Knowledge Building in Process: Adult Learners’ Perceptions of Participating in Collaborative Knowledge-building Communities

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Abstract: This study examines the process of participating in online collaborative knowledge-building communities from the perspectives of the learners involved. It questions the idea of online learning communities and reports on the lived experience of students as online learners and the challenges and struggles of trying to build community.

Introduction

Although the discourse on online learning seems to embrace cooperative and collaborative approaches to learning assessment, discussion has not moved toward the higher level of learning—knowledge generation, which adds to the existing content in a given field (McConnell, 2006; Sorensen, 2005; Barab, MaKinster, & Scheckler, 2004). For example, a discussion board might be thought of as a place for individual performance within a cooperative learning environment in that the dialogue helps individual students better understand the content or gain more insight into its application or implications. In that scenario, the task of the discussion board is to help the student master content as prescribed by the instructor (Rockwood, 1995). Discussion spaces, including wikis, can also be thought of as tools for collaborative learning and knowledge building.

The term knowledge building has been used to refer to task-based and problem-solving groups and seems to involve the application of existing content to novel situations. However, knowledge building as a learning activity is a different process. Knowledge building is an act of creation that stands apart from its creators. Participation and engagement produce a collective understanding of an issue, phenomenon, or situation. In the classroom, the thoughts that emerge are new to the learners, superior to their previous understandings, and for the good of all (Bereiter, 1994; McConnell, 2006). Knowledge building goes beyond sharing of thoughts and moves toward new collective thoughts that can emerge only in a community committed to pushing the basis of existing knowledge and learning ideas for others to expand further. In that way, knowledge-building communities differ from communities of practice (Lave & Wenger, 1991), which are voluntary and unite people engaged in the same occupation or career, and task-based communities, which produce a specific product (Riel & Polin, 2004). Knowledge-building communities are appropriate when the subject matter is issue- or problem-focused rather than foundational.
Method and Procedures

This study explored two research questions: (1) What occurs in an online course that moves learners from information acquisition or task completion to knowledge building? (2) What might help groups move from repeating what is known to advancing new ideas? This study investigated learners’ perceptions of how they participated in an online, collaborative learning experience with knowledge-building as the outcome. Volunteers ($n=11$) in two courses at two Midwestern universities participated in interviews about their online group learning experience. Three researchers read the interview transcripts and assigned themes. Coding was based on a system of category, definition, and indicators. To analyze the process of knowledge-building, the researchers explored the development or lack of development in participation, collaboration, and achieving shared understanding.

Building Knowledge in the Classroom

During the knowledge-building process, learners move from seeing themselves as individuals to identifying as part of a group. Building knowledge collaboratively involves six stages: committing to learn, becoming ready to participate, connecting to collaborate, achieving shared understanding, seeking community review, and making knowledge claims. The instructor’s role is to provide coaching in content and in the knowledge-building process (see figure 1).

**Committing to Learn**

Committing to learn involves coming to the learning experience mindfully. Mindfulness involves the willingness to apply cognitive energy to engage with the thoughts of others, looking beyond the obvious, and responding with vigor and rigor (Langer, 1997).

**Becoming Ready to Participate**

The foundation of the collaborative knowledge-building process is the members’ readiness to participate. A number of researchers have described the importance of participation as a factor in developing and maintaining knowledge-building communities (Lock, 2002; Wanstreet & Stein, in press). Based on the literature and a thematic analysis of interview transcripts, this study defines readiness to participate as learners becoming engaged with others and generating the situations to be discussed. Learners reported becoming ready to participate by creating a welcoming climate, establishing relationships, feeling emotionally and cognitively comfortable, and formulating initial thoughts on the discussion topic.
Creating a welcoming climate. Socializing at the beginning of the course was necessary to create a welcoming climate. Initial connections structured into the design of the course helped learners identify similar interests and goals that helped them come together as a team.

Establishing relationships. Establishing relationships involves genuine caring and withholding judgment (Belenky, Clinchy, Goldberger, & Tarule, 1986). Group members who had difficulty establishing relationships reported dissatisfaction with the learning experience.

Feeling emotionally and cognitively comfortable. Feeling emotionally and cognitively comfortable about participating in a discussion includes feeling as though your input will contribute to the understanding of the group. Comfort evaporated when group members were perceived as untrustworthy. Experience in collaborative learning—or lack thereof—has an effect on cognitive and emotional comfort.

Formulating initial thoughts on the discussion topic. Readiness to participate means that learners are prepared to engage in the dialogue and create an understanding that addresses the issue in novel ways (Cosier & Glennie, 1994). Formulating initial thoughts in advance of the discussion contributed to learners’ preparedness and ultimate satisfaction with the knowledge-building process.

Readiness to participate is reflected in the willingness of group members to get to know one another and the course material in a way that supports collaborative learning. Being unprepared, uncomfortable, or noninclusive hinders participation and the ability of the group to achieve an understanding of the content that is shared by all.

Connecting to Collaborate

Collaborative learning takes place in academic spaces that recognize learners as co-producers of knowledge. To generate knowledge in a collaborative fashion means acquiring new skills, including the ability to work in groups with persons of various backgrounds; to communicate effectively, both orally and in writing; to combine independent and interdependent work to produce a meaningful outcome; and to use social networking and collaborative software (Lipponen, 2002). Establishing a collaborative environment that leads to shared understanding requires ample dialogue that connects group members with one another to explore and understand various perspectives deeply (Stein et al., 2007). Based on the literature and thematic analysis of interview transcripts, this study defines connecting to collaborate as dialogue that supports a knowledge-building experience. Learners reported connecting to collaborate by brainstorming, exploring all points of view, challenging perceptions, ensuring equality of voices, and stretching individual perspectives to embrace others’ perspectives.

Brainstorming. Brainstorming, exchanging ideas, and making suggestions are necessary for collaboration and knowledge building to occur (Wanstreet & Stein, in press). Exchanging ideas led to knowledge construction through deep and meaningful interactions during regularly scheduled chats, telephone conversations, e-mail messages, and asynchronous discussion board postings.

Exploring all points of view. Exploring perspectives in depth supports meaning-making through sustained communication (Garrison, Anderson, & Archer, 2001). Through discussion and feedback, divergent points of view lead to additional exploration.

Challenging perceptions. Learners in this study felt their learning was strengthened through interactions that challenged their viewpoints. When challenging another group member’s
perceptions is not done with tact, however, the collaborative connection is strained. A challenge without empathy can be interpreted as rudeness and damage the climate for participation.

*Ensuring equality of voices.* To be a safe place for thinking, an online learning environment should provide opportunities for multiple voices to be heard (Turpin, 2007). Equality of voices can be compromised, however, by language barriers that are perceived as an individual shortcoming and not as an opportunity for the group to draw in participants.

*Stretching individual perspectives to embrace others’ perspectives.* Collaborative connections are enhanced by embracing others’ perspectives (Belenky et al., 1986).

Brainstorming and exploring all points of view are ways of connecting to collaborate that help group members stretch their perspectives. Group members who buttress their positions with examples from the readings contribute to the empirical testability of their discourse. Learners who were not willing to explore all points of view engaged in shallow discussions that could not lead to shared understanding and knowledge building. The performance of the groups in relation to connecting to collaborate was uneven, which ultimately affected their ability to come to a common understanding of the issues and possible resolutions under discussion.

**Achieving Shared Understanding**

Shared understanding is a new perspective that did not exist before the group’s discussion and that the group members come to accept as their new position and meaning. Shared understanding is the result of knowledge building. Achieving shared understanding is difficult to do in a classroom situation with contrived groups of learners who may not be committed to collaborating.

**Seeking Community Review**

Seeking community review is similar to the vetting process in academic publishing or in communities of practice. The community asks whether the work adds to the canon of knowledge, is novel, includes relevant prior work, presents information clearly, and makes reasonable and supportable claims.

**Making Knowledge Claims**

A knowledge claim pushes the group’s understanding about an issue beyond the existing public knowledge. A knowledge claim is a way to understand an issue that improves on earlier ways of understanding and that can contribute to the learning of another group.

**Conclusion**

The promise of knowledge building lies in its dual capability to support the collective learning of future learners by building on the information artifacts produced by present learners and improving upon what is known about a subject. Electronic tools for sharing emerging thoughts facilitate knowledge building and expand its reach outside the immediate classroom. However, it is the mind-set of instructors and adult learners more than the technology that helps or hampers the knowledge-building process.

To help adult learners move from repeating what is known to creating and testing new ideas, a collaborative knowledge-building framework that accounts for participation, collaboration, and shared understanding could be used. Becoming ready to participate in collaborative knowledge building is the foundation of the framework and involves climate
setting, establishing relationships, feeling emotionally and cognitively comfortable, and formulating initial thoughts on the discussion topic. Connecting to collaborate is achieved by brainstorming, exploring all points of view, challenging perceptions, ensuring equality of voices, and stretching individual perspectives to embrace others’ perspectives. Shared understanding is individual and collective ownership of a new perspective accepted by the group.

The problem with online learning communities, as these results illustrate, is the difficulty in generating knowledge, given an artificial classroom situation, time constraints, and a lack of commitment to the ideas of progressive discourse. Learners in this study were primarily concerned with sharing information rather than with adding to the existing content in the field. To assist the knowledge building process, instructors could conduct discussions around the idea of commitments when setting norms. These commitments include working toward mutual understanding, framing arguments in ways that can be supported by evidence, expanding the scope of propositions the group considers valid, and being open to critically examining any stance that will advance the discussion (Bereiter, 1994). In order to make those commitments, adult learners must accept the idea of distributed learning and understand that they each play a part in it, not only within their group but within interlocking groups in the class. In that way, knowledge building will support the collective learning of the present group as well as future learners.

References


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