Factors Influencing Teachers’ Integration of ICT in Teaching and Learning

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ABSTRACT

There is a growing demand on educational institutions to use ICT to teach the skills and knowledge students need for the digital age. The integration of ICT into education provides opportunities for teachers and students to work better in a globalized digital age, particularly in teaching and learning environment, where teaching and learning can take place anytime and anywhere, 24-hours seven days a week. The purpose of this article is to identify the factors that influence teachers’ decision to integrate ICT in teaching and learning. The study is chosen because of the strategic importance of ICT in education and particularly, its immense potential, to transform the ways in which teaching is carried out in the classroom. There are a lot of studies in the area, but very little empirical research has been conducted to examine this phenomenon from the teachers perceptive. The present article aims to fill this gap by using in-depth case studies, conceptualized within the grounded theory method to develop a model that will explain and enhance the understanding of the factors influencing teachers’ integration of ICT in teaching and learning. The diffusion theory will provide the theoretical foundation for this study.

KEYWORDS

Case Study, Grounded Theory, ICT, Integration, Teachers, Teaching and Learning, Usage

INTRODUCTION

This article examines the factors influencing teachers’ decision to integrate ICT in teaching and learning environment. The explosive growth of Information communication technologies (ICT) has changed modern society (Tomei, 2005) and has dramatically reshaped teaching and learning (Pulkkinen, 2007). New educational approaches are possible in teaching and learning process through the integration of ICT, which provides higher order skills such as collaborating across time and place and solving complex real-world problems improving and enhancing the perception and understanding of the learning process (UNESCO, 2004). Technological innovations are increasingly being used to derive changes intended to deliver significant improvement in education (Lawrence, 2013). There is a growing demand on educational institutions to use ICT to teach the skills and knowledge students need for the digital age. The integration of ICT into teaching and learning provides opportunities for teachers and students to work better in a globalised digital world. There is tremendous potential for teachers and students to harness the power of ICT to improve the quality of teaching and learning in
the classroom. The use of ICT to improve and enhance the quality of teaching and learning is essential for successful education in the 21st century (Bransford et al., 2000). ICT covers all technologies used for the handling and communication of information and their use, specifically in education. For example, desktops, mobile telephony, digital recording equipment, software applications, multimedia resources, information systems, Intranet, Internet, tablet, PCs, e-readers, laptops, etc., provide a great deal of opportunities, as well as challenges for education in general, particularly teaching and learning environment.

A report by UNESCO (2004) states that ICT holds promise in providing not only anywhere and anytime access to knowledge, but also equal opportunities for networking and communication that allows knowledge sharing, participation, and lifelong learning. This is supported by other studies (Lowther et al., 2008; Weert & Tatnall 2005) that have shown that an appropriate use of ICT can raise educational quality and connect learning to real-life situations. ICT offers a new paradigm shift in how education is delivered globally, according to Fu (2013), ICT is being applied successfully in instruction, learning, and assessment. ICT plays a critical role in education, it provides a strong teaching and learning environment for students and it can be used to complement existing teaching practices to support the teaching and learning process. It can be very helpful for teachers’ in preparing and delivering their lessons and it provides opportunities for greater flexibility and accessibility for engaging teaching and learning at the individual, group, and societal levels (Lowther et al., 2008; UNESCO, 2004). The integration of ICT in education continues to gain momentum in educational literature (Bransford et al., 2000). The growth of ICT has opened a vast arena providing opportunities for the improvement of education, particularly in teaching and learning environment, where teaching and learning can take place anytime and anywhere (Cradler & Bridgforth, 2002). The role of ICT in teaching and learning has been increasingly important amongst educators as a mechanism to improve quality in the classroom, interact and facilitate flexibility in learning experiences, anywhere and anytime suitable to individuals (Cradler & Bridgforth, 2002). Students can choose what they want to learn, when and where to learn; this provides them greater independence a feature of lifelong learning (UNESCO, 2004).

The purpose of this study is to empirically identify the factors influencing teachers’ decision to integrate ICT in teaching and learning. Integration is defined in this study as the process of integrating the use of ICT tools or resources into the existing teaching-learning process through learning activities that address the course-area objectives (Parker et al, 2008). The intention is to present evidence from teachers’ perspectives. Previous studies (Baubeng-Andoh, 2012; Hennessy et al., 2005) have shown that theoretical grounding for understanding and developing clear process of ICT integration has been lacking. The present study aims to fill this gap by using grounded theory to develop a model that will explain and enhance the understanding of the factors that influence teachers’ integration of ICT in teaching and learning environment.

BACKGROUND

The integration of ICT is of paramount importance in the access of knowledge and keeping pace with the modern developments ((Pelgrum et al., 2007; Tomei, 2005). The availability of global resources like digital libraries where teachers, students and professionals can access and share research material and course material at anytime, anywhere, 24-hours seven days a week (Cradler & Bridgforth, 2002). New educational approaches are possible in teaching and learning environment through the integration of ICT, which provides higher order skills such as collaborating across time and place and solving complex real-world problems improving and enhancing the perception and understanding of the learning process (UNESCO, 2004). The use of ICT in the classroom is essential for providing opportunities for students to learn to operate in an information age (Tomei, 2005; Bransford et al., 2000). The traditional educational environments do not seem to be suitable for preparing students to
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