

Chapter 5

Interrelationship Between Pedagogy, Theories, Objectives, and Features: Mobile Learning Design

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ABSTRACT

As students bring their own devices, there is a growing demand to leverage the benefits of these devices and foster the use my own device attitude. The effective inclusion and the widespread use of mobile learning practices have not yet been realized. Educational institutions still find it difficult to shift their pedagogical culture to a mobile one. Few studies have clearly shown how they underpin their mobile learning app design with learning theories. This chapter aims to provide the details of the pedagogical aspects of designing a mobile learning environment, shifting the culture to a mobile format, through the design, development, and evaluation of MyFeedBack, a mobile app for enhancing formative and summative assessment feedback. It presents the interrelationship between pedagogy, learning theories, the objectives, and features of the mobile learning platform.

INTRODUCTION

Mobile learning offers affordances such as flexibility of anytime, anywhere access, and portability (Andrews, Smyth, & Caladine, 2010; Dann & Allen, 2013; Fuegen, 2012; O-K & Hong-Fa, 2014). However, nearly twenty years on, mobile learning still

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seems to be in its infancy (Author, 2014b) with attitudes still being investigated by many (Al-Emran, Elsherif, & Shaalan, 2016; Tang & Hew, 2017; Volk, Cotič, Zajc, & Starcic, 2017). It is still confined to researchers, individual innovative educators and institutions around the world (Lim & Churchill, 2016). Mobile devices have been used in many areas such as aspects of measurement, estimation, and control of laboratory test-beds (Frank & Kapila, 2017), Mobile-Assisted Language Learning (MALL) (Burston, 2014; Demouy & Kukulska-Hulme, 2010), engineering (Jou, Tennyson, Wang, & Huang, 2016), polling in the classroom (Stowell, 2015), even in primary schools where apps are considered valuable for facilitating feedback (Falloon, 2015), etc. However, their effective inclusion and the widespread of mobile learning practices have not yet been realised. For example, the vast majority of the apps are not publically accessible (Zydney & Warner, 2016). Moreover, while many lecturers think that all the hype around mobile learning will decrease, students expect to have greater openness and more digital literate lecturers (Harpur, 2016). Many lecturers see the integration of new technologies as threatening their scholarly authority because their adoption requires a re-assessment of their roles and teaching styles in a teacher-student centred framework. On the other hand, research by the National Union of Students (NUS) indicates that students want better services instead of radical pedagogic innovation in their learning experience. The use of technology should be limited to relevant learning and teaching activities that can enhance their learning experience. The lack of academic staff knowledge and teacher preparation is a barrier to the development of technology-enhanced learning (Jenkins, Walker, & Voce, 2014; Sung, Chang, & Liu, 2016). Furthermore, Cheon, Lee, Crooks, and Song (2012) observe that many universities provided apps that did not focus on instruction and as a result of that, there is not enough experience available as to how to deliver learning through mobile technology. Universities usually provide the how-to style tutorials on any new technology that is available; however, there is a need to focus more on the pedagogy behind the technologies.

This paper provides all the steps undertaken to design MyFeedBack, a mobile app for enhancing formative and summative assessment feedback as an example of a detailed mobile learning design process that focuses on shifting from technology to pedagogy and theory. It does not prescribe the content and structure but rather facilitates the understanding of linking various aspects including pedagogy, context, learning theory, and objective of the learning activities. MyFeedBack was developed as part of a study that investigated whether using a mobile web application for assessment feedback could enhance student engagement, communication and motivation. The study results were positive in achieving the objectives. However, the study also showed that the move from bring your own device (BYOD) to students' Use My Own Device attitude is still a long way to go as such opportunities require a pedagogical

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