

Chapter XX

Understanding the Effectiveness of Collaborative Activity in Online Professional Development with Innovative Educators through Intersubjectivity

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ABSTRACT

Effectiveness of professional development is affected by the quality of social interaction. This study examines how online collaborative dialogues might influence teachers' decisions in their classrooms—sometimes hurting when not appropriated well. This study extends principal sociocultural approaches to cognitive concepts of intersubjectivity and activity through illustrations of empirical data. Part of a larger innovative professional development involving four classroom locations across Missouri, synchronous chatroom dialogues comprising teachers and researchers, and pre- and post-unit interviews underwent qualitative discourse and focused microanalyses. We argue that teachers purposefully used their dynamic intersubjective spaces and strategies in the management of meaning-making negotiations within an online interactive environment. The findings reveal two novel variable forms of intersubjectivity: (a) temporary suspension, and (b) resistance and disagreement. These findings provide useful implications for advanced applications and developments with information communication technology in innovations for enhanced learning and teaching as they relate to the evaluation of teacher effectiveness in implementing collaborative online problem-based activities.

INTRODUCTION, LITERATURE REVIEW, AND SIGNIFICANCE OF THE STUDY

Reform advocates in education have increasing interests and hopes for incorporating information communication technology in reforming both instructional and teacher education. These interests and hopes are important and significant. However, the outcomes of their implementation varied in the field. While some implementing groups sustained their learning, other groups did not. Drawing on the cognitive and sociocultural concepts of intersubjectivity and activity, this study examines the specific ways in which teacher understanding and learning were developed (or not) in online collaborative dialogues and the extent to which these collaborative dialogues might impact on teachers' decision-making when implementing innovative constructivist-based professional development, between four teachers and two researchers involving four classroom locations across Missouri, USA.

Previous studies of professional development from a dialogic perspective implementing similar reforms have proven to benefit innovative teachers. As Zeichner and Liston (1996) wrote, "The challenge and support gained through social interaction is important in helping teachers clarify what they believe and in gaining the courage to pursue their beliefs" (p. 76). To facilitate optimal learning for students with technology, teachers need considerable knowledge, effort, persistence, and self-regulation to devise, implement and assess instructional plans and complex learning environments. In such processes, teachers' collaborative professional development plays a critical role as they construct new understandings, through participation in their "community of practice" (Lave & Wenger, 1991, p. 29). The production of these communities often involved a shared practice that reflected the pursuit of learning through interacting, both with each other, and with the world.

Interest in reforming education through technology has steadily increased in recent years (NCTAF, 2003). Technology has been described as "a fact of American life" (OTA, 1995, p. 2) and the Internet as providing the "fabric of our lives" (Castells, 2001, p. 1). As such, it affects our culture, work, and communication (e.g., Hui, 2003). As the availability of technology in education has become increasingly ubiquitous, research has shown the promising potential of technology in improving student and teacher learning (e.g., Bransford, Brown, & Cocking, 1999). Research has also affirmed the importance of connecting teachers and technology (e.g., Marx, Blumenfeld, Krajcik, & Soloway, 1998). This is crucial for the success of standards-based reform in the American schools (e.g., Brunvand & Fishman, 2005) and has the potential to change the future of education (e.g., Tyack & Cuban, 2004; see also Dede, 1996), given the powerful role of communication technology for mediating teacher education reform. The list of often stated goals includes: (1) sharing information and new pedagogy (e.g., Berge & Collins, 1998), (2) facilitating teacher competencies (e.g., Kabilan, 2005), (3) fostering collaborative professional development (e.g., Bober & Dennen, 2001; Riel & Fulton, 2001; Zhao & Rop, 2001); and (4) building reflective communities (e.g., Berge & Collins, 1998; Borthwick et al., 2004; de Vries, Naidu, Jegede, & Collis, 1995; DiMauro & Jacobs, 1995; Salmon, 2004; Schlager, Fusco, & Schank, 2002). It has proven to be a viable alternative strategy for the development of teachers (e.g., Brunvand, Fishman, & Marx, 2003) and teacher professional development e-communities (e.g., Collison, Elbaum, Haavind, & Tinker, 2000).

Despite its growing prevalence and promise, questions have been raised concerning the pedagogical impact of dialogues as mediated by information communication technology on professional development from conceptual, methodological, and practice perspectives (e.g., Wade & Fauske, 2004; see also Wallace, 2004), for two recurring reasons: (1) the prevalence of shallow

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