

Application of artificial intelligence in education: managerial aspects and analysis of user attitudes

Primena veštačke inteligencije u obrazovanju: menadžerski aspekti i analiza stavova korisnika

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Abstract

This paper analyzes the importance and role of artificial intelligence (AI) in education, with a particular focus on the managerial aspects of its application. The research is aimed at examining the level of AI tool usage among respondents, as well as their attitudes toward dimensions of artificial intelligence use in the educational process. In addition to students, parents were included in the study in order to identify differences in perception, awareness, and attitudes toward the use of AI in education. The research results indicate statistically significant differences among respondents, particularly with regard to age and status, while gender differences were considered only descriptively. It was found that respondents are familiar with the concept of artificial intelligence and have a positive attitude toward its application in education. However, the use of AI tools is mostly limited to basic functions such as information search, translation, and foreign language learning. Most respondents do not perceive AI as a replacement for teachers, although concerns regarding its misuse were identified. The results suggest that artificial intelligence already represents a significant factor in the transformation of the educational system and that its role in the development of competencies and the improvement of the educational process will continue to grow. The findings have important implications for the management of educational institutions, particularly in planning, implementing, and controlling the use of AI technologies. Furthermore, the results can serve as a basis for managerial and strategic decisions in education.
Keywords: artificial intelligence, education, AI tools, user attitudes, educational management

Sažetak

Ovaj rad analizira značaj i ulogu veštačke inteligencije (VI) u obrazovanju, sa posebnim osvrtom na upravljačke aspekte njene primene. Istraživanje je usmereno na ispitivanje nivoa korišćenja alata veštačke inteligencije među ispitanicima, kao i njihovih stavova prema različitim dimenzijama primene veštačke inteligencije u obrazovnom procesu. Pored studenata, istraživanjem su obuhvaćeni i roditelji kako bi se utvrdile razlike u percepciji, nivou upoznatosti i stavovima prema primeni veštačke inteligencije u obrazovanju. Rezultati istraživanja ukazuju na statistički značajne razlike među ispitanicima, posebno u odnosu na starost i status, dok su razlike prema polu razmatrane samo deskriptivno. Utvrđeno je da su ispitanici upoznati sa konceptom veštačke inteligencije i da imaju pozitivan stav prema njenoj primeni u obrazovanju. Međutim, korišćenje alata veštačke inteligencije uglavnom je ograničeno na osnovne funkcije, kao što su pretraživanje informacija, prevođenje i učenje stranih jezika. Većina ispitanika ne doživljava veštačku inteligenciju kao zamenu za nastavnike, iako je utvrđena zabrinutost u vezi sa njenom mogućom zloupotrebom. Rezultati ukazuju na to da veštačka inteligencija već predstavlja značajan činilac transformacije obrazovnog sistema i da će njena uloga u razvoju kompetencija i unapređenju obrazovnog procesa nastaviti da raste. Nalazi imaju značajne implikacije za upravljanje obrazovnim institucijama, posebno u planiranju, primeni i kontroli korišćenja AI tehnologija. Pored toga, rezultati mogu poslužiti kao osnova za donošenje upravljačkih i strateških odluka u oblasti obrazovanja.

Ključne reči: veštačka inteligencija, obrazovanje, alati veštačke inteligencije, stavovi korisnika, upravljanje obrazovanjem

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1. Introduction

Artificial intelligence (AI) opens up numerous opportunities across various areas of social activity and is increasingly becoming an indispensable part of modern life. Advances in software technologies have enabled more precise, efficient, and comprehensive collection, processing, and interpretation of data. Tasks that were once time-consuming or practically unsolvable are now successfully accomplished thanks to the capabilities of AI. Modern business relies on complex and interconnected processes, where the experience, expertise, and motivation of employees are key factors for the effective execution of managerial activities. Decision-making within managerial responsibilities occurs across different timeframes, and the experience, expertise, and engagement of managers directly affect efficiency in daily, weekly, monthly, and annual tasks. Managers constantly face the challenge of choosing among multiple alternatives for problem-solving or project implementation (Dragić et al., 2025).

One of the main advantages of applying AI is its multidisciplinary nature, drawing on various scientific disciplines. It incorporates methods from logic, statistics, probability theory, and more. This complex approach aims to achieve the primary goal of AI: mimicking human cognitive abilities. The accelerated pace of technological development and global business has also sparked significant interest in AI. It has become a crucial factor for development and, in the long term, for the survival of businesses, the economy, and society as a whole (Zrnić, 2026). Even areas that were not the primary focus of AI's emergence and development, such as sociology and pedagogy, are inevitably being influenced by AI.

Global economic development no longer relies solely on increasing production and sales volumes; instead, the focus is gradually shifting toward cost reduction as a prerequisite for further growth and sustainability. After all, one of the guiding principles behind the formation and use of AI in business is saving time, a critical resource in modern operations. Another objective of AI implementation is reducing errors caused by human factors. Economists and large corporations were among the first to recognize the benefits of AI for increasing profits through all the aforementioned reasons. They also identified the potential for completely replacing human labor with machines, thereby minimizing costs and maximizing production volume and quality. This realization, however, generates a genuine concern about job loss due to the accelerated development and adoption of AI across many sectors.

2. History of artificial intelligence

The development of artificial intelligence is an ongoing process. Its beginnings are linked to early ideas about process automation developed in the mid-20th century. For several decades, there has been significant interest in studying and developing artificial intelligence, but its widespread application has become visible only in the last ten years. Advances in modern technologies, such as

graphics processing units (GPUs), the internet, and large language models (LLMs), have enabled artificial intelligence to reach its full potential and become one of the key drivers of technological development (The History of AI, Avicena, 2024).

One of the leading researchers in the field of cognitive systems published a paper on the perceptron in 1957 (The Perceptron: A Perceiving and Recognizing Automaton, Project Para, Cornell Aeronautical Laboratory). The perceptron, a single-layer model, became the predecessor of modern neural networks. Based on this work, several authors, most notably Marvin Minsky and Seymour Papert, focused on a more detailed study of the mathematical foundations of the perceptron and demonstrated how machines can learn by performing simple tasks based on data obtained during the training process (Massachusetts Institute of Technology Report, January 1919).

3. Artificial Intelligence and education

There are several reasons, but three stand out in highlighting the importance of applying artificial intelligence in education. The first reason relates to better prioritization and, consequently, the reduction of overall educational costs. Emphasis is placed on the ability of artificial intelligence to adapt to students and teachers and their needs. Teachers could use the support of virtual assistants for preparing or presenting teaching materials. Working with students requires mentorship, which in turn requires available time. Virtual support enables teachers to create and provide specific support sets for students based on common questions and uncertainties. For example, voice assistants can help pupils and students overcome language and cultural barriers, which can significantly support the development of confidence and improve academic performance.

When discussing the importance of artificial intelligence in education, it is also necessary to pay close attention to a very important aspect related to safety and potential risks. Many researchers acknowledge the importance of AI in education but approach it with caution and concern regarding the misuse of data, emotions, personal freedoms, and similar issues. Discrimination that an algorithm may introduce, for example in speech recognition systems that do not perform well with regional dialects, is just one of the potential problems. Similarly, exam monitoring systems may unfairly identify certain groups of students for disciplinary action, potentially causing harm.

Another concern related to the use of artificial intelligence in education is the possibility that students could be subjected to high levels of surveillance, which could significantly threaten freedom of movement, privacy rights, and similar protections. Video and audio recordings, as digital forms, can be misused and lead to serious consequences for individuals. Additionally, there is concern within academic circles about the potential for AI to replace educational workers. Since the educational process involves transferring knowledge from teachers to

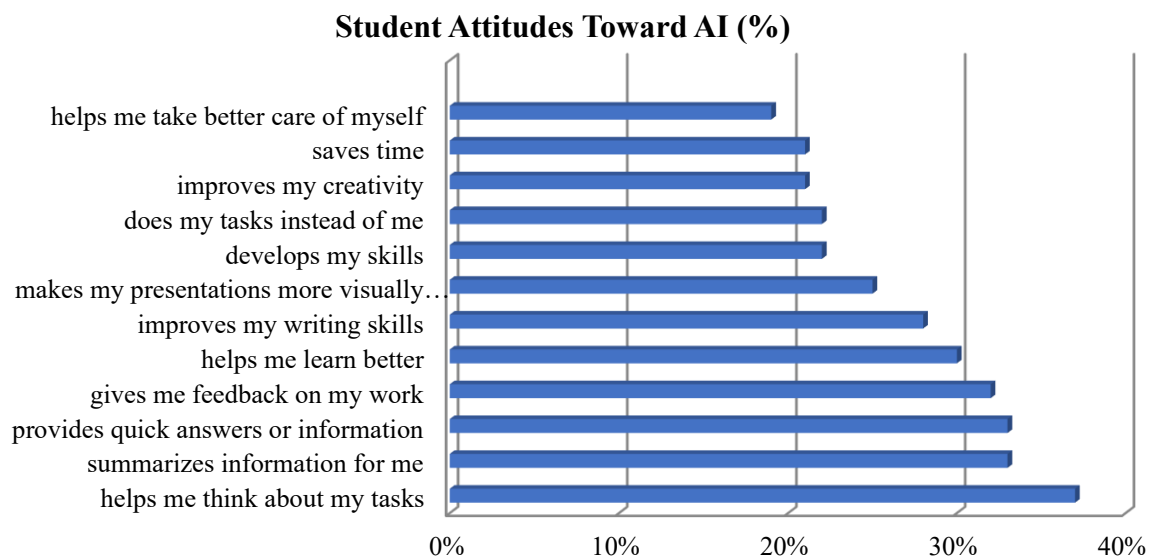
students, analyzing that information, and explaining it through examples, it is plausible that algorithms with large storage capacities could partially replace teaching staff. Undesirable effects may arise when artificial intelligence enables large-scale automation of teaching decisions. For instance, if AI adapts the pace of learning for some students by accelerating it and slowing it down for others based on incomplete data or biased assumptions, the gap in student achievement could widen (Cardona et al., 2023).

The application of artificial intelligence requires the development of new competencies among future professionals, which means that educational systems must adapt curricula and learning outcomes to modern technological changes (Fridgeirsson et al., 2021). A positive example of AI implementation in education can be seen in a school district in Fulton County, Georgia.

School administrators aimed to create more personalized learning experiences using Copilot Chat for 87,000 students across 104 schools. The process first involved training educators and students on how to use the tool. The results showed a significant increase in student confidence and a much higher level of engagement. Users reported that they use Copilot Chat as a partner for idea exchange rather than as a tool that does the work for them. It helped them collaborate and expand their creativity, focusing on ambitious ideas (A Microsoft Special Report, 2025).

The results of a study conducted in Australia, where students used an AI chatbot before exams, showed that those students improved their exam scores by 10% compared to peers who did not use the technology. The following section presents graphs illustrating the results of a survey on students' attitudes toward the use of artificial intelligence in their educational activities.

Figure 1. Student attitudes toward the use of artificial intelligence



Source: Microsoft (2025), *2025 AI in Education: A Microsoft Special Report*, p. 8.

Figure 1 presents the attitudes of students from 104 schools in the state of Georgia, USA, regarding the use of artificial intelligence in the educational process. Students' attitudes are generally positive, given that artificial intelligence significantly supports them in education, both quantitatively and qualitatively. Students expressed satisfaction with the fact that AI shortens the preparation process and saves time required for technical and operational tasks. They also highlighted their satisfaction with the support AI provides in terms of motivation, fostering creativity and analytical thinking, as well as providing feedback and similar benefits.

3. Research methodology

The research was conducted in the period from October to December 2025 and included respondents from several cities in Serbia (Belgrade, Novi Sad, Senta, Bečej, Zrenjanin, Loznica, Šabac, Niš). The study included both

students and parents in order to obtain a comprehensive answer to the research question addressed in this paper. A total of 100 respondents completed the survey, of which 91 provided valid responses.

The procedure involved an anonymous survey in order to obtain honest and relevant answers.

Independent variables: gender, status, age. Dependent variables: "level of familiarity with AI", "attitudes toward AI in education", "whether they use AI", "for what purposes they use AI", "which AI tools they use", "whether they believe AI will replace teachers", "whether they are concerned about the potential misuse of AI in education".

The collected data were statistically processed using descriptive analysis (N, mean, SD) and comparative analysis (using one-way ANOVA for independent variables with three or more subgroups, and t-tests for independent variables with two subgroups). Based on

these analyses, interpretation and conclusions were drawn.

4. Research results

Descriptive statistics included an overview of the data in terms of respondent frequency, percentage distribution, mean values, and standard deviation (Table 1).

Table 1. Descriptive statistics (gender, age, status)

Variable	Subgroup	N	%	Mean	SD
Gender	Male	41	45.1	1.55	0.50
	Female	50	54.9		
Age	18-25 years	38	41.8	2.15	1.12
	26-35 years	14	15.4		
	36-50 years	26	28.6		
	>50 years	13	14.3		
Status	Student	54	59.3	1.41	0.49
	Parents	37	40.7		

Source: Authors' research

The sample structure shows a relatively balanced representation of respondents by gender, with women slightly more represented (54.9%) compared to men (45.1%). The arithmetic mean for the gender variable is $M = 1.55$ with a standard deviation of $SD = 0.50$, indicating relatively low variability in responses within this category. Regarding the age structure, the largest portion of the sample consists of respondents aged 18 to 25 (41.8%), while the least represented group includes respondents older than 50 (14.3%). The average value for the age variable is $M = 2.15$ with $SD = 1.12$, indicating greater dispersion of responses and a more heterogeneous age structure. In terms of respondent status, the majority of the sample consists of students (59.3%), while parents make up 40.7% of respondents. The arithmetic mean for this variable is $M = 1.41$ with $SD = 0.49$, suggesting a relatively homogeneous distribution of responses with a slight dominance of the student category.

A larger percentage of respondents reported using AI tools for learning and exam preparation, indicating that artificial intelligence can significantly support both the collection and processing of information relevant to students as well as teachers. Interestingly, research conducted in the region, specifically in Bosnia and Herzegovina, in addition to data on student usage of AI, also highlights the use of artificial intelligence in education by teachers and instructors. The results of that study show that only 16.7% of teaching staff use artificial intelligence in their work (Stanić, 2024). Based on this finding, it would be valuable to conduct similar research on attitudes toward and the use of artificial intelligence in education in the Republic of Serbia, focusing specifically on professors, teachers, and instructors. This would enable a meaningful comparative analysis across countries in the region.

It is very important for teaching staff to provide students with guidance so that their learning and preparation process involves the use of AI tools as supportive, rather than primary, resources. Artificial intelligence should primarily serve as an auxiliary tool to make tasks faster, more precise, and more efficient. While speed, precision,

and efficiency are key priorities in industry, production, and services, in the education system the use of AI should be limited to assisting with learning and preparation, not during testing, exams, or other forms of knowledge assessment. Professors play a crucial role in educating students about the appropriate use of AI in preparing for coursework, including emphasizing the ethical aspects of its use. Many universities continuously educate their students on topics such as academic integrity, academic misconduct, and the ethical use of artificial intelligence (Schaeffer et al., 2024).

Like any technological innovation, the justification for using artificial intelligence depends entirely on proper evaluation and appropriate use by educators. As the saying goes, "Fire is a good servant but a dangerous master." Artificial intelligence in education can contribute to personalized learning, improved assessment processes, and reduced administrative workload for teachers, but it also raises important questions related to ethics, privacy, and academic integrity (Ayala-Pazmiño, 2023; Vukmirović et al., 2025). Alongside the development of AI as a supportive tool, it is also necessary to raise awareness about its potential role in assuming certain leadership functions. This highlights the need for education systems to prepare students for work in technologically intensive and digitally driven environments (Al-Walai & Liang, 2021; Bharadiya et al., 2023).

The effective use of artificial intelligence does not depend solely on technology, but also on knowledge, organizational capabilities, and users' readiness to integrate it meaningfully into existing processes, especially in the educational context. The development of AI tools should serve as a guide for fostering managerial and leadership skills among students, who represent the drivers of future economic and societal development (Enholm et al., 2022). While the introduction of artificial intelligence brings significant innovation opportunities, it also presents organizational, ethical, and managerial challenges that are equally relevant for educational institutions (Machucho & Ortiz, 2025).

Dependent variables related to the purpose and type of AI tool usage were analyzed using descriptive statistics. Most respondents are familiar, or at least aware, of the concept of artificial intelligence. This fact highlights how quickly AI has reached users. A significant proportion of respondents indicated that they have heard of artificial intelligence but have not yet recognized its practical applications. There is also a possibility that some respondents reported familiarity with AI due to social desirability or discomfort with the idea of not keeping up with rapidly emerging technological trends.

The results indicate that respondents most frequently used AI tools for text translation and language learning, suggesting that artificial intelligence has been in use the longest and has shown the greatest impact in this domain. The fact that a text in a foreign language can be transformed into a native language within seconds

demonstrates the significant advantages AI has provided to anyone in need of translation.

Intuitive language-learning programs that offer feedback on knowledge level and progress represent the second most commonly used category of AI tools among respondents. AI-powered language learning tools have enabled a much broader population to learn a foreign language either for free or at a minimal cost, thereby reducing class-based differences among students, workers, and others. These tools allow students from different countries to quickly and easily gain the qualifications needed to study at a foreign university or to find employment in an international company.

There is a wide range of artificial intelligence tools used across different fields. The most general and widely used is ChatGPT, which is confirmed by the obtained data. Duolingo is a language-learning tool used for acquiring foreign languages and is particularly practical and appealing to younger populations.

Advanced AI technologies, including deep learning, contribute to greater organizational agility, which further highlights the need for education systems to develop flexibility, analytical thinking, and digital competencies among students. It is essential to properly inform students and younger generations so they do not adopt these tools as their primary means of learning. Teachers must take on the role of guiding students' focus so that their interest in AI technologies and tools is directed toward developing their potential and analytical thinking skills (Haining et al., 2019).

A lack of critical thinking represents a serious issue faced by AI generations. The increasing use of generative artificial intelligence in organizations points to a growing need for education systems to foster digital literacy, critical thinking, and the responsible use of AI tools (McKinsey & Company, 2024).

The majority of respondents evaluated the use of AI in education as mostly useful or even very useful. This finding is expected, as users of artificial intelligence tools tend to focus on the benefits, such as time savings and quick access to information. However, the results also reveal a critically oriented group of respondents (25%) who emphasize the potentially harmful or very harmful effects and consequences that may arise from the further development of artificial intelligence.

A significantly higher percentage of respondents (82%) stated that they believe artificial intelligence cannot replace teachers in terms of their teaching activities. It is noteworthy that as many as 15% of respondents believe that artificial intelligence could partially replace teachers in the educational process. This suggests that there are legitimate concerns about the future of the teaching profession, as AI could be accepted by pupils and students as a virtual teacher available anytime and anywhere.

The application of artificial intelligence in education is broad. It provides significant opportunities for faster development of science and technology, as well as an

increased volume of research. The use of AI tools enables teachers to prepare presentations, materials, exercises, tasks, and teaching content more quickly and with higher quality. Proper use of AI tools can greatly assist teachers in areas such as statistics, grading, and student assessment. The possibilities offered by AI tools in preparing students for exams are also substantial, as confirmed by statistical data.

Despite these advantages, there is also a certain level of concern regarding potential misuse in education. A large percentage of respondents expressed significant or moderate concern about possible misuse of AI in education. This is particularly evident in the context of electronic or online testing and exams. The speed of data processing and the ability to generate answers across a wide range of scientific fields create virtually unlimited opportunities for misuse.

Privacy and data security in the era of modern information technologies represent major challenges. The use of artificial intelligence in education involves the processing of personal data, including sensitive information about students, teachers, and parents.

Table 2. Descriptive statistics of attitudes toward artificial intelligence by respondents' gender

Variable	Gender	N	M	SD
How familiar are you with AI?	Male	41	1.44	0.63
	Female	50	1.36	0.53
Attitude toward AI in education	Male	41	2.46	1.45
	Female	50	2.64	1.34
Do you use AI?	Male	41	2.49	1.14
	Female	50	2.40	0.95
Do you think AI can replace teachers?	Male	41	2.07	0.47
	Female	50	2.08	0.27
Are you concerned about the possible misuse of AI in education?	Male	41	1.98	0.82
	Female	50	1.48	0.58

Source: Authors' research

The analysis of descriptive statistics indicates relatively similar mean values between male and female respondents across the examined variables. Female respondents recorded a slightly lower mean value for familiarity with artificial intelligence ($M = 1.36$; $SD = 0.53$) compared to male respondents ($M = 1.44$; $SD = 0.63$). Regarding attitudes toward the use of AI in education, female respondents recorded a somewhat higher mean value ($M = 2.64$; $SD = 1.34$) compared to male respondents ($M = 2.46$; $SD = 1.45$).

Similar mean values were also recorded for the use of artificial intelligence, with $M = 2.49$ ($SD = 1.14$) for male respondents and $M = 2.40$ ($SD = 0.95$) for female respondents. The mean values related to perceptions of whether artificial intelligence can replace teachers were almost identical for male respondents ($M = 2.07$; $SD = 0.47$) and female respondents ($M = 2.08$; $SD = 0.27$).

A greater descriptive difference was observed in relation to concern about the potential misuse of artificial intelligence in education. Male respondents recorded a mean value of $M = 1.98$ ($SD = 0.82$), while female

respondents recorded a mean value of $M = 1.48$ ($SD = 0.58$). The presented differences are descriptive and cannot be interpreted as statistically significant because no inferential test of gender differences was conducted.

Table 3. One-way analysis of variance for the independent variable age

Dependent variable	F	Sig.
How familiar are you with AI?	12.06	< .001
Attitude toward AI in education	11.36	< .001
Do you use AI?	9.62	< .001
Are you concerned about the possible misuse of AI in education?	9.57	< .001

Source: Authors' research

The results of the one-way ANOVA showed statistically significant differences among respondents of different age groups in terms of familiarity with artificial intelligence, attitudes toward its use in education, the use of AI for learning or exam preparation, and concern about its potential misuse in education ($p < .001$).

The largest F value was observed for familiarity with AI ($F = 12.06$), while statistically significant differences were also found in attitudes toward AI in education ($F = 11.36$), the use of AI ($F = 9.62$), and concern about its potential misuse ($F = 9.57$). These results indicate that respondents' age is associated with statistically significant differences in their perceptions and use of artificial intelligence in the educational process.

Table 4. Descriptive statistics of attitudes toward artificial intelligence by respondents' age

Variable	Age	N	M	SD
How familiar are you with AI?	18-25 years	38	1.05	0.23
	26-35 years	14	1.43	0.51
	36-50 years	26	1.77	0.71
	>50 years	13	1.62	0.51
Attitude toward AI in education	18-25 years	38	1.84	0.95
	26-35 years	14	2.86	1.61
	36-50 years	26	2.73	1.40
	>50 years	13	4.00	0.82
Do you use AI?	18-25 years	38	1.89	0.80
	26-35 years	14	2.86	1.17
	36-50 years	26	2.58	0.90
	>50 years	13	3.31	0.95
Do you think AI can replace teachers?	18-25 years	38	2.11	0.45
	26-35 years	14	2.00	0.00
	36-50 years	26	2.15	0.37
	>50 years	13	1.92	0.28

Source: Authors' research

The analysis of descriptive statistics by age categories indicates differences in the level of familiarity with and attitudes toward the use of artificial intelligence in education. Regarding familiarity with artificial intelligence, respondents aged 18 to 25 recorded the lowest mean value ($M = 1.05$; $SD = 0.23$), while respondents aged 36 to 50 recorded the highest mean value ($M = 1.77$; $SD = 0.71$). These results indicate that the youngest respondents were the most familiar with artificial intelligence, while familiarity was lower among the older age groups.

In terms of attitudes toward the use of artificial intelligence in education, respondents aged 18 to 25 recorded the lowest mean value ($M = 1.84$; $SD = 0.95$), while respondents older than 50 recorded the highest mean value ($M = 4.00$; $SD = 0.82$). These results suggest that younger respondents had more positive attitudes toward the use of AI in education, whereas respondents older than 50 demonstrated greater skepticism.

A similar pattern was observed for the use of artificial intelligence. Respondents aged 18 to 25 recorded the lowest mean value ($M = 1.89$; $SD = 0.80$), while respondents older than 50 recorded the highest mean value ($M = 3.31$; $SD = 0.95$). This indicates that younger respondents used AI more frequently, while respondents older than 50 reported the lowest level of use.

When it comes to perceptions of whether artificial intelligence can replace teachers, the results show relatively similar mean values across the age groups. Respondents older than 50 recorded the lowest mean value ($M = 1.92$; $SD = 0.28$), while respondents aged 36 to 50 recorded the highest mean value ($M = 2.15$; $SD = 0.37$).

Table 5. One-way analysis of variance according to respondents' status

Dependent variable	F	Sig.
How familiar are you with AI?	19.75	< .001
Attitude toward AI in education	10.89	.001
Do you use AI?	6.95	.010
Do you think AI can replace teachers?	6.00	.016
Are you concerned about the possible misuse of AI in education?	0.04	.851

Source: Authors' research

The results indicate statistically significant differences between students and parents in familiarity with artificial intelligence ($F = 19.75$; $p < .001$), attitudes toward the use of artificial intelligence in education ($F = 10.89$; $p = .001$), the use of AI ($F = 6.95$; $p = .010$), and perceptions of whether artificial intelligence could replace teachers ($F = 6.00$; $p = .016$).

However, no statistically significant difference was found between students and parents in concern about the potential misuse of artificial intelligence in education ($F = 0.04$; $p = .851$). These findings indicate that respondents' status represents a relevant factor in explaining differences in several examined perceptions and forms of AI use, but not in the level of concern regarding its potential misuse.

Table 6. Descriptive statistics of attitudes toward artificial intelligence by respondents' status

Variable	Status	N	M	SD
How familiar are you with AI?	Student	54	1.15	0.36
	Parent	37	1.76	0.64
Attitude toward AI in education	Student	54	1.96	1.05
	Parent	37	3.43	1.37
Do you use AI?	Student	54	2.00	0.82
	Parent	37	3.08	0.98
Do you think AI can replace teachers?	Student	54	2.11	0.42
	Parent	37	2.03	0.29

Source: Authors' research

The results of descriptive statistics indicate differences between students and parents in terms of familiarity with, perceptions of, and use of artificial intelligence. Regarding familiarity with artificial intelligence, students recorded a lower mean value ($M = 1.15$; $SD = 0.36$) compared to parents ($M = 1.76$; $SD = 0.64$). This indicates that students were more familiar with artificial intelligence than parents.

In terms of attitudes toward the use of artificial intelligence in education, students recorded a lower mean value ($M = 1.96$; $SD = 1.05$) compared to parents ($M = 3.43$; $SD = 1.37$). These results indicate that students had more positive attitudes toward the role and application of artificial intelligence in the educational process, whereas parents demonstrated a more reserved attitude.

A similar pattern was observed for the use of AI technologies. Students recorded a lower mean value ($M = 2.00$; $SD = 0.82$) compared to parents ($M = 3.08$; $SD = 0.98$), indicating that students used artificial intelligence more frequently.

When it comes to perceptions of whether artificial intelligence can replace teachers, the mean values of students ($M = 2.11$; $SD = 0.42$) and parents ($M = 2.03$; $SD = 0.29$) were relatively similar. Nevertheless, the analysis presented in Table 5 showed that the difference between the groups was statistically significant ($F = 6.00$; $p = .016$). Although the difference in mean values was small, its practical importance cannot be determined without an appropriate effect-size measure.

5. Discussion

The results indicate that artificial intelligence has already become a recognizable and increasingly accepted part of the educational environment. Most respondents were familiar with the concept of AI and generally evaluated its use in education positively. However, AI tools were most frequently used for basic functions, such as searching for information, translating texts, and learning foreign languages.

These findings are consistent with the Microsoft special report, which indicates that students recognize the role of AI in saving time, supporting creativity, exchanging ideas, and increasing engagement in the learning process (AI in Education, A Microsoft Special Report, 2025). The frequent use of ChatGPT and Duolingo also confirms that respondents primarily recognize the practical value of AI in activities that simplify access to information and support learning.

At the same time, respondents expressed concern about the possible misuse of artificial intelligence, particularly in online testing, examinations, and knowledge assessment. Ayala-Pazmiño (2023) points out that AI can contribute to personalized learning and improved assessment, but also raises questions related to ethics, privacy, and misuse. Schaeffer et al. (2024) similarly

emphasize risks related to transparency, privacy, confidentiality, and data integrity in higher education.

One of the most important findings is that the majority of respondents do not believe that artificial intelligence can completely replace teachers. As many as 82% stated that AI cannot replace teachers, while 15% believed that it could partially assume certain teaching functions. This result indicates that AI is primarily perceived as a supportive tool rather than as a complete replacement for teaching staff.

This finding is consistent with Cardona et al. (2023), who emphasize that teachers should remain central participants in the educational process and that AI should support, rather than replace, human decision-making. Although artificial intelligence can provide explanations, generate examples, adapt tasks, and offer feedback, education also includes communication, motivation, professional judgment, and understanding of students' individual needs.

The descriptive results according to gender showed relatively similar mean values between male and female respondents. Since no inferential test of gender differences was conducted, these findings can only be interpreted descriptively.

More pronounced differences were found according to respondents' age. Younger respondents were more familiar with artificial intelligence, used it more frequently, and expressed more positive attitudes toward its use in education. Respondents older than 50 demonstrated a more reserved attitude and reported a lower level of AI use. These differences may be related to the greater exposure of younger respondents to the internet, social media, digital platforms, and other contemporary technologies.

Differences were also found between students and parents. Students were more familiar with AI, expressed more positive attitudes, and used AI tools more frequently. Parents demonstrated a more reserved attitude and a lower level of use, although they were also familiar with artificial intelligence to a certain extent.

The identified differences according to age and respondent status are also relevant from a managerial perspective, since the introduction of AI into education cannot be based on the assumption that all user groups have the same level of familiarity, experience, and acceptance.

The results can also be viewed in relation to the research of Stanić and Stanić (2024), which showed that only 16.7% of teaching staff used artificial intelligence in their work. Although teachers were not included as a separate group in the present study, the findings may indicate that students adopt AI tools more quickly than some participants in the formal educational process.

No statistically significant difference was found between students and parents in concern about the potential misuse

of artificial intelligence. This indicates that both groups recognize the risks associated with inappropriate use, privacy, data protection, and excessive dependence on technology.

Overall, the findings show that respondents recognize both the benefits and risks of artificial intelligence in education. AI is primarily perceived as a useful tool for supporting learning and accessing information, but not as a complete replacement for teachers.

6. Conclusion

The education system has undergone numerous transformations throughout history, but the modern wave of digitalization driven by the development of artificial intelligence represents one of the most significant changes. The results of the conducted research indicate that artificial intelligence already has a visible role in the educational process from the perspective of students and parents.

The analysis showed a relatively high level of familiarity with the concept of artificial intelligence and predominantly positive attitudes toward its application in education. However, the use of AI tools is still largely limited to basic functions such as information searching, text translation, and foreign language learning. This indicates that respondents recognize the practical value of artificial intelligence, although the broader possibilities of these technologies have not yet been fully utilized.

Statistically significant differences were identified according to respondents' age and status. Younger respondents and students were more familiar with artificial intelligence, expressed more positive attitudes toward its use in education, and used AI tools more frequently than older respondents and parents. The descriptive results according to gender showed relatively similar mean values between male and female respondents, although the statistical significance of these differences was not tested.

The results also showed that respondents generally do not perceive artificial intelligence as a complete replacement for teachers. Most respondents considered AI to be a tool that can support learning, provide information, and facilitate certain educational activities. At the same time, the role of teachers remains important in communication, motivation, guidance, professional judgment, and understanding the individual needs of students.

Although artificial intelligence offers numerous advantages in terms of speed, accessibility, and support for learning, the research also identified concern regarding its possible misuse, particularly in the context of knowledge assessment, online examinations, privacy, and data protection. Students and parents expressed a similar level of concern regarding these risks.

From a managerial perspective, the findings indicate that the introduction of artificial intelligence into education requires a planned and responsible approach. Educational

institutions should take into account the different levels of familiarity, experience, and acceptance of AI among students, parents, and different age groups. Particular attention should be paid to defining the appropriate role of AI tools, preserving the central role of teachers, and addressing issues related to misuse, academic integrity, privacy, and data protection.

It can therefore be concluded that artificial intelligence is generally perceived as a useful educational tool whose effects depend on the purpose, manner, and context of its use. Its future role in education will depend not only on technological development, but also on the readiness of users and educational institutions to use it responsibly. Future research should include teaching staff and examine the long-term effects of artificial intelligence on learning outcomes, academic integrity, critical thinking, and the quality of education.

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