Unleashing the power of gen-AI for digital education development

Richard McInnes, Mark Carandang and Ajay Kulkarni
University of Adelaide

Teaching and learning is being transformed by Generative Artificial Intelligence (gen-AI). Gen-AI in the form of tools such as Midjourney and ChatGPT provide opportunities for novel partnerships between human and non-human actors in the field of education. Unlike previous technologies such as augmented and virtual reality, which encountered barriers due to their high costs, complexity, and demanding implementation processes, gen-AI has the potential to more broadly reshape digital pedagogy with its low cost, accessibility, and ease of adoption. In Higher Education, the initial attention on gen-AI was driven by a focus on students utilising AI-text generators in assessments (Rudolph et al., 2023). Yet, for course design and development gen-AI-human partnerships have the potential to yield results that surpass the creativity, originality, and efficiency of individual efforts (Halaweh, 2023). We already have a research base about how human actors collaborate when designing and developing courses to create exceptional student experiences (Chen & Carliner, 2020), but what is possible with the addition of non-human actors? In what way will human-AI partnerships enhance the existing ways that we design and develop courses and programs? Emerging case studies around the use of gen-AI for course design and development shed light on the possibilities as well as the risks involved in these partnerships (Airey et al., 2023). But when this is implemented in practice, what are the possible outcomes?

Focusing on the theme of Digital Pedagogy this poster presentation will share examples of how the power of gen-AI has been unleashed for digital education development. Within our context as third-space professionals, we work with academic staff to rapidly develop micro-credentials for a global audience. In this work, we have integrated gen-AI as a non-human partner to help us generate efficiencies in our work and enhance the quality of the courses we output. This poster presentation will share innovative practical examples of how digital educational developers have utilised the affordances of text-based, image-based, and coding-based gen-AI to create artefacts such as interactive learning content and enhanced visuals to support learning. These examples demonstrate how human-non-human partnerships can be leveraged to maximise the human ‘value add’ while gaining time and resource efficiencies in the implementation of digital pedagogies. The examples are unpacked as part of the digital poster to show the ‘behind the scenes’ of how they were created in partnership with gen-AI. Finally, this poster will share the development of sustainable prompts that can be reused in different contexts, thereby further capitalising on the affordances of gen-AI.

Due to the recent emergence of gen-AI in teaching and learning, case studies such as this one, are crucial in revealing how we incorporate gen-AI, providing transparency in pedagogical decisions, making them replicable, and open to critical scholarly discussion. As such, the aim of this poster presentation is to explore how gen-AI has been implemented in a way that provides conference delegates with practical examples to engage with and discuss.

Keywords: Generative Artificial Intelligence; educational development; course design; online

References


Note: All published papers are refereed, having undergone a double-blind peer-review process. The author(s) assign a Creative Commons by attribution licence enabling others to distribute, remix, tweak, and build upon their work, even commercially, as long as credit is given to the author(s) for the original creation.

© McInnes, R., Carandang, M. & Kulkarni, A. 2023