

Online Communication and Collaboration in a Community of Practice for Teachers Professional Development

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Abstract: The purposes of this paper are (a) to introduce our BCT (Building Community through Telecollaboration) project that aims to encourage, facilitate and support collaboration among students, teachers and educational leaders to enhance learning across the community in Quebec; (b) to present a conceptual framework forming the basis of our participatory design research approach; and (c) to report our study of teachers' communication and collaboration in this community.

Introduction

The Building Community through Telecollaboration (BCT) project (<http://bctcollaboration.wikispaces.com/>) is a province-wide initiative with educators and administrators from English school boards in Quebec to build an online community of practice (Wenger, 1998) to support collaboration across Quebec for the just-in-time learning of ICT tools to involve students in collaborative projects. The project was initiated in 2007 within a *design research* approach (Bereiter, 2005; Brown, 1992) involving iterative processes of design – evaluation – revision, and close collaboration between teachers, administrators, a University-based research team, and a support team. Since 2009 (Phase 2), we have taken a *participatory design* research approach (Silva & Breuleux, 1994), which emphasizes the engagement of participants in the design process. To that end, we created a Leadership Team formed of the researchers, practitioners, and three lead teachers, who are the leaders of three Cycle groups of teachers. The Cycle lead teachers participated actively in the project development process as representatives of the participating teachers; they also facilitated communication and collaboration among the teachers in their Cycle group. Each group organized various collaborative classroom activities with ICT tools (e.g., WIKI, Blog, VoiceThread, Google Docs, Audacity, and Live Classroom) depending on the needs and the levels of skills of the participating teachers. The significant success of this shift toward a participatory approach and distributed leadership has motivated this report.

In addition, the research presented in this paper is situated within a conceptual and methodological context of innovation and ICT in schools, collaborative technologies, and collegial professional development through learning networks. Our work attempts to create and foster a culture of reflection and sharing among the network of teachers participating in the project to move from individual practice to collaboration, professional engagement, and teacher leadership. A particular focus is for teachers to share their practice through blended on-line and face-to-face communication. Our participatory design research approach was guided by the following questions: (a) How did the teachers communicate and collaborate in the BCT community?; (b) What are the characteristics of each Cycle group?; and (c) What factors might have influenced the Cycle groups' collaborative activities?

Methods

During the school year 2009-2010, approximately 40 teachers from 18 elementary schools registered in the BCT project. Data were collected from multiple sources:

- a) Discussion transcripts of BCT Discussion Forum;
- b) Sense of community (SoC) questionnaire (Lockhorst & Admiraal, 2009), Computer proficiency (CP), and Classroom use of IT (CU);
- c) Online surveys on using ICT tools;
- d) Needs assessments and Appreciative inquiry at the face-to-face meetings;
- e) Researcher notes on BCT face-to-face meetings and BCT Lead Team meetings (online & offline)
- f) Focus interviews with BCT teachers including the Cycle leaders, administrators, and practitioners.

The data obtained were analyzed by using mixed methods, including quantitative and qualitative approaches.

Findings

For the characteristics of members in each Cycle group, overall, the BCT teachers' levels of CP (3.90 out of 5) and CU (3.68 out of 5) are moderate, and there is a significant relationship between CP and CU. Cycle 3 is the (relatively) higher-competence group in CP and CU while Cycle 1 is the (relatively) lower-competence group in CP and CU. Actually, the majority of Cycle 1 teachers were newcomers to the BCT Project and also novices in ICT in the beginning of the school year. The results of the SoC Questionnaire (4.18 out of 5) reflect that a relatively positive sense of community has developed in their Cycle groups. Interestingly, we see a trend

towards an inverse relationship between the degrees of SoC levels of competencies in CP & CU, suggesting that some teachers who are already competent in CP and CU and able to implement classroom projects with ICT do it by themselves without collaborating with other BCT teachers. Hence, it raises questions as to how the ICT competent teachers can be integrated within the BCT community as well as novice teachers.

The BCT teachers interacted with each other online between the face-to-face meetings. We investigated their usage of the BCT discussion forums and their perceptions of using ICT tools for their online communication and collaboration. For the usage of the discussion forums, each Cycle group showed different interaction patterns. Cycle 3 represented a positive interaction pattern in a more ongoing and interactive way in comparison to those of Cycle 2 which was rather limited. In addition, the Cycle 3 teachers initiated a discussion topic not only on a specific collaborative project but also in relation to teachers' general practice while the Cycle 1 teachers used the discussion forum for sharing information and resources. In addition, each Cycle group's collaborative classroom projects can be found at <http://bctcollaboration.wikispaces.com>.

Overall, ongoing, interactive communication among BCT teachers did not take place as much as we expected. Time constraints were a major concern for teachers in relation to their online activities. BCT teachers prefer using Email to the discussion forum for interaction with other BCT teachers. Since it was the first year that the BCT discussion forum was introduced to the teachers, it is clear that they needed more time and considerable effort to learn how to use this new tool. In sum, online communication and collaboration in the BCT community has increased slowly but positively. BCT teachers have been more comfortable with using the discussion forum and posting messages, now it is time to encourage them to use it in more regular and interactive ways by offering a range of communication and collaboration activities along with clear guidelines and sensible deadlines.

Conclusions and Implications

Based on the findings above, we discuss some issues and suggest strategies for increasing and facilitating teachers' communication and collaboration in the BCT community along with plans for 2010-2011. Our reflection has focused on: a) how to satisfy the diverse needs of teachers with diverse expertise, b) jump starting and scaffolding a culture of sharing and reflection; and c) stimulating a higher level of participation on-line. There is a wide range of expertise across the group of BCT teachers. Hence, we need to consider how we can meet the needs of the many beginning teachers as well as those who are more advanced. The concept of *Cycle Leaders* allows the competent teachers to help/support others, develop their professional practice and knowledge, and contribute to the BCT community. Along with this, another form of relationship between competent teachers and other BCT teachers –namely, a *buddy system*– has been initiated in 2010-2011. As a CoP for teachers, it is crucial to develop shared visions and goals among members of the community –a *joint enterprise*– as well as to set individuals' personal goals. To do that, a *Self-reflection sheet* was developed to help teachers clarify and reflect on their own goals in the BCT project, level of ICT competencies, needs and expectations from the BCT community, and hence build common visions and goals of the BCT community. To encourage teachers' joint engagement, each Cycle group was asked to develop *Group Guidelines* through group consensus. The guidelines are expected to be effective in terms of teachers' self-motivation and self-regulation. In addition, the Leadership Team has made a particular effort in building trust and creating a safe, respectful, and supportive environment in the BCT community.

In sum, we add one more voice to the choral of remarks on how challenging it is to create a culture of sharing online about practice within a group of elementary school teachers. Our results, however, lead us to be optimistic about the potential success of the approach we have taken namely participatory design research. Therefore, this study contributes to advancing our understanding of an innovative educational research approach, namely *the participatory design research*, as well as our knowledge of the conceptual framework in relation to professional development through learning networks. In addition, the findings offer useful practical suggestions for supporting teacher collaboration which can be applied in other teacher communities of practice.

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