Karen Goodnough
Memorial University of Newfoundland

Fostering a Community of Practice: Reflections on the Evolution of a Teacher Inquiry Group

Introduction

As a university researcher-teacher, I have been privileged to play a role in supporting the work of practitioners in science and technology education. In this brief report I use several of the ideas proposed Wenger, McDermott, and Synder (2002) on communities of practice to reflect retrospectively on the evolution of a teacher inquiry group, *Science Teachers in Action.*

Wenger (1998) uses the notion of a *community of practice* as an "entry point into a broader conceptual framework" that focuses on a social theory of learning. In this theory, learning is conceptualized as social participation; people come together to engage actively in the "practices of social communities" and to construct "*identities* in relation to these communities" (p. 4).

Communities of practice are "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger et al., 2002, p. 4). Communities of practice are ubiquitous, and individuals are often members of a variety of these communities. These authors believe that communities of practice can be cultivated through thoughtful attention to creating learning environments that value learning and provide support through resources, time, and the removal of organizational barriers.

Methodology

This naturalistic study draws from the qualitative, ethnographic tradition (Denzin & Lincoln, 2000; Wolcott, 1988). The study was conducted over a 10-month period from September 2002 to June 2003. Data collection sources and methods included participant observation (35 hours of audiotaped group planning sessions and field visits), documents (lesson plans and other teacher-generated materials), journals (generated by all participants), and audiotaped interviews (conducted at the beginning and end of the project). Many elements of the research design were emergent, and data collection and analysis occurred early in the process. In analyzing the data, I used grounded theory (Strauss & Corbin, 1998) to code raw data, generate categories, and establish broader categories based on emerging themes.

Results and Discussion

Wenger et al. (2002) propose seven design principles that can be used to cultivate the growth of communities of practice. I describe below how each principle emerged in our inquiry group.

Karen Goodnough is an assistant professor in science education. Her teaching and research interests include science instruction, problem-based learning, school-university partnerships, and teacher inquiry. She can be reached at kareng@mun.ca.

Design for evolution. To allow for evolution of our community, it was necessary for group members to have ownership of the process. Although I structured many organizational aspects in the early stages (meeting place, meeting times), this eventually changed. Flexibility allowed the group to make many decisions about their learning-choice of research topic, scheduling of whole-group sessions and individual sessions, and the types of support needed from external individuals.

Open a dialogue between inside and outside perspectives. As an academic (an outside perspective) who had facilitated many teacher inquiry groups, I helped group members develop an understanding of how to engage in action research. My inside perspective, developed after being a teacher for 15 years, helped me recognize the needs of the community, a necessity for a facilitator of a community of practice. As Wenger (1998) suggests, "only an insider can appreciate the issues at the heart of the domain" (p. 54).

Invite different levels of participation. Core community members were intensely involved in planning for and implementing classroom-based research projects, whereas other individuals, who were not at the core of the community, played an active role in contributing to our community. Two district-level consultants provided support and advice throughout the process, and school-based administrators provided moral support.

Develop both public and private space. In any form of teacher development, there should be opportunities for whole-group interactions (public meetings) as well as individual interactions. Through funded release time, group members were able to meet for six days for planning and sharing ideas. In addition, some release time was used so pairs or individuals could work together outside public group time. My role was critical during private time. Often I would meet individuals or with pairs at their school sites, or in other instances we communicated by telephone or e-mail.

Focus on value. After becoming more comfortable with the notion of action research, the teachers began without prompting to talk about the value of the community. One of the teachers shared her thinking at a meeting, "This is really valuable. Although learning about action research is challenging, I am learning about how different ways of differentiating instruction can be used in science so that students gain a better understanding of what is being taught." Through membership in this community, the teachers became more reflective about their practice and shifted their classroom practice to place more onus for learning on students.

Combine familiarity and excitement. After the third planning meeting, group members became more comfortable as rapport and trust developed. We were able to create a learning environment that fostered open discussion and provided a forum for sharing ideas. Excitement was integral to the group, and this manifested itself as the teachers gained insights into their practice. As well, our monthly agendas changed based on the needs of the community.

Create rhythm for the community. Wenger et al. (2002) refer to rhythm as the *beat* of the community. If participants do not have enough time to reflect on their learning, they can became overwhelmed. Similarly, if the pace is too slow, then interest can wane and members may become less engaged. For example,

two group members from the same school who worked on a common research question became frustrated with the overall process. They recognized the value of the community, but struggled with finding a research area that was exciting to them. Later in the project Ada admitted, "We were not convinced that our original question reflected the true needs of our classrooms."

Final Comments

Although communities of practice should evolve naturally, design principles can be instrumental in "energizing participation" (Wenger et al., 2002). The design principles proposed by Wenger et al. provide a practical, useful guide for those who initiate or facilitate professional development communities of practice.

References
Denzin, N.K., & Lincoln, Y.S. (Eds.). (2000). *Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Strauss, A.L., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). New York: Wiley.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity.* New York: Cambridge University Press.

Wenger, E., McDermott, R., & Synder, W. (2002). *Cultivating communities of practice.* Boston, MA: Harvard Business School Press.

Wolcott, H.F. (1988). Ethnographic research in education. In R.M. Jaeger (Ed.), *Complementary methods for research in education* (pp. 187-249). Washington, DC: American Educational Research Association.