

CHATGPT IN EDUCATION: BENEFITS OR RISKS?

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Abstract: ChatGPT is an artificial intelligence (AI) application increasingly used in educational settings. This paper explores the benefits and challenges of using ChatGPT from both educators' and students' perspectives. Major benefits for educators include simplifying curriculum and lesson planning, grading assignments, language translation, supporting research, and enabling better time management. From students' perspectives, ChatGPT facilitates adaptive learning, offers personalized learning experiences, and provides information for research projects and homework assignments. However, challenges such as generating incorrect information, lack of human interaction, reliability issues, risks of plagiarism, and ethical dilemmas have also been identified. ChatGPT usage is not yet widespread, primarily due to a lack of knowledge and adequate training among educators and students. Future studies should investigate the efficacy of ChatGPT in education and its long-term impact on learning and teaching.

Key words: ChatGPT, artificial intelligence, education, teaching, learning

1. INTRODUCTION

The 21st century has experienced a rapidly changing landscape in educational practices largely due to advancements in technology such as artificial intelligence (AI) [1]. The first AI program, called ELIZA, created by Joseph Weizenbaum at the Massachusetts Institute of Technology (MIT) in 1960, was the first computer program that tried to replicate human conversation [2]. In 2010 Apple introduced the world to Siri, a voice-activated, virtual assistant integrated into Iphone.

ChatGPT is an advanced AI model launched by OpenAI in November 2022. OpenAI, co-founded by Sam Altman and Elon Musk, developed ChatGPT with the role of generating content, answering questions, engaging in conversations, and providing explanations [3]. The model is powered by a sophisticated system known as the Generative Pre-trained Transformer (GPT), trained on databases, books, and websites. This training equips ChatGPT to generate responses that are clear, coherent, and contextually accurate.

To address diverse user needs, OpenAI has developed multiple versions of ChatGPT. The free version, GPT-3.5, provides essential functionality that is sufficient for most users. However, there are limitations when compared to the paid version, GPT-4.0 or ChatGPT Plus, in terms of integrating and generating images and tables within a 24-hour period. Such limitations do not exist for the paid version. Furthermore, version 4.0 is designed and developed to give more accurate responses compared to version 3.5.

Specialized versions like ChatGPT Enterprise, Codex, and DALL·E further expand its applications into professional and creative domains.

ChatGPT, particularly version 4.0, is designed to encourage meaningful and efficient conversations. Based on previously entered information, it can predict the course of the discussion. It is considered to be an exceptional and highly versatile personal assistant trained on a large number of internet texts, articles, and general data [3]. Its ability to synthesize large volumes of data and generate meaningful content has made it a popular choice for teaching, learning, and enhancing productivity.

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The aim of this paper is to explore the advantages of ChatGPT in education while also addressing potential risks. It examines how ChatGPT is transforming learning environments and highlights its potential as a groundbreaking tool in the age of AI-driven innovation.

2. EMPOWERING EDUCATORS: HOW IS TEACHING AND LEARNING ENHANCED BY CHATGPT

Educators generally see ChatGPT as a valuable tool for reducing workload and supporting students while emphasizing the need to balance technological advancements with meaningful human interaction in the classroom [4].

2.1. Benefits of using ChatGPT: Educators perspective

One of the significant advantages of ChatGPT is the role of a teaching assistant, providing materials and ideas for curriculum development, lesson planning, and short-term and mid-term plans by significantly reducing teachers' time spent on planning [4]. With simple commands, generating yearly plans and providing clear instructions and all the necessary information of curriculum topics, ChatGPT can integrate all ideas and present a clear plan in just a few seconds. ChatGPT can offer constructive feedback, correct grammar, punctuation, and spelling errors [5]. Additionally, it can grade student essays using the Automated Essay Grading option. This option provides educators with more time to focus on other aspects of teaching [1].

Language translation could be used to translate educational materials and research papers into different languages, making them more accessible to a wider audience [1], [6].

It is important to highlight that, while ChatGPT is a powerful tool, its information should be taken with caution because the responses may be unverified or even inaccurate -the phenomenon of ChatGPT „hallucination“ where false information is presented as a fact. Furthermore, it is very important to emphasize that educators should never rely only on the sources provided by ChatGPT, precisely because of possible errors. Therefore, every piece of information provided by ChatGPT must be carefully reviewed and tailored to meet the user's needs. In this way, educators can obtain accurate and precise information.

Currently, there is a debate on whether ChatGPT is a constructive tool to be used in education or not, weighing its risks against the benefits. Most educators are opposed to the use of ChatGPT in teaching and learning. Some of the reasons could be the fear of technology, lack of awareness of its potential in education, no proper training, and a lower level of educators' digital literacy in contrast with other educators who loudly celebrate all its achievements.

2.1.1. Benefits of using ChatGPT: student perspective

From a student's perspective, there are a few positive aspects of using ChatGPT. Students, particularly at the university level and higher grades in high school, can use ChatGPT as a resource for gathering information needed for homework, assignments, essays and research projects.

For younger age groups, ChatGPT offers a version of tutoring called 'Tutor Me,' a paid feature linked with Khan Academy which can tutor math, science, and humanities, to name a few. Khan Academy (khanacademy.com) is a non-profit organization that provides quality education with online resources to interested learners of all ages and from diverse backgrounds [7]. This option enables ChatGPT to interact with students in real-time, answering their questions or providing feedback on their responses instantly.

ChatGPT can be a valuable tool for exam preparation, generating practice questions and providing feedback on students' responses. This platform can help students to identify areas of weakness and what they should focus on in their further studies.

Furthermore, ChatGPT can be tailored to adapt to an individual's learning pace. Based on the mistakes a student makes while using ChatGPT as a personalized tutor, ChatGPT provides targeted feedback and new tasks focused on specific areas of improvement. This platform gives students opportunities to focus on specific problems and particular skills they need to improve and receive a personalized response that supports their learning [8]. Personalization, in this context, refers to the capability of a technology to customize interactions according to a user's preferences, actions, and unique characteristics [8].

The extent to which ChatGPT could provide precise information is supported by the fact that it has passed the final exam at the University of Minnesota Law School and the US Medical Licensing Exam [9].

2.1.2 Using ChatGPT from a personal perspective

The UAE Ministry of Education encourages the application and implementation of AI in education. Schools are providing training for the staff on how to use this tool proactively and securely and encourage educators to incorporate classroom activities with ChatGPT. Approval of ChatGPT's utilization in education within the UAE, following the address delivered by Dr. Ahmed Belhoul Al Falasi, Minister of Education for the UAE, was remarkable and has caught the attention of the UAE academic community [10].

Using ChatGPT in teaching has been a revolutionary experience for me. The time I used to invest in lesson planning, as well as researching for resources and creative ideas for lessons, has been reduced to a minimum. Additionally, the anxiety stemming from an overwhelming number of tasks to complete in a short period has decreased, and the joy of teaching has once again become my everyday feeling of happiness.

Truly, ChatGPT has become my personal assistant. However, no matter how much this advanced technology has made the teaching job easier, I feel immensely proud as a human being when, while browsing websites and journals, I come across a sticker verifying that the entire creation is the result of human effort — 'Proudly human produced'.

One of the negative aspects I noticed was repetition—answers to given questions that were very similar or identical. Unimaginative teaching examples that were either unsuitable for the age group or repeated multiple times often drove me back to traditional methods of seeking ideas, such as books, journals, essays, and teacher websites.

3. CHALLENGES OF USING CHATGPT

ChatGPT is a revolutionary invention with a crucial and significant role in education. However, at the same time, it could present a potential risk that leaves educators, teachers, or any other user addicted to generating and integrating information, what some researches call as 'intertwinement' because the interaction between technology and user becomes inherently interwoven in practicing knowledge work [11].

ChatGPT has the potential to generate content that students might submit as their own work, blurring the lines of academic integrity [12]. It is challenging for educators to determine whether a student has used ChatGPT or not [13]. It's very important that ChatGPT provides a possibility for educators to check if the students' assignments are fully reliant on ChatGPT without any input of

critical thinking of their own as part of the process. Schools should consider the incorporation of more complex assessment methods such as the implementation of problem-solving skills, data interpretation, and case studies that go beyond simple knowledge-based questions [14].

The use of ChatGPT has led to many legal challenges, especially when it comes to copyrights for the generated texts. Governments are collaborating to develop regulations that tackle legal concerns, including those involving copyright issues. It is possible to add a watermark on the images generated by AI models, but to mark the texts produced by ChatGPT is proving to be challenging [15].

There are a few challenges of using ChatGPT in education and research, such as plagiarism, ethical issues, data privacy, inaccuracy, and inability to emotionally engage in teaching, which demand caution and responsible usage [3]. The regulatory environment needs to be clear, especially concerning copyright and intellectual property rights. Multi-stakeholder engagement is needed for updates of schoolwide policies about AI [16]. Future research should focus on the ethical implications of AI in pedagogical application, the long-term impact of AI on students' outcomes, and educators' equality, while also examining its integration with technologies [17].

4.CONCLUSION

ChatGPT is a great tool for teaching and learning from educators' and students' perspectives. A balanced approach must be used if the benefits of ChatGPT are to be realized while the risks are minimized in education. These include proper training for educators, an increase in digital literacy, and more effective strategies for ChatGPT integration in educational settings.

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