Developing Deeper Understanding through Online Discourse in In-Service Teacher Education

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Abstract A major challenge in online graduate education contexts is to create communities of inquiry characterized by critical discourse. Progressive discourse is a kind of critical discourse that deepens over time and is committed to idea improvement (Bereiter, 2002). In-service teachers, however, find such discourse difficult, with greater risk of being misinterpreted in text-based, asynchronous online discussion, and teachers’ discursive interactions in general shows a lack of direct advice or criticism (Kling & Courtright, 2003). Guidelines were provided to help students manage group discourse, problem finding, and problem solving. Students were also asked to make their learning goals public and use electronic supports called scaffolds. Some emergent recommendations include the usefulness of an educational intervention identifying clear guidelines for managing group discourse; having students publicly state their learning goals to highlight shared values among themselves and the instructor; and using scaffold supports in Knowledge Forum® to focus students’ reading and writing.

Introduction

A major challenge in online graduate education contexts is to create communities of inquiry characterized by critical discourse. Ideally, students engage in critical dialogue with faculty and peers to refine new understandings of professional practice and knowledge to enter into the larger academic community (Conrad, Duren, & Haworth, 1998). Progressive discourse is a kind of critical discourse that deepens over time and is committed to idea improvement (Bereiter, 2002). In-service teachers, however, find such discourse difficult. The reasons for this include the greater risk of being misinterpreted in text-based, asynchronous online discussion, and the fact that teachers’ discursive interactions in general shows a lack of direct advice or criticism (Kling & Courtright, 2003). While the problem is not unique to online contexts, it is particularly worthy of study given the affordances and constraints of using information and communication technologies. To this end, this study investigates how instructor-student dialogue supports in-service teacher students in developing deeper understanding through progressive discourse in three online master’s-level education courses using Knowledge Forum®, over the course of a school year. Quantitative and qualitative analyses of questionnaire, interview, and online discussion transcript data from this intervention study will form a part of a larger initiative towards understanding graduate research apprenticeship in online graduate education within the in-service teacher education program at the Ontario Institute for Studies in Education of the University of Toronto (OISE/UT), Canada.

Background and Rationale

Research suggests that electronic supports can increase the depth of student learning by reframing classroom discourse to support knowledge building (Scardamalia & Bereiter, 1994). Yet, students in online graduate education and professional development contexts tend to share and compare ideas rather than engage in systematic and sustained discourse for the social construction of knowledge (Gunawardena, Lowe, & Anderson, 1997; Kanuka
Anderson, 1998). Indeed, without considerable direction from the instructor, online discussions show low levels of participation and lack of continuity (Guzdial, 1997; Hewitt & Scardamalia, 1998). Recent studies analyzing the patterns and types of collaborative interactions to inform the design of instructional interventions further suggest that without the instructors’ explicit guidance and presence, in-service teachers were found to engage primarily in “serial monologues” (Pawan, Paulus, Yalcin, & Chang, 2003). Hence, it is important to understand how to instructor-student discourse can most effectively support in-service teachers in collaborative online discussion contexts.

Methods

Design research refers to iterative, situated and theory-based attempts to understand and improve educational processes; it is a methodology for carrying out studies of educational interventions (Collins, Joseph & Bielaczyc, 2004). This design research study uses an intervention adapted classroom activities designed for Woodruff & Brett (1999) intended to inform students’ perception of cooperation and trust needed to encourage community-building and critical engagement. Guidelines to help students manage group discourse, problem finding, and problem solving in online discourse were provided, and students were asked to make their learning goals public and to try using scaffold supports. Scaffold supports in Knowledge Forum are cognitive prompts designed to focus both the writing and reading process.

Participants

The sampling strategy was purposive and convenient (Creswell, 1998; Miles & Huberman, 1994), selecting participants enrolled in graduate education courses, and who were willing to speak at length and share ideas about their learning experiences. 30 participants (24 female, 6 male) were recruited from two master’s-level educational technology courses using Knowledge Forum. The first course was a face-to-face course using online discussion in mixed-mode and the second was a fully online course. 13 participants were in academic (12 M.A., 1 Ph.D.) and 17 participants were in professional (13 M.Ed., 1 M.T., 3 Ed.D.) degree programs. Additional participants will be recruited from another online master’s-level course using Knowledge Forum beginning in January 2005.

Measures

The mostly closed-ended questions on the online questionnaire obtained descriptive information about the participants’ demographic background; computer skills; previous experiences with collaboration; and perceptions of the asynchronous online discussion forum. These data are complemented by nine individual pre- and post-intervention interviews that were audio-taped, transcribed, and analyzed for patterns of online discourse. The first set of interview questions were focused around the following areas: the students’ reading strategies; students’ writing strategies for new notes and build-on notes; students’ critical interactions with peers; collegial and collaborative group processes; and the instructor’s influence on students’ critical engagement. In addition to these questions, the second set of interview questions asked participants about their perceptions of the usefulness of the educational intervention identifying clear guidelines for managing group discourse and the effect of using scaffold supports for their learning.

Online discussion transcripts were automatically-recorded and machine readable; thus, they provide a rich and compelling record of the in-service teachers’ interactions with their instructors and peers. Quantitative analyses of the students’ reading, writing, and patterns of interaction, as well as the development of qualitative discourse analysis measures are currently in progress.

Results and Discussion

This paper reports preliminary findings from the qualitative pre- and post-intervention interview data to understand how instructor-student discourse can support in-service teachers develop deeper understanding in master’s education courses using Knowledge Forum. Challenges faced by instructors and students included students’ relative inexperience with online discourse for those in the mixed-mode course, and negative previous experiences with collaboration for those in the online course.
New online students had to develop effective strategies to read and write new and build-on notes in order to avoid information overload and to participate in a timely manner. By logging in to Knowledge Forum early and regularly during the week, they were better able to contribute substantively and receive more satisfactory peer feedback necessary to improve their ideas. Many students selected notes to read by looking at the titles of others’ discussion notes, although the majority of students stated that they read all of the notes in the order that they appeared in threaded online discussion. Students wrote build-on notes in response to interesting ideas or the content in others’ notes, but many also associated certain classmates with presenting and responding with good ideas. A number of students suggested that they engaged more critically and built-on to notes containing ideas with which they disagreed, rather than those containing ideas with which they agreed. Still, other students pointed to feeling anxious or intimidated about disagreeing in online discussion, and many stressed the importance of acknowledging the strengths of their peers’ ideas before expanding on them.

Students who shared negative previous experiences with collaborative discussion frequently cited low levels of social presence (Short, Williams & Christie, 1976), leading to a feeling of a lack a sense of community in the online context. Students were hesitant to engage in progressive discourse to “push ideas to the edges of what you know” when they “don’t know a person well or don’t really trust them.” Students explained that they did not always feel confident about their level of understanding of course material, writing ability, or computer skills with advanced functions of Knowledge Forum. A few students also confided that unless they were leading the week’s discussion, they did not initiate new notes that set forth their ideas and did not yet see their role as one that encouraged peers to share in the overall advancement of knowledge in the community. This suggests that these students were beginning to embrace “epistemic agency” and “collective cognitive responsibility” (Scardamalia, 2002) as discussion leaders, but need to demonstrate understanding of these knowledge building principles in their regular online participation.

In spite of these challenges in the asynchronous online discussion database, the majority of students felt that Knowledge Forum provided a virtual space where their instructors encouraged them “to contribute to the online knowledge building process.” Students were able to pose thought-provoking questions that connected ideas from course readings to key course concepts, other readings, and class discussions to deepen mutual understanding through progressive discourse over time. Alternatively, they posted their ideas from the readings and added general questions such as “Any thoughts?” or “What do you think?” to encourage peer interaction. Still, students suggested that they would feel more encouraged if their instructor interacted with them more, perhaps as one student said, because “students always attach more value to what the instructor says.”

The educational intervention asked students to make their learning goals public; to ascribe to the guidelines for managing discourse; and to try using scaffold supports in their contributions. Students found that making their learning goals public was motivating and helpful to their own learning and helped them to get to know their classmates better. Further, those with previous experiences with knowledge building and collaboration began to understand how these individual goals fit into the shared values of the class as a collective. The guidelines for managing discourse were helpful, especially for those who were new to online discourse or who perceived the asynchronous online discussion form as having low social presence. Many students, particularly in the online course, tried using the scaffold supports, and almost all students saw the potential of scaffolds to focus and organize their thinking while writing notes, if somewhat visually distracting when reading notes.

Conclusions and Implications

The following recommendations emerge from these data: to support in-service teachers deepen their understanding through online discourse using a knowledge-building approach, an educational intervention identifying clear guidelines for managing group discourse would be useful, especially for students who have not yet developed online expertise; having students publicly state their learning goals may highlight shared values among themselves and with the instructor; and the using scaffold supports in Knowledge Forum could improve students’ reading and writing in the asynchronous online discussion to support the development of progressive discourse.

References


