Dialogues in Promoting Knowledge Construction

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Abstract: The purpose of this paper is to examine how different types of dialogues promote knowledge construction in an online course. Findings show that the instructor was able to design online discussion questions that balanced the grounding dialogue, critical dialogue and reflective dialogues. Three types of dialogues were interwoven to help students understand the topics from various dimensions. Giving students freedom to select readings and discussion questions, creating a safe environment, and providing practical and controversial materials allowed space for different types of dialogues to flourish, and was found to be crucial for stimulating active and proactive knowledge sharing and creation.

Keywords: Grounding dialogue, reflective dialogue, critical dialogue, knowledge construction, knowledge sharing, online learning

The Purpose of the Study

The topic of knowledge construction has been broadly explored in different learning contexts from varying perspectives. For example, Schwarz, Dreyfus, and Hershkowits (2004) were interested in the role of teachers in constructing knowledge in classrooms. Their study indicates that "guidance in construction of knowledge relies on how the teacher designs dialogue types, which teaching methods she implements in these dialogues, and to what extent she attends to students' epistemic actions in the classroom" (p.176). In this paper, I am interested in how different types of dialogues contribute to students' knowledge construction.

Literature Review

Knowledge from the tacit to the explicit is an abstract process. It extracts and categorizes the concrete examples into commonalities which are decontextualized and can be shared and transmitted in public (Hershkowitz, Schwarz, & Dreyfus, 2001; Rosch & Mervis, 1975).

Different tools can facilitate learners in constructing knowledge (for example, Enyedy, 2003; Farell & Holkner, 2002; Fisher, Bruhn, Graesel & Mandl, 1999). Communication is an important tool to construct and transfer knowledge among learners. Communication includes nonverbal forms such as gestures, smiles, and frowns and verbal forms such as dialogue, talk, and speeches. Types of dialogue, discussion, and social interaction patterns influence how knowledge is constructed. For example, inspired by Mercer's (1995, 1996) talk categories, Schwarz, Dreyfus and Hershkowits (2004) proposed several kinds of classroom dialogues, such as grounding dialogue, critical dialogue, and reflective dialogue.

In grounding dialogue, the teacher presents a topic and students share common knowledge. In critical dialogue, students challenge each other's views, understand and accommodate divergent viewpoints, and develop new ideas, and the teacher supports students' argumentation and knowledge construction. In reflective dialogue, students "integrate and

generalize accepted arguments. They recapitulate actions and draw lessons from their experiences" (Schwarz, Dreyfus & Hershkowits 2004, p. 170), and the teacher helps students draw conclusions. In reflection, experience is re-thought in order for the perspective to change and the practice to improve (Freed, n.d.).

Different types of dialogues play different roles in facilitating knowledge construction. For example, grounding dialogue is good for knowledge sharing, while reflective dialogue can facilitate learners to create knowledge and generalize practical examples into explicit knowledge. Reflection is to evaluate, synthesize and abstract the concrete examples shared. It reveals the important features and relations which are neglected in abstract and explicit knowledge. This meant that:

> we emphasize and utilize critical and reflective thought and attitude toward what we do and why we do it. We interpret what we do and why we do it by involving ourselves and others in conversation, debate, and reflection on individual and collective understandings. We value the importance and relationships of all parties involved. (Bowne, Cutler, DeBates, Gilkerson, &Stremmel, 2010, p.49)

Critical dialogue enables learners to challenge the ideas and clarify the complex puzzlements. Based on the theories of constructivism, Hammer and Collins (2002) reported how students in a graduate education seminar constructed knowledge with different types of dialogues. Their findings indicate that educators should use different types of interactions based on participants' different knowledge levels and different learning purposes.

Methodology

I employed three types of dialogues in one graduate level online adult education course: Grounding dialogue, critical dialogue, and reflective dialogue. Thirteen students participated in the course activities. There were three types of assignments in this online course: the weekly online discussions, the project-related assignments, and the course reflections. Data collected include some posts and comments submitted in weekly online discussions, and interviews from nine students about their learning experiences, individual students' mid-term course reflections and final reflection papers, as well as the monthly summaries. Data from interviews are supplementary data which helped me understand how dialogues in online discussions and in blogs help students gain new knowledge. Data were analyzed with the constant comparison method, with the three types of dialogues as a framework to guide me in identifying, comparing, and generalizing the categories and constructing the themes from the data (Boeije 2002; Frame 2013; Strauss & Corbin 2008).

Findings, Conclusions, and Implications

Students developed different ways of sharing knowledge in grounding dialogues. They either shared similar ideas with their peers, or they constructively added more meaning to their peers' posts, or they reinterpreted their peers' ideas and added nuanced meaning to them. Some students explored outside reading materials, which greatly increased the richness of the topics. Several types of students played a significant role in the grounding dialogue. They are: knowledge providers (students who provided large amounts of information about the topics), questioners (students who asked questions), and connectors (students who connected the

common points across the postings). Connectors used examples, practical cases, explanations, and summaries to fill the knowledge gap across the posts, connect the dots among the dialogues and helped other students make connections among various posts. These different ways of constructing knowledge in grounding dialogue are consistent and complementary to Aalst's (2009) idea that the process of knowledge construction includes explanation- seeking questions, interpretation and evaluation of new information, and the sharing and testing of ideas. Knowledge was continuously created and shared in ongoing discussions and the dynamics of the online dialogues were active.

In grounding dialogue, knowledge is shared and expanded, which is a basic level of constructing knowledge. Knowledge construction at a higher level stage can lead to substantial knowledge restructure and the creation of a new concept (Aalst, 2009). In online discussions, the instructor provided controversial materials and practical cases to intrigue students' divergent viewpoints, which broadened students' perspectives and greatly deepened their understanding of the theoretical topics. However, in an online environment, some students were cautious to not directly post divergent opinions when they replied to their peers' posts. Some students disagreed with other students by first agreeing with them in general, and then explaining the ramifications of their own opinions. There were only a few students who directly broke the flow of the convergent dialogues and gave divergent opinions. Many reasons may prevent students' critical and proactive dialogues. Some students mentioned that since this is an online course, there was a lack of physical contact and synchronous communication. Students could not see each other's body language, and they did not know how other students would take their criticisms. Therefore, when students commented on others' posts, they deliberately avoided direct disagreement or criticism. When students did not trust and did not have a certain level of comfort, they did not want to give divergent opinions. Sometimes, even if students trusted the environment, they had different levels of openness about what to say and what not to say.

In reflection, we recapitulate our actions and draw lessons from our past experiences (Schwarz, Dreyfus & Hershkowits 2004). Students' comments on their classmates' monthly summaries were mainly about emotional and social support, which are necessary for creating a collaborative and personalized learning environment behind the "cold" computer screen. However, the value of reflection is more than just giving emotional and social support. In the monthly summaries, each group shared some tacit information about the process of how they conducted their projects in different ways, how they handled difficult situations, and how they comprehended the course materials, etc. This helped students revisit and evaluate their learning experience, conceptualize the values and lessons gained in their learning, discover their learning gap, and synthesize, abstract, and interpret the rationales of what they did and why they did it in certain ways (Bowne, Cutler, DeBates, Gilkerson, & Stremmel).

The instructor designed the discussion questions which balanced the grounding dialogue, critical dialogue and reflective dialogue. Three types of dialogues were interwoven in weekly discussion questions to help students understand the topic from various dimensions. If students lack the basic foundational knowledge, they can hardly have a clear knowledge map about the weekly topics, not to mention criticizing and debating them. In designing the questions, the instructor started with questions which led to grounding dialogues, and then based on the knowledge gained from the grounding dialogues, the instructor designed questions to trigger

critical dialogues. The instructor required students to use examples, experience, and practical cases to explain their viewpoints, which helped students understand the abstract constructs of the topics in authentic contexts. The instructor also gave students freedom to choose which questions to answer, which posts to comment on, and which articles to read. Students had a choice of creating their own questions or to reflect on what they learned each week. Giving students freedom greatly promoted the active online dialogues and gave space for different types of dialogues to flourish. Students at different learning levels could contribute to the online discussions in certain degrees. The students' weekly discussions were very productive, both in quantity and in quality.

The study contributes to the practice of knowledge construction in an online learning environment through different types of dialogues, which supports some scholars' ideas of how to construct knowledge through social interactions, personal reflection and experience sharing (For example, Tee & Karney, 2010; Tsoukas, 2003). The study indicates that in addition to knowledge sharing, students also need deeper reflections and critical evaluations to understand and create the deeper meaning of the knowledge (Aalst, 2009; Schommer, 1990). To help students to construct knowledge, instructors need to design the course by considering students' interests, their prior knowledge, and immense histories of life experiences. This study provided some experience of how to do so by employing three types of dialogues (Aalst, 2009).

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