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Embracing the Use of Generative AI in a First-Year Information System Course

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https://doi.org/10.34074/proc.240102

Abstract

The use of generative artificial intelligence (AI) tools in higher education has gained a lot of attention in the media. Much of this narrative is about the use of tools such as ChatGPT as a way for students to cheat on the assessments they submit. This paper presents an analysis of how ChatGPT has been used in the design and delivery of a first-year information systems course. The background of the course and the institution that it is delivered in is presented, along with the design of the research, which is consistent with the early phases of an action research project. A literature review is presented that highlights the use of tools such as ChatGPT for developing hypothetical scenarios; the importance of students developing AI literacy skills; preparing the students for workplaces where these tools are being used; and the importance of considering the context of students when seeking to enhance student engagement. The design and delivery of the course is described, analysed and compared with the outcomes of the literature review and a revised version of Bloom's Taxonomy of Learning. It is concluded that tools such as ChatGPT can be used for the effective design and delivery of courses in ways that enhance student engagement, increase student AI literacy, enhance the employability of graduates, and address all levels of a revised version of Bloom's Taxonomy of Learning. Areas in which to extend the research include conducting focus groups with students from the first and subsequent iterations of the course examined in this study.

Keywords: Generative AI, ChatGPT, student engagement, socio-cultural learning, scaffolding