A Qualitative Exploration of the Social Interaction in an Online Learning Community

Haidong Wang
The University of Georgia

Focusing on the social and interpersonal interaction in an online M.Ed. degree program, this qualitative study explored the development of social and affective connections, the learners' participation in online communication, and the impact of social interaction on students' learning. Three students from this program were selected and interviewed. Data were collected and coded to summarize the main themes. The findings reveal that the social interaction in an E-learning community has different features than the social interaction in a face-to-face class. This study suggests that being supportive and contributive is the starting point of developing good relationships, that students participate in social communication on different levels, and that social interaction facilitates students' online learning in a variety of ways.

Keywords: Social Interaction, Learning Community, Online Learning

INTRODUCTION AND THEORETICAL BACKGROUND

Online learning has grown prolifically in school instruction and corporate training during the past decade. To develop a successful online course, many scholars (e.g., Hiltz, 1998; Lally & Barrett, 1999; Palloff & Pratt, 1999; Russell, 1999; Russell & Ginsburg, 1999) suggest that building and sustaining an online learning community is crucial and necessary. Research indicates that a learning community can not only increase persistence of students in online programs, but also enhance information exchanges, learning support, group commitment, collaboration, and learning satisfaction (Dede, 1996; Stein & Glazer, 2003; Wellman, 1999). Palloff and Pratt (1999) assert, "the learning community is the vehicle through which learning occurs online. Members depend on each other to achieve learning outcomes for the courses online…. Without the support and participation of a learning community, there is no online course" (p. 29).

Haidong Wang is in the Department of Lifelong Education, Administration, and Policy of The University of Georgia. Please contact the author at Department of Lifelong Education, Administration, and Policy, The University of Georgia, 850 College Station, River's Crossing Athens, GA 30602-4811, E-mail: wanghd@uga.edu

An online learning community is usually comprised of a technical platform, learning tasks, and social interaction among the students (Carabajal, Lapointe, & Gunawardena, 2003; Tu & Corry, 2002). According to Carabajal et al., there are three dimensions of an online community: a technological dimension, a task dimension, and a social dimension. Technology provides a gathering place and communication tools that make the teaching-learning transactions possible. The task dimension includes the learning content, materials, resources, and activities used in the courses. The social dimension refers to participants maintaining some degree of mutual caring and understanding through frequent interaction. During the online learning process, members of a student group develop a sense of belonging, social-emotional bonds, and good relationships. Tu and Corry (2002) propose a similar theoretical framework that includes instruction, social interaction, and technology as the three major dimensions of their eLearning community.

Using multiple tools — such as Bulletin Boards, chat rooms, HorizonLive, listservs, and email — online communication consists of content-related communication and social communication. Casual chatting, or other social communication that is not directly related to learning tasks, can provide the online learners with support and help keep the group together, thereby contributing to their learning process and outcomes. Thus, the social aspect is a crucial component of an effective learning community. Harrisim, Hiltz, Teles, and Turoff (1995) explain that "computer-mediated communication is capable of supporting socio-emotional communication as well as task-oriented communication; in fact, without personal communication, the group will not be nurtured" (p. 277). They further explain their point regarding the importance of social communication:

> Social communication is an essential component of educational activity. Just as a face-to-face school or campus provides places for students to congregate socially, an online educational environmental should provide a space, such as a virtual café, for informal discourse…. The forging of social bonds has important socio-affective and cognitive benefits for the learning activities. (p. 137)

In examining how social relationships or connectedness develops online, Cho (2002) found that there are structural factors (e.g., a pre-existing friendship network) and psychological factors (e.g., individual communication styles) that influence the formation of collaborative learning and working networks. In their study of an online course, Harmon and Jones (2000) report the phenomenon of fast friendship (i.e., sharing suffering and working at a distance tend to push students to quickly form strong bonds) and being overwhelmed (the amount of time required and the feeling of being hopelessly behind others) among the online learners. These reactions may rise from the psychological and emotional pressures resulting from independent learning at a distance, especially when students sit before a computer screen alone most of the time. To cope with these problems, Lally and Barrett (1999) suggest that instructors provide more opportunities for socio-emotional discourse and networking among the learners. In fact, the lack of the social communication of an online course may hinder the maintenance of the group's well-being, and the development of necessary support for the members may facilitate group decision making and problem solving (MacDonald & Gibson, 1998). Orey, Koenecke, and Crozier (2003) found that if a learning community has not developed in an online course, the students tend to receive help from family members, colleagues, or friends and build a supporting community offline.

Viewing social presence as a key predictor for the effectiveness of the online community, Tu (2002) developed a survey instrument to measure the social presence of distance learners. He found that three factors influence the students' social involvement behaviors: social context, online communication and interactivity, and online privacy with regard to sharing personal information. Regarding the amount of social communication, Huang and Wei (2000) found that only 40% of face-to-face group

interaction time is spent on task-focused interaction, implying that more than half of a group's communication is off-task. Oren, Mioduser, and Nachmias (2002) conducted a series of five studies on the development of the social climate of virtual learning discussion groups in online learning environments. These studies echo the findings of other researchers. In each of the discussion groups in their research, a social activities layer gradually emerged, fulfilling an important role in supporting the learning group's work, as evidenced in the content of more than one-third of the messages in an asynchronous environment.

Since social interaction appears to be significant for group maintenance and beneficial for students' online learning, many instructors use explicit or implicit strategies to foster this kind of communication in their online instruction. Haythronthwaite (1998) reports using face-to-face introduction activities, such as an on-campus boot camp, that was effective in initiating relationships and feelings of community. Bowman (2001) recommends pairing students during the first unit of the online class so that the pairs can communicate with each other later and learn together. Day (2004) suggests establishing ground rules in the welcome/introduction text so that the students understand that their commitment to the online discussions is important. A study by Woods and Ebersole (2003) demonstrates that using no-subject-matter-specific discussions may reinforce positive social relationships. They report that the use of four personal discussion folders (Autobiographies, Cybercafe, Devotionals, and Prayer Requests) in their online instruction contributes initially to building a positive faculty-student relationship, resulting in a greater sense of community.

Through a brief review of the literature, it is clear that many studies on online education concentrate on course content development from the instructor's perspective and emphasize the technical interface and instructional tasks. There are few empirical studies on the development of social interaction in an online community from the students' perspectives and on the impacts of social communication on students' learning. As Carabajal et al., (2003) note, "large gaps exist in our understanding of the impact of the social dimension, input variables and the impact of these contingency factors on learning outcomes" (p. 231). This suggests that further research efforts should be made to explore the development of social interaction in E-learning communities.

In response to the call for exploration, this research study focused on the social and affective dimensions of the online learning community. Specifically, the purpose of this study was to explore the features, levels, and related issues of the development of social and affective relationships in an online learning community, and their influence on students' online learning processes and outcomes. The investigation was guided by three primary research questions:

1. How are the social and affective relationships developed in the online community?
2. How do the learners participate in the social communication?
3. How does social interaction influence students' online learning process?

RESEARCH METHODS AND DATA COLLECTION

In order to investigate the social and affective interaction among students in an online learning community, a qualitative study was employed by the researcher and semi-structured in-depth interviews were conducted with three adult students who were registered in an online M.Ed. program in the Department of Adult Education in a public university in the Southeast.

PARTICIPANTS

These three students were purposefully sampled (Patton, 2002) from an online research methods course in the spring of 2003. There were 16 adult students (11 female and 5 male) in the class. The selection was mainly based on two criteria: (a) students' participation level and (b) representativeness of the group demographic. The first criterion involved students' participation levels in the online discussions as evidenced by their postings on the course WebCT bulletin board. For example, Tom was one of the very active and popular members of the class, and he posted many more messages than most students in the class. On the contrary, Chin was not active in the online discussions and usually posted the minimum number of messages required. Ellen represented the large fall-between group who participated in the online discussion to a moderate degree.

The second criterion for participant selection involved representativeness of the whole class demographic. Chin represents the international students, while Ellen and Tom represent most domestic students from the United States. Gender and profession factors were also considered in the participants' selection. The profile information for the three research participants is briefly displayed in Table 1.

Table 1. The Profile of the Three Participants

Name	Gender	Race	Age	Profession	e-Learning exp.	Active level
Chin	Female	Chinese	25-30	Full-time student	2nd semester	Not active
Ellen	Female	Caucasian	over 40	Teacher	3rd semester	Active
Tom	Male	Caucasian	50-55	Consultant	3rd semester	Very active

PROCEDURE

A semi-structured interview was conducted with the three selected participants individually at convenient times and locations. That is, the researcher interviewed the participants based on a list of questions expanded from the three primary research questions. The questions were open-ended, which allowed the participants to freely express their experiences, thoughts, and feelings about their online learning experience. Follow-up questions were improvised during the interview. Each interview lasted approximately 90 minutes and was tape-recorded.

DATA ANALYSIS

The researcher transcribed the audiotapes and coded the data pool with reference to the three research questions in order to summarize the main themes. Through repeated reviews of the interview data, four major themes related to the research questions were summarized and reported in the section below. In reporting the research outcomes, pseudonyms were used to protect the students' privacy. It should be noted that the interview with Tom was conducted via telephone, as he had moved to another state at the time of the interview. This interview was not as effective or productive as the face-to-face interviews, so less data from his case was used in reporting the research findings.

FINDINGS AND DISCUSSION

Four themes emerged from the data analysis with reference to the research questions. The findings of this study indicate that (a) online communication reveals different

features than classroom communication, (b) a good relationship comes from being contributive and respecting others, (c) there are three different participation levels among the students, and (d) social interaction can facilitate online learning in a variety of ways. Each of these findings will be discussed in this section.

THE COMMUNICATION IN AN ONLINE ENVIRONMENT REVEALS SOME DIFFERENT FEATURES

The participants were strongly aware of the differences between online learning and face-to-face learning. They frequently compared these differences during the interviews. In their opinion, online learning provides them with greater opportunities to participate. As Chin said, "Everyone expressed their opinion freely…. There are no such kinds of embarrassment if you cannot answer the teacher's questions like in face-to-face class." She also mentioned that the bulletin board gives students time to deliberate on posted questions, which leads to quality postings. However, the disadvantages of online learning are also apparent. Chin noted that she could not keep up with the fast typing during the online chats. Because the topics changed quickly, when she had something ready to express, the topic had often already changed. This was a frustrating experience for her. Ellen mentioned that losing social cues and context information made the online conversation difficult to follow and made it easy to misunderstand each other. In her interview, Ellen said the following:

> By that I mean it is easy to misinterpret what somebody has written, because you can't see their faces, so you don't know when they are joking, or if they were angry (facial expression), or they were just commenting on that. You can't hear their tone of voice, so you don't know if they are being sarcastic, you don't know if they are trying to be ironic. The fact you can't see their faces and hear their tone of voice, you have to be very careful with the words you choose. You need to communicate with the points; otherwise it is easy to misunderstand. And we had that happen sometimes, and we had to go back and clarify with each other by saying, 'No, no, no; that is not what I mean.'

Ellen warned online learners to be very careful about the language they used in communication. Another feature of the online communication, as Ellen discovered in her group, is that people are more willing to express strong opinions than they would be in face-to-face classrooms. These opinions were probably close to their real thoughts, reflecting what they really wanted to say. Ellen explains this phenomenon:

> The other thing I find is, people are more willing to express strong opinions, because they can't see (other) people, they are not going to be embarrassing the other people. They have no time to think what others' responses are going to be. So I think people are all out to offer very strong opinions on the online discussion, or stronger than they would be in the face-to-face communication.

The distance between students protects online learners in some sense, giving them more flexibility and freedom to control their own learning. In short of the visual and auditory clues and the timely feedback from other classmates, they tend to express their real thoughts about the discussion questions, with a tendency to neglect social etiquette and "face" politeness from the classroom discussion. This feature appears to stimulate critical thinking and deep, meaningful learning (Carabajal et al., 2003). However, the paucity of visual clues perceived in the context provided through live classroom information also makes online communication difficult and less effective, which usually leads to more frustration.

A GOOD ONLINE RELATIONSHIP BEGINS WITH RESPECTING OTHERS AND CONTRIBUTING TO THE COMMUNITY

When facing a new learning situation, especially when sharing the same difficulties, such as new learning tasks or technical problems, students tend to work together and help each other. Just as Harmon and Jones (2000) describe the phenomenon of fast friendship development in their online course, Ellen offers a typical description of the starting point of online relationships:

> Because most of us are new to this research class, we never have taken a research class before. So we are very confused about these materials. So it is kind of…everybody tries to help everybody to understand our terms, in what the instructor expects everybody to be working on. This course particularly *pulls* everybody together. We try to work together.

During the course, kind responses to others' posts tend to increase the closeness of the relationship. Chin reports a case of how others' reflections on her posting enhanced her feeling of collectiveness:

> In one of our courses, when we discussed our feeling about the class, a classmate, Angela, posted and said, "You are not alone, Chin. I have the same feeling…." That makes me feel sympathy. Other students also commented it was always like that for the international students at the beginning. There is always someone coming up and speaking frankly on their feelings, or responding to others' feelings.

Throughout the course, the students had many opportunities to interact with each other. Messages that express caring for others, especially those that involve personal feelings, fostered a sense of community. Ellen noted that when a classmate experienced a personal tragedy, others in the class tried to comfort and encourage her. Chin mentioned a dedicated classmate who contributed greatly to their teamwork and from whom she learned much. On the topic of the relationship development, Chin found that the previous existing relations between students also shape the network in their current online group. That is, those who knew each other prior to the class tend to group together and communicate more with each other than with the other students. These examples echo Cho's (2002) finding of pre-existing networking. Negative feelings seldom arose in this online community. Two participants said that they never had any friction with other classmates during the online discussions. However, Ellen gave an example of how she became angry at the instructor's attitude. The instructor failed to consider a broader point of view that Ellen had proposed, which made her angry. From this example, we can see that in an online environment, the instructor may change his or her leading position to be a fellow participant (Day, 2004).

The three participants offered similar suggestions for being a good learning community member, such as preparing fully for the online course, posting short and informative messages, listening to others and contributing to the discussion, avoiding negative comments, being supportive to others, and being constructive.

THERE ARE THREE DIFFERENT PARTICIPATION LEVELS IN THE ONLINE INTERACTION

Just like in a face-to-face course in a classroom, not all of the students in an online course participate in the discussion in the same way. Ellen and Tom both mentioned that there were three levels of participation in their online group. There was a very active group of people who posted many messages, a lurking group who seldom posted

anything other than the required assignments, and a large group of people who fell between the two extremes. Ellen describes this phenomenon:

> We have about 23 students in our cohort group. We have probably 5 that are verrry vocal. Ha ha ha, they posted a lot! You know. (Pause) I will say probably five of them. Then there are probably…I can think of three or four who you rarely have heard from. They rarely posted something. There are some others just in the middle, post three or two comments and get out. So I think I am probably the average. I may probably post a little more than other people, but I'm not near the upper group posting all the time.

In responding to my question of what factors differentiate the students' participation, Chin suggested the importance of a personality factor. She believed the introverts tend to be active in the online learning environment, while the extroverts prefer face-to-face conversations. As Ellen explained\, "Introverts like to have time to process information in their head, so as soon as they got time to process information in their head, they respond (with a post)." Further study of the relationship between the participants' personalities and their online behaviors may help to understand the relationship between different patterns of participation and students' personalities.

The content of social communication in this online course was far from being broad and inclusive. Since bulletin boards and email are the most common tools for course communication, most off-task online conversations were about personal topics such as job, family, and childrearing. Sometimes the chat centered on current news and popular social topics. About two-thirds of the topics were somehow related to the course content. For Tom, there were two kinds of conversations: replying to others' postings and humorous gossip. The online learners seldom made a telephone call to their teacher or to other students. It seemed they did not want to extend their relationship into the real world. Are they trying to keep a feeling of "mystery," or are there other reasons? Chin explained she had no contact with other students out of class since she was busy. Since most online learners are adults, they often must juggle school, career, and family responsibilities. The time constraints may be an important factor leading to reduced levels of communication in the online course. Ellen mentioned that her group once planned an in-person party, but it failed because other events intervened.

SOCIAL INTERACTION FACILITATES ONLINE LEARNING IN A VARIETY OF WAYS

Two of the participants said that they did not like the online learning environment because of the isolation. However, they also reflected that the social interaction brought benefits to the online learning process. Social interaction not only breaks the border of isolation due to the distance, but it also creates an environment for students to learn in a collective way. Tom believed that the social interaction is very important to the online learning, since "the personal content is a necessary part of the online communication; it breaks the barriers of distance and isolation." The communication also makes the independent learning easier for him. He noted that "social interaction helps with the learning process, because it adds additional frames and constructions for the cohort group to remember." For Chin, the online discussions with others not only meant encouragement and help, but always reminded her that she was not fighting alone. For Ellen, the social communication provided a framework for relating the discussion content to personal experience and offered a broader background for understanding the information:

> It gives you a broader perspective from which to measure somebody's comments. The more you know about a person, whether face-to-face or online, the more significant (meaning) you can get from the comments he made, because you

understand more background on that. You know, I know you are from China, probably recall that from your name, so I would value your opinion on international travel, about different educational systems, those kind of things more highly than somebody living in South Georgia. So I can get a broad perspective. The more you know them, the more interpretable are their comments.

CONCLUSION

Incorporating relevant studies from the literature and the data from the three interviews, this study explored the topic of the social interaction among students in an online course. From the preliminary findings, the researcher found that online learners believe that social communications possess some different characteristics than the communications in a face-to-face class. For instance, an online learning environment allows students to have more control over their levels of participation and provides them with more time to deliberate on discussion topics. However, the lack of visual and tonal clues and context information leads the students to express strong opinions, a situation that leads both to meaningful and deep learning and to some potential conflicts. Facing similar difficulties and sharing common interests were the initial factors that pulled the students to work together. Being supportive of and contributive to the community makes it possible for good relationships to develop. The social interaction does help to break down the barriers due to physical distance and isolation. It provides mutual support and offers a frame of reference for students' reflections, thus contributing to the learning process and outcomes.

This exploration of the social and affective dimension of online communication provides some insights to online learning from students' perspectives. The results indicate that instructors should pay more attention to this dimension during the design and teaching of online courses, rather than focusing solely on course materials and technology template. A quality online course comes with a "live" learning community where social interaction is decisively encouraged and facilitated. However, social interaction is a multi-faceted dynamic process that is impacted by many factors, such as students' characteristics, subject content, instructional strategies, technological interface, and organization of instruction. Limited by the sample size and specific conditions of this online program, the findings from this study are subject to divergence from other studies based on different online programs and samples. Moreover, this study raises additional questions related to the research topic. For example, what is the relationship between students' personalities and participation patterns? How does the social interaction change with the course's progress? To what extent does the social interaction affect the students' satisfaction and their learning outcomes? These are all significant questions that call for further study. It is hoped that future researchers can reference the findings from this study and investigate these questions on the topic of social interaction in an online environment. These investigations can eventually contribute to the improvement of the quality of online courses, as well as student learning.

REFERENCES

Bowman, L. (2001). Interaction in the online classroom. *Teachers Net Gazette, 2*(7), 2-7. (ERIC Document Reproduction Service No. ED464319)

Carabajal, K., Lapointe, D., & Gunawardena, C. N. (2003). Group development in online learning communities. In M. G. Moore & W. G. Anderson (Eds.), *Handbook of distance education* (pp. 217-234). Mahwah, NJ: Lawrence Erlbaum Associates.

Cho, H. (2002). *Analysis of electronic learning communities using a social network perspective.* Unpublished doctoral dissertation, Cornell University, New York. *Dissertation Abstract (ProQuest), A63*/09, P. 3044.

Day, M. (2004). Enhancing learning communities in cyberspace. In M. W. Galbraith (Ed.), *Adult learning methods: A guide for effective instruction* (pp. 425-450). Malabar, FL: Krieger.

Dede, C. (1996). The evolution of distance education: Emerging technologies and distributed learning. *American Journal of Distance Education, 10*(2), 4-36.

Harmon, S., & Jones, M. (2000, April). *A qualitative analysis of situated Web-based instruction.* Paper presented at conference of American Education Research Association, New Orleans, LA.

Harrisim, L., Hiltz, S. R., Teles, L., & Turoff, M. (1995). *Learning networks: A field guide to teaching and learning online*. Boston: MIT Press.

Haythronthwaite, C. (1998). A social network study of the growth of community among distance learners. *Information Research, 4*(1). Retrieved October 12, 2003, from http://informationr,net/ir/4-1/paper49.html

Hiltz, S. R. (1998, November). *Collaborative learning in asynchronous learning networks: Building learning communities.* Paper presented at the 3rd Web Net 98 World Conference of the WWW, Internet, and Intranet. Orlando, FL.

Huang, W. W., & Wei, K. K. (2000). An empirical investigation of the effects of Group Support Systems (GSS) and task type on group interactions from an influence perspective. *Journal of Management Information Systems, 17*(2), 181-206.

Lally, V., & Barrett, E. (1999). Building a learning community on-line: Towards socio-academic interaction. *Research Papers in Education, 14*(2), 147-163.

MacDonald, J., & Gibson, C. C. (1998). Interpersonal dynamics and group development in computer conferencing. *The American Journal of Distance Education, 12*(1), 7-25.

Oren, A., Mioduser, D., & Nachmias, R. (2002). The development of social climate in virtual learning discussion groups. *International Review of Research in Open and Distance Learning, 3*(1), 1-19. Retrieved October 25, 2003, from http://www.aln.org/alnweb/journal/vol2_issue1/wegerif.htm

Orey, M., Koenecke, L., & Crozier, J. (2003). Learning communities via the Internet a la Epic learning**:** You can lead the horses to water, but you cannot get them to drink. *Innovations in Education and Teaching International, 40*(3), 260-269.

Palloff, R. M., & Pratt, K. (1999). *Building learning communities in Cyberspace: Effective strategies for the online classroom.* San Francisco: Jossey-Bass.

Patton, M. (2002). *Qualitative research and evaluation methods.* Thousand Oaks, CA: Sage Publications.

Russell, M. (1999). Online learning communities: Implications for adult learning. *Adult Learning*, *10*(4), 28-31.

Russell, M., & Ginsburg, L. (1999). Learning online: Extending the meaning of community. *A review of three programs from the Southeastern United States.* Report of National Center for Adult Literacy (NCAL-99-01).

Stein, D., & Glazer, H. (2003). Mentoring the adult learner in academic midlife at a distance education university. *American Journal of Distance Education, 17*(1), 7-13.

Tu, C. (2002). The measurement of social presence in an online learning environment. *International Journal on E-Learning 1*(2), 34-45.

Tu, C., & Corry, M. (2002). E-Learning communities. *The Quarterly Review of Distance Education*, *3*(2), 207-218

Wellman, B. (1999). The network community: An introduction to networks in the global village. In B. Wellman (Ed.), *Networks in the global village* (pp. 1-48). Boulder, CO: Westview Press.

Woods, R., & Ebersole, S. (2003). Using non-subject-matter-specific discussion boards to build connectedness in online learning. *The American Journal of Distance Education, 17*(2), 99-118.