

Both Sides of the Border: A Snapshot of Two Internet-Based Professional Development Initiatives

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Purpose

This presentation aims to analyze two Internet-based teacher education (IBTE) endeavors for in-service teachers. Critical components of Internet-based learning will be highlighted and implications for using the Internet in both teacher education and professional development will be discussed.

Using the Internet to Teach Teachers?

The need for qualified teachers is higher than ever before. Nationwide schools are being pushed to be more accountable for their students' performance on achievement tests. Further, this accountability has been extended to the field of teacher education by the National Staff Development Council's proposal that teachers in all schools should have access to high-quality professional growth and teacher education programs by 2007 (Salpeter, 2003).

The Internet provides a robust avenue for customized learning environments that promote dynamic interaction and collaboration between participants (Sabatini, 2001). The National Staff Development Council and others in the field endorse IBTE and the opportunity for teachers to receive training any time, any where, as well as collaborate over a distance with others that share a similar interest or need for further education. (NSDC, 2001; Richardson, 2001). Resources in IBTE programs are accessible anytime and anywhere, making teacher education more convenient.

The need for IBTE stems from concepts such as the separation of teacher and learner in space and/or time (Perraton, 1988), the self-directed nature of learning by the student rather than the distant instructor (Pea, 1994), and asynchronous communication between student and teacher, mediated by print or an alternate form of communicative technology (Keegan, 1986; Garrison and Shale, 1987). Further, Lieberman and Miller (1990) contend that the "...establishment of new norms of collegiality, experimentation, and risk-taking by promoting open discussion of issues, shared understandings, and a common vocabulary" is an essential aspect of professional growth (p. 1049). The need for further teacher education can be met by IBTE programs that allow for both the asynchronous interaction between a teacher and content, as well as the collaboration of teachers over a distance via video conferencing, message boards or electronic-mail.

This presentation will discuss InterMath, a blended program that combines face-to-face and internet-based activities and ALTER, a completely on-line professional development program.

Overview of InterMath

InterMath is a face-to-face professional development program designed to teach

middle grades mathematics teachers to integrate more technology into their instruction. Funded by the National Science Foundation in 2000, the development team recognized the need to use the Internet to enhance the teacher's experience. This need resulted in a website (<http://www.intermath-uga.gatech.edu>) with over 800 mathematical investigations, an interactive dictionary of near 1,000 terms, a portfolio holding the work of each participant, as well as a number of job aids on how to use various technologies to explore the investigations.

Intermath is based on the premise of learner-centered professional development (Loucks-Horsley, Love, Mundry, & Hewson, 2003). Each participant selects the investigations that they want to explore, the technologies that they will employ and the methods they will use to display their work. The instructor assumes the role of facilitator offering support as the students' complete the investigations. This model allows each participant to interact with the content during class, collaborate with other students and revisit the resources outside of class as well (Hill & Hannafin, 2001) and construct their own meaning of what they learn.

Overview of ALTER

The Canadian province of Newfoundland and Labrador has approximately 66% of its schools being classified as "rural" and 31% being classified as "small rural schools." The resources and logistics utilized for providing continuous, relevant and up-to-date professional development to all teachers in our province is, at best, a challenging and necessary task. However, the fact that schools throughout Newfoundland and Labrador are, for the most part, "wired" for Internet access present the opportunity for unique solutions.

As a multi-faceted support program, the ALTER Project has the potential to provide a complimentary support "tool" for teachers in their attempts to help students attain the "expected outcomes" as outlined in the English Language Arts Curriculum for the province of Newfoundland and Labrador. With the development and dissemination of various new instructional resources, teachers can be provided with a variety of implementation strategies to best utilize these resources.

With the evolution of the Training of Teacher Trainers concept, direct in-service support by "mentor teachers" would provide a necessary supplemental component to this professional development program. Certain teachers throughout the province of Newfoundland and Labrador would become the mentors of other teachers in their individual schools. Thus, the specific literacy problems in a school can be addressed, utilizing the expertise of one or more teachers found within that particular school. This expertise might be shared during regularly scheduled staff meetings, thus eliminating the necessity for school closures, substitute teacher allocations, or the necessity of additional special staff meetings.

The main objective of the ALTER Project is the development of an interactive web-based PD program for K-12 teachers. The focus would be on the creation and implementation of online micro-workshops in the area of literacy assessment and re-instruction.

Implications for Teacher Education

While we have outlined two models herein that are focused on in-service teachers,

we feel that the principles and theoretical underpinnings are relevant to pre-service teachers as well. Findings from the Intermath site support the notion of resource-based learning (Hill and Hannafin, 2001), where the learner actively engages with content that is stored on the Internet and receives scaffolding and support either virtually or in a face-to-face environment. As constructivist theory further influences teacher education programs, the Internet serves as a resource for course content, just-in-time help and collaboration with others in the field of education. ALTER provides options for online support as pre-service teachers design instruction for their field experiences. Online collaboration and telementoring with in-service teachers or teacher education faculty has been shown to improve the self-efficacy and confidence of new teachers (Garrison & Shale, 1987; Wighton 1993).

Conclusion

The experiences of these two Internet enhanced professional development initiatives have outlined many of the critical components of using the Internet as a platform for professional development programs, such as the vast opportunities that are available to teachers and the different interactions between teachers in various environments. These experiences have also compared the attributes of programs that are completely on-line to those that are a mixed model of both face-to-face and on-line programs. This comparison has illustrated the ease of implementation of the face to face technology-rich model compared to the entirely web-based model. However, in the geographic context, the entirely web-based models presented many advantages to the face to face model.

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