Strategies for Successful Professional Development to Support Technology Integration

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What are some of the key requirements for successfully integrating technology in your classroom? Not surprisingly, one requirement is adequate and effective professional development.

You may want to review the National Staff Development Council's [http://www.nsdc.org/] principles of effectiveness that apply to all professional development. However, because many teachers do not have a strong foundation for technology-enhanced instruction—and this is not necessarily an intuitive practice—it is critical for teachers to be provided with adequate professional development opportunities to support this practice. CITEd has, therefore, conducted a review of some literature that describes strategies for successful professional development practices to support technology integration, and we have summarized those findings below.

Our review shows that, in addition to effective professional development, supporting technology integration also entails the following elements: (1) establishing communities of practice, (2) providing administrative support, and (3) creating relevance to context and curriculum. This information is a valuable resource for schools or districts establishing or refining their approaches to delivering effective professional development to support technology integration.

**Establishing a community of practice**

Findings from these case studies of schools’ and districts’ efforts to improve technology integration into the curriculum converge on the powerful element of teachers supporting each others’ learning. Establishing a true learning community of practice in which teachers—and sometimes students—are engaged in learning through technology together is noted as key to maintaining and deepening the efforts undertaken. These sometimes casual networks sustain engagement, offer
just-in-time and contextual support, and can bridge the gap between professional development and implementation.

References


Administrative support
The importance of active administrative support for teachers' planning and collaboration was also emphasized. Without dedicated time, communities of practice cannot be sustained in a school or district. Administrators' support and explicit expectations were also seen as a key element to negotiating the logistics of school schedules and teachers' competing time commitments and priorities.
References


Relevance to context and curriculum
Researchers observing the efforts of teachers, schools and districts to implement technology stress the need to work with teachers to weave technology-based activities into their existing curriculum in order to stretch—rather than add to—their instructional repertoires. Ongoing professional development offered on site, especially when supplemented with a community of practice or inquiry group, was found to be effective at changing teachers' attitudes and self-reports of technology proficiency. While these studies are careful to point out that such work is incremental, the researchers find that the sustained effects and shifts in teachers' attitudes and beliefs toward technology integration are positively impacted.

References


References


Annotated Bibliography of Professional Development Articles

The author presents findings from a review of the local technology plans of 27 school districts. Findings show that districts were moving toward long-term development strategies, as opposed to a series of "one-shot" activities. Many plans called for strategies for follow-up support and addressed various levels of teachers' concerns about the implementation of technology. Furthermore, some districts acknowledged the need to evaluate the impact of technology plans on both teacher and student learning. This study will be of interest to those involved in developing technology plans who need an understanding of trends within this area. However, perhaps the most valuable component of this paper surrounds a framework that the author borrows from Joyce & Showers (1995), which explains the four incremental categories of professional development. They include presentation of theory; theory and demonstration; theory, demonstration, and practice; and theory, demonstration, practice, and follow-up. Teachers involved in professional development activities that include theory, demonstration, practice, and follow-up are more likely to transfer technology skills into teaching than those who participate in professional development activities that do not include all four dimensions. Thus, professional development coordinators should look for these elements when considering technology training opportunities.

Reference


In this conceptual article, the author presents the need for research surrounding teachers' pedagogical beliefs to understand the dearth of technology use in the classroom. The author argues that this area of research is necessary because the conditions for successful technology integration, such as ready access to technology, increased training for teachers, and a favorable policy environment, appear to be in place. Therefore, she posits that limited high-technology use can be attributed to additional barriers, particularly those related to teachers'
pedagogical beliefs. A plethora of related research in the field is presented to support the author’s position, resulting in a well supported, yet dense article. However, the heart of the argument for additional research about teachers' pedagogical beliefs to understand why teachers generally do not use high-technology in the classroom is compelling. Though it is unlikely that education practitioners would draw on the article to inform their own practice, it would serve as an excellent resource for anyone interested in identifying areas in the field that remain underexplored.

This study examines how efforts in staff development in technology support teachers in learning and using technology, and also considers whether this emphasis on technology causes changes on a schoolwide level. Three assumptions of teachers' professional development in instructional technology served as a framework to guide this study. These assumptions included: 1) teachers are at various levels in their knowledge and use of technology, 2) staff development for instructional technology needs to be based on what are currently construed as "best practices" for teachers' professional development, and 3) teachers' professional development in technology may well serve to further larger goals of school reform. The author concludes that the human element in integrating technology is critical. Teachers and other staff members must be supported on an ongoing basis in order to sustain the process of technology integration in the classroom. The framework for this study is particularly important because it draws on the professional development literature as a foundation, and builds on this foundation to consider professional development for instructional technology. Although constant reference to the literature makes for a dense read, this approach is necessary to fully unpack characteristics that can inform effective professional development. The article would be a suitable read for education professionals involved in the implementation of professional development activities involving technology integration.

Authors examine different stages of technology adoption, review traditional roles that technology has served in the classroom, examine what a classroom might be like when attention is given to technology, and present ways in which educational technology may be useful to teachers given current classroom conditions. Although the article was written ten years ago, the principles that the authors present related to technology-supported instruction remain relevant. The framework for the different stages of technology adoption has continued to inform the work throughout recent studies such as Bauer & Kenton (2005), Eskicioglu & Kopec (2003), and Nisan-Nelson (2001). These stages are worth mentioning, and include: familiarization, in which the teacher is introduced to technology; utilization, in which the teacher tries different technology in the classroom; integration, in which the teacher becomes dependent on technology; reorientation, in which the teacher reconsiders the purpose of the classroom and uses technology to support a learning environment that encourages students to construct and shape their own knowledge; and evolution, which directs attention to the education system and its need to evolve and adapt in order to be effective. Although only the stages of technology adoption are highlighted here, each of the four components of the article is relevant to the field. This is a seminal piece for education professionals at any level in need of fundamental knowledge of technology use in the classroom.