14. ARTIFICIAL INTELLIGENCE IN EDUCATION

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This paper deals with the information about the influence of the Artificial Intelligence on educational sphere. Also, the purpose is to inform about the future of the Artificial Intelligence.

Artificial Intelligence (AI) is a section of computer science that deals with solving cognitive tasks which are traditionally assigned to humans. In order for Artificial Intelligence to be able to perform the given tasks, it must be pre-trained on real and similar tasks. Artificial intelligence (AI) is increasingly acting as an incentive for progress in technology and business. It is widely used in a wide variety of industries and has an impact on almost all aspects of creativity. Artificial Intelligence is utilised in healthcare (diagnosis, personalised treatment), finance (fraud detection, algorithmic trading), customer service (chatbots, virtual assistants), marketing (targeted advertising, recommendation engines), and security (facial recognition, cybersecurity). The development of Artificial Intelligence is facilitated by the availability of large amounts of data for training and an increase in computing power. One of the industries where it is making a significant impact is education.

AI has the potential to revolutionise education by enhancing personalised learning experiences, supporting educators, promoting inclusivity, enabling data-driven decision-making, and fostering lifelong learning. By leveraging the benefits of AI in education, we can create more engaging, effective, and equitable educational experiences for learners of all ages and backgrounds.

There are several key tools and applications of AI in educational sphere (Figure 1):

What AI-based tools or applications have you encountered in educational settings?

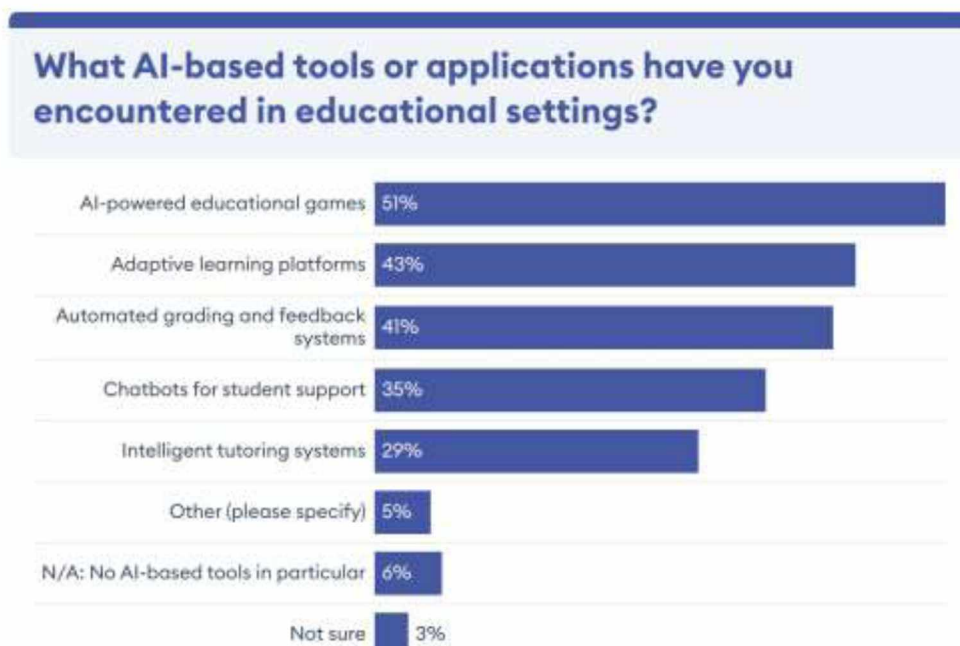|	
AI-powered educational games	51%
Adaptive learning platforms	43%
Automated grading and feedback systems	41%
Chatbots for student support	35%
Intelligent tutoring systems	29%
Other (please specify)	5%
N/A: No AI-based tools in particular	6%
Not sure	3%

Figure 1 – The most common AI-based tools used in educational setting

- AI-powered educational games;
- adaptive learning platforms;
- automated grading and feedback systems;
- chatbots for student support;
    intelligent tutoring systems [1].

While AI-powered educational tools have the potential to revolutionise the learning experience, there are also some potential negative effects to consider. One potential negative effect of AI in the educational sphere is the risk of over-reliance on technology. Educators and students can become too dependent on AI-powered tools. It usually leads to a chance that they may neglect developing essential skills that are not easily automated, such as critical thinking, creativity, and empathy.

AI algorithms are only as good as the data they are trained on, because the data sometimes may lack diversity. Also, there is a risk of bias and inequality in AI-powered educational tools, it could perpetuate existing inequalities and stereotypes in education. AI-powered educational tools often collect and analyse large

amounts of data based on student performance and behavior. There is a chance that this data could be misused or improperly shared, leading to privacy concerns for students and their families [2].

AI plays a crucial role in transforming the learning process by making it more personalised, adaptive, interactive, and effective. By leveraging AI technologies, educators can create engaging and tailored learning experiences that meet the diverse needs of students and enhance their overall educational outcomes.

Overall, while AI has the potential to transform the educational landscape, it is important to ensure that AI-powered educational tools are used ethically, responsibly, and inclusively. By approaching AI in education with a critical and proactive mindset, we can utilise its benefits while mitigating its potential drawbacks.

The future of AI in education holds great promise for transforming the way students learn and teachers teach. AI technology is expected to further personalise learning experiences by providing tailored content and feedback to individual students based on their unique learning needs and preferences. Additionally, AI-powered tools can continue to automate administrative tasks, freeing up educators to focus on more personalised and interactive teaching methods. AI may be useful for everybody: for children it can be used to make interactive educational games, for students it is an adaptive learning platform that can be utilised anytime, teachers can design strategies to improve outcomes of learning process (Figure 2).
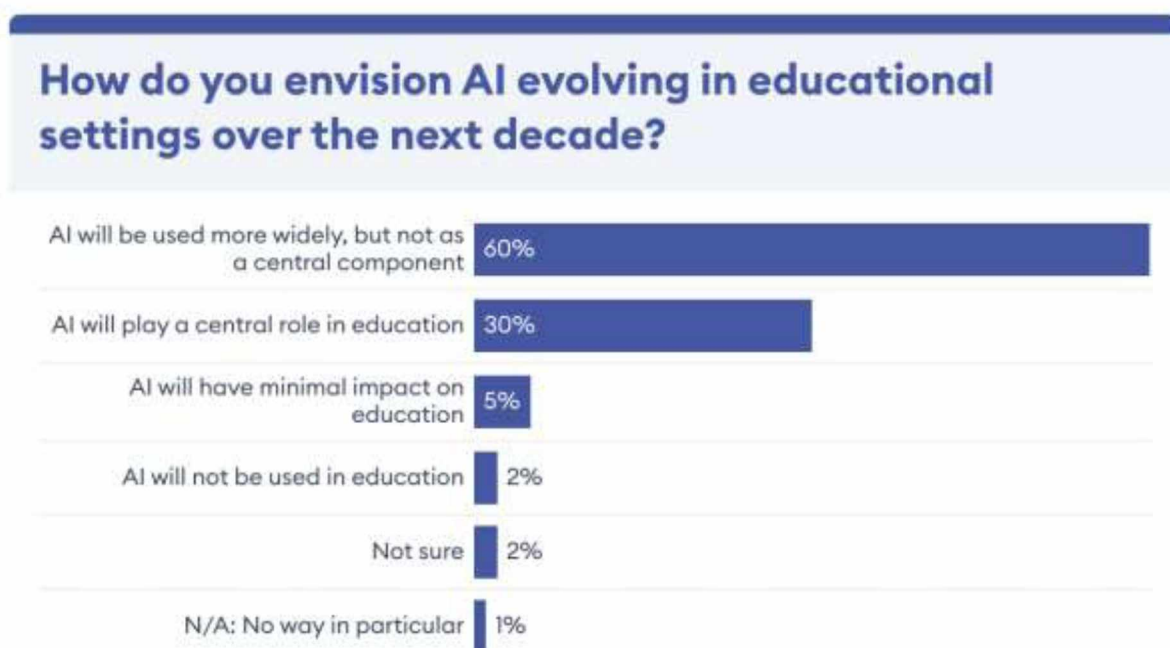

Figure 2 – Possible usage options of AI in educational settings over the next decade

In the future, AI is likely to play a significant role in promoting inclusivity and accessibility in education by providing support and accommodations for diverse learners, including those with disabilities, learning differences, or language barriers. Data-driven insights generated by AI can help educators make more informed decisions about curriculum design, teaching strategies, and resource allocation, leading to more effective educational practices [3].

As AI technology continues to evolve and improve, we can expect to see advancements in virtual and augmented reality applications, adaptive learning platforms, and intelligent tutoring systems that enhance the overall teaching and learning experience. With continual innovation and integration of AI in education, the future holds the potential for a more equitable, efficient, and effective educational system for all learners.

Furthermore, AI can provide real-time feedback to students, helping them to track their progress and make adjustments as needed. This can lead to a more efficient learning process and better outcomes for students.

Overall, the future of AI in the educational sphere looks bright. As technology continues to advance, we can expect to see even more innovative applications of AI in education, ultimately leading to a more personalised, engaging, and effective learning experience for students.

References:
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