

## Chapter 15

# My Experience Tells the Story: Exploring Technology Adoption from a Qualitative Perspective – A Pilot Study

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### INTRODUCTION

For more than forty years, information technology (IT) has been part of the infrastructure supporting schools and universities. Essential functions such as central planning, budgeting, scheduling, grading, and maintaining student records have drawn on IT resources, beginning with mainframe computers and migrating to other platforms. Now routine business tasks are distributed throughout the workplace. Individual departments and faculty members regularly use tools like word processing, spreadsheets, publishing tools, email, and the Web for their research and administrative needs. Now that technology is widely available on most university campuses (The Campus Computing Project, 2001), the integration of these technologies into higher education for teaching and learning practices have become more important. According to Schrum, Skeeel, & Grant (2002, p. 258), professors use software tools, like word processors, but rarely use technology for teaching or require students to use it for assessment purposes. McKenzie (2001)

and Parisot (1995) examine the standard practice of higher education institutions in which they buy the new and complex technologies and simply make them available to faculty members without any attempts to build an infrastructure to support faculty adoption practices. If higher education is to survive the onslaught of technology, then they have to devise plans to support the adoption of such innovation (Hagenson & Castle, 2003, p. 2).

Although studies have been conducted at K-12 school level and universities alike, few studies have inquired qualitatively into the end users experience during the technology adoption process in a higher education setting or to connect experiences to policy to support and develop faculty in their quest to adopt technological innovation. Just as educators in teacher preparation program have a special challenge in preparing pre-service teachers for the integration of technology into instruction, higher education have an obligation to prepare their faculty for the adoption and integration of technology into their instruction. While technology is used more often for administration and research purposes in the higher education setting, it is used less frequently for instruction (Spotts, 1999; Zhao

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& Cziko, 2001) due to the fact that the integration of technology into teaching challenges the prevailing dominating traditional mode of practices of faculty members and universities (Anderson, Varhagen, & Campbell, 1998; Pope, Hare, & Howard, 2002). Through research and practice, we as critical researchers must critically analyze, understand, and critique all forms of practice that hinders full participation of faculty in their quest to use information and communication technology. Thus this article is to uncover the associated practices of how faculty use technology in the teaching and learning process. Since, few studies have inquired qualitatively in this phenomenon, the author seeks to explore the issues of technology adoption and its implication toward leadership and training and development based on the personal experiences of faculty involved in the process, while presenting some preliminary findings of a qualitative research project.

As more faculty in higher education begin to adopt technology, universities should begin to streamline faculty and training and development services relating to the adoption of these tools. In order to develop sound policies and procedures in addition to training and faculty development programs, technology professionals and administration must understand the faculty experience and then the factors that affect the technology adoption process and ultimately their implications for faculty quality teaching. Not only will this study inform the literature in the field, this study will assist universities and technology professionals in higher education, in developing policies, procedures, and support networks for faculty in their quest to adopt related technology to provide student with opportunities for quality teaching and active student engagement.

## **OVERVIEW OF THE LITERATURE**

The investigation into the adoption of technology for the purpose of quality teaching for faculty in

a higher education setting, not only draws upon academic foundations, but also advances practices aimed to explore the technical, cognitive, and aesthetic basis of signifying human interaction as mediated by technology. A number of theories have been used to address some basic elements that directly relate to faculty adoption of technology in teaching and teacher education programs. The Concerns-Based Adoption Model (Hall & Hord, 1987) and Rogers' Diffusion of Innovations (2003) theory have been among the most used frameworks in many studies. Similar to Rogers' theory, the Concerns-Based Adoption Model (Hall & Hord, 1987) is used to study the process of adopting innovations (Sherry & Gibson, 2002). In this model, Hall and Hord (1987) described eight different levels of use of an innovation: non-use, orientation, preparation, mechanical use, routine, refinement, integration, and renewal. While the Concerns-Based Adoption Model focuses more on the adoption process of an innovation, the Diffusion of Innovations Theory looks at both the adoption and the diffusion of an innovation. The emphasis is on this theory when examining both faculty adoption of technology and the issues that are experienced in the social environment during the diffusion of the innovation.

Further, as seen as consumer behavior, technology adoption can be measured in terms of units purchased or number of programs installed. This is consistent with behaviorist models: What users are thinking is secondary to their behavior. General surveys at the state or regional level become useful benchmarks of adoption levels over time (Becker, 1994). These demographic data then become valuable information in the hands of policymakers and administrators seeking to allocate resources in fair and effective ways.

In addition, adoption can also be seen as a process of information diffusion, culminating in a rational choice to use (or not use) the new technology. This perspective relies principally upon a view of learning as information acquisition (Mayer, 1992, 1996). A prospective user

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