

E. Grinevitch

School of Business of BSU, Minsk, Belarus, e_grinevich@sbmt.by

CHATGPT: A NEW CHALLENGE FOR THE EDUCATION SYSTEM?

In November 2022, OpenAI released ChatGPT. GPT stands for «Generalized Pretrained Transformer». Using artificial intelligence (AI), ChatGPT can create human-like responses to a variety of questions. This ability has led many scientists to fear that ChatGPT will challenge the very purpose of higher education. The article deals with the main problems faced by the educational community with the advent of the new ChatGPT artificial intelligence technology. The advantages and disadvantages of the new technology for students and teachers, possible applications in the educational process are listed.

Keywords: *ChatGPT, an artificial intelligence, generalized algorithms, an educational system, a practical wisdom, purposeful education experiences, a language model*

Е. Г. Гриневич

Институт бизнеса БГУ, Минск, Беларусь, e_grinevich@sbmt.by

CHATGPT: НОВЫЙ ВЫЗОВ ДЛЯ СИСТЕМЫ ОБРАЗОВАНИЯ?

В ноябре 2022 г. компания OpenAI выпустила ChatGPT. GPT расширяется как «Обобщенный предварительно обученный преобразователь». Используя искусственный интеллект (ИИ), ChatGPT может создавать реалистичные ответы на разнообразные вопросы. Эта способность заставила многих ученых опасаться, что ChatGPT бросит вызов самой цели высшего образования. В статье рассмотрены основные проблемы, вставшие перед образовательным сообществом с появлением новой технологии искусственного интеллекта ChatGPT. Перечислены достоинства и недостатки новой технологии для студентов и преподавателей, возможные ее варианты применения в образовательном процессе.

Ключевые слова: *ChatGPT, искусственный интеллект, обобщенные алгоритмы, образовательная система, практическая мудрость, целенаправленный образовательный опыт, языковая модель*

History teaches us that it never works to ban new technology from our classrooms – it is more productive to adjust to its implications while exploring its potential.

Artificial intelligence (AI) is expanding capabilities might seem shocking, or even threatening. A higher education has faced new technologies before.

For example, fast forward to the turn of the millennium, when academics feared the consequences of distance education, with some even predicting the end of university education, as we knew it [1].

In retrospect, we can smile at these modern Luddites, knowing that their concerns did not happen. Given that knowledge, we also might wonder: Is history is repeating itself in 2023.

The most recent firestorm was ignited in November 2022, when the company OpenAI released ChatGPT (GPT stands for «Generalized Pretrained Transformer» algorithms). Using AI, ChatGPT can create realistic responses to question prompts, generating everything from outlines to college essays. That awe-inspiring capability has caused many academics to fear that ChatGPT will challenge the very purpose of higher education.

Many teachers are afraid that students can use ChatGPT to cut short the gradual, arduous journey of learning how to think creatively and critically, argue a point, and make moral judgments.

Professors throughout the world are calling for a complete classroom ban on the technology. They are recommending a return to face-to-face teaching, sit-in examinations, the use of pen and paper for assignments, the use of new AI tools to detect students using AI new tools, and so on [1].

Nevertheless, as we respond to this new development, we must learn from history and come to a clear conclusion: *Banning new technology will fail*. We will not win any arms race to develop AI that detects AI. Therefore, we need to embrace it with open arms, as we have done with new technologies in the past, in ways that account for basic human nature.

AI tools like ChatGPT do not change the university experience, but as they become more powerful, they have long-term consequences that compel us to look at the purpose of higher education on a deeper level. It is a process that exists not only to prepare students for careers, but also to help them develop what Aristotle called *phronesis*, a term that Thomas Aquinas later translated to mean «practical wisdom».

Since we cannot ban technology (at least not in the free world), we must quickly embrace the implications of AI tools for teaching, learning, research, and outreach. We must view AI as a tool we can use to encourage the development of practical wisdom.

We consider all the advantages and disadvantages of this technology for education [2].

How will ChatGPT benefit students?

Research: ChatGPT can help students quickly access information and answer questions on a wide range of subjects, making research and homework assignments faster and more efficient.

Suggestions on writing: It can help students improve their writing skills and better express their thoughts and ideas as well as check grammar and sentence construction.

Personalized learning: ChatGPT can personalize the learning experience, by providing tailored and interactive responses based on the student's proficiency and learning style.

Language learning: ChatGPT can be used as a tool for language learning, helping students practice speaking and writing in a foreign language with an AI tutor.

On-demand access to educational content: ChatGPT can provide students with 24/7 access to educational resources and support, allowing them to continue learning outside regular school hours.

How will chatGPT negatively impact students?

Lack of human interaction: ChatGPT may reduce the need for human interaction in the classroom, potentially leading to a lack of personal connection and support for students, which may be detrimental to students' social and emotional development.

Reduced critical thinking: It could potentially lead to students becoming overly dependent on technology for information and learning, potentially hindering their ability to think critically and solve problems on their own.

Inaccurate information: ChatGPT may not be able to fully understand the context of a student's question or situation, leading to inaccurate or unhelpful responses, which may lead to confusion.

Lack of empathy: ChatGPT may not be able to provide the same level of empathy or emotional support as a human teacher or counsellor.

Generic responses: ChatGPT may not be able to adapt to different learning styles, cultural backgrounds, or special needs students, which may result in a one-size-fits-all approach to education.

The benefits of ChatGPT for teachers

Personalization: ChatGPT can be used to create customized learning experiences for each student based on their individual needs and abilities. This can help students stay engaged and motivated, and can lead to improved academic success.

Efficiency: ChatGPT can automate repetitive tasks such as grading, providing feedback, and creating educational content. This can save teachers time and allow them to focus on more important tasks such as providing individual support and instruction to students.

Flexibility: ChatGPT can be used to create a variety of educational resources such as interactive tutorials, study guides and online learning quizzes. This can make it easier for students to access the information they need to learn, regardless of their location or schedule.

Adaptability: ChatGPT can be used to create adaptive learning systems that can adjust to a student's performance and provide targeted support. This can help students stay on track and make steady progress in their learning.

Accessibility: ChatGPT can be used to create educational resources that are accessible to students with disabilities, such as those who are visually or hearing impaired. This can help make education more inclusive and equitable for all students.

The negative impact of ChatGPT on teachers

Job Loss: With the ability of ChatGPT to automate repetitive tasks such as grading, providing feedback, and creating educational content, there may be concerns that it will lead to job loss for teachers.

Dependence on technology: Teachers may become overly dependent on ChatGPT, which could limit their creativity and ability to develop unique approaches to teaching and learning. It could also lead to a lack of understanding of the underlying concept of the subject, which will make it difficult to troubleshoot when the technology is not available.

Limited Human interaction: ChatGPT may limit the human interaction between teachers and students, which can be detrimental to students' social and emotional development. Teachers may also miss the opportunity to provide individualized feedback and support, which is essential for student growth and success.

Limited understanding of the technology: Teachers may have a limited understanding of how ChatGPT works and its capabilities. This could lead to teachers not being able to fully utilize the technology to its full potential or even using it in an incorrect way.

Limited creativity: Over-reliance on ChatGPT-generated content may limit the creativity of teachers in developing their own educational materials. It may also make them less inclined to develop their own assessment methods or ways of providing feedback.

Practical uses for ChatGPT in education

Virtual Tutoring: ChatGPT can be used to provide virtual one-on-one tutoring to students at any time and from any location. The virtual tutor can use natural language processing to understand student questions and provide personalised instruction. This can be especially beneficial for students who have difficulty attending traditional classes or for those who learn at different paces.

Self-paced Learning: ChatGPT can be used to create interactive tutorials, quizzes, and study guides that students can access at any time and from any location. This allows students to learn at their own pace, which can lead to better learning outcomes.

Language Learning: ChatGPT can be fine-tuned for language learning, it can be used to create interactive language learning resources such as virtual language tutoring, language quizzes, and language translation tools.

Automated Assessments: ChatGPT can be used to create automated assessments. These assessments can provide immediate feedback to students, allowing them to identify areas of improvement and adjust their learning plans accordingly.

Personalised Study Plans: ChatGPT can be used to create personalised study plans for students based on their individual needs and abilities. These study plans can be accessed by students at any time and from any location.

Generating study notes: ChatGPT can be used to summarise study materials such as textbook chapters, articles, or research papers, making it easier for students to understand and retain the information.

Question Answering: ChatGPT can be fine-tuned to answer students' questions related to a specific subject or topic, providing quick and accurate responses [3].

Game-based learning: ChatGPT can be used to create educational games that students can play to learn new concepts and skills in a fun and interactive way.

ChatGPT has the potential to greatly affect education in both positive and negative ways. It can be used to personalise learning content, automate repetitive tasks, and provide students with on-demand access to educational resources.

However, it is important to consider the potential drawbacks of ChatGPT such as lack of human interaction, reduced critical thinking and the risk of inaccurate information being shared.

As with any new technology, it is important to use ChatGPT in a way that maximises its benefits while minimising its drawbacks. Teachers and students must be trained to use the technology effectively. The ultimate goal should be to enhance the educational experience for students while not replacing the important role of human interaction and critical thinking in the learning process.

While AI technology will bring many benefits to education and research, it also presents unresolved ethical and legal implications related to privacy and bias. It is likely that new concerns will arise as the technology evolves. However, while these concerns are very real, we can manage them if universities, professors, and students shape the use of AI in higher education. Together, we can integrate the technology in a balanced manner that considers ethical, legal, and human factors.

Furthermore, we must remember that humans tend to overestimate the immediate impact of new technologies and underestimate their long-term consequences. History has taught us that, as long as we approach this challenge with a sense of caution, ChatGPT and its successors can help us design richer, more purposeful education experiences than ever before.

I believe that this technology is the future and I invite colleagues to consider all the possibilities that it provides us.

References

1. *Roos, J.* ChatGPT: The Next Firestorm in Education [Electronic resource] / J. Roos. – February 1, 2023. – Mode of access: <https://www.aacsb.edu/insights/articles/2023/02/chatgpt-the-next-firestorm-in-education>. – Date of access: 23.03.2023.
2. The impact of ChatGPT on education [Electronic resource] // CambriLearn. – January 25, 2023. – Mode of access: <https://cambrilearn.com/blog/impact-chatgpt-education>. – Date of access: 20.03.2023.
3. *Brown, Ch.* ChatGPT prompts mastering: A Complete Guide to Mastering Effective Prompts / Ch. Brown. – 2023. – 104 p.