Blending Technology with Inquiry-Based Pedagogy: Implications for Learning and Teaching in Online Environments Designed for Graduate Level Teacher-Education Courses

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ABSTRACT: PURPOSE OF THE STUDY
This study is intended to further inform the construct for teacher-learners’ transfer of technology first to their teaching dogma, secondly for their pedagogical praxis and ultimately for the paradigm of teaching and the students’ learning environment. Although much has been written and reforms mandated about the professional development of teachers and the need for technology-rich instruction more discrete information is needed about the teacher’s learning being situated in technology learning environments. What evidence does the situated praxis of online discussions in the teaching of teachers offer to further the research of meaningful technology transfer into their classrooms?

Keywords: distance education, teacher education, online teaching, Web-based instruction, blended classes, inquiry-based pedagogy

INTRODUCTION TO THE STUDY
We are examining data accumulated from blended course online discussions with in-service and pre-service teachers. The data accumulated from these blended course online discussions includes topics of threads, content of responses, identification of originator (instructor versus teacher-learner) of threads, and occurrences of collaboration in forming meaning. Our in-depth evaluation of the online interactions and subject of discussions will contribute to creating a potential model for teachers as participant practitioners in online learning in order to demonstrate the transfer of technology into their pedagogy.

LITERATURE REVIEW
Angers and Machmets’ (2005) qualitative study identifies the “adoption and use of technology in the classroom is determined by teachers’ attitudes and beliefs.” (Angers, 2005, p. 780). Their findings regarding that “Teachers beliefs about classroom practice appear to shape their goals for technology,” (Angers, 2005, p. 789). In our study we look at how these intrinsic beliefs can be expressed, changed over time and influenced by participating in online classes, thereby guiding the students to become expert-practitioners. How can the instructor design the learning experience to get these results? We are also adding to the body of literature by studying the mechanism for the eventual transfer of technology learning to the classroom.

Stephenson’s (2002) work is a collection of articles by many authors on how to transit from theory to practice, create effective online learning environments using theoretical frameworks and evidence-based research and pedagogy to help learners to make the optimum use of online learning. The articles all lead to the transformation from instructor-managed to learner-managed pedagogy for best online learning. Several features that are most relevant to both instructors and learners include the following: access to resources, heuristics, attention to different learning styles and needs, access to experts, both online and offline, tracking and recording of dialogue, transactions among students, teachers, student-student, a variety of types of engagement, including synchronous and asynchronous, feedback, good design of the web environment, easy links to multimedia, universal design, opportunities for telementoring and interaction with experts both within and outside of the institution, an opportunity to work in collaboration with peers and groups online and globally. These features should be flexible and learner-controlled. Learners should be able to utilize all of these features online and go to other resources. Importantly, students must perceive the difference in the online environment as offering more than a lecture delivered online, be encouraged to use the interactivity, and to take responsibility for his/her own learning and participation in order for this transformation to occur. These are the goals of our online course development, to encourage transfer from the blended component of the class to the teacher-learner’s own pedagogy and practice.

While Kozleski (2004) emphasizes the economic contribution of technology as being imbedded in education, she identifies changes to teachers’ dogma and pedagogy as critical for the transference of technology in education. Our efforts to identify discrete teacher learning underscore, “rather than harnessing the curriculum, understanding education as a technology transfer activity opens the dialogue about how and what to teach.” (Kozleski, 2004, p.191).

Borko (2004) identifies elements of a situated analysis of teacher learning as a learning program, with teachers as the learners, the instructors as the guides for the teachers as they construct new learning along with the context in which the teachers learning occurs. While many researchers have studied some combination of these relationships and the factors that influence them our study will further our understanding of what and when meaning is being situated in the teachers understanding of the new role technology will now play in their teaching for their classrooms.

CONCEPTUAL FRAMEWORK

The impetus for this study came as a response to the meta-analysis done by Mary Tallent-Runnels, Julie A. Thomspsons, William Y. Lan and Sandi Cooper (2006).

Their research suggests that courses taught totally online are called “online courses” and those taught partially online be labeled “blended courses.” As part of their findings and recommendations for future research, the authors suggest that there are few existing studies focusing on pedagogy and learning online, which type of format fits which particular class and instruction, what the online roles of instructors and students play, and how the depth of online interactions that occur can lead to and encourage higher-order, critical thinking and constructivist learning.

To achieve higher order thinking, Wakefield (1996) suggests three pedagogical approaches; 1.) Stand-alone instruction in thinking independently, 2.) Dual agenda
II. The Role of the Instructor

Along with the designing of the course, we examine the instructor’s pedagogical praxis and paradigm choices. As an example, both instructors have made use of inquiry-based teaching methods in class and online.

III. Online Discussions

The online postings will be examined in terms of topics, and content. We will pay particular attention to teacher-learners’ references to prior experiences and knowledge in connection to their new learning within the content and topics of the online discussions.

Do particular categories of discussion topics provoke teacher-learning level of engagement with technology learning?

INITIAL FINDINGS

Identification of characteristics for online pedagogical practices:

Pedagogical implication of online postings allows for more in-depth assessment of learners’ levels of engagement with material as well as analysis of learners’ construction and integration of meaning for learning.

Initial analysis of the data suggests the Instructor/Teacher-Mentor’s pedagogical approach to the online setting shows movement from leading to some combination of modeling online behavior and heuristics for teacher-learners.

REFERENCES

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