Chapter 17

Mobile Learning among Students and Lecturers in the Developing World: Perceptions Using the UTAUT Model

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ABSTRACT
The potential of mobile technologies to influence teaching and learning has enthused educational technology researchers. This chapter compares lecturers and students at the University of Guyana on the factors of the Unified Theory of Acceptance and Use of Technology model and attitude in relation to technology in education using principal components and regression analyses. It also focuses on access to devices and use of the device features. The results show that the mobile phone is the most popular mobile device among students and lecturers and that both groups have positive attitudes towards using mobile devices for teaching and learning. However, students are more disposed and better equipped to use mobile technologies in the near future and have stronger intentions towards integrating them into their learning. Whereas attitude is the most important determinant of adoption among students, the facilitating conditions is most critical to mobile learning adoption among lecturers.

INTRODUCTION
Technology is fundamentally changing the way we teach and learn and it is believed that it has the potential to provide solutions to many of the problems and challenges of education in the 21st century (Kukulska-Hulme, 2010). Educational technology in particular offers tremendous benefits to both teachers and students by creating new pedagogical models, curriculum delivery methods and learning systems. This has availed numerous possibilities for distance education, including new models of interaction through

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synchronous and asynchronous tools (Chang, 2010). One area of e-learning that is gaining increasing popularity is mobile learning (m-learning).

M-learning has extended the possibilities of e-learning and distance education systems by allowing educators and students to teach and learn anywhere, anytime and on the move. This new educational paradigm has emerged with the evolution of mobile devices and mobile Internet access (Chang, 2010; Negas & Ramos, 2011; Wang, Shen, Novak, & Pan, 2009) and the rapid increase in the number of mobile devices worldwide has driven institutions to explore the potential of mobile technologies to support teaching and learning (Wang et al., 2009). The number of active mobile phones in the world reached 2.7 billion in 2007 (Ahonen & Moore, 2007), surged exponentially to over 5 billion in 2010 (Wood, 2010) and analysts at Wireless Intelligence predicted that by mid-2012 there would have been approximately 6 billion active mobile connections worldwide (Wood, 2010). Furthermore, Kadle (2010) predicted that by 2012 smart phones would have outsold desktops, notebooks and net-books put together. The most recent statistics from the International Telecommunications Union (ITU) indicates that mobile cellular subscription worldwide has reached 97% (International Telecommunications Union, 2015).

The changing economic and social lifestyles of people and in particular circumstances centred on the need for greater mobility and travel have resulted in the extensive use of mobile technologies (Kukulska-Hulme, 2010; El-Hussein & Cronje, 2010). In particular, the increasing mobility of online social networking extends and enlarges the reach of these networks and facilitate “flexible and spontaneous learning” inside and outside of formal classroom environments (Kukulska-Hulme, 2010). The ubiquity and pervasiveness of these technologies and their popularity especially among students make them suitable for use in educational contexts (Du, 2015; El-Hussein & Cronje, 2010; Jeng, Wu, Huang, Tan, & Yang, 2010; Negas & Ramos, 2011). Mobile devices include, but are not limited to, smart phones, mp3 players, tablet PCs and PDA’s. However, the use of these devices seems to be mainly for social contact (Kukulska-Hulme, 2010) and teachers have reported problems related to the use of mobile phones in the classroom (O’Bannon & Thomas, 2015).

Issues of access and ubiquity remain a challenge for the developing world. Guyana for example has only two cellular phone service providers: Guyana Telephone and Telegraph Company (GT&T – gtt.co.gy) and Digicel (www.digicelgroup.com/gy/). This low level of competition implies relatively high cost of services, including mobile Internet. On average the monthly subscription fees for mobile Internet access range from 2000 - 3000 Guyana Dollars or 10-15 US Dollars (Mobile Plans & Rates, 2016). At the same time, fixed broadband speeds are less than 5 Mbps whereas the GPRS and/or EDGE technology (for mobile data) of these providers offer low data rates - between 1kbps and 30kbps. In fact, Guyana is ranked among the countries with the lowest Internet speeds worldwide (International Telecommunications Union, 2015). Such low bandwidth would pose significant challenge for educational institutions that are considering m-learning as this would limit the range of m-learning that can be explored. The relatively high cost of smart phones would also be a challenge to ownership especially among less affluent students.

At the University of Guyana, developments in e-learning in general take place at a slow pace mainly due to the lack of adequate infrastructure. Although e-learning has been emphasized in recent policy documents and strategic plans (Strategic Plan 2009-2012, 2010), systematic integration is yet to be realised. At the two university campuses (Turkeyen and Berbice campuses), a small sample of lecturers and students engage informally with e-learning technologies but mainly for communication and sharing of course resources (Gaffar & Singh, 2011). Teaching via distance between the two campuses is practically non-existent; instead, lecturers commute between the main campus (Turkeyen) and the smaller campus (Berbice) to provide instructional support for undergraduate courses with obvious financial implications.