Chinese Students’ Perceptions of Cooperative Online Distance Education Interaction

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Background Information

Interaction is considered to be a necessary and important ingredient for a successful learning experience so distance learning practitioners and researchers have concerned with how much interaction a distance learning environment could provide for students (McIsaac & Gunawardena, 1996). Vygotsky (1978, 1986) asserts that a great deal of learning occurs in a social context and is brought out by interactions with other people. The process of interactivity among learners brings in the benefits including analyzing, synthesizing, and evaluating course content (Lave, 1991), increases in learning achievement (Bates, 1993), applying higher levels of cognitive processing (Garrison, 1993), and development of collaborative and cooperative learning skills (Berge, 1995). Computers can potentially contribute to a sense of community within the group and create a social bond which offers important motivational and cognitive benefits in learning (Harasim, 1992).

Western culture values individualism; pedagogical practices are designed for developing individualism and individuated skills while Chinese culture is highly collectivist and pedagogical practices tend to reflect the importance of the group (Carson, 1992). As a result of culture differences, online interaction practices in distance learning within Western culture may not be beneficial to Chinese students.

The purpose of this study was to find out Chinese students’ attitude toward their interactions with peers, instructors, course material, and interface in a cooperative online distance education environment. The kinds of interaction facilitating Chinese students’ learning, the barriers encountered, and suggestions to overcome these barriers were investigated in the study.

Activity theory was applied in analyzing Chinese students’ interactions in a cooperative distance learning environment. Activity theory (Leont’ev, 1978; Vygotsky, 1978) is increasingly being used to explain social aspects of technology-supported learning (Jonassen, 2002). Activity theory can contribute to computer-supported collaborative learning by “[understanding] learning not as the internalization of discrete information or skills by individuals, but rather as expanding involvement over time—social as well as intellectual—with other people and the tools available in their culture” (Russell, 2002, p. 65).

Activity theory has its origins in the social-historical approaches around 70 years ago and can be characterized in (a) objective, (b) ecological, and (c) socio-cultural perspectives on human activity (Kaptelinin, 1996). The key elements of activity theory related to computer-supported cooperative learning are shown in Figure 1:

![Figure 1. Engestrom’s classic model of Activity Theory.](image-url)

Figure 1. Engestrom’s classic model of Activity Theory. The model shows the relationship between the subject, the object and the community, as well as how rules, instruments, and the division of labor are used in transforming the object into the desired outcome (Engestroem, 1987).
There are seven elements in the model and the definition of each element as follows (Jonassen, 2002; Jonassen & Rohrer-Murphy, 1999; Collis & Margaryan, 2004):

1. Subject: The individuals such as learner, peers, facilitator, supervisor, instructor, and mentor who participated in the activity.
2. Instruments: Methods, resources, supports, online tools and environments that facilitate the activity such as technological tools, networks, and learning resources.
3. Object: Products created by the subjects during the activity such as learning tasks, assignments, and projects.
4. Community: Socio-cultural environment in which interactivity takes place such as virtual classroom and organization.
5. Rules: Standards and norms of the community that rule the activity such as frameworks, culture and other standards that influence the learning environment.
6. Division of Labor: Roles and relationships within the community that affect task division and responsibilities. For example, roles and relationships within cooperative teams and courses.
7. Outcome: The overall results achieved by the activity system such as final products and learning outcome.

From the prospective of Activity theory, the process of cognition is no longer studied based on certain aspects individually but on the interaction between learners, tools, resources, and context that influence learning in a socio-cultural setting.

Methodology

A purposeful sampling was used to select participants in University of Central Florida who: (1) have taken at least 2 online or mixed mode courses; (2) have used the function of discussion board or chat room; and (3) must be over 18 years old. Four in-depth interviews were conducted to give an in-depth portrait of their participation. In order to completely understanding the feelings of the participants, the qualitative research was conducted for researcher to go deep into the interviews. The whole interview was recorded. The audio-tape was then transcribed by the researcher and a Grounded Theory Analysis based on Activity theory was done on the transcripts.

Data was gathered in the fall 2006 semester and consisted of: (1) Four face-to-face audio-taped semi-structured interviews lasted for 30 to 50 minutes; and (2) Four field notes, 5 analytic memos and more than 20 journal entries. Recordings were transcribed and compared with field notes, analytic memos and researcher’s journal for details. The data was analyzed using Grounded Theory methods.

Results and discussion

The results that organized according to Activity Theory indicate:

Subject—Subject

A number of participants said that course mail was commonly used in Chinese students’ cooperative online interaction and it was helpful to their learning. They felt that they were comfortable to interact with others by this asynchronous communication tool because they were allowed to have more time understanding what others said and have sufficient time to respond to others. The participants expressed that:

“I like email, I usually ask questions and if we had teamwork, I discussed with my teammates and asked professor questions using emails.”

“we usually used email to contact with others. We used email to exchange word documents, draft, something like that…. I like email because I can have more time to think about what I want to say and I have more time to check their feedback and response.”
Asynchronous online discussion boards were also commonly used and they were regarded to be a helpful tool in Chinese students’ cooperative online interaction. A participant said that:

“…the discussion board is useful for me to post our reflection for the class and our projects. For me and for that class, the discussion board most of the time is to post something but sometimes we can get feedback from classmates.”

Rules—Instruments

However, synchronous online discussion tools such as chat room were not regarded to be useful to Chinese students according to their cooperative learning experience. All participants expressed the similar experience that they didn’t like to use chat room due to flaws in technology and language barrier.

“I don’t like chat room is that I think the design of the program is not good at all. I mean if there are more than three or four [people participated], if more people talk at the same time, the screen will refresh very quickly and it’s hard to track what was said.”

“I can not type English very fast so sometimes I felt that I can’t catch up [with] their speed. Sometimes when I finish my typing, they already jump to the next topic or next issue. So let me feel like kind of, you know…embarrassed or upset.”

Subject—Community

As for Chinese students’ attitude toward cooperative online interaction, in general, most of them had passive attitudes toward cooperative online discussions. They basically didn’t actively take part in discussions unless they were required to do so. However, compared to face-to-face discussions, they felt more comfortable and were more willing to express themselves in online environments.

“I don’t feel stressed in posting discussions. The professors set up due dates and I posted when required. If I don’t post it I won’t get grade.”

“For me, if you don’t ask me to [express my ideas] I won’t do it but I think for somebody, if you ask them to do, I think Asian students will express themselves more freely if they are required to in the online environment than in face-to-face class.”

Division of Labor—Instrument

To improve cooperative online interaction and make Chinese students’ learning experience a successful one, most of them agreed that instructors’ skills in designing activities and facilitating interactions were essential abilities in promoting successful cooperative online distance education interaction.

“I believe that [a comfortable online discussion environment] depends on how the professor designed the courses. The way the professor designed that could make me comfortable to express my ideas. I think it’s the feeling to make you feel comfortable and you will be more willing to talk.”

“I think the professor’s ability to use chat room was important. If the professor could keep an eye on all students in the chat room and facilitate some students. I think that’ll be better.”

Subject—Instrument

To facilitate Chinese students’ cooperative online distance education interaction, participants recommended integrating more technology features such as video and audio into cooperative online learning environment to help them correctly interpret others’ ideas and efficiently communicate with others.
“I think maybe they can use some kind of video chat so I can see others’ faces to feel more reality not just see words.”

“I would like to say to integrate video and audio communication tools there, I think that’ll be much better and much efficient and effective to communicate.”

Conclusion

According to Chinese students’ cooperative online learning experience, interacting with other peers and instructor was frequently taken place and asynchronous communication tools such as email, course mail, and discussion boards contributed to their interactivity and learning. However, due to barriers such as language and cultural difference, Chinese students were not fully comfortable in interacting with others using synchronous communication tools. They needed more time to organize their ideas, as well as understand others’ and needed time to compose their feedback. The interface of these tools and instructors’ facilitation skills were considered to be an important role in successful cooperative online learning interaction. Because of culture difference, Chinese students would not actively participate in cooperative online learning interactions unless they were asked to do so. Besides instructor’s facilitation skills, integrating technological communication features such as video and audio into chat room was recommended to improve cooperative online learning interaction. To better serve Chinese students’ learning needs and help improve their learning outcomes, instructional designers and instructors should be aware of Chinese students’ experience of interaction in cooperative online distance education.

Reference


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