THE ROLE OF ARTIFICIAL INTELLIGENCE IN EDUCATION

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Abstract: Artificial intelligence (AI) is becoming an important part of modern education. It helps teachers improve learning methods and gives students new ways to study more effectively. AI technologies support personalized learning and quick access to information. However, their use also brings risks such as reduced human interaction and possible ethical concerns. This paper discusses both the benefits and drawbacks of using AI in education, focusing on how it can make learning easier while still requiring careful and responsible use.

Keywords: Artificial intelligence, education, benefits, drawbacks, learning, teaching methods, students, ChatGPT.

INTRODUCTION

It is not secret that the role of AI in human life is growing rapidly at present. It is widely used in almost all fields of our lives. Areas such as education, finance, medicine,

marketing and manufacturing are clear examples of this. In general, artificial intelligence not only helps to make human work easier and save time, but also creates more convenient opportunities for them and causes financial growth [1]. However, it is also possible that it will cause a number of problems for people in the future. This article provides information about the role and importance of artificial intelligence in education, its positives and negatives, and its impacts in the future.

If we talk about the origin of artificial intelligence, this term was first used in an online article in 2015 (Konishi, Y. (2015). When this term first appeared, it was not as relevant as it is now. However, over time, it continued to develop, and now it has entered almost all areas of our lives. For example, one of such areas is the field of education. Today, the process of artificial intelligence entering the field of education is also accelerating. In particular, artificial intelligence is providing great help to people in processes such as learning languages, organizing educational processes interactively, and developing knowledge through independent learning. Also, when it comes to the benefits of AI in education, one of its main advantages in the field of education is that it can facilitate learning with greater flexibility and convenience, as learners can learn whenever and wherever they want using AI-related infrastructures (Kabudi, T., Pappas, I., and Olsen, D. H., 2021). Since many learners live in different geographical regions and under different conditions, receiving quality education is extremely important for them. In this situation, AI is a key tool for them to implement this process, meaning that learners can find and research all the information they need through AI, regardless of their situation. Thus, the widespread use of AI in education is of great importance for the overall development of learners.

Artificial intelligence also allows for increased student engagement and motivation by making learning more engaging and engaging, such as through games or interactive content. This allows students to be more engaged and motivated (Zhang, K., and Aslan, A. B., 2021). What does this mean? Effective use of AI by teachers in the

classroom can increase student engagement and make them work harder than before. It is also important to use AI in modern assessment processes, including assessing students using STEM or interactive assessment methodologies. Artificial intelligence can also reduce the costs of educational institutions by eliminating unnecessary work in the educational process and automating processes that reduce the need for resources (Adlawan, D. (2024), that is, since artificial intelligence carries out educational processes, mainly without the participation of others, it prevents unnecessary costs and resource consumption, allowing a sharp reduction in expenditures from the state budget. As a result, these funds can be used to solve various social and economic problems in society. Thus, the widespread use of artificial intelligence in educational processes paves the way for the effective organization of lessons and further increase students' interest in the lesson. This will contribute to the further development of the educational sector in the future and the in-depth knowledge of students.

With all the advantages that AI can offer to teachers, students, and administrators, it does come with its challenges and drawbacks. Following are some of the most common issues that concern educators. Relying more and more on AI may reduce the teacher-to-student interactions and relationships and take away from the social-emotional aspects of learning. If those interactions diminish, students' social skills and interpersonal development will suffer. Teachers need to be aware of this and take care to identify and respond to the social and emotional needs of their students. Several drawbacks and potential disadvantages may arise from the use of AI algorithms, technologies, and applications in the field of education. Among these drawbacks are (Abdulsalam, 2021; Alghamdi & Alfarani, 2020; Al Hiary, 2023b; Celik et al., 2022; Ghanaiem, 2023): 1. Increase in costs associated with AI technologies and applications in the field of education. 2. Possibility of job reduction and increased unemployment rates among faculty members. 3. Risk of exposure to hacking and the spread of viruses in robots, devices, and smart applications used. 4. Lack of human connection,
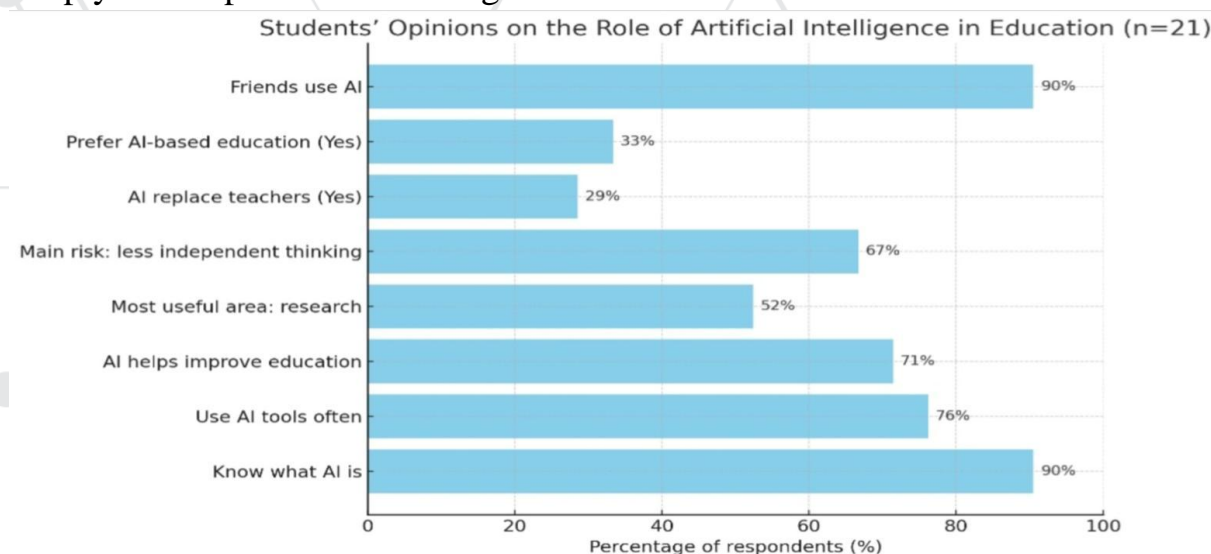
interaction, communication, and personal social adaptation among learners and teachers, which is considered an essential element in the processes of teaching and learning, potentially leading to the loss of the ability to understand individual learner needs, and limited ability to develop their human, social, and emotional skills that can be nurtured through it. 5. Learner boredom and loss of enthusiasm and desire for learning due to extensive interaction with automated systems, devices, and smart applications, as there is an increasing reliance on modern smart technologies at the expense of traditional methods. Additionally, Issues of algorithmic bias and discrimination present another significant challenge (B. Heinrichs., 2016). If not vigilantly addressed, these biases can insidiously propagate existing disparities within educational systems.

Therefore, it is critical to adopt a transparent algorithmic framework that is regularly audited for biases and corrected accordingly, ensuring fair and equal treatment for all students. Transparency and explainability in AI systems are further marred by technical complexities [8-9].Complicated algorithms can be perceived as opaque and unaccountable, which could lead to resistance from those it aims to serve. Demystifying these systems via explainable AI should therefore be a priority, so that not only are decision-making processes clear, but learners and educators alike can understand and trust the AI tools with which they engage. Moreover, people make the mistake of thinking AI knows everything. And yes, it does know a lot, but it knows as much as it knows if that makes sense, and what it knows isn't always correct. Even at the bottom of a ChatGPT conversation, it says, 'ChatGPT can make mistakes.A recent study published by Defense One found AI tools are incorrect 1/4 of the time, which is a pretty high number to think it's OK to rely on for educational purposes. And again, the Google AI Overviews is an example of just how wrong AI can be. Higher education

professionals and students simply can't trust every answer AI gives, and that in itself is simply unacceptable for learning.

Figure 1. Students' Opinions on the Role of AI in Education

The bar chart shows the results of a survey of 21 university students about their opinions on Artificial Intelligence (AI) in education. It presents information about how well students know AI, how often they use it, what benefits and risks they see, and whether they think AI could replace teachers in the future.

Overall, most students have a positive opinion of AI and believe that it is useful for studying. However, some of them also worry that using AI too much might make students less independent or even replace teachers one day.

According to the data, around 90% of students said they know what AI is, and about three-quarters (75%) use AI tools such as ChatGPT, Grammarly, or Duolingo regularly. About 70% of participants think AI helps to improve the quality of education, and more than half (around 52%) believe it is most useful in research and data analysis. Another 38% mentioned that it helps with learning foreign languages. These results show that AI plays a big role in students' daily learning.
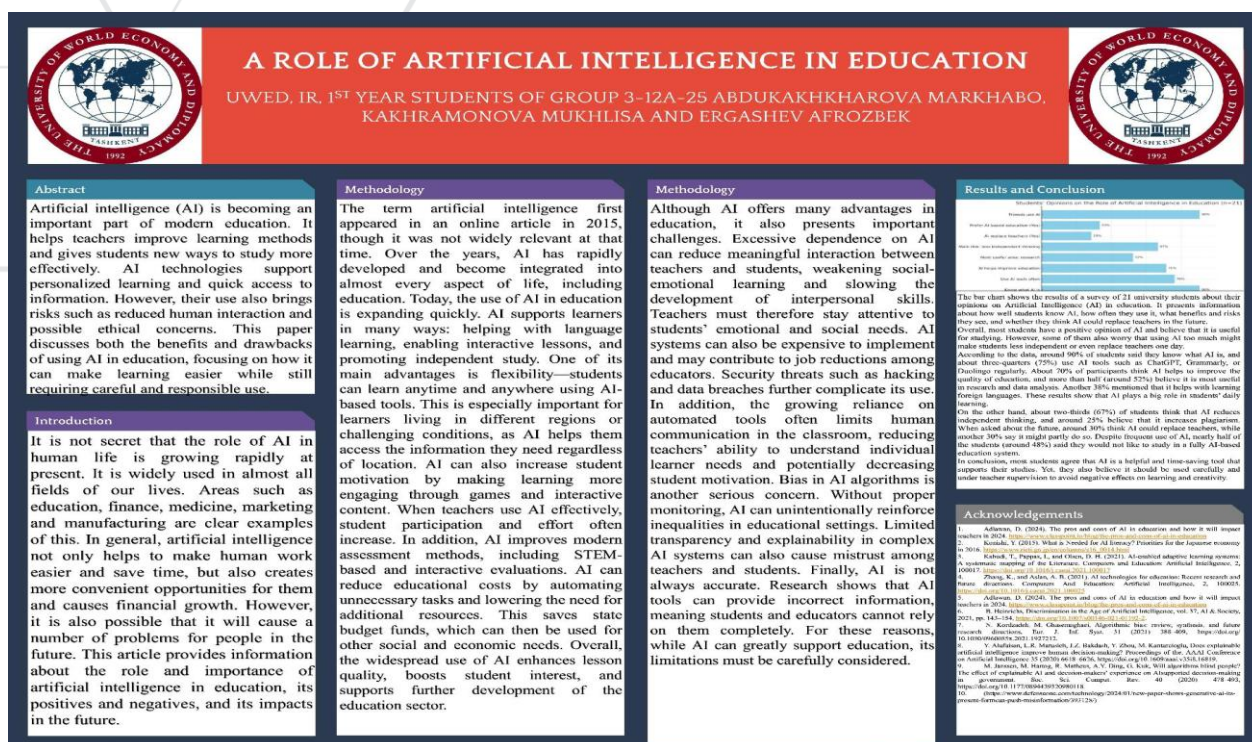
On the other hand, about two-thirds (67%) of students think that AI reduces independent thinking, and around 25% believe that it increases plagiarism. When asked about the future, around 30% think AI could replace teachers, while another 30% say it might partly do so. Despite frequent use of AI, nearly half of the students (around 48%) said they would not like to study in a fully AI-based education system.

In conclusion, most students agree that AI is a helpful and time-saving tool that supports their studies. Yet, they also believe it should be used carefully and under teacher supervision to avoid negative effects on learning and creativity.

Picture 1. Educational Poster on the Role of Artificial Intelligence in Education

CONCLUSION

This study aimed to explore the landscape of multimodal and generative AI in education. Artificial intelligence (AI) has great potential in education. It can provide personalized learning for students, reduce teachers' workload, and make the learning process faster and more efficient. At the same time, using AI raises concerns such as

data privacy, algorithmic bias, and reduced human interaction. Therefore, AI should be used as a supportive tool for teachers, not as a replacement. Its integration into education must prioritize ethics, fairness, and human-centered approaches.In the future, AI is expected to play an even larger role in education. However, this growth should remain responsible, equitable, and focused on human needs. Only then can the benefits of AI be fully realized while minimizing potential risks.

REFERENCES:

1. Adlawan, D. (2024). The pros and cons of AI in education and how it will impact teachers in 2024. https://www.classpoint.io/blog/the-pros-and-cons-of-ai-in-education

2. Konishi, Y. (2015). What is Needed for AI literacy? Priorities for the Japanese economy in 2016. https://www.rieti.go.jp/en/columns/s16_0014.html

3. Kabudi, T., Pappas, I., and Olsen, D. H. (2021). AI-enabled adaptive learning systems: A systematic mapping of the Literature. Computers and Education: Artificial Intelligence, 2, 100017. https://doi.org/10.1016/j.caeai.2021.100017

4. Zhang, K., and Aslan, A. B. (2021). AI technologies for education: Recent research and future directions. Computers And Education: Artificial Intelligence, 2, 100025. https://doi.org/10.1016/j.caeai.2021.100025

5. Adlawan, D. (2024). The pros and cons of AI in education and how it will impact teachers in 2024. https://www.classpoint.io/blog/the-pros-and-cons-of-ai-in-education

6. B. Heinrichs, Discrimination in the Age of Artificial Intelligence, vol. 37, AI & Society, 2021, pp. 143–154, https://doi.org/10.1007/s00146-021-01192-2.

7. N. Kordzadeh, M. Ghasemaghaei, Algorithmic bias: review, synthesis, and future research directions, Eur. J. Inf. Syst. 31 (2021) 388–409, https://doi.org/10.1080/0960085x.2021.1927212.

8. Y. Alufaisan, L.R. Marusich, J.Z. Bakdash, Y. Zhou, M. Kantarcioglu, Does explainable artificial intelligence improve human decision-making? Proceedings of the, AAAI Conference on Artificial Intelligence 35 (2020) 6618–6626, https://doi.org/10.1609/aaai.v35i8.16819.

9. M. Janssen, M. Hartog, R. Matheus, A.Y. Ding, G. Kuk, Will algorithms blind people? The effect of explainable AI and decision-makers' experience on AIsupported decision-making in government, Soc. Sci. Comput. Rev. 40 (2020) 478–493, https://doi.org/10.1177/0894439320980118.

10. https://www.defenseone.com/technology/2024/01/new-paper-shows-generative-ai-its-present-formcan-push-misinformation/393128/