

Chapter 1

Pre-Service Teachers and Technology Integration with Smart Boards

James N. Oigara
Canisius College, USA

Jared Keengwe
University of North Dakota, USA

ABSTRACT

This study explores pre-service teachers' experiences integrating SMART Board technology into their teaching practice. The results suggest that pre-service teachers found the technology mentoring process to be useful in preparing them to integrate instructional technology into their lessons. The pre-service teachers developed high interest in integrating SMART board technology within their own practice. They also reported the technology mentoring process to be useful in preparing them to integrate instructional technology into their teaching. This article highlights the need for teacher educators to create a better curriculum aimed at preparing teachers who can selectively, purposely, and effectively integrate appropriate educational technologies into classroom instruction.

INTRODUCTION

Educational technology use has become an integral part of teaching and learning at an ever-increasing number of American schools. Today, many schools K-12 have access to computers, Internet resources and other emerging technology tools. Technology provides opportunities for new methods of teaching and learning. Despite

the abundance of technology available in many schools today, evidence suggests that many teachers do not use it effectively or in a fully integrated manner (Rakes et al., 2006, p. 412). Most teachers in K-12 classrooms have not received sufficient time, access and support to become comfortable with proper technology integration in the learning process (Keengwe, 2007).

While there is evidence that technology use boosts student motivation and is associated with increased academic achievement, many teachers

DOI: 10.4018/978-1-4666-2017-9.ch001

continue to struggle with the practical implementation of emerging tools of technology into the curriculum and this is attributed to inadequate training. Although there are examples in literature of how social studies teachers utilize technology to enhance learning, they are limited in number. Research also show that social studies teachers are less likely to integrate technology in the classroom than teachers of other disciplines, and when they do, they use technology for low level tasks like accessing content notes, drills and practice activities, and educational games (Whitworth & Berson, 2003). Technology enhances learning of social studies because the discipline is concerned about natural and social phenomenon that cannot be easily expressed without the support of graphics maps, video, pictures, etc. Multimedia technology allows students to interpret, construct meaning, and present data in a meaningful way to their peers and instructors (Grabe & Grabe, 2008).

A number of researchers agree with the idea that proper technology training is the major factor that could ensure successful infusion of technology into the curriculum in K-12 classroom (Reynolds & Morgan, 2001). There has, historically, been lack of emphasis on proper technology integration and lack of faculty modeling of appropriate use and integration of technology in teacher education courses. The goal of teacher preparation in educational technology must be to increase teachers' knowledge of educational technology and to effectively integrate it into the curriculum. Teacher preparation programs must provide intensive curriculum-based technology integration training that would help teacher candidates to develop technology skills. Appropriate and selective use of appropriate technology tools is likely to enhance meaningful learning (Keengwe, Kidd, & Kyei-Blankson, 2009).

Although schools have witnessed incredible investments in technology resources, many teachers lack adequate training to prepare them to use technology effectively in instruction. Given all the duties teachers must attend to, they have little

time to explore the options various technologies might offer. Research shows that a common teacher complaint is the lack of time in school to learn to use technology in their content. However, time spent learning to appropriately integrate a new technology into instruction will increase the likelihood of its use in the classroom (Bauer & Kenton, 2005, p. 534). If future teachers are to learn to effectively integrate technology into the classroom, they need to see good modeling by education instructors during their training. This study explored pre-service teachers' experiences integrating SMART Board technology into their teaching practice.

SMART Board Technology

SMART board is a brand name interactive of electronic whiteboard produced by SMART Technologies, Inc. This Canadian based company is estimated to dominate more than fifty percent of the interactive whiteboard market. The interactive SMART board system is composed of three parts, a computer with Notebook software, projector, and the whiteboard. Once the system is properly connected the computer images are displayed on the board where they can be easily manipulated as the board surface is touch sensitive. The users can control the software from the computer and from the board. Notes can be added, highlighted, saved for future use, printed out, utilize the Internet and integrate numerous software programs to be used in the classroom.

The interactive whiteboards have gained popularity in educational system, K-12 schools to the collegiate level (Oigara, 2010). Many researchers believe that educational technology skills should be integrated with the teacher education methods courses in order to provide pre-service teachers with the skills and first-hand experiences of applying technology to their specific content areas (Davis & Falba, 2002). The National Council for Accreditation of Teacher Education (NCATE) calls for improvements in the integration of technology

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