerable opportunities for personalization and efficiency, it simultaneously requires well-defined ethical, legal, and pedagogical frameworks to ensure its fair and responsible use [3].

AI Tools in supporting teachers and the classroom

The development of generative artificial intelligence has led to the emergence of digital tools that are no longer merely technical additions to the teaching process, but are increasingly becoming an integral part of pedagogical planning, instructional design, and the facilitation of learning. Within this group, a particularly prominent role is held by AI assistants—tools based on large language models (LLMs), such as ChatGPT, Copilot, Grammarly, Perplexity, and Canva AI—which are capable of generating textual and visual content, suggesting instructional strategies, shaping learning materials, creating assessment forms, and supporting students throughout the learning process. The role of these tools in education does not lie in their ability to "do the work" in place of the teacher, but rather in their capacity to free time and cognitive space for what is most valuable in the teaching process: pedagogical interpretation, interaction, questioning, problematization, and critical reflection. In this sense, AI tools function as an extension of the teacher's professional practice rather than as its substitute.

ChatGPT as a pedagogical mediator

ChatGPT represents one of the most widely adopted platforms based on generative artificial intelligence models, and it substantially influences the way teachers plan and shape instructional activities. In practice, it is most commonly used to support the preparation of explanations, examples, and tasks, which enables faster lesson preparation and facilitates the differentiation of content according to students' knowledge levels and learning needs. Recent studies indicate that ChatGPT can serve as a "cognitive partner" in the instructional planning process, particularly in phases of conceptualizing lesson ideas, generating examples, and designing learning scenarios [9].

However, the use of ChatGPT requires critical and pedagogically informed oversight from the teacher. Holmes, Bialik, and Fadel [12] emphasize that generative models produce linguistically convincing text that may nonetheless be factually inaccurate, imprecise, or conceptually oversimplified. For this reason, pedagogical mediation remains essential—the teacher does not accept the generated content as final, but instead evaluates, selects, adapts, and interprets it in accordance with curricular standards and instructional objectives. Thus, the use of ChatGPT in educational settings is not a technical issue, but a didactic one.

Furthermore, empirical research highlights the risks associated with excessive or uncritical reliance on dialogic AI systems. Zhai, Wibowo, and Li [11] argue that frequent use of ChatGPT may reduce students' cognitive autonomy, as learners may replace the process of understanding with the reproduction of AI-generated responses. Similarly, the Pew Research Center reports that many teachers express concern that the use of ChatGPT could weaken the development of critical thinking and independent problem-solving skills if clear pedagogical guidelines are not established [6].

In other words, ChatGPT is only as effective as the teacher's competence to guide its use. When teachers possess well-developed digital and AI literacy, ChatGPT can expand instructional creativity, inclusiveness, and differentiation. When such competencies are lacking, there is a risk that the tool may diminish learning quality. This once again affirms that AI does not replace the teacher—it underscores the significance of the teacher's professional role.

Copilot as an integrated digital teaching partner

Microsoft Copilot, integrated within the Microsoft 365 platform, functions as an AI assistant embedded in applications already familiar to teachers, such as Word, PowerPoint, and Teams. This makes Copilot particularly relevant in educational environments where schools are already organizationally and technically aligned with the Microsoft ecosystem. In practice, Copilot is most commonly used to reorganize, expand, or condense existing instructional materials, as well as to generate presentation structures, lesson outlines, and class plans. In Tan's [9] research, Copilot was identified as a tool that reduces teachers' cognitive load and time burden during the lesson planning phase, allowing them to devote more attention to pedagogical analysis and instructional decision-making.

However, Copilot does not independently generate pedagogically meaningful content. Research on large language model interaction demonstrates that the quality of output depends directly on the quality of input—that is, on the clarity of goals, context, and instructions provided by the teacher [12]. If the teacher does not define a clear instructional purpose or assessment criteria, Copilot cannot ensure a meaningful educational solution. Its effectiveness is therefore highest when used as a tool for structuring and guiding the teacher's work, rather than as a source of original content. In this way, Copilot reinforces rather than replaces the teacher's expertise and planning role.

Grammarly and metacognitive support in writing

Grammarly is a tool for automated language analysis and correction that is increasingly used in the teaching of both native and foreign languages, as well as in subjects where written expression is of particular importance. The tool enables students and teachers to identify errors in sentence structure, spelling, syntax, and style. Elsayed et al. [2] demonstrate that the use of tools such as Grammarly can reduce writing-related anxiety and enhance students' motivation to write, especially when it is used as a form of reflective feedback.

However, the primary pedagogical value of Grammarly does not lie in its ability to "correct" a text, but in its potential to support learning about one's own writing. If students use the tool without understanding the reasons behind the corrections, there is a risk that they will not develop autonomy in writing, and that their individual style will become generic. For this reason, it is recommended that Grammarly be used after the initial writing process, as a means of reflection rather than during the drafting stage [12]. By doing so, students learn to recognize patterns in their own errors, which contributes to the development of linguistic awareness and metacognitive control in writing.

Perplexity AI as a tool for developing information literacy and critical thinking

Perplexity AI differs from most dialogic AI systems in that it provides the sources on which its responses are based. In an educational context, this feature carries strong pedagogical value, as it enables students and teachers to verify the credibility of information, compare sources, and develop a habit of critically examining knowledge. In studies focused on student-led inquiry and research, Perplexity has been shown to function as a valuable bridge between independent exploration and digital assistance [3].

Unlike ChatGPT, which may produce text that is linguistically convincing but not necessarily accurate, Perplexity promotes a culture of source validation, aligning with the principles of information literacy. Its use is particularly meaningful in secondary and higher education, as well as in project-based learning, where students are expected to develop the ability to connect, interpret, and evaluate information rather than merely reproduce content.

Canva AI and the visual articulation of learning content

Canva AI enables the generation of visual representations, diagrams, graphic posters, and presentations with minimal technical skill, which makes it accessible to teachers across different subject areas. Visualizing complex concepts can support comprehension for students who prefer visual learning styles and can foster creative expression in the classroom. However, as Holmes and Tuomi [13] caution, visually appealing design does not necessarily lead to deeper understanding. If Canva's visual output is used before the content has been meaningfully internalized, there is a risk that students may remain at a surface level of learning.

For this reason, Canva AI has the greatest pedagogical value when used in the later stages of learning, as a form of summarization, conceptual mapping, and knowledge presentation, rather than as an initial source of explanation. In this way, visual representation becomes evidence of understanding rather than a substitute for it.

Methods and materials

The primary research instrument was a purpose-designed online questionnaire distributed to teachers of different subject areas employed in one primary and one secondary vocational school in the Republic of Serbia. The questionnaire consisted of 15 items and covered the following areas: demographic information, level of digital literacy, frequency of AI tool usage, specific instructional contexts in which AI assistants are applied, perceived barriers, and attitudes regarding the ethical dimensions of artificial intelligence use in education. The items included multiple-choice questions, Likert-scale statements, linear rating scales, and open-ended questions for qualitative insights.

The sample consisted of 109 teachers, and data analysis was conducted using Excel and Python. Descriptive statistics were applied to present the frequencies and percentage distributions of responses, while hypothesis testing was performed using correlational analysis (Spearman's correlation). Open-ended responses were qualitatively analyzed through the identification of thematic patterns.

The main goal of the study was to examine how teachers perceive the role and potential of AI assistants in education, which AI tools they use, in which instructional situations, which barriers they identify, and which ethical dilemmas they consider important for the safe and responsible integration of artificial intelligence into teaching practice. The research was guided by the following hypotheses:

H1: Most teachers use AI assistants occasionally or experimentally, but not systematically in the instructional process.

H2: There is a positive correlation between the level of digital literacy and the frequency of AI tool use in education.

H3: The main barriers to broader use of AI assistants relate to insufficient knowledge, ethical concerns, and fear of misuse.

H4: Teachers who use AI tools more frequently express more positive attitudes toward their role in improving instruction and student motivation [1].

Results

The sample in this study is predominantly female, with 78.9% of respondents identifying as women and 21.1% as men. The age structure indicates a strong presence of more experienced teachers: 43.1% are over 51 years old, while 42.2% are between 41 and 50. Younger teachers are less represented, with 9.2% aged 31–40 and only 5.5% under the age of 30. Regarding educational attainment, most respondents hold a higher education degree—73.2% have completed undergraduate studies, 26.6% hold a master's degree, and 1.1% hold a doctoral degree. In terms of subject areas, the largest proportion of teachers work in the natural sciences (34.9%) and vocational subjects (26.6%), followed by social sciences (17.4%), informatics (15.6%), while arts teachers are the least represented (5.5%).

A large majority of teachers (86.2%) report using artificial intelligence in everyday life, while 11.9% do not, and 1.8% are unsure. However, when assessing their level of knowledge about AI, most respondents position themselves in the middle range (39.4%). A further 31.2% consider their knowledge to be low, and 16.5% very low. Only 11% report a high level of knowledge, and 1.8% describe their knowledge as very high. Regarding the use of AI assistants in teaching, the majority state that they currently do not use AI assistants but plan to in the future (45.9%). Occasional use is reported by 31.2%, regular use by 8.3%, while 14.7% neither use AI assistants nor plan to do so. Concerning familiarity with ethical principles related to the use of AI in education, 51.4% of respondents state that they are not familiar with them, 34.9% are partially familiar, and only 13.8% fully familiar.

When it comes to attitudes toward the impact of AI tools in education, most teachers express moderate optimism. They agree that AI assistants can contribute to improving instructional quality, yet they simultaneously express concern about potential misuse. Many respondents perceive AI as a time-saving resource, but emphasize the need for clear legal regulations and responsible use by students. The emotional stance toward the introduction of AI in education is generally positive or marked by curiosity (more than

half of respondents), though accompanied by a degree of caution [1].

Testing Hypothesis H1: Most teachers use AI assistants occasionally or experimentally, but not systematically in the instructional process

The results clearly confirm this hypothesis. The largest proportion of respondents (45.9%) reported that they do not currently use AI assistants in teaching, but intend to do so in the future. Occasional use was reported by 31.2% of teachers, while only 8.3% indicated regular use. A total of 14.7% of respondents stated that they do not use AI assistants and do not plan to introduce them.

This distribution indicates that the use of AI in education is presently situated in a phase of exploratory and preliminary adoption, where teachers experiment with these tools rather than implement them systematically. This suggests that AI assistants are not yet integrated into instructional practice as stable pedagogical resources, but rather appear as optional or supplementary tools [1].

Figure 1 presents the distribution of AI assistant usage among teachers, showing that occasional use and anticipated future use are notably more common than regular or systematic use.

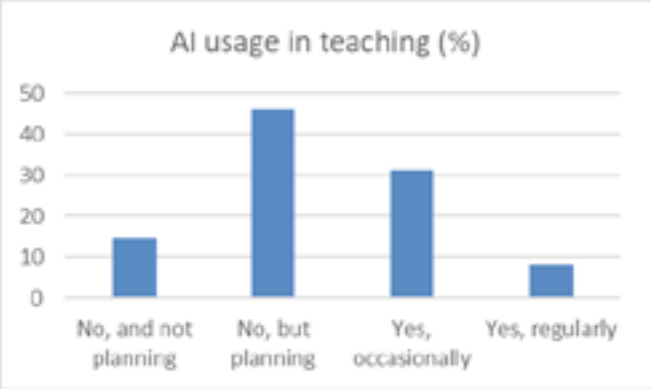

Figure 1. *Frequency of AI Assistant Use in Teaching*

Testing Hypothesis H2: There is a positive correlation between the level of digital literacy and the frequency of AI tool use in education

The Spearman correlation between self-assessed knowledge of AI technologies and the frequency of AI assistant use in teaching is $\rho = 0.36$, indicating a moderately positive relationship. This result supports the hypothesis that a higher level of digital literacy encourages more frequent use of artificial intelligence in the educational context. Teachers who are more confident in working with AI tools are more likely to incorporate them into lesson planning and instructional activities, even if only occasionally [1].

Testing Hypothesis H3: The main barriers to the broader use of AI assistants relate to insufficient knowledge, ethical concerns, and fear of misuse

The qualitative analysis of open-ended responses regarding the barriers to using AI in teaching shows that the most frequently mentioned concerns relate to misuse (38 occurrences), followed by fear (28 occurrences), and lack of knowledge or understanding (11 occurrences). These results indicate that teachers' most prominent concerns are associated with the potential for unethical use and manipulation of AI-generated content, as well as feelings of uncertainty stemming from insufficient training and limited understanding of how these tools function. In contrast, explicitly articulated ethical terms such as "ethics" or "safety" appeared less frequently in the responses, which may suggest that ethical dilemmas are experienced more as emotional apprehension than as clearly formulated professional concepts. These findings strongly confirm the hypothesis that insufficient knowledge, ethical ambiguity, and fear of misuse represent the key barriers to broader integration of AI assistants in educational practice [6].

Testing Hypothesis H4: Teachers who use AI tools more frequently have a more positive attitude toward their role in improving instruction and student motivation

The analysis of the relationship between the frequency of AI assistant use and attitudes measured on the Likert scale revealed several positive, although differently expressed, correlations. The strongest association was observed for the statement that "AI assistants save teachers' time" ($\rho = 0.40$), suggesting that those who use these tools more frequently recognize their practical value in everyday instructional work. A more moderate positive correlation was found for the statement that AI can contribute to improving the quality of teaching ($\rho = 0.21$).

At the same time, a slight negative correlation was observed in relation to concerns about misuse and the need for regulation, indicating that more frequent users of AI tools tend to express somewhat lower levels of fear regarding potential risks. These findings confirm that practical experience contributes to more positive attitudes and greater confidence in the usefulness of AI technologies in education [6].

DISCUSSION

The results of this study indicate that the use of AI assistants in education among teachers in Serbia is still at an early stage of integration and is occurring primarily on an individual rather than a systemic level. Most respondents do not use AI tools regularly but perceive them as a potential form of support that could be incorporated into their professional practice in the future. Similar patterns have been observed in international research, where teachers recognize the potential benefits of AI in education but remain uncertain about how to apply such tools in a pedagogically meaningful and responsible way. A key factor underlying this caution is the lack of formal training and clear implementation guidelines.

The observed moderate positive correlation between teachers' digital literacy and the frequency of AI tool use suggests that higher levels of digital self-efficacy directly influence openness to technological innovation. Teachers with more developed digital competencies are better prepared to evaluate the pedagogical value, limitations, and practical implications of AI tools, and are therefore more likely to experiment with and integrate them into instruction. This finding supports the view that digital competence represents an important prerequisite for the responsible use of AI in educational contexts.

Although teachers' attitudes toward AI are generally positive—particularly regarding the potential for saving time and facilitating the preparation and adaptation of instructional materials—significant concerns remain. The most frequently identified risks relate to the possibility of misuse, challenges to academic integrity, and the danger that students may become overly dependent on AI tools instead of developing independent thinking and problem-solving skills. These concerns reflect broader debates in the literature, which warn that uncritical application of conversational AI systems can lead to reduced cognitive autonomy among learners.

Importantly, both the findings of this study and existing research consistently emphasize the continued central role of the teacher, regardless of the capabilities of AI systems. The most favorable learning outcomes are reported when AI support is combined with expert pedagogical guidance. While AI can enhance the efficiency and organization of instruction, it cannot replace the teacher's professional judgment, emotional interaction, and reflective decision-making, which remain essential in the learning process.

Finally, the results show that teachers who use AI tools more frequently tend to hold more positive attitudes toward them, while those with less experience are more likely to express hesitation or concern. This suggests that practical experience contributes to developing confidence and the ability to use AI critically, intentionally, and in a pedagogically responsible manner.

RECOMMENDATIONS FOR EDUCATIONAL PRACTICE AND TEACHER COMPETENCE DEVELOPMENT

The results of the study indicate that the successful integration of artificial intelligence into the educational process requires coordinated effort at both the level of classroom practice and the education system as a whole. AI tools can enhance instructional efficiency, support the adaptation of learning materials to students with different abilities, and facilitate lesson preparation, but only when they are used within clearly defined pedagogical objectives and when teachers possess adequate digital and AI literacy. Therefore, it is essential to ensure professional development that focuses not only on understanding the functional capabilities of AI tools but also on developing a critical stance toward them, particularly with regard to evaluating the quality of generated information, ensuring student data protection, and maintaining academic integrity.

At the level of school practice, it is recommended to introduce pedagogical scenarios that clearly specify when and how AI can be integrated into the teaching process. These scenarios should reflect the different phases of learning: during the initial acquisition of concepts, AI may serve as visual or explanatory support, whereas in phases that involve analysis,

argumentation, and reflection, the use of technology should be limited in order to preserve students' cognitive autonomy. It is especially important to encourage students to explain, rephrase, and critically evaluate AI-generated outputs rather than accept them passively.

From a systemic perspective, it is recommended to develop continuous professional development programs in which teachers are trained not only to use AI tools technically but also to apply them responsibly and inclusively in pedagogical practice. Such training should integrate three key dimensions: understanding the algorithmic process and limitations of AI, pedagogical-didactic use of AI in lesson planning and implementation, and ethical principles and data protection standards. Furthermore, it is crucial to provide clearly formulated guidelines for the responsible use of AI, expressed in the form of accessible and concrete recommendations that are understandable to teachers with varying levels of digital competence.

Framework for the responsible integration of AI in teaching

The introduction of artificial intelligence tools into the educational process cannot be viewed as a technical matter alone, but rather as a pedagogical and ethical decision made by the teacher. The effectiveness and safety of AI use in teaching depend on how the teacher plans, guides, monitors, and reflects on its application. In this sense, artificial intelligence does not replace the teacher; instead, it functions as an instrument that can support the teacher's professional practice when used responsibly and critically.

The integration of AI in teaching requires a deliberate and guided process in which the teacher clearly defines the learning objectives, the context of use, and the scope of activities in which AI will be included. The teacher's key role lies in understanding when AI use is meaningful and when it may undermine students' independent thinking, creativity, or academic integrity. In other words, AI may facilitate learning, but it must not take over the learning.

The following section presents a model for the responsible integration of AI tools into the teaching process, based on the didactic principles of planning, mediation, and reflection:

1. Pedagogical formulation of goals and purpose

The teacher first defines what the student is expected to learn and only then decides whether and how AI can support that process. If the lesson objective involves acquiring new knowledge, AI may be used as a medium for explanation and illustration. However, if the objective requires independent analysis, evaluation, or creativity, AI use must be limited to supportive functions rather than generating final answers. This helps protect the development of critical thinking and cognitive autonomy.

2. Pedagogical control and verification of content

AI-generated content may be linguistically convincing but incomplete or factually inaccurate, as noted by Holmes, Bialik, and Fadel [12]. Therefore, the teacher assumes the role of source validation and quality assurance. The teacher verifies, adjusts, and aligns content with curricular standards and the classroom context. AI may provide material, but the teacher gives it meaning.

3. Active role of the student

The student should not become a passive recipient of AI-generated answers. Learning occurs through effort, error, questioning, and understanding. AI should therefore be used as a partner in dialogue, not as an authority. Students should be encouraged to explain, reformulate, challenge, or expand AI-generated content. This approach fosters metacognition, autonomy, and reflection, as suggested by studies such as Elsayed [2]

4. Ethics, transparency, and academic integrity

The use of AI tools in education requires clearly defined boundaries. Teachers should openly communicate to students when AI use is permitted, which tasks must be completed independently, how to verify the reliability of information, and why plagiarism — including "AI-assisted plagiarism" — undermines the development of essential learning skills.

Conclusion

The results of the study confirm that artificial intelligence can serve as a valuable resource for enhancing the educational process, but only when its use is guided by well-considered pedagogical intentions and responsible implementation practices. Although teachers recognize the benefits of AI assistants in saving time, preparing instructional materials, and differentiating content, the adoption of these tools is not yet systemically supported and instead depends largely on individual initiative, personal experience,

and the level of digital competence. This situation indicates the need for organized support for teachers, through structured training programs and guidelines that integrate the technical, pedagogical, and ethical dimensions of AI use in teaching.

The teacher's role remains central, as learning does not consist merely of reproducing information, but involves effort, error, questioning, and understanding. AI tools can contribute to learning only when they are used as partners in dialogue, rather than as authorities or substitutes for students' own cognitive processes. Students should be encouraged to explain, challenge, reformulate, and critically evaluate AI-generated content, thereby fostering metacognition, autonomy, and reflective thinking, as emphasized in recent research. For this reason, clearly distinguishing the role of the teacher from the role of AI remains a key principle in the responsible use of educational technologies.

In conclusion, the successful integration of artificial intelligence in school practice does not depend solely on the technical availability of tools, but on the pedagogical competence of teachers and the existence of educational policies that support their professional autonomy. AI in education has the potential to contribute to more inclusive, flexible, and motivating learning environments, but only if it remains aligned with educational objectives and does not replace human interaction, professional judgment, or instructional responsibility. Therefore, the development of AI literacy among teachers represents a crucial step toward the responsible, ethical, and meaningful use of these technologies in education.

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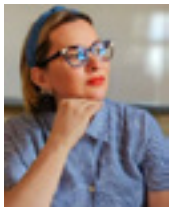

Aleksandra Ivanov was born on September 19, 1979, in Belgrade. After completing high school, she enrolled in undergraduate studies at the Faculty of Organizational Sciences in Belgrade. With an excellent grade on the defense of her thesis titled "Enterprise Restructuring," she obtained the title of Graduate Engineer of Organizational Sciences. In 2012, she enrolled in master studies at the Faculty of Technical Sciences in Čačak, and with the highest grade on the defense of her master's thesis "ICT Literacy of Teachers at Dragojlo Dudić Primary School," she earned the degree of Master Professor of Technical and Computer Education (2015). In 2022, she began her doctoral studies at the Faculty of Informatics and Computing, Union Nikola Tesla University, in the study program Informatics.

The education of students represents the core of her professional career. From 2006 to 2007, she worked as a mathematics teacher at Duško Radović Primary School. She then spent ten years as a teacher of Informatics and Computing at Dragojlo Dudić Primary School (2007–2017). After that, she joined the Architectural Technical School in Belgrade as a professor of Informatics and Computing, where she continues to work to this day.

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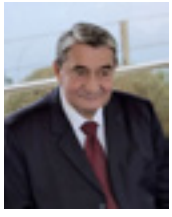

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Zeljko Stankovic received his higher education in Cleveland, Ohio, USA, where he graduated in 1981. The topic of the thesis was "Reversible sound in halls". He defended his master's thesis ("Learning control system (LMS) based on ADL SCORM specifications") in 2006 at the University of Novi Sad, Faculty of Science, Department of Informatics. He defended his doctoral dissertation (Laser perception of defined objects and encapsulation of control and logic elements for an autonomous robotic teaching tool) at Singidunum University, Belgrade, in 2010. He has been programming since 1984, creating programs for his first Commodore 64 computer. He works as a full-time professor at Pan-European University "APEIRON". Robotics and bioengineering have been a field of work and interest for many years. He is the holder of the patent right for the teaching tool CD ROBI.

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