

# The Role of AI Tools in Education: Opportunities and Challenges

Nebojša Stanković<sup>1\*</sup>  [0000-0002-1770-9601], Irena Stanković<sup>2</sup>  [0009-0003-2326-4674],  
Gordana Marković<sup>3</sup>  [0009-0006-4558-3088] and Marija Blagojević<sup>1</sup>  [0000-0003-4186-0448]  
<sup>1</sup> Univerzitet of Kragujevac, Faculty of Technical Sciences Čačak, Čačak, Serbia  
<sup>2</sup> Primary School "Radoje Domanović", Novi Beograd, Serbia  
<sup>3</sup> Technical School, Čačak, Serbia  
\* [nebojsa.stankovic@ftn.kg.ac.rs](mailto:nebojsa.stankovic@ftn.kg.ac.rs)

**Abstract:** *Artificial intelligence (AI) has significant potential for raising the quality of knowledge acquired by students. Advanced AI tools provide invaluable support in their learning endeavors. This study explores the perceptions of 953 primary and secondary school students, as well as university students, regarding the integration of AI in teaching methods. The research sample consists of Serbian students: 618 primary school students from Čačak and Belgrade, 233 secondary school students from Čačak, and 102 students from the Faculty of Technical Sciences in Čačak. The authors designed a targeted questionnaire to collect relevant data. The findings reveal a significant gap in the understanding of AI from the perspectives of different groups of students, particularly concerning applications more complex than the basic tools such as chatbots. This paper offers a comprehensive analysis of the most common AI tools in educational environments and presents conclusions and recommendations for improving the integration of AI tools in teaching to enrich the educational experience.*

**Keywords:** *artificial intelligence; AI tools; education; research; chatbots*

## 1. INTRODUCTION

Artificial intelligence (AI) is becoming a key factor in various industrial sectors, including education. Thanks to rapid technological advancements and the support of innovative companies like OpenAI, AI tools are becoming invaluable resources for students seeking to enhance their educational experiences.

These tools are designed to be easy to use, affordable, and accessible to users of all skill levels. By providing a wide range of functionalities through a single platform, AI tools eliminate the need for multiple programs. This enables users to efficiently and easily perform various tasks, significantly reducing effort and increasing productivity.

Although AI tools offer enormous benefits, there is legitimate concern that students may become overly dependent on automation, potentially impacting the development of critical thinking skills. However, banning AI tools (especially ChatGPT) in educational institutions for these reasons seems excessive and unjustified. Instead, numerous AI tools can significantly enhance students' creativity and accelerate the learning process, allowing them to explore topics of interest more deeply and efficiently. AI not only transforms education but also enriches it, opening new horizons for future generations of pupils and students. The introduction and proper integration

of AI tools into the education system can create a dynamic and inclusive learning environment, where technology supports rather than substitutes for human curiosity and creativity.

AI enables students to utilize new and innovative tools to enhance their education. The best AI tools for students support understanding complex concepts, researching topics efficiently, and even preparing for exams. AI has the potential to transform learning by providing personalized experiences that are tailored to each student's individual needs. [1].

Many previous works have explored the application of AI tools in education, providing valuable insights and recommendations comparable to the findings presented in this paper. One notable study published in the *International Journal of Educational Technology in Higher Education* examined trends in the application of AI in education (AIEd) through a systematic review. This research identified that AI tools are predominantly used to enhance personalized learning experiences, automate administrative tasks, and create intelligent learning support systems. It was emphasized that it is important to integrate artificial intelligence as a support for learning and not as a substitute for traditional educational methods [2].

A comprehensive review published in Education Sciences detailed the potential and implications of using AI, particularly ChatGPT, in educational contexts. This research highlighted AI's dual impact: while AI tools can significantly aid in understanding complex concepts, provide personalized feedback, and enable continuous learning, there are concerns about over-reliance and a possible decline in critical thinking skills among students. The study recommended integrating AI tools with traditional teaching methods to balance technological benefits and critical skill development. This approach leverages AI's advantages while encouraging students' critical thinking and analysis skills [3].

A report from Old Dominion University provided practical applications of AI tools in teaching, learning, and research. Citing specific examples such as creating practice tests, providing personalized study advice, supporting research activities by generating literature reviews and bibliographies, and converting course materials into different formats for better accessibility, the report highlighted the diverse possibilities that artificial intelligence offers in an educational context. He placed special emphasis on the importance of guiding students on how to effectively and ethically use artificial intelligence tools. He encouraged teachers to design assignments that encourage original thinking and critical analysis, rather than passive dependence on AI-generated content. This approach promotes active learning and the development of key skills in students, while at the same time using advanced technological resources [4].

Hosseini et al [5] analyzed received responses to questions about the use of ChatGPT in various contexts. According to the results, only 40% of the audience had tried ChatGPT. In the article the greatest uncertainty was shown regarding the use of ChatGPT in education. During the discussion, both pros and cons were raised for the application of this technology across education, research, and healthcare contexts.

Together, these studies suggest that while AI tools hold great promise in improving educational outcomes, we must apply them carefully to avoid potential drawbacks such as reduced critical thinking and academic integrity issues. Integrating AI tools with a balanced approach can lead to richer learning experiences and better educational outcomes. This approach makes it possible to take advantage of technology while encouraging the development of key skills in students and preserving educational integrity.

## 2. AI TOOLS IN EDUCATION

AI tools have revolutionized education, transforming how students acquire knowledge and enhance their learning experience. These tools

offer personalized learning experiences tailored to students' unique needs and preferences. This technology supports students with different learning styles or disabilities, fostering more inclusive education. AI-powered learning platforms allow learners to progress at their own pace and receive relevant feedback on areas needing improvement [6].

Teachers can use AI tools to create personalized lessons adapted to each student's pace. AI-powered chatbots can act as virtual tutors, providing instant support and guidance, further facilitating the learning process outside traditional classes.

Given the trends in the development and use of artificial intelligence in education, it is necessary to monitor current regulations at the level of the Republic of Serbia, as well as innovations through available standards. The development strategy of artificial intelligence [7] provides an overview of goals and measures in the field of education. A specific goal involves the development of education tailored to the needs of modern society and the economy conditioned by the advancement of artificial intelligence.

In addition, AI can improve student engagement and motivation. AI-powered virtual tutors can interact interactively with students, offering personalized feedback and guidance, contributing to more stimulating and dynamic learning. AI should be seen as a useful tool that complements and enhances the teaching and learning process, not as a substitute for human interaction.

## 3. POSSIBILITIES OF CHOOSING NEW AI TOOLS FOR LEARNING

AI tools have fundamentally changed the educational landscape, opening the door to personalized learning experiences, and resulting in more accessible education and greater student engagement. These technological advances promise a bright future for education, adapting to meet the growing and changing needs of students. Below is an overview of the most commonly used groups of AI tools in education [8, 9]:

- **Chatbots:** Automated computer programs that simulate a human conversation to solve user queries. They use artificial intelligence, machine learning, and natural language processing to provide support and answer routine queries [10].
- **Visual & Design Tools:** Tools that enhance the aesthetic appeal and usability of designs and products, helping to create compelling and aesthetically pleasing designs [11].
- **Lesson Design & Content Creation Tools:** Software and platforms that help teachers plan and create content for lessons, based on curriculum goals and pedagogy [12, 13].

- **Teaching Aides:** AI tools that support teachers in customizing learning experiences and making informed decisions based on data analytics [14].
- **Quiz/Assessment Generators:** Tools that automatically create custom quizzes and tests, helping to assess student knowledge in a fun and engaging way [15]. The grading generator allows you to choose how many of each type of question you want on the exam. Questions can be chosen from multiple choice, numerical answer, short answer, and more [16].

- **Collaboration & Communication Tools:** Software that facilitates communication and collaboration among team members, enabling effective remote work and physically present work [16, 17].

Table 1 provides an overview of popular AI tools from the Chatbots, Visual & Design Tools, and Teaching Aides groups, representing only the tip of the iceberg of AI's possibilities in education [9].

**Table 1.** The most popular AI tools are Chatbots, Visual & Design Tools and Teaching Aides

Group	AI tool	Description	Function	Price and terms of use	Multilanguage (Serbian)	Access/link
Chatbots	ChatGPT	Generative AI chatbot <sup>1</sup>	Allows users to communicate and receive answers.	Free version and ChatGPT Plus version (\$20/month)	Yes	[18]
	Bing Chat	ChatGPT-4 robot	Enables web browsing, answers the question	Free	Yes	[19]
	Perplexity	Generative AI chatbot	Provides concise answers and detailed response	Free	Yes	[20]
	Gemini	An experimental service for chatting with artificial intelligence	Provides answers to user questions	Free	Yes	[21]
	PI	Personal AI companion for various tasks and answering questions	Enables communication via text or voice commands	Free	Yes	[22]
Visual & Design Tools	Adobe Express with Firefly	Includes Adobe Firefly generative AI model for creating custom images and text effects	Provides tools for creating visual content	Free	N/A	[23]
	Bing Image Creator	Generates AI images using DALL-E technology	Allows creation of new images with text and graphic queries	Free	N/A	[24]
	Pictory	AI platform for creating interesting videos	Provides tools for creating videos with visuals	Free trial, then monthly subscription (\$19)	N/A	[25]
	Canva Classroom Magic	AI tools suite for educators	Magic Design for visual content, Magic Writing for text generation	Free through a Canva EDU Pro account	N/A	[26]
Teaching Aides	gotFeedback	An AI tool for providing feedback to students	Provides feedback on student work	Free version for three teachers and administrators	Yes	[27]
	Grammarly	AI writing assistant	Detects and corrects writing errors	Free version and paid version (\$12/month)	No	[28]
	Goblin Tools	Tools for neurodivergent people	Help with tasks that are considered difficult	Free	Yes	[29]
	Hello History	AI-powered app for "conversations" with historical figures	Allows users to interact with historical figures	Limited free version with in-app upgrade option	No	[30]
	Chat PDF	AI tool for interacting with PDF documents conversationally	Summarizes and answers questions about PDFs	Free for two PDFs per day, max 120 pages per document	Yes	[31]

#### 4. METHODOLOGY

The *research aims* is to assess the general knowledge about artificial intelligence (AI) and AI tools in education among pupils and university students and to analyze their attitudes and experiences regarding the use of AI processes in teaching. The research aims to discover:

- 1) How familiar are students with the concept of artificial intelligence and its tools?
- 2) How and how often to they use AI technologies in everyday life and education?

- 3) What are their views and experiences with AI, including potential abuses?
- 4) How interested they are in learning about AI tools as part of a school or university curriculum?
- 5) How do they evaluate the usefulness of AI tools and Chatbots in education?
- 6) Are they satisfied with the quality of answers provided by Chatbots?
- 7) How much do they believe that AI tools can improve their ability to learn?

<sup>1</sup>A generative AI chatbot is a type of artificial intelligence that can generate authentic responses based on text input, using deep neural networks or similar techniques. These chatbots are capable of understanding and responding to various user queries, simulating a conversation with humans.

## Research Design, Privacy, and Data Protection

The *research design* used in this study is a descriptive research design with elements of quantitative analysis. Questionnaires were used in the research to collect data on the knowledge, attitudes, and experiences of pupils and university students regarding AI and AI tools in education.

The research was conducted during May 2023/24. among primary and secondary school students in Čačak and Belgrade, as well as university students from the Faculty of Technical Sciences (FTS) in Čačak. The surveyed sample included a total of 953 pupils and university students.

Participation in the survey was completely voluntary. The respondents were informed about the purpose of the study and were assured of the confidentiality of their answers. To ensure anonymity, the surveys were conducted on paper without any identifying information and were completed in the presence of the professor. This approach protected respondents' privacy and encouraged candid responses. The collected data were used exclusively for this research and were handled by applicable *data protection* regulations.

An overview of the *surveyed sample* shows the following structure:

- Group A: Students of the 5th and 6th grades of elementary school - 289

- Group B: Students of the 7th and 8th grades of elementary school - 329
- Group C: Students of 1st and 2nd grades high school students - 137
- Group D: Students of 3rd and 4th grades of high school - 96
- Group E: Students from FTS in Čačak - 102

The *survey* consisted of two parts:

1. First part - General information about artificial intelligence and AI tools in education: It contained a series of statements with provided answers, and the results are summarized in Table 2.
2. Second part - Students' evaluations of artificial intelligence and AI tools in education: This part contained an evaluation scale from 1 (not at all) to 5 (very much), with a special focus on experiences in using chatbots. The results are shown in Table 4.

## 5. RESULTS AND DISCUSSION

### 5.1 The First Part of the Survey

The first part of the survey aimed to assess the general knowledge of artificial intelligence (AI) and AI tools in education among pupils and university students. Table 2 presents the respondents' answers categorized by age group.

**Table 2.** Percentage responses of pupils and university students in the first part of the survey

No.	Question	Answers offered	Age/Group (values are in %)				
			A	B	C	D	E
1.	How familiar are you with the term artificial intelligence?	I have never heard of her.	4.2	2.4	3.6	3.1	0.0
		I know it exists, but I don't understand it well.	25.3	21.5	19.6	5.2	2.9
		I have a basic understanding of how AI works.	46.0	50.6	48.6	56.3	59.8
		I am well-versed in various fields of artificial intelligence.	24.6	25.5	28.3	35.4	37.3
2.	In your opinion, which statement best fits the concept of AI (only 1 answer)?	A robot that performs tasks.	30.4	32.2	29.2	9.4	18.6
		A type of program that can learn and remember information.	48.8	43.2	46.0	69.8	53.9
		Human intelligence inserted into a computer.	20.8	24.6	24.8	20.8	27.5
3.	How often do you use technologies that rely on artificial intelligence?	Several times a week.	22.5	29.8	29.2	34.4	33.3
		Every day.	39.8	28.0	19.7	18.8	16.7
		Once a week.	10.0	11.6	12.4	17.7	19.6
		Less than once a week.	16.3	23.4	35.0	24.0	29.4
		Never.	11.4	7.3	3.6	5.2	1.0
4.	Did you learn about AI in your educational institution (school, faculty)?	Yes, intensively.	12.1	7.9	1.5	5.2	2.0
		Yes, occasionally.	39.4	36.5	24.1	54.2	52.9
		No, but I would like to.	29.8	32.2	40.1	29.2	38.2
		No, and I don't want to.	18.7	23.4	34.3	11.5	6.9
5.	How would you describe your attitude towards AI in one word?	Fascinating.	17.0	13.7	16.8	7.3	5.9
		Useful.	60.9	63.5	59.1	68.8	63.7
		Scary.	5.2	7.3	11.7	10.4	15.7
		Promising.	8.0	8.2	4.4	6.3	13.7
		Needlessly.	9.0	7.3	8.0	7.3	1.0
6.	Have you had a negative experience with AI?	Yes, several times.	15.6	13.7	21.2	30.2	26.5
		Yes, once.	11.8	14.0	5.8	14.6	11.8
		No never.	46.4	45.6	48.2	46.9	48.0
		I do not know.	26.3	26.7	24.8	8.3	13.7
7.	Would you like to learn more about AI tools in your school/college curriculum?	Yes, very.	26.3	19.5	14.6	18.8	27.5
		Yes, but not too much.	41.9	35.3	41.6	50.0	54.9
		No, it is not my priority.	17.0	31.3	32.1	26.0	15.7
		I am not sure.	14.9	14.0	11.7	5.2	2.0
8.	Do you think that AI can be used for the misuse of learning and information?	Yes, absolutely.	37.7	37.7	37.2	37.5	47.1
		Yes, but only in certain cases.	48.4	45.6	46.0	54.2	44.1
		No, I believe that AI is always in the service of good.	13.8	16.7	16.8	8.3	8.8
9.	As a student, did you use AI in your educational process and was there any misuse?	I did not use artificial intelligence in teaching.	40.5	37.7	24.8	9.4	17.6
		I used artificial intelligence in class and did not abuse it.	36.7	36.2	40.1	53.1	77.5
		I used artificial intelligence in class and abused it.	7.3	6.4	16.1	19.8	2.9
		I used artificial intelligence in class and may have misused it	3.5	4.3	7.3	7.3	2.0
		I don't want to answer this question.	12.1	15.2	11.7	10.4	0.0

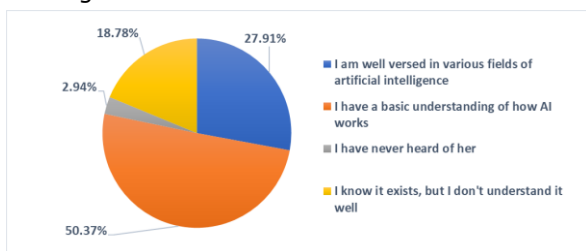
### 5.1.1 Discussion

Question 2: Nearly half of the respondents (49.1%) perceive artificial intelligence as a type of computer program capable of learning and retaining information. Younger participants exhibit less understanding, while older ones demonstrate better comprehension. Conversely, only a small fraction of respondents associate artificial intelligence with robots performing tasks.

- **Question 3:** The youngest respondents (group A) use AI-based technologies most often (39.8%), while university students (group E) use AI the least (16.7%).
- **Question 5:** Despite most respondents viewing artificial intelligence as useful and promising, university students express the most apprehension. Moreover, university students and senior high school students report more negative experiences with AI compared to younger respondents.
- **Question 6:** University students and senior high school students had more negative experiences with artificial intelligence compared to younger students.
- **Question 8:** A significant number of respondents, especially senior high school students and university students, believe that AI can be misused.

Figures 1-3 offer graphic summaries of the respondents' answers to Questions 1, 4, and 7 from this part of the survey.

- **Question 1:** Figure 1 shows the summary response of the respondents to the question "How familiar are you with the concept of artificial intelligence?"

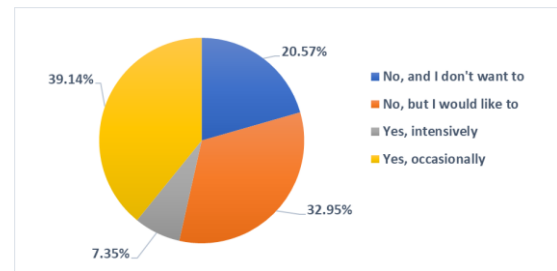


**Figure 1.** "How familiar are you with the term AI?"

Almost half of respondents (50.37%) have a basic understanding of artificial intelligence, while 27.9% of respondents are well-versed in various areas of artificial intelligence. However, a significant number of respondents (18.78%) only know that artificial intelligence exists, but do not fully understand it.

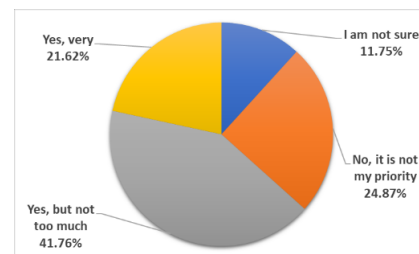
- **Question 4:** Figure 2 shows the summary response of pupils and university students to the question "Did you learn about artificial intelligence in your educational institution (school, faculty)?" More than a fifth of the respondents (20.57%) did not learn and do not want to learn about artificial intelligence, while

slightly less than half (46.49%) occasionally or intensively learned about artificial intelligence in their schools or faculties.



**Figure 2.** "Did you learn about artificial intelligence in your educational institution (school, faculty)?"

- **Question 7:** Figure 3 shows how willing the respondents are to learn about AI tools within the school or university curriculum (question "Would you like to learn more about AI tools in your school/ faculty curriculum?").



**Figure 3.** "Would you like to learn more about AI tools in your school/faculty curriculum?"

Of all respondents, 21.62% of respondents expressed a very high level of interest in learning AI tools, while 41.76% of respondents were moderately interested. On the other hand, 24.87% of respondents believe that learning AI tools is not their priority.

- **Question 9:** Table 3 shows the percentage answers of the respondents to the question "As a student, did you use AI in your educational process and was there any misuse?" It was interesting to compare the results by gender.

**Table 3.** Respondent's answers to the question: "As a student, did you use artificial intelligence in your educational process, and was there any misuse?"

Answers	Female	Male	Total
I did not use A in teaching.	34.14%	30.12%	31.69%
I used AI in class and did not abuse it.	45.97%	41.14%	43.02%
I used AI in class and abused it.	4.84%	11.88%	9.13%
I used AI in class and may have misused it.	4.57%	4.48%	4.51%
I don't want to answer this question.	10.48%	12.39%	11.65%

Men were almost 2.5 times more likely to use artificial intelligence and report misuse (11.88% compared to 4.84%), while 11.65% of respondents did not want to answer this question. A higher number of respondents use AI in teaching without misuse (43.02%) compared to those who did not use AI in teaching (31.69%).

### 5.1.2 Conclusion and Recommendations

- **Knowledge of artificial intelligence (AI):** The majority of respondents believe that AI is a type of computer program that can learn and remember information. Younger respondents are less knowledgeable about AI, while older ones understand its essence more. The majority of respondents use AI-based technologies, with younger people using AI technologies more often than university students.
- **Attitudes towards AI:** Most respondents see AI as useful and promising, but university students express the most fear. University students and senior high school students have more negative experiences with AI compared to younger students.
- **Possible abuse of AI:** A large number of respondents believe that AI can be used for abuse, especially older high school students and university students.
- **Interest in learning about AI and AI tools:** Most respondents want to learn about AI and AI tools, with more than half expressing interest.

- **Use of AI tools in education:** Male respondents use AI tools more in education and are more prone to misuse compared to female respondents. A greater number of respondents use AI tools in teaching without abuse.

These results point to a pressing need for enhanced education regarding artificial intelligence to comprehend its capabilities and limitations adequately. Moreover, there's a necessity to prevent potential misuse. Further research should delve into AI's impact on education and identify avenues for improvement. Additionally, measures like the introduction of ethical guidelines and teacher training on AI technology's proper utilization are warranted.

### 5.2 The Second Part of the Survey

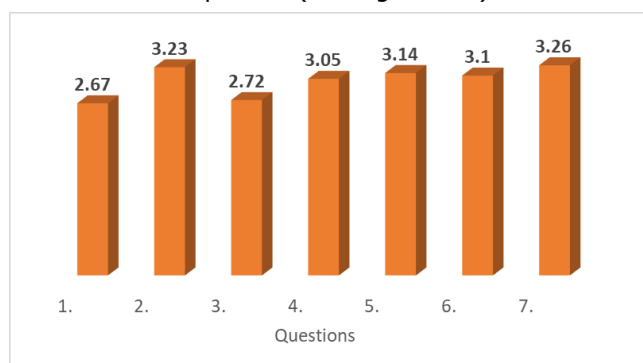
Table 4 presents the average responses of surveyed students to questions in the second segment of the survey, using a scale of 1-5 to rate their perceptions (1 - not at all, 2 - very little, 3 - good, 4 - significant, 5 - very much).

**Table 4.** Assessment scale (1-5)

No.	Questions	Age/Group					Total
		A	B	C	D	E	
1.	What is the level of awareness of AI technology in your school/faculty?	2.72	2.66	2.35	2.43	3.27	2.67
2.	How would you rate (in general) the usefulness of AI tools in education?	3.22	3.12	3.24	3.33	3.54	3.23
3.	How familiar are you with Chatbots in education?	2.56	2.63	2.80	3.04	3.07	2.72
4.	How would you rate the usefulness of Chatbots in education?	3.05	3.03	2.99	3.10	3.12	3.05
5.	How much can AI tools improve your ability to learn?	3.17	3.01	3.07	3.09	3.60	3.14
6.	How satisfied are you with the quality of responses provided by chatbots?	3.25	3.13	3.10	2.94	2.77	3.10
7.	How much will using chatbots for learning help students?	3.25	3.17	3.35	3.18	3.51	3.26

#### 5.2.1 Discussion

Figure 4 provides a comprehensive summary of students' assessments for Questions 1-7 from Table 4. Overall, respondents exhibit moderate awareness of AI technology (average: 2.67) and are relatively uninformed about chatbots in education (average: 2.72). However, they rate the usefulness of AI tools (average: 3.23) and chatbots (average: 3.26) positively. Moreover, they believe that AI tools can significantly enhance learning abilities (average: 3.14) and express satisfaction with chatbot responses (average: 3.10).



**Figure 4.** Summary of grades for primary, secondary, and university students for Questions 1-7 from Table 4

Further analysis of responses by gender for Questions 5 and 6 is presented in Tables 5 and 6.

**Table 5.** Estimates of respondents' responses to the question "How much can AI tools improve your ability to learn?" (Question 5)

Age	Male	Female	Total
Elementary school V, VI-grade	3.21	3.11	3.17
Elementary school VII, VIII-grade	3.11	2.88	3.01
High school I, II-grade	3.09	3.03	3.07
High school III, IV-grade	3.11	3.05	3.09
University students	3.70	3.44	3.60
<b>Total</b>	<b>3.20</b>	<b>3.04</b>	<b>3.14</b>

On average, men rated the potential to improve learning with AI tools higher, with an average rating of 3.20, while women gave slightly lower ratings, with an average rating of 3.04. University students rated this item the highest, with an average score of 3.60, while elementary school students gave slightly lower, but still quite high scores, ranging from 3.01 to 3.17.

**Table 6.** Estimates of respondents' answers to the question "How satisfied are you with the quality of answers provided by chatbots?" (Question 6)

Age	Male	Female	Total
Elementary school V, VI-grade	3.32	3.16	3.25
Elementary school VII, VIII-grade	3.15	3.10	3.13
High school I, II-grade	3.25	2.69	3.10
High school III, IV-grade	3.08	2.45	2.94
University students	2.90	2.56	2.77
<b>Total</b>	<b>3.18</b>	<b>2.99</b>	<b>3.10</b>

Men generally rated the quality of chatbot responses higher, with an average rating of 3.18, while women gave slightly lower ratings, with an average rating of 2.99. Again, university students rated this item the lowest, with an average score of 2.77, while elementary and high school students scored slightly higher, but still below average, ranging from 2.94 to 3.25.

### 5.2.2 Conclusion and Recommendations

The analysis of the second part of the survey reveals significant insights into the attitudes and perceptions of students about artificial intelligence and AI tools in education. There is a basic understanding of AI technology among respondents, with university students being better informed compared to primary and secondary school students. Nevertheless, there is a general interest in learning about AI tools in educational institutions, although some respondents feel insufficiently informed about these technologies.

Assessments of the usefulness of AI tools in education are positive, especially when it comes to using chatbots for learning. However, a variation in ratings was observed between genders, with females expressing greater caution and less satisfaction with the quality of responses provided by chatbots compared to male respondents. This may be the result of various factors, including individual perceptions, experiences, and attitudes towards technology and education.

The insights gleaned from the second part of the survey shed light on students' attitudes and perceptions toward AI and AI tools in education. While there's a basic understanding of AI, there's a need for more comprehensive training and information dissemination. Additionally, adjustments in AI tool implementation considering user preferences, especially potential gender disparities, are essential for maximizing educational benefits.

## 6. CONCLUSION

The research presented in this paper provides a deeper insight into the attitudes and perceptions of pupils and university students towards artificial intelligence (AI)-based technologies. The main findings indicate a positive attitude towards AI tools

in education, particularly among younger respondents, while older individuals express more caution and skepticism. Specifically, 39.8% of younger respondents actively use AI tools compared to 16.7% of university students, demonstrating significant variation in technology usage across age groups.

Despite broad consensus on the potential and usefulness of artificial intelligence, concern remains high among university and high school students, who frequently report negative experiences and fear the potential misuse of this technology. Although there is significant interest in learning AI tools, with 21.62% of respondents showing a very high level of interest and 41.76% moderately interested, it is notable that 24.87% do not prioritize this learning.

The implications of these findings underscore the necessity for additional education and awareness of artificial intelligence among students. Educational institutions should actively address these fears and negative experiences to foster a more inclusive and supportive learning environment. Integrating AI literacy into curricula can significantly contribute to overcoming knowledge gaps and enhancing students' competencies in utilizing AI technology, thereby potentially improving educational outcomes.

This study significantly contributes to understanding the complex relationship between students, AI technology, and education, emphasizing the need for further research and actions in the field of AI education and implementation within the educational system. While integrating AI technologies in education offers numerous advantages, achieving a balance between technology and the human factor, and safeguarding against potential risks and shortcomings, requires the development of a robust strategy. Deeper risk analysis and the formulation of ethical guidelines are crucial steps towards achieving this balance.

For future research, it is recommended to focus on aspects that promote the comprehensive and ethical use of artificial intelligence in education, ensuring that AI not only enhances the learning process but also preserves key elements of the educational experience that encourage critical thinking, creativity, and independence among students.

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