

# Graduate Education and Faculty Development

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The Graduate Education and Faculty Development Committee of SITE focuses on professional development of educators which occurs beyond initial teacher preparation and uses technology to facilitate delivery and/or support the efforts of educators to integrate technology into their practice. Activities include graduate programs leading to additional certifications as well as to an increase in teaching effectiveness, in-service programs offered to educators working in institutions at any level, and initiatives which facilitate organizational change associated with technology. Presentations and papers at the annual SITE conferences mirror the activities in the larger educational community, and provide professional development opportunities for all attending. This paper discusses recent literature in the field, and places the SITE presentations within the broader arena of educational research.

*Integration of technology, technology integration, integrating technology into curriculum* and similar phrases have become standards in the world of education, and appear in titles and/or descriptions of courses, in-service activities, articles, and even books. Teacher preparation programs have added courses to address the issue, and there is much discussion about the preparedness of new teachers to use technology as a tool to enhance student learning. But what about those teachers who are already in the classroom, and may have been there for years, becoming certified before technology was included in the curriculum, either as a stand-alone course or integrated throughout the certification (and other) courses? And with the emergence of new technologies and new approaches to using existing technologies, how are even technologically-savvy teachers and university faculty members to keep up with the changes?

The Society of Technology and Teacher Education (SITE) has created a committee to examine the field of Graduate Education and Faculty Development, in an effort to promote research and discussion that to share ways that technology is being used for teacher education beyond initial certification. The SITE newsletter described the committee's mission as follows:

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Each year, at the SITE conference, educators come from around the world to share, to learn, and to collaborate. Research reports and best practices are presented in person and in the conference proceedings. The topics are generally representative (although possibly more in-depth) of activities that are reported in professional journals and other venues reporting research findings. In the Graduate Education and Faculty Development section of the 2005 edition of the *Society for Information Technology & Teacher Education International Conference Annual*, the 31 papers appear to be

representative of four major areas: Designing Online Courses and Materials, Technology Integration, Learning Electronically (Online and Video), and Group Faculty Development. These areas also represent the trends in the graduate education and faculty development field in general, with innovative research being conducted in each. Although there is some crossover between *graduate education* and *faculty development*, these may well be artificial distinctions to help clarify what is going on in each area.

## **Graduate Education**

Graduate education includes courses taken by educators for academic degrees and/or additional certification, for the improvement of knowledge and skills in a teaching field, or in the general pursuit of new knowledge. With the rapid growth in distance education – with courses offered via the web, and also via video-conferencing – much attention in the literature has focused on the design and delivery of distance education courses, and on the learner characteristics needed to promote successful course completion by students. Topper (2004, 2005) has been examining the importance of considering student assessment in the design and development of online courses. His findings At SITE 2005, he discussed his findings related to” the issue of instructional quality in online graduate courses in educational technology using student course evaluations along with additional data to paint a more complete picture of effective instruction in these contexts” (p. 1227). Mode of course delivery has also been addressed, along with the need for different types of preparations for different types of delivery. Stallings and Koellner-Clark (2003) examined the use of various types of on and off-line activities and found that there was value in combining delivery modes if instructors utilized the strengths of each delivery method. Barron et al. (2005) studied the conversion of traditional graduate classes into web-based classes to provide feedback to designers and faculty.

Technology integration, and teachers’ knowledge and attitudes in this area, have been the topic of many writings and presentations. Liu and Huang (2005) studied 86 in-service teachers enrolled in a graduate class, to examine teachers’ concerns about technology, and found that their findings supported earlier findings about the three different groups – inexperienced, experienced, and renewing – and discussed international implications of their findings. Bartlett (2005) presented a self-study of efforts to integrate technology into a teacher education program and included samples of the complex electronic teaching portfolios created by her students. Brown (2005) studied the use of PowerPoint as a method of engaging students in lecture presentations through the use of PowerPoint, as a way of addressing individual learning styles.

With the growth of online classes, attention has been given to student learning in electronic environments and using technology. Coe and Owen (2005) explored how educational administrators in a graduate leadership course learned to enhance technology integration within learning environments. Gibson and Skaalid (2004) studied a graduate course where participants considered that understanding the use of the Internet as a constructivist tool changed their way of thinking. Whipp (2004) examined the role and type of self-regulation that helped some students to be successful in online courses.

Bryan, Danaher, and Duay (2005) described student perceptions toward learning online and Loeffler (2005) related adult learning styles and the completion of graduate degree programs in educational leadership. Other topics included using a Web-assisted leadership course for school improvement, mapping distributed cognition with a collaborative constructionist approach, and intersecting problem based learning, constructionism, and technology to explore professional problematic areas of educators.

Whole group faculty development has also been addressed.. The University of Tennessee conducted bi-weekly workshops for faculty technology training (Greer, 2005). The Faculty of Education in the University of Alberta (Canada) has implemented an extensive technology professional development program to enhance teaching, research, administration, and person productivity in the faculty through the integration of information and communication technologies (Davies & Irvine, 2005). Another university

used information resources with instructional strategies in an online delivery system, and a public school system conducted faculty training using reflective practice.

## **Faculty Development**

For the purposes of this paper, and of the inclusions in the Graduate Education and Faculty Development section of the SITE papers and presentations, the terms faculty development and professional development are being used synonymously. A review of the literature has revealed the same four trends, as discussed above under Graduate Education: Designing online materials, technology integration, learning electronically, and group faculty development

Koehler et al. (2004) described a faculty development approach in which faculty members and graduate students worked together to design a successful model for online teaching. Abbott (2005) examined authentic professional development – looking at eight teachers involved in telecomputing projects with their students – and discovered that although telecomputing may not change the teachers' styles, it may affect the way that students feel about their learning. Kanaya, Light, and Culp (2005) examined the relationship between intensity (versus duration) of a technology-focused professional development program and specific participant characteristics in predicting successful outcomes.

Dick (2005) described a professional development activity to promote technology integration among teachers, and used a constructivist approach to teach skills using specific programs before ways of integrating technology. Brown et al. (2004) explored the technology-related professional development of three faculty members, and identified key issues to be considered with providing professional development at that level. Taylor and Walls (2005) described a nine-step approach to professional development for teachers, who created instructional units demonstrating integration of technology along with a variety of other criteria.

## **Initiatives for Organizational Change**

Several studies have examined the need for change, and some have suggested initiatives that could help. Hall (2005), discussed the need for a change in professional development, based partly on the changing technologies, and describes a professional development program where some of the changes were implemented. He said that there was a movement from professional development to professional growth, which is being accelerated by technology. Also in the area of professional development, Otero et al. (2005) have presented “a model for technological change driven by the notion of situated practice and communities of discourse in their school of education” (p. 8).

Recent literature has revealed various trends in the technology areas concerning graduate education and faculty development. And a number of these are assessing and evaluating how educators are doing in integrating technology, how we are enhancing and progressing learning that occurs within the field, and are providing very specific aspects of technology that would and could add to the teaching and learning in the graduate education and professional development areas of technology training and integration. Topper (2004) discussed how we are doing using self-assessment to measure changing teacher technology literacy within a graduate educational technology program. This study reported on development and testing of a simple self-assessment instrument used for documenting in-service teachers' changing knowledge, skill, and suppositions towards technology within a graduate teaching education program. The current movement towards standards for technology in teacher education provides an opportunity to begin to study how teachers' changing technology competence also influence their plans for integrating technology into their classroom practices. Topper found that in-service teachers enter graduate program with the same limited set of skills and knowledge that pre-service teachers leave undergraduate programs with, but these skills can be upgraded when teachers are exposed to a course in educational technology.

Even though university faculty were doing an adequate job of preparing in-service teachers, more could be done to improving the overall preparation on in-service teachers (Topper, 2004).

Simple activities can be monumentally effective when it comes to learning in the educational technology field. Dick (2005) has created a professional development activity on technology integration for teachers with model a constructivist approach while considering the characteristics of adult learners. The activities involves teachers reading about technology integration and learning how to use Microsoft Word, Excel, and the Internet, before working in groups to devise lessons that integrate at least one technology activity.

At SITE 2006, we will see how the research that we have identified in this paper continues to mature and evolve. The field of Graduate Education and Faculty Development is quite broad and varied. The literature reveals that we must consider our learners, develop content to address their needs, and then evaluate the training. Keys to finding the most appropriate methods to promote the appropriate use of technology in the classroom and in education in general may well be varied depending on one's particular situations including: funding, infrastructure, and guiding organizational theme.

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