



LJMU Research Online

Atherton, P

The best of times, or the worst of times? How AI is disrupting human decisions in English education

<http://researchonline.ljmu.ac.uk/id/eprint/24987/>

Article

Citation (please note it is advisable to refer to the publisher's version if you intend to cite from this work)

Atherton, P (2024) The best of times, or the worst of times? How AI is disrupting human decisions in English education. ETAS, 41 (2). ISSN 1660-6507

LJMU has developed **LJMU Research Online** for users to access the research output of the University more effectively. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LJMU Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain.

The version presented here may differ from the published version or from the version of the record. Please see the repository URL above for details on accessing the published version and note that access may require a subscription.

For more information please contact researchonline@ljmu.ac.uk

<http://researchonline.ljmu.ac.uk/>

The best of times, or the worst of times? How AI is disrupting human decisions in English education

Dr Pete Atherton, Senior Lecturer: Teacher Education, Liverpool John Moores University

Introduction and context

How do you feel about AI in education? What is AI anyway? Artificial Intelligence (AI) refers to the development and implementation of systems capable of performing tasks that would typically require human intelligence. AI is a logical extension and exploitation of recent and emerging technologies but is also a product of the people and institutions who develop and use it and their attendant power dynamics (Atherton, 2023; Williamson, 2023). AI systems are trained to mimic human thinking, learning, conversation, reasoning, problem-solving, and comprehension of natural language. While many of your colleagues may have strong opinions about AI, there is little evidence of its transformative effects.

Yet.

AI is frequently conflated with its subsets, and this can inhibit our understanding of how we can use it. Before we go any further, let us be a little more granular with our definitions and categorise AI systems as reactive, predictive and generative. Machine Learning (ML) represents a form of AI where algorithms enable systems to learn from and make decisions based on data. Not all AI learns from its users. Reactive systems like Amazon's Alexa offer instant responses to specific queries or tasks without utilising past interactions to inform future actions. These systems can support education institutions by providing quick access to information and managing routine tasks, though they lack the capability to adapt or learn over time. Predictive AI refers to the analysis of large datasets to forecast trends and anticipate outcomes. We may be familiar with recommended content on streaming platforms like Netflix or suggested purchases through online retailers. In the educational context, predictive AI is increasingly used to tailor learning experiences by identifying students at risk of falling behind and suggesting interventions based on patterns identified in the data (Atherton, 2023). Generative AI, however, has led to a paradigm shift, as it creates new information from what is already out there. ChatGPT, Open AI's Large Language Model (LLM), has been perhaps the most prominent example of generative AI yet has only been part of public discourse since November 2022. Generative AI can create bespoke resources, provide real-time, personalised feedback, and can form part of personalised learning journeys (Atherton, Khan & Topham, 2024). The images that accompany this article have been generated through platforms such as Midjourney and DALLE2 but within Chat GPT.

Educators may be energised by the augmentation of complementary strengths presented by AI in terms of what humans can achieve in a way that is augmented by AI (Kim, 2024). They may be fearful that it may take their job - or worse. They may also share ethical concerns surrounding transparency, authenticity and the validity of accurate assessment. At the time of writing, educational institutions are at pains to develop and communicate workable policies on AI. These policies are likely to be iterative, collaborative and adaptive, to be proactive as they anticipate accelerating rates of change and reactive when AI presents them with an unprecedented challenge. This article neither seeks to belittle nor deny any genuine threats that AI may pose to employment, data privacy, academic rigour, educational ethics and so on.

What is certain, however, is that AI is already here; we use it every day, and it uses us too. This article outlines and contextualises the opportunities presented by AI as an educator of English and the threats - perceived or otherwise.

What we know already and ethical challenges

Dickens' *A Tale of Two Cities* may be an apt way to frame some of the themes explored in this article:

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way—in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.



Created using Dell E 2 in Chat GPT 4o. Prompt in appendix as 'prompt 1'

The current educational context echoes Dickens' polarised cultures, in which atavism coexists with evolutionary innovation. In terms of the relevance of AI to English teaching there are unprecedented opportunities presented to educators through the swift creation of impressive resources. For many, however, the age of generative AI feels like a minefield of antitheses, dualities and dichotomies in which the profession of teaching faces a deeper existential challenge.

I will now examine some of the benefits of AI in education, before evaluating some of the potential limitations.

The best of times?

AI is already helping schools and colleges save time and resources on planning and administration. Many teachers are benefiting from pedagogical opportunities that

generative AI presents to them in the areas of learning design, adaptive learning, modelling and explaining, and personalised assessment (Sein Minn, 2022; Atherton, 2023). Indeed, it is difficult to keep up with the dizzying array of AI educational resources, for example Diffit for sequences of learning with differentiated resources, Chat GPT for lesson plans, Numerade for STEM learning, Slidesgo and Canva Magic Studio for presentations and more.

School leaders and administration staff are starting to benefit from the integration of AI into educational administration and student support, for example learning analytics, and predictive algorithms. Some of these can be incorporated into management information systems (MIS), while other schools may prefer a more bespoke AI system such as a R.A.G (retrieval augmented generation), which can reassure schools of the privacy of their data (Ouyang et al, 2023).

As teachers' knowledge of prompting develops alongside their students' I envisage a time in the very near future where it will be normal for students to tutor themselves in their own time and receive excellent instant and targeted feedback on their work. There are already many GPTs, for example Khan Academy's Tutor Me, that can encourage students to teach themselves and adopt the right skills for academic progression.

The worst of times?

At the same time, there are legitimate concerns regarding the extent to which users and institutions can trust the ethics, reliability, and impartiality of AI-generated data (Y. Hong et al., 2022). Teachers are facing a significant increase in student work that is not only plagiarised but is nearly impossible to trace back to its original source. While Large Language Models (LLM) like ChatGPT are proving beneficial to both students and teachers, there are worries about biases present in both the outputs of ChatGPT and within society at large. The ethical aspects of AI in education require continuous refinement and enhancement to safeguard student and institutional data privacy and to reduce bias (Atherton, Khan & Topham, 2024). Additionally, research indicates the necessity for reskilling educators and addressing the potential risk of students becoming deskilled (Kasneci et al., 2023). Ethical frameworks in AI education often depend on context and can differ considerably across countries, regions, and domains (Nguyen et al., 2023). Studies increasingly show that LLM can produce high-quality writing for various purposes, which is difficult to detect and has been found to surpass the quality of students' own work, including reflective writing (Li et al., 2024).

In the next section, I will provide a critical overview of how AI can assist with reading, writing and spoken language.

2) Reading and AI - adaptive learning and interactivity.

The numerous AI tools that can support students' reading build on existing assistive technologies. AI is supporting students with specific learning disabilities (SPLD), accelerating the comprehension of foreign language learners and simplifying academic reading for older students. AI can personalise assistive devices and make them more intuitive through machine learning. There have been significant advancements in adaptive equipment, highlighting AI-powered predictive text and voice recognition.

Both students and staff can be ably assisted by Microsoft Copilot and through browser extensions like Blaze AI and Claude AI. These can all be accessed free and provide instant content analysis, to help users summarise, translate, respond and correct their reading and, by extension, their writing. A great deal of the emerging information about how AI can assist reading is from the blogosphere. There is a paucity of empirical studies, especially in the domain of English education (Atherton, 2023; Atherton, Topham & Khan, 2024). The absence of a consensus over what works suggests a need for ongoing sharing of good practice but with a recognition that the effectiveness of AI is context-dependent (Nguyen et al., 2023).

The notion of good practice is particularly problematic when applied to writing.

3) Writing and AI - how writing is now a hybrid act and feedback is a dialogue

Both you and your students have been using technology to support the act of writing for as long as you have been teaching. Writing has been a hybrid act for hundreds of years and in response to many technologies, for example the word processor, spell check, predictive text, copy and paste and now generative AI (Jiahui Luo, 2024). AI can be a welcome companion to creative writing, whether modelling a literary form, creating essay templates, improving writing by acting on feedback and so on. I started using AI Creative Writing Coach with my student teachers of English this year. This GPT (generative pre-trained transformer) provides AI feedback on students' creative writing. The preliminary findings are encouraging. My students felt that they could share their ideas with confidence, as the feedback would be instant and devoid of emotion or human bias. They could not take any feedback personally and it would naturally inform the next redraft. When the 'coach' provided the next round of feedback, it could be more targeted through prompts like 'How do I show rather than tell in my writing?'

There are too many GPTs related to writing to discuss in this article. Perhaps one of the skills that students will need to possess is the creation of their own GPT, for example 'Pete's road map to success in IELTS'. To be successful at this takes a patient, iterative, dialogic approach to prompting (Jiahui Luo, 2024). If writing is an issue, users can use voice to text, then paste their prompt into Chat GPT.

4) Spoken language and AI - why these skills will be more important than ever.

There are a growing number of AI applications that are designed to assist with spoken language. Standalone apps such as Voiceitt provide support with non-

standard language patterns to people with speech disabilities. AI is also proving popular with learners of English as a foreign language. Smalltalk2Me is an AI-powered language simulator that is designed to support English language learners with spoken and written language. While Smalltalk2Me users can receive instant feedback and band evaluations in preparation for the IELTS speaking test (International English Language Testing System), a more basic chatbot can also assist students of English inside Chat GPT. Examples of such chatbots are IELTS Speaking - English & Language Learning, which provides prompts and feedback relevant to each part of the IELTS.

As is often the case, however, potential users of AI platforms are likely to hit either a brick wall or a paywall. The more sophisticated assistive tech is, of course, very expensive, all AI platforms incur significant costs, for example research and development, production and testing, compliance, legal cover, marketing and personnel.

A common complaint of AIED research is that many applications are not grounded in educational theory or that there is a lack of alignment between AI and human pedagogies that frequently inhabit existing educational frameworks. The use of AI in education mirrors wider debates about the risk of applying outdated or discredited learning theories like VARK learning styles or Bloom's Taxonomy onto new technologies (Atherton, Topham & Khan, 2024).

6) Conclusions and further research.

Educational trends come and go but AI has accelerated recommendations in the literature for ongoing professional development, to ensure that educators are equipped to effectively integrate AI tools into their teaching practices. Without adequate training, the potential benefits of AI in education may not be fully realised, and educators may struggle to use these tools in ways that enhance learning outcomes (Chen et al., 2020). As part of this development, perhaps teachers could be encouraged to attend to the ways in which AI challenges their identity as a teacher.



Created using Dell E 2 in Chat GPT 4o. Prompt in appendix as 'prompt 2'

Like Dickens' Charles Darnay and Sydney Carton, is our AI presence a benign or malign version of our physical selves? While Dickens' dichotomies in *A Tale of Two Cities* may warn the reader against binary thinking, the use of the doppelganger could have transhistorical resonance for the AI age (Bauer, M & Zirker, A, 2014, cited in Huguet/Vanfasse, 2014).

To what extent is our AI identity our own doppelganger?

Appendices

Images

Prompt 1

To represent *A Tale of Two Cities* by Charles Dickens, imagine a powerful and symbolic scene that captures the essence of the novel. Picture a split image that shows both Paris and London during the French Revolution. On one side, Paris is depicted with dark, stormy skies, a guillotine in the foreground, and a crowd of revolutionaries with red banners. On the other side, London is calmer with cobblestone streets, horse-drawn carriages, and the looming figure of a courthouse. The background should include a contrast of light and dark tones, symbolising the duality of the two cities and the themes of sacrifice, revolution, and resurrection that permeate the novel.

Prompt 2

A dimly lit, mysterious alleyway at night, with cobblestone pavement and old brick walls. Two identical figures stand facing each other at the centre of the alley. Both figures have short, dark hair, wearing the same dark trench coats, and have an expressionless face. The lighting casts long, eerie shadows that blend into the darkness around them. There's a light fog that adds to the surreal and ominous atmosphere. The alleyway is lined with old, flickering street lamps, giving off just enough light to see the doppelgangers clearly.

References

- Atherton, P. Topham, L. Khan, W. (2024) AI AND STUDENT FEEDBACK, *EDULEARN24 Proceedings*, pp. 79-88.
- Atherton, P. (2023). *Goal-Setting and Problem-Solving in the Tech-Enhanced Classroom - A Teaching and Learning Reboot*. New York, NY: Routledge.
- Bauer, Matthias / Angelika Zirker (2014), 'Dickens and Ambiguity : The Case of ATale of Two Cities' Dickens, *Modernism, Modernity*, ed. Christine Huguet / Nathalie Vanfasse, Paris: Éditions du Sagittaire.
- Chen, L., Chen, P., & Lin, Z. (2020). Artificial Intelligence in Education: A Review. *IEEE Access*, 8, pp. 75264–75278.
- Hong, Y., Nguyen, A., Dang, B., & Nguyen, B. P. T. (2022). Data Ethics Framework for Artificial Intelligence in Education (AIED). In *Proceedings - 2022 International Conference on Advanced Learning Technologies, ICALT 2022*.
- Jiahui Luo (Jess) (Feb 2024): A critical review of GenAI policies in higher education assessment: a call to reconsider the “originality” of students’ work , *Assessment & Evaluation in Higher Education*, DOI: 10.1080/02602938.2024.2309963
- Kasneći, E., et al. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learn. Individ. Differ.*, 103.
- Kim, J. (2024) Leading teachers' perspective on teacher-AI collaboration in education. *Educ Inf Technol* 29, 8693–8724. <https://doi.org/10.1007/s10639-023-12109-5>
- Li, Y. et al. (2023) 'Can large language models write reflectively', *Computers and Education: Artificial Intelligence*, 4, p. 100140. doi:10.1016/j.caeai.2023.100140.
- Nguyen, A., Ngo, H.N., Hong, Y. et al. Ethical principles for artificial intelligence in education. *Educ Inf Technol* 28, 4221–4241 (2023). <https://doi.org/10.1007/s10639-022-11316-w>
- Ouyang, F., Dinh, T.A. & Xu, W. (2023). A Systematic Review of AI-Driven Educational Assessment in STEM Education. *Journal for STEM Educ Res* 6, 408–426. <https://doi.org/10.1007/s41979-023-00112-x>

Sein Minn (2022). AI-assisted knowledge assessment techniques for adaptive learning environments. *Computers and Education: Artificial Intelligence*, 3, ff10.1016/j.caeai.2022.100050ff. Ffhal-03897560f

Williamson, B. (2023) 'The social life of AI in Education', *International Journal of Artificial Intelligence in Education*, 34(1), pp. 97–104. doi:10.1007/s40593-023-00342-5