**Adapting the Unified Theory of Acceptance and Use of Technology (UTAUT) in exploring the Pre-service teachers Use of Mobile Augmented Reality**

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The popularity of Mobile Augmented Reality (MAR) has increased in recent years. However, the potential remains underexplored in education due to the massive penetration in the entertainment industry. It promotes flexibility in learning as well as enriches students’ learning experiences. Therefore, this study aims to enhance the use of MAR and formulates a model of MAR usage for pre-service teachers. Since they are the limitations in achieving existing MAR technology resource, the present study developed a MAR technology, namely Mobile Augmented Reality Learning Cardiovascular (MARLCardio). In the context of this study, MARLCardio serves as an experimental tool to determine the acceptance level of MAR and the factors that might influence pre-service teachers’ decision to use MAR in their learning. Responses from pre-service teachers through a survey were analysed using descriptive analysis and structural equation modelling. Finding in this study found that pre-service teachers are at their moderate level in accepting the use of MAR. In addition, there are four factors that contribute to the pre-service teachers’ decision in using MAR for learning which are performance expectancy (PE), effort expectancy (EE), social influences (SI) and facilitating conditions (FC)). The outcome suggests that the benefits gained from the use of MAR technology play a major role to increase the use of MAR. The easiness of use and support from surrounding people are also a concern for those who are not familiar with the use of MAR. It can help them to adopt the use of MAR easily. The formulation model of MAR usage perhaps is able to provide ideas and assist future research towards achieving better success of MAR usage.

Keywords: Augmented Reality, UTAUT Model, Educational technology