

# Chapter 9

## Technology and Teacher Education: Student Evaluation of Faculty Instructional Quality

**Albert Akyeampong**  
*Ohio University, USA*

**Teresa Franklin**  
*Ohio University, USA*

**Jared Keengwe**  
*University of North Dakota, USA*

### ABSTRACT

*This study explored one primary question: To what extent do student perceptions of various forms of instructional technology tools predict instructional quality? Participants for the study were drawn from a teacher education program in a large Midwest public university. Data were collected using a web-based survey with a total of 121 responses used in the final analysis. A multiple regression analysis was conducted to evaluate how well Productivity Tools, Presentation Tools, Communication Tools, and World Wide Web Tools predict Student Evaluation of Faculty Instructional Quality. The overall significant results of the regression model and the subsequent significant results of the t-test for Presentation Tools and Productivity Tools is an indication that Presentation and Productivity tools can be used by faculty to facilitate student and faculty interaction, promote cooperation among students, promote active learning techniques, give prompt feedback, emphasize time on task, communicate high expectation and respect diverse talents and ways of learning.*

### INTRODUCTION

Technology permeates all sectors of human lives. While educational technology has been a focus of educational policy reform over the past two decades (U.S. Department of Education, 2006), the

integration of technology into instruction and its effect on student learning is of increasing interest to stakeholders such as policymakers, administrators, educators, students, and parents (Keengwe, 2007). Even so, technology alone cannot realize many educators' vision for technology to im-

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## **Technology and Teacher Education**

prove education (Oppenheimer, 2003). Further, technology by itself cannot change the nature of classroom instruction unless teachers are able to evaluate and integrate the use of that technology into the curriculum (Geisert & Futrell, 2000).

Faculty in most teacher education programs are faced with the primary task of preparing graduates who are capable of incorporating technology in their lessons. The general expectation is that teacher education graduates would be both capable and committed to using technology as a tool for enhancing lessons plans that enhance student learning. Teacher educators are expected to be competent in using various technology tools in order to achieve this expectation. A U.S. Department of Education (2000) report indicates that:

*Teachers must be comfortable with technology, able to apply it appropriately, and conversant with new technological tools, resources, and approaches. If all the pieces are put into place, teachers should find that they are empowered to advance their own professional skills through these tools as well (p. 39).*

Preparing graduates who are capable and committed to using technology as a learning tool is a major task for teacher education programs (Howland & Wedman, 2004). Teacher preparation in higher education programs must prepare preservice teachers to incorporate technology effectively in their future K-12 classrooms. In the participating College of Education, technology is an integral part of the teacher education preservice program. At this college, technology's focus is to support student learning; faculty use technology tools to help teacher candidates explore various ways to integrate technology into their curricula, thereby adding value to the overall teacher preparation process. Given that technology integration is lacking throughout the educational curriculum (International Society for Technology in Education, 2000), integration of technology into existing teacher education programs would be the ideal step

toward integrating technology into the candidates' future K-12 classroom classrooms.

The growing interest in technology use in higher education by students or faculty is reflected in a number of recent studies on faculty or student technology use in higher education (Keengwe, 2007; Marwan, 2008). Technology has also opened new areas for instruction (Baylor & Ritchie, 2002) that are closely linked to student learning. Wepner, Tao, and Ziomek (2003) argue that:

*If teacher education programs hope to keep up with the changes that are occurring as result of the new digital society, then it is imperative that we take a closer look at the role that technology can have in transforming teacher preparation (p. 72).*

Teachers need to integrate computer skills into the content areas and recognize that computers are not ends in themselves (International Society for Technology in Education, 2000). In addition, for successful integration of technology in education, educational stakeholders must shift their focus from just providing more machines in the classrooms to investing in faculty. Fabry and Higgs (1997) state that:

*If the integration of technology in the classroom in the next ten years is to look any different from the last ten, we must focus time, money, and resources in areas that can have the greatest impact for our students, our teachers (p. 393).*

## **The Study**

Technology has become an integral part of learning tools in most classrooms. Consequently, if the power of new technologies is to be realized, instructors need to employ instructional strategies consistent with the Seven Principles of Good Practice in Undergraduate Education and support preservice teachers to gain comfortable skills and ability in everyday technology use (Chickering

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