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## Experimenting Technology Enhancement Active Learning with Support of Mobile Device, Gamification and Augmented Reality Application

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### Abstract

Having lecture series as the main instructional design in tertiary education is considered no longer relevant recently. Students nowadays are exposed to gadget and online environment that imposing them into listening to lectures alone does not produce effective learning result. This research investigates how an instructional design could be planned to make learning enjoyable, by experimenting digital technology to enhance active learning, with support of mobile devices and augmented reality application. First, an innovative instructional design is developed using combination of traditional and modern techniques of teaching and learning, for the dissemination of knowledge in timber building construction class. The improved instructional design engages students to experience five stages of learning processes that have been enhanced with, game elements; listening to the lecture, gamifying quiz, experimenting the visualization of augmented reality models, gamifying quiz again, and expressing their opinion. The instructional design is tested in a session of building construction class, specifically focusing on timber construction of Malaysian traditional houses. Students' insight is later sought via online survey, to obtain their feedback on the tested instructional design. The majority of respondents confirmed that conventional teaching method is still relevant in this digital era. However, the usage of Technology Enhancement Active Learning (TEAL) is preferred by very high percentage of the respondents. The majority of respondents also agreed that mLearning of Augmented Reality helps to enhance active learning in the classroom setting.

### Keywords

Author Keywords: [Instructional Design](#); [Augmented Reality](#); [Active Learning](#); [Mobile Learning](#); [Learning Trend](#)

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