Chapter 61
The Pathway to Nevada's Future:
A Case of Statewide Technology Integration and Professional Development

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ABSTRACT

An online, statewide technology professional development project was implemented for middle school teachers in Nevada. This document reports the preliminary findings associated with the planning, development, and implementation of Module 1 of the Pathway to Nevada's Future project. Baseline data, participant characteristics, findings, and results from participation in Module 1 are reported. Data sources include online surveys, online discussions, and informal interviews of project personnel.

During the planning phase, the milestones outlined in the grant proposal were accomplished. In terms of project implementation, Module 1 was designed, developed, and implemented. A schedule for Module 2 was developed for the summer and implemented during June and July 2010.

At the beginning of Module 1, base-line data were collected and examined to describe the general profile of Pathway participants. Overall, these data suggested that the population of participants was an appropriate cross section of Nevada teachers. Participants indicated that they held a high opinion of the role of technology in the classroom and reported being moderately skilled in technology use. There were many areas, however, in which they were not skilled and had room to benefit from the planned modules. Overall, the group was well suited to interact with the professional development materials, provide formative feedback for refining the modules, and apply their learning in classrooms across Nevada.

Module 1 primarily involved an overview of resources, tools, and strategies intended for a variety of settings. Activities ranged from conceptual readings, webinars, videos, and discussions, to hands-on assignments that exposed participants to a range of tools.

Results indicated that participants significantly increased in their knowledge, attitudes, and self-efficacy associated with technology and technology integration. However, analysis of progress, assignments, and online discussions indicated that the amount of material was overwhelming for the majority of participants. As a result, adjustments to the delivery of Module 1 were implemented during the professional development. These modifications were also implemented in subsequent Modules, allowing participants to explore applications of interest at a deeper level.

BACKGROUND INFORMATION

Digital technologies and their uses have pervaded nearly every segment of society. For example, informed citizens may find their news via television, online news outlets, papers, magazines, blogs, forums, and/or podcasts, just to name a few. People may find respite in virtual worlds like Second Life, World of Warcraft, or EverQuest. Others may simply consume media and movies on smartphones, portable MP3 players, or tablet computers. Regardless of the medium, students also find themselves in a world that is pervaded by technology, media, and knowledge. Technology has clearly provided new affordances for the presentation and storage of information.

These contemporary environments also allow users to participate in the creation and exchange of information in dynamic ways (Dede, 2008; Schrader, Lawless, & McCreery, 2009). On the World Wide Web (WWW), there has been a shift from a passive information retrieval system to a dynamic, interactive model in which users are active participants in authoring, editing, evaluating, and disseminating content (Dede, 2008; O'Reilly, 2005). Often termed Web 2.0, the modern Internet and WWW have changed the way people share their views (e.g., blogs), engage in communities of practice (e.g., social networks), and collaborate on ideas (e.g., wikis) (Dede, 2008; Jenkins, 2006; 2007; 2008). When compared to an industrial society, this difference is profound and requires an entirely different set of skills to be productive (Goldman, 2004).

Collectively, the presentation, consumption, and production of information across resources and modes have given rise to a wide array of educational difficulties. Although 17 million students in the United States regularly use the Internet in school (Pew Internet and American Life, 2001, 2005), we know very little about the skills students require to negotiate these information environments (Lawless & Schrader, 2008). As a result, little emphasis is placed on training students to become competent 21st century learners within formal school settings (Manning, Lawless, Gomez, McLeod, Braasch, & Goldman, 2008). This is not only true of the United States, but countries like Australia and the United Kingdom where there is a similar push toward understanding educational technology and technology integration for the 21st century (Kitson, Fletcher, & Kearney, 2007; New London Group, 1996). Unfortunately, what students are trained to do in school does not necessarily align with the expectations of what they need to do in their futures (Apple, 2007; Gee, 2006; Leu, 2000; Schrader et al., 2009).

As a result of these concerns, educators in Nevada developed a statewide program to facilitate the integration of technology in Nevada's schools as part of a national funding initiative. This chapter describes and characterizes the conceptualization and implementation of this project as it may pertain to other broad-scale technology integration

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