An Investigation of Educational Use of Information and Communication Technology from the Perspectives of Ghanaian Students

Charles Buabeng-Andoh, Pentecost University College, Accra, Ghana

ABSTRACT

The purpose of this study was to study undergraduate students’ acceptance and use of ICT in classrooms. A total of 361 students from four universities participated in the study. Survey questionnaires which comprised both closed-ended and open-ended questions were used to collect data. Descriptive statistics, Pearson correlation, repeated-measures of Analysis of variance and multiple regression were used to analyze the findings. The study revealed that students use technology for personal purposes rather than for instructional purposes. Despite, students’ high acceptance of technology, their technology integration into learning has remained low. The analysis showed that students believing that technology can improve their relationship with other students significantly contributed to their acceptance of technology in schools. Understanding students’ acceptance and their experiences of technology use offer insights into their integration of technology into learning.

KEYWORDS

Education, Perception, Students, Technology Acceptance Model, Undergraduate

INTRODUCTION

The present trend in education is to integrate information and communication technology (ICT) into the learning process. As many instructors use ICT to support teaching, technology-integrated education has become a concern for many researchers (Liu, Chen, Sun, Wible & Kuo, 2010). Several studies have found that teachers’ integration of ICT for educational purposes has not yet met the objectives of some school administrators; instructors in general have not fully noticed the academic advantages of ICT (Ertmer & Ottenbreit-Leftwich, 2010; Kim, Kim, Lee, Spector, & DeMeester, 2013). Some studies that investigated ICT integration in schools have revealed that instructors decide whether to integrate ICT into their teaching or not to integrate it (Ertmer, 2005; Kim et al., 2013). Regardless of several studies conducted on ICT integration, research has revealed only limited results about the significance educators give to integration of ICT, and how they use ICT in their educational practices. Surprisingly, most of these studies had been investigated in the developed countries, however, developing nations have received little research study in the area of students’ and teachers’ ICT integration (Hassan & Ditsa, 1998). Previous studies have reported that the successful use of ICT in learning strongly depends on students’ and teachers’ attitudes (Selwyn, 1999; Woodrow, 1991). However, current studies indicated that teachers and students are still unwilling to actively use ICT in teaching and learning activities (Reffell & Whitworth, 2002).
The real integration of ICT into undergraduate and graduate students’ studies still continues to be uneven and differs from specific course to specific academic institutions (Marriott, Marriott, Selwyn, 2004). Moreover, some studies have revealed that the acceptance and use of ICT have received little attention in developing countries (Enakire & Onyenania, 2007; Myhill, 2002). Therefore, it is important to explore undergraduate students’ acceptance and use of ICT in classrooms in Ghana since it is clear from literature that there are few studies on acceptance and use of ICT in less developed nations. Research results from students’ ICT use and acceptance may have important implications for administrators, faculties, departments, lecturers, and employers and may enhance educational delivery to students’ learning experience in universities, and their application of knowledge and skills in the real world of work.

THEORETICAL FRAMEWORK

A review of previous studies revealed that the technology acceptance model (TAM) was widely used to study users’ acceptance of the new technology. The TAM has gained great respect in the information technology and information system studies (Davis, 1989). Davis used TAM to explain the determinants of user acceptance of a broad spectrum of end-user computing. In TAM, two belief constructs, perceived usefulness and perceived ease of use influence users’ intentions to use technology. Perceived usefulness is the extent to which a person believes that using a particular system would enhance his or her job performance. Perceived ease of use is the extent to which a person believes that using a particular system would be free of effort. While it is likely that users may perceive a technology to be useful, at the same time, they may perceive its use to be difficult. In other words, the performance benefits of the technology outweigh the efforts of adopting it (Davis, 1989). Attitude toward use is hypothesized to affect intention to use, which in turn affect actual usage behavior.

Over the years, TAM has been used in several studies in different contexts including school teachers’ (Pynoo, Devolder, Tondeur, van Braak, Duyck & Duyck, 2011), virtual learning environment (Rienties, Giesbers, Lygo-Baker, Ma & Rees, 2014), and e-learning (Yuen & Ma, 2008). However, the identifiable gap in TAM research is that most studies assumed that the intention to use ICT is directly related to actual usage behavior (Bagozzi, 2007; Pynoo et al., 2011). Bagozzi (2007), however, indicated that intention to use does not necessarily correlate to actual usage. The extensive use of TAM relies on its ability to explain users’ intention to use technology, its validity and reliability. It is evident from the literature that TAM has been used extensively to investigate users’ acceptance of ICT in developed countries, but little or none in less developed nations, specifically Ghana. Therefore, it is important to examine undergraduate students’ ICT use and acceptance in classroom in Ghana by adopting TAM as the theoretical framework.

LITERATURE REVIEW

Students’ Use of Technology

Pouratashi and Rezvanfar (2010) studied the factors influencing agricultural students’ application of ICT. The results found that word processing is used more than the Internet, programming and graphic processing. Also, they revealed that students’ level of ICT skills was low. Therefore, the authors recommended that in the future, colleges of agriculture enhance their students’ ICT skills by introducing ICT courses in their curricular. In addition, faculty members at colleges of agriculture should develop and use instructional strategies that require students to work with ICT. Nonetheless,
A Vehicle for Transforming Education
Julia Gooding (2010). *ICTs for Modern Educational and Instructional Advancement: New Approaches to Teaching* (pp. 47-54).
[www.igi-global.com/chapter/vehicle-transforming-education/38388?camid=4v1a](www.igi-global.com/chapter/vehicle-transforming-education/38388?camid=4v1a)

Reliability-Based Dynamic Programming for E-Learning User Profile Assessment
[www.igi-global.com/article/reliability-based-dynamic-programming-learning/67798?camid=4v1a](www.igi-global.com/article/reliability-based-dynamic-programming-learning/67798?camid=4v1a)