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# Artificial Intelligence in education: Let's ChatGPT about it

Recent advances in Artificial Intelligence (AI), specifically the rapid rise of Natural Language Processing (NLP) platforms such as Open AI's Chat GPT<sub>3.5</sub>, are already having a major impact on higher education institutions. There are significant concerns within academic communities about the threats such platforms pose to academic integrity. Many HE institutions have reacted quickly, announcing policies banning the use of AI software in the creation of assignment responses. Some are planning to return to strictly exam-based modes of assessment. In this article we reflect upon these recent events and how it has impacted our own teaching practice in the field of business management. We propose some alternative ways of thinking about these recent developments and focus on the opportunities that these AI platforms have to offer rather than the threats they pose.

**Keywords:** AI education, natural language processing, NLP, Open AI, chat GPT<sub>3.5</sub>, digital fluency

## Introduction

The launch of Open AI's ChatGPT<sub>3.5</sub> in November 2022 was a watershed moment for academic institutions across the globe. The artificial intelligence (AI) platform enabled students to generate original, high-quality responses to assessment questions, complete with references in a matter of seconds. As a management school department responsible for delivering modules on digital business (operations and supply chain management department), we aim to inform students of cutting-edge innovations. ChatGPT felt different, leaving us unsure of how to progress.

We are clearly at the beginning of a paradigm shift in human–computer interactions within the realm of creative works. News articles hailing the ‘end of the essay’ appeared rapidly (Weale, 2023). Concerns about academic integrity are valid and well documented in the pedagogical literature (Eke, 2023; Alser & Waisberg, 2023). However, there is a risk that too much attention is being given to combating the threat rather than embracing the opportunity (Ouyang & Jiao, 2021; Cano, Venuti, & Martinez, 2023). This risks dividing staff and students and alienating those who feel moving to purely exam-based assessments would not be a fair test of ability. As a management school, we have numerous case studies that display the consequences of organizational failure to adapt to technological innovation. Scholars such as Ouyang and Jiao (2021) have proposed that AI will play a transformative role in education, presenting new opportunities for personalized and learner-centred approaches. This article discusses the potential of ChatGPT and how it may be incorporated into progressive teaching and assessment models.

## **Initial reactions to Open AI**

Our initial reaction was to keep quiet on the matter. However, after mulling over the implications, one lecturer in our group decided that the best approach was to have an open discussion with their students. During a seminar, they shared their screen with the students and inputted one of the assignment questions into ChatGPT. Within five seconds it produced a response with flawless Harvard referencing that would have easily attained a 50–60% score. The students sat aghast. Questions about whether AI-generated responses would be detectable by Turnitin followed. This prompted some interesting debates about copyright, assessments, and the impact of AI on the jobs market. The discussion deepened, addressing the risks of becoming reliant on AI for knowledge sharing and acquisition and the wider societal impacts of that. It was one of the best class discussions of the entire module.

## **A fork in the road: Progressive models of learning and assessment**

History is replete with examples of people who could not accept that the genie cannot be put back in the bottle. Those people quickly found themselves unable to meet the challenges of a changed world. Looking ahead, Schiff (2021, p. 345) opines ‘a socially and historically grounded consideration of educational technology helps to reveal possible trajectories for AI in education’. As is the case in our own evolution, survivability is measured in our ability to be able to adapt to a changing environment, a factor as true for organizations as it is for individuals and societies (Saebi, Lien, & Foss, 2017). At some point in the 1990s, every job suddenly required computer literacy. It seems probable that CVs of the near future will require a statement of one’s aptitude in the use of AI (Marr, 2023). Microsoft have recently extended their commercial partnership

with Open AI, integrating OpenAI features into Microsoft Teams Premium, indicating further integration into the Microsoft Office suite (OpenAI, 2023).

At the management school, one of our graduate attributes is that students should be 'digitally confident' and 'competent working with rapidly evolving digital technologies'. A graduate in 2023 adept at leveraging AI technologies is empowered with additional capabilities (is better adapted) than one who is not. Are we looking to graduate students with the most capability to meet the needs of the modern world? If yes, then embracing AI in our teaching practices becomes a logical necessity (Zhang, Lu, Zhu, & Zhang, 2023).

The integration of NLP into teaching practice is in its infancy and the question of *how* is very much an open one. Being open about the power of AI tools has been effective and provided the following benefits:

- psychologically, the student's willingness to misuse the tool seemingly dropped as a result of open discussions in teaching sessions;
- the students were enthused by the significance of such a disruptive innovation, they felt part of a momentous point in history as opposed to a stagnant observer;
- the student's repertoire of practical skills was expanded.

The following section provides an example exercise that proved the above benefits.

## An example

Figure 1 demonstrates a seminar activity that exposed students to two complementary pieces of Open AI software (DALL-E2 image generation and Chat GPT). Students used AI prompts to create an effective social media campaign, drawing on theory covered in the lectures. Another graduate attribute is that management school students should be 'creative problem solvers'. Teaching them how to utilize AI to solve problems aligns well with this. This exercise featured in a digital business module, so similar tasks may not be universally appropriate cross-programme. However, the central principle of training students to use AI tools will likely produce the aforementioned three benefits and avoid the disadvantages that a policy of policing the tools would bring.

Reflecting upon the initial discussions and the feedback from the seminar activity shown in Figure 1 has led us to derive the following benefits/opportunities for students from our observations:

- *Inspiration*: Students found creating 'an example' instantly useful, using it as a scaffold to add their insights and order their thinking. They commented ChatGPT helped them 'get going' with assignments, which is seen as a major hurdle. This aligns with Vázquez-Cano (2021) and Loh (2023) who have emphasized the role AI could play in personalizing student learning paths and creating adaptive learning experiences.
- *Research*: Search engines have been used in academic processes for thirty years. However, ChatGPT takes the search function to a new level, being described as a 'superior search engine' (Haleem, Javaid, & Singh, 2022). It surpasses traditional

keyword searches by allowing a prompt to replace a search, producing a meta synthesis from multiple sources, pushing the human role further into the editorial process.

- *Analysis:* ChatGPT can be used to correct grammar, summarize in bullet-points, reduce word count, derive themes from texts, and compare the thematic content of multiple texts. It can also act as a 'critical friend' for students, offering analysis on 'work-in-progress' in a conversational manner (Vázquez-Cano, 2021).

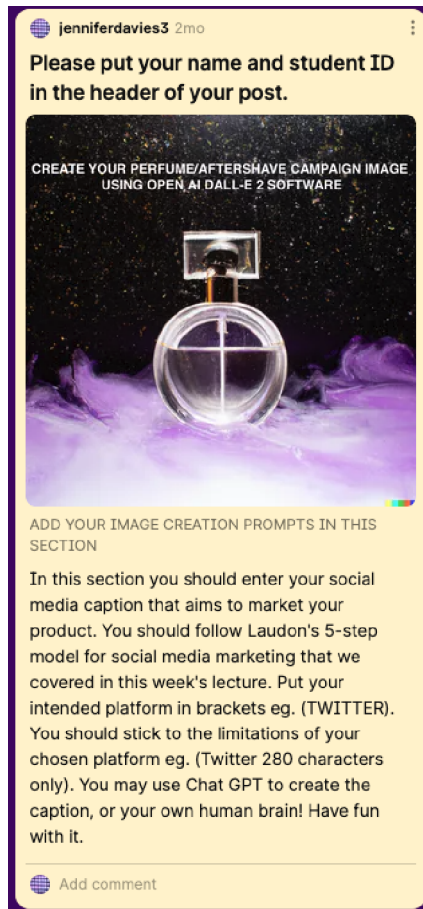


Figure 1 Digital business seminar activity on Padlet utilizing Open AI software

## Pedagogical implications

Our reflections on using AI in education lead us to several key pedagogical implications that can guide educators on how to utilize the technology in practice. Firstly, educators should engage in open discussions about the use of AI in educational settings. This can mitigate potential misuse and stimulate important debates about AI ethics. Secondly,

by integrating AI tools into teaching practice, educators can support the growing need for graduates to be digitally fluent in AI. Thirdly, educators can promote the use of AI as a learning aid or even an educational agent (chatbot) (Shiff, 2020; Loh, 2023), helping students streamline assignments, enhance research, create study plans, improve grammar, summarize texts, and engage in more in-depth critical analysis (Haleem et al., 2022). This is particularly useful for international students. Fourthly, Dwivedi et al. (2023) highlighted that AI tools like ChatGPT have the potential to facilitate multidisciplinary research. We posit that by leveraging AI, learners can transcend the boundaries of their own fields, broadening their educational experience. Our example demonstrates how students can equip themselves with the necessary skills to undertake multidisciplinary projects. Finally, we advocate for curriculum and assessment development that embraces innovative exercises like the one we presented (Figure 1). Such exercises encourage students to apply theoretical knowledge in creative and technologically advanced ways.

## Conclusion

Given the quantity and variety of higher education institutions, it seems a foregone conclusion that some of these institutions will take the fork in the road of seizing the opportunity and integrating these new tools into an innovative model of learning and assessment. Institutions that take the alternative fork and resist adapting to this paradigm shift may find themselves outcompeted by their contemporaries.

With regards to assessment, whilst protecting academic integrity is a necessity (Lynch, Salamonson, Glew, & Ramjan, 2021), drastic action such as banning usage or reverting to purely exam-based modes of assessment may be an expensive opportunity cost. The future is open to blue-sky thinking for how AI can be integrated into our own subject areas and assessments. Being able to generate multiple-choice questions on a narrow topic spontaneously or utilizing AIs in the marking process are likely just scratching the surface of the potential applications.

In our deliberations on this issue, we recalled Napster, a music-sharing platform that leveraged the internet and transformed music dissemination, paving the way for music-streaming platforms e.g. Spotify. Record labels wasted resources trying to police it when their efforts would have been better spent integrating into the paradigm. While this example isn't a direct parallel, it serves as a warning that history may not repeat, but it does rhyme.

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