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Submission ID

459

Paper submission type (read-only)

Individual

Individual Paper (read-only)

New Researcher

Title (read-only)

Improving learner engagement using H5P and Moodle for active hybrid learning: a multidisciplinary case study in China

Abstract (read-only)

Learner engagement has long been considered essential to effective hybrid learning and teaching in different disciplines, but with many challenges, such as resistance to new technologies and low learner autonomy (Bodily et al., 2017; Li, Purwanto, et al., 2022). The COVID-19 pandemic has accelerated the educational transition from conventional low-tech face-to-face to fully online or hybrid learning (Green et al., 2020; Li, Huijser, et al., 2022). Factors that affect students' online engagement by using emerging learning technologies have drawn much attention in recent educational research (Ladson-Billings, 2021) but vary in different countries (Li et al., 2021). For example, Teo et al. (2019) found that students in China were more likely to engage in online learning if the technology is easy to use (i.e., less effort to learn how to use the technology), while the students in Germany were found technically experienced and will accept any technology (Nistor et al., 2019). Hwang and Francesco (2010)

et al., 2020; Shahjahan et al., 2022).

Our study collaborates with module leaders from four university schools (Education, Technology, Design and Humanities), covering science and social science disciplines using H5P on a Moodle-based virtual learning environment (VLE) to explore the potential solutions for addressing the above problems. Moodle is an open-sourced virtual learning environment and has served as a central learning and teaching platform in the selected university for over 16 years (Li, Zhang, et al., 2022). H5P is an open-sourced digital tool designed to create interactive online activities and increase student engagement. It provides easier and quicker interactive quizzes, presentations, and visualized knowledge test games to enrich learner engagement in the hybrid learning environment (Wehling et al., 2021). As an emerging interactive learning technology, there are only a few studies about H5P in the medical education context in western countries (e.g., Killam & Luctkar-Flude, 2021; Magro, 2021), and fewer studies about using H5P in eastern countries (Li & Reis, 2023). We need more empirical studies to explore if H5P can also benefit Chinese students of different disciplines, and if so, what factors influence students' uptake of the H5P for hybrid learning. Moreover, how university teachers can use H5P for innovative curriculum design in a hybrid learning environment is a critical but still open question.

This study aims to conduct mixed-method research to examine four research questions: (1) to what extent does using the H5P improve online learning engagement and learner performance? (2) based on the Unified Theory of Acceptance and Use of Technology (UTAUT) model, what factors might affect learners' intention to use H5P for hybrid learning? (3) what is the relationship between learner autonomy and their acceptance of H5P? (4) How does using H5P in curriculum design improve online learning engagement and learner performance? The two primary data sources for the data collection are: (1) the massive online digital behavioural logs and assessment grades (quantitative data) on the VLE from eight credit modules of four different schools with large sample size (100-1000 students per module per semester) and (2) the semi-structured self-reported online survey (quantitative and qualitative data) and focus group interviews with students and teachers (qualitative data). The eight modules teach undergraduate and postgraduate students, enriching the sample diversity. The main contribution of this study lies in presenting the empirical evidence of how H5P and Moodle could support innovative curriculum design and enhance learning and teaching in a hybrid learning environment compared to the conventional way of teaching. The theoretical and practical implications could stimulate technology-enhanced educational innovation across different disciplines and benefit educators, researchers and practitioners.

References (read-only)

Bodily, R., Graham, C. R., & Bush, M. D. (2017). Online learner engagement: Opportunities and challenges with using data analytics. Educational Technology, 57(1), 10-18. http://www.jstor.org.liverpool.idm.oclc.org/stable/44430535

Green, W., Anderson, V., Tait, K., & Tran, L. T. (2020). Precarity, fear and hope: reflecting and imagining in higher education during a global pandemic. Higher Education Research & Development, 39(7), 1309-1312. https://doi.org/10.1080/07294360.2020.1826029

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). Cultures and organizations: software of the mind: intercultural cooperation and its importance for survival. McGraw-Hill.

Hwang, A., & Francesco, A. M. (2010). The influence of individualism—collectivism and power distance on use of feedback channels and consequences for learning. Academy of Management Learning & Education, 9(2), 243-257. https://doi.org/10.5465/AMLE.2010.51428546

Li, N., & Reis, C. (2023). Using H5P to enrich online learning engagement in a postgraduate certificate program teaching. In A. ElSayary & A. Olowoselu (Eds.), Overcoming challenges in online learning. Routledge. https://doi.org/10.4324/9781003342335-14

Limniou, M., Duret, D., & Hands, C. (2020). Comparisons between three disciplines regarding device usage in a lecture theatre, academic performance and learning. Higher Education Pedagogies, 5(1), 132-147. https://doi.org/10.1080/23752696.2020.1797522

Nistor, N., Stanciu, D., Lerche, T., & Kiel, E. (2019). "I am fine with any technology, as long as it doesn't make trouble, so that I can concentrate on my study": A case study of university students' attitude strength related to educational technology acceptance. British Journal of Educational Technology, 50(5), 2557-2571. https://doi.org/10.1111/bjet.12832

Themes (read-only)

STEM - (Science, Educational Technology & Mathematics & Medical)

Second Theme (read-only)

Higher Education

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