

CITY UNIVERSITY OF HONG KONG
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**The Role of Mobile Devices in Business Education:
Evidence from a Professional Doctoral Program**
移動設備的角色在商業教育中的作用：
來自專業博士課程的證據

Submitted to
College of Business
商學院
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Business Administration
工商管理學博士學位

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September 2018
二零一八年九月

Abstract

In today's world, our standard of living has improved gradually with numerous technological advancements. However, many business executives continue to encounter a conundrum when faced with solving different kinds of business problems, some of which are beyond their experience and expertise. Under these circumstances, they may consider continuous learning in order to enhance and update their knowledge base, besides pursuing other methods to cope with their business problems or improving their existing modules of running their companies. However, Work Based Professional Doctorate Part-time Programmes, one of the most popular study programmes for business executives today, have not been implemented using advanced e-learning methods, such as an ideal learning environment based upon an e-learning platform for students or even specific e-learning tools which are easily accessible by students. At the same time, conflicting demands on time from multiple stakeholders reveal an urgent requirement for busy business executives to access an unsatisfying learning environment, which in turn may lead to a loss of interest on their part for continuous learning.

The purpose of this study aims at determining whether Doctorate programme students can be motivated to learn by mobile support and the social network function in reference management systems, which would aim at improving their learning motivation, thereby enabling them to complete their studies. This thesis is a fundamental study of how mobile support and reference management systems could be widely used as an essential tool of IT solutions to business problems by employing the self-determination Theory and Agent Environment Interaction. The self-determination theory refers to the "state" of the doctorate students and different motivational levels, namely amotivation, extrinsic motivation and intrinsic motivation. Moreover, the reason behind adopting agent-environment interaction was that doctorate students mostly use the iPad as their agent of learning, and agent-environment interaction would help in determining whether using the iPad (agent) had any significant and visible impact on their learning results and whether the students gained any interactive rewards from using the agent.

There are three key elements to this research study: autonomy support, perceived competence and perceived relatedness. autonomy support refers to support from Professors, lecturers or supervisors; perceived competence refers to the ability of self-learning of professional doctorate students; perceived relatedness refers to support from classmates. This study aims to understand

which “states” of doctorate students would most considerably impact their learning motivation. In much the same way as the usability of mobile devices offers tools to support learners using mobile devices, usability of reference management systems offers reference management tools to support learners and usability of social networks offers social network tools to support learners, this study uses a mobile device with reference management and social network functions as its primary tool to investigate high impact elements for learning motivation. Moreover, the reward for mobile learning could be classified as perceived learning and course satisfaction. Perceived learning would measure students’ self-perception of knowledge and skills gained and course satisfaction would measure students’ enjoyment during the learning. These two factors would be used to measure the motivation levels of doctorate students, and subsequently their “status”.

The final results of this research paper showed that self-motivation of learning was the critical factor of affecting the mobile learning of doctorate students. This study also discovered that the learning process of doctorate students could be described and split into three stages, general study, reference management and social network system.

The first stage, general study, is mainly about the methodology or introduction part of the academic research. The mobile device helps search for background support for research.

Then, the second stage is a reference management system. As doctorate students need to search and read many pieces of literature to complete their research, they need reference management to store useful works of literature and do keywords searching. Also, reference management could help them to do citations or highlight essential parts of the literature.

The last stage is the social network system. After the doctorate students have completed searching the works of literature supporting and background research, they have to start the qualitative research or quantitative research. They need to discuss with other doctorate students in the chat group of the social network system since the comments from other professional doctorate students are precious for them.

An application prototype was developed to motivate business executive students to learn through mobile support and thereafter, to continue using the prototype for further learning purposes. This study also concluded that the primary factor motivating doctorate students to learn was the applications available on their mobile devices. The main objective of this study is to discover the

ideal learning environment for doctorate students, and as the use of applications is a vital element of this process, for the direction of the study it would help if we are able to build an ideal e-learning application, which would allow study to become an ingrained habit in doctorate students' lives. The application would make the process of learning easier for doctorate students, as the design would be based up on their concentration levels. For example, based on feedback received in the course of research for this paper, it was ascertained that doctorate students preferred to peruse past conversations only when they were busy, as these conversations did not provide additional information for their research or study, and thus, did not impact their study ; they would prefer scrutinising course materials, their calendar or group discussions when they were less busy; and finally, the study illustrated categorically that doctorate students preferred to use reference management systems and research interest discussions when they had considerably more free time to peruse the same.