8th International Conference on
TEACHING, LEARNING and EDUCATION
26-28 July 2024 II Dublin, Republic of Ireland

Framework in Evaluating Chatbot Quizzes for Aerospace Management Education

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Abstract

The chatbot quizzes in aerospace management are created by integrating Bloom's Taxonomy to structure questions and organise tasks that align with specific cognitive levels, and ensuring that they are relevant to learning outcomes specified in the curriculum. It is not only able to test knowledge retention, but allows learners to progress to test higher cognitive skill capability. The higher-order thinking skills are essential for aerospace management education because they prepare aerospace professionals to work effectively in the dynamic industry. Developers and course instructors can test the chatbot to ensure quizzes are relevant, engaging, and comprehensive to self-learning. This paper introduces the chatbot developed for learning aerospace management and proposes a framework that evaluates the efficacy of the chatbot. A discussion is made on the test results of chatbot quizzes generated. The framework provides an evaluation of the adequacy of chatbot quizzes and whether they promote immediate feedback and reinforcement, alignment with learning outcomes, engagement through interactivity using different quiz formats, and adaptive learning experiences.

Keywords: aerospace management; artificial intelligence; bloom's taxonomy; chatbot; quizzes