

**UNIVERSITI TEKNOLOGI MARA**

**STUDIO-BASED LEARNING: THE IMPACT OF  
SMARTPHONE APPS FOR INTERIOR DESIGN  
STUDENTS**

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Thesis submitted in fulfillment  
of the requirements for the degree of  
**Doctor of Philosophy**

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## **AUTHOR'S DECLARATION**

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research

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## ABSTRACT

In the era of technology advancement, technology is transforming education and practice of architecture and design. These are an essential subject in this digital age for instructors and students alike today that brings new technological developments that can benefit studio-based teaching. Smartphone apps technology allows anyone to access information and learning materials from anywhere and at any time. As a result, students have control of when they want to learn and from which location they want to learn. This thesis investigated the provision of learning supports within an apps environment in terms of its impact on interior design student learning outcomes in studio-based learning. Despite the familiarity with M-learning as a paradigm in modern education, there has been a shortage of research concerning how to deploy the apps used by the design practitioners in a successful way in studio-based learning. The integration of apps in a university environment needs to involve apps from design industries in terms of the readiness of users, users' acceptance and engagement. A mix method theory-approach was used in this study. There are four main purposes of this quantitative study: determine the preferred smartphone apps operating system among interior design students, apps usage students use most and least, primary app used, and app usage to support studio-based subjects. The sample group of the study comprised 300 second-year interior design students in Klang valley who used smartphone apps in studio-based learning. While qualitative study (main study) the design practitioners and focus group were then interviewed in order to establish their understanding of the salient features of appraisal observations. It is a key way for students to better operate and contribute to the globe waiting for them outside the classroom by having knowledge and being aware of the recent developments in technology for instructional reasons and it is also a good way to foster independent and life-long learning. Indeed, these objectives are achievable because our students are equipped with the understanding and abilities needed to take over their own inclination through the application of relevant technological training, which is essential in today's globalized globe. The results clarify that most students agreed that they understand the role of tools of technology in studio-base education, identify technological applications and resources used by practitioners today, be clarified of how they might deploy technology through a range of teaching and learning strategies and evaluate the apps to support teaching and learning in studio-based subjects. Through testing the apps used by the design practitioners, the authors found that students are positive towards the apps but they do not have a strong willingness to adopt it. The proposed apps model can improve the understanding of interior design students by suggesting what factors are the most important in enhancing students' acceptance of mobile learning.

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