Are We There Yet?
An Exploratory Predictive Study of Instructor Acceptance of an Educational Tablet Computer

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ABSTRACT
This study used aspects of the classical Technology Acceptance Model (TAM) to predict instructor acceptance and adoption of a tablet computer (tablet PC) for mobile learning in a Ghanaian higher education institution. Following a distribution of a customized tablet PC (known as Campus Companion) to all instructors of the institution, and an expectation that they will use these devices to support and facilitate mobile learning, data on instructor perceptions, attitudes, and behavioral intention to use the technology were gathered and analyzed. Thirty-eight (38) instructors participated in the study. Findings show that instructors’ intentions to use the tablet PC for mobile learning are very low, and are significantly influenced by their perceived usefulness, perceived ease of use and attitude towards the device. Implications of these findings for practice and further research are discussed within the context of the adoption of tablet PCs for mobile learning within the Ghanaian higher education context in particular and the developing world in general.

KEYWORDS
Campus Companion, Ghana Technology University College, Instructors, M-Learning, Mobile Learning, Tablet PC, Technology Acceptance Model (TAM)

INTRODUCTION AND PURPOSE
Mobile learning or m-learning represents anytime and anyplace delivery of learning through Internet and wireless enabled mobile electronic devices, or as Wexler et al (2007) specifically put it, “any activity that allows individuals to be more productive when consuming, interacting with or creating information mediated through a compact digital portable device that the individual carries on a regular basis, has reliable connectivity and fits in a pocket or purse” (p. 7). Personal mobile computing devices (Smartphones, iPads, Tablet PCs etc.), coupled with wireless communication technologies (WiFi, Bluetooth, GPS, 3G etc.), have created a wide array of new possibilities for technology users. In addition, these devices are becoming increasingly ubiquitous in the daily activities of most people, and in academia, it has been established that students spend more time using mobile tools for informal learning and collaborative activities than in formal school settings (Dahlstrom, 2012; Wang, Wu, & Wang, 2009).

In this context, educators are generally of the view that delivering instruction seamlessly through these mobile devices and technologies should be of benefit to students, as learning can be personalized and also made readily accessible through devices that are in their direct control. M-learning processes...
therefore have the potential of enhancing learning through increased learner engagement, attention and participation in instructional and collaborative activities. Indeed, a growing number of initiatives are demonstrating ways in which m-learning can help confront existing educational challenges and pioneer new strategies for learning (McKinsey & Company and GSMA, 2012).

The foregoing notwithstanding, m-learning is still very much in its infancy in the higher education (Motiwalla, 2007), particularly in Sub-Saharan African higher education. This is not surprising, given that instructional design, pedagogical and best practice frameworks of m-learning are still being developed, while no clear standards presently exist for guiding the design and development of learning initiatives that take into account the different kinds of mobile technology platforms available (EDUCAUSE Learning Initiative, 2010). Challenges also exist from the user perspective, for example, the small screen sizes (Rekkedal & Dye, 2007), limited processing powers and graphical limitations of most mobile devices means instructors and learners might be spending more than necessary time searching for and accessing information (Motiwalla, 2007; Waycott & Kukulska-Hulme, 2003).

Within the context of these challenges, one cannot be certain the extent to which instructors and learners are willing to accept m-learning as a viable means of delivering quality learning experiences. Interestingly however, several Ghanaian higher education institutions are hoping to mainstream m-learning into their educational practices by simply providing instructors and students with mobile computing devices (tablet computers in particular) and accompanying software applications, but rarely carry out evaluation studies to help predict and explain user acceptance, usability and usage levels of these devices for m-learning etc. Since instructor acceptance is a crucial factor in the success of a technology based educational initiative (Gong, Xu, & Yu, 2004), such studies have the potential of providing critical feedback that can help guide institutions pursue appropriate corrective steps as they make the inevitable transition to m-learning in the not too distant future.

Against this backdrop, and following the distribution of a customized tablet computer to instructors in one Ghanaian higher education institution, this study sought to predict these instructors’ intention of using the device as the main platform for furthering m-learning in the institution, and also explain their future user behavior using simple measures taken after they had briefly interacted with the system. Findings of the study are discussed within the context of the overall acceptance of mobile learning within the Ghanaian higher education context with the objective of contributing towards the evolution of best-practice m-learning frameworks in Ghanaian higher education.

LITERATURE REVIEW

Learning with the Tablet Computer

A Tablet Computer or Tablet PC (coined by Microsoft when it released its Windows XP Tablet PC operating system in 2002), is a portable, general-purpose computer contained in a single panel, and having an LCD touch screen which serves as both input and output interfaces. The user operates the device either with a finger or a stylus (Webopedia, 2014). Tablet PCs come in a variety of shapes, sizes and features, but share many similar characteristics like possessing a Web browser for Internet access, an operating system capable of running programs, and several software applications (apps) for capturing and processing digital multimedia content. Almost all Tablet PCs either come with wireless networking built in, or can be upgraded to have that capability. Standard ports, such as USB and/or Firewire, are available on most models.

One critical feature of the Tablet PC that is of value to education is the functionality that enables the user write and draw directly onto the screen using digital ink, mimicking pen and paper. Applications (e.g. Microsoft’s OneNote) allow handwriting to be saved, edited, indexed and searched, giving the pen input equal status to the keyboard and mouse. Thus, most teaching and learning activities which hitherto involved static physical books and paper - highlighting, annotating, freehand drawing, sticky notes, paper grading etc. - can now be done electronically on the Tablet PC, enabling faster creation
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