

The Educational Challenges of ChatGPT

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Abstract

ChatGPT has exploded onto the educational scene in 2022 and has become increasingly popular with students. ChatGPT is a machine learning, self-learning, neural network-based text interpretation model that can participate in conversations and answer questions. ChatGPT is an algorithm that can write and respond to text messages, can learn from user input, and can answer questions as if it was a human. It has been described as ‘Google on steroids’. Several researchers have explored the use of artificial intelligence and algorithms in education [2, 6]. Authors often even argue that “researchers cannot always differentiate between AI-generated and original abstracts.” [3]. Still, this paper argues that ChatGPT could change the world of schooling that pedagogy has yet to address, and it is important to generate debate on the issue. In the presentation, the authors will thus point out the benefits and challenges of its use in education from a techno realist perspective. Among the advantages, we mention that it could be used in education, for example, in cases where the instructor is unavailable but students could still ask questions. With ChatGPT, instructors can automatically respond to questions posed by learners, which can help learners better understand and master the course material. The challenge facing education is at least as significant, so some schools and districts in the US have reacted with surprising speed and have banned the algorithm [1]. Banning ChatGPT may be because schools do not want students to use ChatGPT to circumvent learning or to share information from dubious sources with others. Indeed, ChatGPT can also write an essay or solve a maths problem on demand. In addition, schools may feel that using ChatGPT can affect students’ writing skills and human communication. In all cases, it is important that students use the technology responsibly and do not use it to bypass learning or even to disseminate false

information unwittingly. As quoted by AVERY in his New York Times Opinion article we believe, in the words of Dustin York (Maryland University) that ‘(AI Chat GPT) is “a tool not a villain”’ [1].

For educators, ChatGPT poses both real problems and opportunities for teaching, learning and, increasingly for research and professional development. Educators are quickly realising the generative potential of ChatGPT to produce a wide range of pedagogical material such as lesson plans, text comprehension prompts, writing exemplars for criticism among many others. While exciting, we agree with many of the carefully argued concerns raised by PERROTTA, SELWYN, EWIN that ‘the communicative performance of an AI system in a ‘small world’ is often misconstrued as indicative of its potential performance in a large one’ [5]. This is an extremely dynamic new frontier in pedagogy and one which, we argue, needs to be carefully considered by educators working together to look at the opportunities that this technological advance can bring to the arena of learning. It is the mediation of the expert education professional that is, we argue, of continued significance as this digital technology becomes more commonplace in education leading to important considerations for professional development and training in the field of digital pedagogy at the Higher Education level. One significant issue that is at the centre of much current debate is the ability to detect student responses using ChatGPT. Several countries have called for a return to oral or pen/paper examinations to negate the possibility of plagiarised student submissions. This raises important considerations for assessment at all levels of education and, we propose, a reflection on the benefits of more traditional forms of personal examination assessment that have been, and continue to be, an important element of the Hungarian education system. The issue of AI and assessment is one that needs careful consideration within the professional academic field and with policy makers. As stated in the University of Kent Blog (AI and Higher Education) ‘How we change our approach to assessment is a complex topic which requires input from our academic colleagues and policy makers’ [4]. By considering differing international perspectives around the use of, and reaction to, ChatGPT in education, we make the case for developing an open, evidence-informed strategy for exciting discussions of this technology and how it relates to pedagogy for the benefit of teachers and students in this crucial new phase of digital-technological advancement.

References

- [1] D. AVERY: *New York City Schools Ban ChatGPT Amid Cheating Worries*, 2023, URL: https://www.cnet.com/tech/computing/new-york-city-schools-ban-chatgpt-amid-cheating-worries/?fbclid=IwAR1IoRK6yvLuD86cBylf8JHNjdJUM-5nhm_Bx00Hd2jLso1PdIUSqv2DTMw (visited on 01/10/2023).
- [2] L. CHEN, P. CHEN, Z. LIN: *Artificial Intelligence in Education: A Review*, IEEE Access 8 (2020), pp. 75264–75278, DOI: [10.1109/ACCESS.2020.2988510](https://doi.org/10.1109/ACCESS.2020.2988510).
- [3] E. H.: *Abstracts written by ChatGPT fool scientists*, Nature 613.7944 (2023), p. 423, DOI: [10.1038/d41586-023-00056-7](https://doi.org/10.1038/d41586-023-00056-7).

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- [4] U. OF KENT BLOG: *AI and Higher Education: Is it time to re-think teaching and assessment?*, 2023, URL: <https://blogs.kent.ac.uk/learn-tech/2023/01/11/ai-and-higher-education-is-it-time-to-re-think-teaching-and-assessment/> (visited on 01/10/2023).
- [5] C. PERROTTA, N. SELWYN, C. EWIN: *Artificial intelligence and the affective labour of understanding: The intimate moderation of a language model*, *New Media & Society* (2022), DOI: <https://doi.org/10.1177/14614448221075296>.
- [6] S. ZOLTÁN: *A digitális pedagógia elmélete*, Budapest: Akadémiai Kiadó, 2020.