Professional Development Article Review: Technology as a Catalyst for Change

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Introduction

The purpose of this paper is to review the article, “Technology as a Catalyst for Change: The Role of Professional Development” by Nita J. Matzen and Julie A. Edmunds. The article examines the relationship between a professional development program, teachers’ instructional use of technologies, and their broader instructional practices. It presents an analysis of results from an evaluation of the Centers of Quality Teaching and Learning (QTL), which is a professional development program that places technology in the context of student-centered instructional practices. It also focuses on the relationship between the professional development given and teachers’ use of technology in their classrooms and their general instructional practices.

Premise

Proponents of computer based technology have long argued that the use of technology can transform learning and teaching, but recent research indicates that teachers also use technology in ways that are consistent with their existing instructional practices.

Teachers’ experiences with technology professional development often focus mainly on computer skills and not on improved instructional practices, creating a likelihood that they will fall back on technology practices consistent with their existing instructional strategies because they are not given a broader vision for the use of newer technologies.

Researchers in educational technology have long thought that technology could be the catalyst that could transform the instructional practices teachers use toward a more constructivist approach. Constructivism is a theory that “…challenges the idea that meaning lies in words, actions, and objects, independent of their interpreter. Teachers and students are viewed as active
meaning makers who constantly give contextually base meanings to words and actions of others as they interact.” (Cobb, 1988, p. 88).

Some research shows that teachers are acting as learning facilitators more than providing traditional instruction. A ten year study of the Apple Classroom of Tomorrow project presented a model of instructional change that showed five stages of technology implementation: entry, adoption, adaptation, appropriation, and invention. As teachers move farther along this model, teaching beliefs begin to change. Another model presented showed three stages: automation, expansion, and data-driven virtual learning. Moving along these stages can change the way teachers deliver their instruction (Valdez et al., 1999).

Methodology

This article uses results from a methodology called The Centers for Quality Teaching and Learning. QTL is a seven day, 50 hour, professional development program that models the connection between instructional practices, the curriculum, and the use of computers. The first five days focus on teacher participation, with teachers assuming the role of students. As teachers actively participate in instructional activities that integrate educational theories and practices with the use of technology, the connection is made between technology and the curriculum. The last two days are used for follow-up. The purpose of QTL was to examine the implementation and impact of the program on teacher change as it applied to technical skills, awareness and use of educational theories and practices which related to the use of computers and general instructional practices.

Results

It became clear that teachers reported changes in instructional practices with technology. The initial survey results showed increased use of constructivist compatible practices with the
use of technology, but no increase in traditional instructional practices (Matzen & Edmunds, 2007).

Data showed that some teachers reported making changes in their instructional practices after participating in QTL. Participants wrote comments such as “I have refocused my instruction to include a variety of teaching techniques and to empower students more” and another commented, “I have changed my instructional practices, and I am working on an interdisciplinary state project that has changed my role from information server to coach, helper, manager and advisor.” (Matzen & Edmunds, 2007, p. 426).

Speculation is that teachers may use technology in ways inconsistent with their general practices because many see technology as a new, unfamiliar tool; subsequently they implement it in the specific ways they have been shown. This study also suggests that professional development experiences that merely teach technology skills would most likely result in no technology use at all or with technology use consistent with teachers’ existing instructional practices. Results also show that technology can provide a context for trying out a new instructional practice (Matzen & Edmunds, 2007).

In conclusion, the relationship between technology and constructivist practices is complex. Technology can promote more constructivist compatible instruction. This research suggests that the interaction may depend largely on the type and focus of the professional development received.
References

