Designing an online environment for *all* teachers: Supporting teachers in learning to learn online

Rebecca Schneider, University of Toledo, Rebecca.Schneider@utoledo.edu

Abstract: Online collaborative environments have the potential to transform how teachers are supported in their professional learning and work. Yet, many teachers fail to fully or productively participate in these opportunities. To address this challenge, *A Learning Community of Teachers (ALCOT),* an online professional collaboration environment, was designed to support mentors and leaders in providing guidance to novices as they learn to develop and share ideas online.

Introduction

Web-based communication tools can provide teachers the opportunity to share ideas and interact with experts in ways otherwise not possible. To encourage professional growth, however, online environments need to encourage thoughtful collaborations around real issues in science and mathematics teaching and learning. In addition, developing professional identity appears to be particularly important for professional growth. We have some evidence that online conversational tools can be helpful. For example, blogs have been shown to support teachers' developing identities as professionals (Luehmann, 2008). But not all teachers take advantage of these new opportunities for support. Only 15 percent of teachers have participated in a professionally-oriented online community or social networking site and only 28 percent have read or written a blog about teaching (Berry, 2009). To be effective online environments need to engage *all* teachers in opportunities to develop as professionals.

A Learning Community of Teachers (ALCOT) is an online environment designed to support teacher learning and community at each phase of the professional continuum. The idea is to explicitly support productive and professional relationships for all teachers. Guided by ideas about how teachers learn to teach and become active members of professional community, this web-based environment is centered on the individual, facilitates one-to-one and group guidance, and encourages continuing participation. ALCOT is specifically designed to support mentors and leaders in providing guidance to novices as they learn to develop and share ideas online. The goal of this study is to describe the challenges and leverage points for teachers new to online collaboration when they are supported by specific communication features – such as electronic journals, blogs, or public dialogue – and instructional guidance – such as individual mentoring, prompting, and feedback – as they learn to use web-based communication to learn and participate in a professional community.

E-learning for teachers' professional learning and work

To be effective, online environments need to facilitate collaborations in ways that match teachers' needs for learning and support. Based on ideas about how expertise develops, I propose that science and mathematics teachers' learning and participation can be supported by learning the practices and discourse of reform-oriented teachers and teacher educators. Participating in the discourse of a community can help teachers develop their identity as a member and encourage their continued and increasingly competent participation (Beijaard, Meijer, & Verloop, 2004). Identity in particular appears to be important in explaining how teachers engage students with content and participate in guiding new teachers (Beijaard, et al., 2004). Teachers will, however, need guidance – including guidance from within the community – to productively participate in these dialogues. Creating such active and interactive environments will require rethinking how we support teachers' learning and community online.

The community of inquiry model (Garrison & Anderson, 2003) proposes that in an e-learning environment, educational experiences are at the intersection of cognitive, social, and teaching presences. Consistent with this model, *A Learning Community of Teachers (ALCOT)*, an online environment, is designed to encourage professional conversations, projects, and identities that integrate cognitive, social, and guidance aspects for teachers. ALCOT centers assets and conversations on individuals, facilitates one-to-one and group guidance from leaders and peers, and has ongoing or durable assets and groups to encourage continued and increasing participation. Although other researchers have explored strategies for supporting teachers online (e.g., see: Davis, Smithey, & Petish, 2004; Farooq, Schank, Harris, Fusco, & Schlager, 2007; Fishman, et al., 2001; Moore, 2002; Schlager, Farooq, Fusco, Schank, & Dwyer, in press), and have illustrated the power of online communities and teacher-to-teacher interactions, these efforts struggle to encourage all teachers to participate in meaningful ways. Through ALCOT design and research, I am exploring strategies to explicitly support teachers, including those who might be most hesitant, in learning how to learn and teach in innovative online environments.

Methods

To begin putting the ALCOT model into practice, the tools to support conversations, projects, and identities were piloted during the 2008-2009 academic year. These features were used by 20 experienced teachers (4-12 grade) participating in a graduate course for new mentor teachers hosting a preservice candidate and by 18 initial licensure teachers (4-12 grade) participating in a graduate course just prior to or during their first two year of teaching. In this pilot, the mentor role was filled by the faculty instructor of the graduate courses. Thus, experienced teachers learning about mentoring were themselves mentored by the instructor. Participating online was a component of the course grade but no set number, frequency, or timing of posts was required. This was to encourage authentic use and explore the value of the supports. Feedback was collected through interviews and recording of verbal comments throughout the semester. In addition, records of online conversations and identities were collected to determine how, when, and for what purpose teachers used ALCOT features.

Outcomes

One leverage point for developing conversations was the one-to-one conversations supported by the mentor-mentee journal. Here the course instructor/mentor provided direct questions for the teachers' response. In this way, teachers were first encouraged to post online. Over the course of the semester, teachers first posted simple responses to direct questions, then responses to follow-up questions (which they did not do initially), then began to post their questions, then information such as thoughts on class activities. The questions that prompted the most descriptive answers for experienced teachers were related to their classroom events. For initial licensure teachers, prompts regarding their course paper resulted in more detail and many follow-up questions from the teachers. One request was for the ability to post audio rather than text only so that the mentors or mentees could "talk" to each other. Both groups quickly used comments to post ideas in response to the leader's blog.

The leverage point for developing identity online was the group leader blog. In this blog, the group leader modeled blogging and took a lead in sharing ideas. Teachers were quick to post comments to the blog entries including thoughtful comments based on the ideas posed. Teachers reported and showed evidence in their posts of reading these entries regularly. Personal blogs, on the other hand were more challenging. Teachers did not know what a blog was and were unsure how or why to blog. Sometimes they posted random questions to their mentor on the blog rather than using the journal. They also did not necessarily understand they could post a blog without it being an instructor guided task. This challenge indicates that learning to blog, as a form of presenting yourself, will take more time than other types of online posts.

References

Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Teaching and Teacher Education, 20*, 107-128.

Berry, B. (2009). *The teachers of 2030: Creating a student-centered profession for the 21st century*: Center for Teaching Quality.

Davis, E. A., Smithey, J., & Petish, D. (2004). *Designing an online learning environment for new elementary science teachers.* Paper presented at International Conference on the Learning Sciences, Santa Monica, CA.

Farooq, U., Schank, P., Harris, A., Fusco, J., & Schlager, M. (2007). Sustaining a community computing infrastructure for online teacher professional development: A case study of designing Tapped In. *Journal of Computer Supported Cooperative Work, 16*(4-5), 397-429.

Fishman, B., Marx, R., Bobrowsky, W., Warren, D., Marrill, W., & Best, S. (2001). *Knowledge networks on the web: An on-line professional development resource to support the scaling up of curriculum enactment.* Paper presented at the American Educational Research Association.

Garrison, G. D., & Anderson, T. (2003). *E-learning in the 21st century*. London: Routledge.

Luehmann, A. L. (2008). Using blogging in support of teacher professinal identity development. *Journal of the Learning Sciences, 17*, 287-337.

Moore, J. (2002). *The inquiry learning forum: Online professional development with a community orientation*. Paper presented at the Society for Information Technology and Teacher Education, Chesapeake, VA.

Schlager, M., Farooq, U., Fusco, J., Schank, P., & Dwyer, N. (in press). Analyzing online social networking in professional learning communities. *Journal of Technology Education*.

Acknowledgements