Chapter XIX

Technology Literacy Issues for Freshmen Education Majors in a Leading Teacher Program

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ABSTRACT

In this chapter, the literacy issues of a preservice leading teacher education program are discussed. The leading teacher program is constructed on the foundation of the three major themes of leadership, diversity, and technology. The technology theme ensures that the preservice teacher is cognizant of information literacy issues and instructional technology principles and practices. The student is well-prepared to become a leading teacher in the nation's schools, where he or she is entrusted to prepare a citizenry that will communicate and collaborate to solve complex problems in the new millennium.

INTRODUCTION

This chapter will explore the features of a leading teacher program that has foundations in the national and international standards for instructional technology. It will discuss a strong commitment from the department chair, the dean of the school of education, and upper administration to provide the equipment, support, and expectations to transform the school into a home of the nation's leading teachers (Handbook, 2001). The preservice teacher enters

the program with technology skills to communicate and complete assignments. They quickly acquire and increase the skills in information technology so that they can obtain sufficient data, synthesize that data into useful information, and create interactive visual presentations and exciting virtual tours (Tomei, 2001). Finally, the leading teacher must be aware of the rapid advancements and changes in technology and how those changes affect the learning process. The teacher must know how to adapt to the changes and to infuse the new technology into the curriculum of the future.

BACKGROUND

The federal government recognized the need to bridge the digital divide to ensure that all students have the opportunity to advance themselves and the U.S. economy. The nation and the nation's businesses need individuals who can acquire data and transform that data into meaningful information. The citizens of this land need to communicate and collaborate with their peers without regard to time and space limitations. To accomplish these goals and anticipate future needs, the workers of tomorrow need to practice the technology skills of today. These workers, university students and military personnel of tomorrow, will come from the current bank of students in the K–12 space. With a high attrition rate for teachers, it appears logical to concentrate on the students in teacher training institutions and inspire them to fulfill the role of guide, facilitator, and leading teacher of our nation's children. Teacher training institutions need to set the expectation that preservice teachers will possess an expert level of instructional technology skills to gather data and synthesize information, to create insightful interactive visual presentations, and to construct meaningful virtual tours of the vast resources of the Internet. This chapter will explore these concepts as they relate to an existing leading teacher program.

MAIN THRUST OF THE CHAPTER

In this chapter, the preparation of preservice teachers as technology leaders will be discussed. While a tremendous amount of money was expended on equipment to bridge the "digital divide," a smaller amount was used to train existing teachers. Given the attrition rate of teachers, a closer examination of the preservice teacher arena is warranted. The teacher preparation institutions have an opportunity to proclaim an admirable program based on standards, post-high school needs, and organizational support. A few of these topics will be examined in this chapter in order to better understand the process of preparing leading teachers that are facilitators and guides in the learning process. Also, the distinction is made between information technology, technology literacy, and instructional technology.

The preparation of preservice teachers as technology leaders will be discussed. The expectation is that students graduate from high school technologically literate to enter post-secondary education, the military, or the private corporate sector. To accomplish this goal, K–12 teachers must be technologically literate to help prepare the students. The current group of K–12 teachers must operate at this level, and new preservice teachers must be trained to operate at this level also. The Commonwealth of Pennsylvania alone dedicated approximately $50 million to staff development from 1996 to 2000 (Edwards, 2001). This effort provided the funding to raise the information technology skills of existing faculty. However, recent

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