

Weblog for Trust-building in Online Collaborative Learning Environment

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Objectives

This study extends from the co-conducting study of the relationship of trust, intellectual conflict, and knowledge building in online collaborative learning environment. As the researchers analyzed the interview data by using grounded theory, another interesting group of data revealed emerging themes and relationships presenting graduate students' perceptions toward Weblog and how Weblog help them build trust among team members.

Keywords: Weblog, trust-building, online collaborative learning environment, CSCL

Background

In the co-conducting study, the researchers initially focused on the relationship of three main components: 1) trust 2) intellectual conflict and 3) knowledge building. In the initial stage of data analyses, emerging themes and relationships among each theme reveals that all three components are connected in a recursive way. In other word, trust influences on how the students work collaboratively in group and with trust they are open to intellectual conflict. The collaboration of group work with intellectual conflict then influences knowledge building. The degree of collaborative work moving in either positive or negative direction was observed within this study as shown in the figure below.

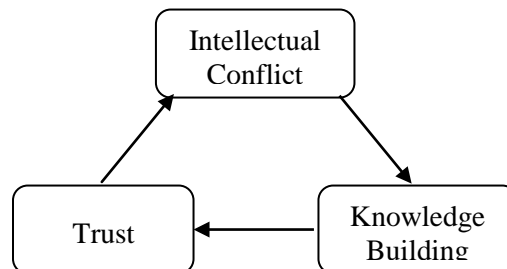


Figure 1

In terms of foundation of knowledge building, trust is one of the most important bases to stimulate and manage the intellectual conflict. Tschannen-Moran and Hoy refer to the study of Baier (1986) and Parsons (1960), they say, “Trust is necessary for effective cooperation and communication, the foundations for cohesive and productive relationships in organizations.” (2001, p. 549) In terms of the considerations for the successful Computer-Supported Collaborative Learning (CSCL), the question of trust is central (Jones et al, 2006). Team members must get to know each other and, in the process, develop a relationship based on understanding, support and trust (Kirschner & Bruggen, 2004). To support intellectual conflict, social precondition, such as trust, shared understanding, and accountability must be constructed (Kirschner & Peterson, 2004).

Extending from the notion of trust as a key factor in online collaborative learning, the researchers attempt to examine how the tool, particularly Weblog, influence on trust-building and later possibly on the sense of community. Our pre-conceptual vision is that there is an additional subordinate group of affinities related to trust-building in CSCL environment. As shown in the figure below, an extending group of affinities include: identity, interaction, and cohesiveness.

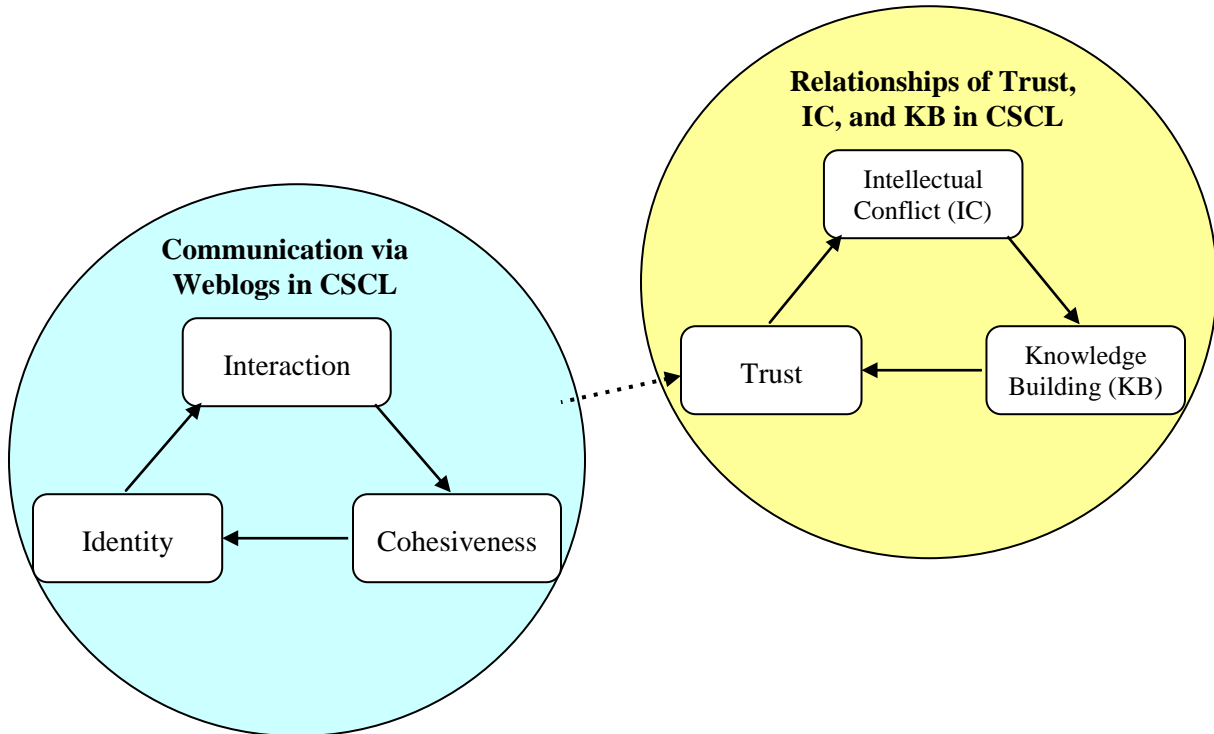


Figure 2

Weblog as a learning tool

In an online collaborative learning environment, learning occurs when students interact with other students, within a community of learners. Many studies recently focused on applying “social networking adaptive technologies” (Duffy & Bruns, 2006) like blog to support students’ learning (Wang, Fix, & Bock, 2004; de Moor & Efimova, 2004). Blog can be described as an online journal, which provides personal setting features including the appearance of the site, the authority with one or many contributors, and links to peers or other interesting blogs.

Du and Wagner (2005) points out that Weblog provide students an opportunity to actively participate in collaborative learning. When focusing on knowledge sharing, the students can post their thoughts and interact with other students in their blog. Also, when having the students worked collaboratively with team members, Weblog allow them to provide comments or feedback to other team members and to “write a log jointly as a group.” Efimova (2004) says that, “at a given time, a blogger is involved in two types of conversations: (1) conversations with self and (2) conversations with others.” Grabinger and Dunlap (1995) mention about self-reflection addresses one of the benefits of self-reflection that “it implies observing and putting an interpretation on one’s own actions, for instance, considering one’s own intentions and motives

as objects of thought”. Thus, implementing Weblog activity, particularly in the beginning stage, in an online learning course will support the learning of the students as it help enhancing group collaboration, self-reflection, and reflection on the relationship with the others.

Weblog and Identity

As mentioned earlier, Weblog allows one to observe self as they observe the others. Lee (2004) states, “Identity implies the validation of ‘self’ through membership, and is constructed through a series of patterned interrelations.” Furthermore, Ewins (2005) mentions that how one sees oneself and the others requires consciousness. Ewins says:

In place of the stream of consciousness within posts, the Weblog itself becomes the stream – a stream of individual posts, each of them representing a particular moment in time and moment of consciousness. By reading down the page and back through the archives, one can get to know a blogger better, her interests, her personality, her view of the world (2005, p. 373).

Weblog and Interaction with Others

Buelens et al (2005) mention that students’ interaction should be viewed in two aspects: task-relevant and socio-emotional aspects. Focusing only on task achievement may not maintain a group life. As the students work on given tasks, they develop relationship and mutual trust as they interact with each other. Different from a face-to-face learning environment, the students who take an online course have a limited opportunity to observe their team members and do not know each other’s personal experience. This situation thus could affect their socio-emotional relationship in their group learning. Johnson and Johnson (1996) refer to Deutsch’s works (1949, 1962) and mention that interdependence and interaction are critical to group learning. As the group develops a positive interdependence, it is more likely that the group will have a promotive interaction. While the group that develops a negative interdependence, it is more likely that the group will have an oppositional interaction; and none interdependence would then leads to no interaction in the group. As such, the course instructor or designer needs to understand interaction pattern and apply an appropriate and effective tool that can support group interaction.

Weblog can be used to support online communication and group discussion in many ways. In the study of de Moor and Efimova (2004), they examine how Weblog can be used to form interrelationships, which in this case, the participants exchange ideas and as such conversations take place in the form of a dialogue. Within a conversation, the participants interact with the others allowing them to create an online sense of community (Wang et al, 2004). Weblog that is used for online journal, a blogger shares life experiences, viewpoints, and online resources.

One way to study about the communicative pattern in Weblog is examining the dynamics of blogosphere stories (Jenkins, 2003). In this analysis, four types of Weblog posts are identifies: (1) opinion, (2) vote, (3) reaction, and (4) summation. Marres and Rogers (2000) provide an approach to examine Weblog conversation by examining an issue network. Three possible topics or issues include: (1) a common issue, (2) acknowledge one another, and (3) interconnection by multiple routes.

Weblog and Cohesiveness

In Lee's study (2005) on the sense of community in the CSCL environment, he says, "for a community to be cohesive, it must influence its members to conform. Influence of a member on the community and influence of the community on the member operate concurrently." When a group of students start working together, each individual may initially focus on how to accomplish the task. With the use of Weblog to allow them to get to know each other, the students can easily build a relationship within the group. Efimova (2004) also mentions that Weblog conversations support development of ideas as well as relations with others.

Research Method

Among the qualitative research approaches, this study will mainly use the techniques and procedures of the grounded theory approach originally developed by Glaser and Strauss (Strauss & Corbin, 1998). Grounded theory means "theory that is derived from data, systematically gathered and analyzed through the research process" (Strauss & Corbin, 1998, p. 12). Grounded theory research begins with an area of study and gathers data from a variety of sources, including interviews and observations. Data gathered are immediately analyzed using coding procedures. The results of the analysis become the guides for further data gathering. Data gathering continues until no new or relevant data emerge regarding all categories. When data gathering is completed, theories are integrated and refined through the coding procedures. More detailed descriptions of the procedures are given in the following sections.

Research Questions

- 1) How do the students perceive Weblog activity?
- 2) How do trust-building and sense of community appear in students' Weblog?

Participants

The participants of the research consist of about twenty two graduate students who were enrolled in a graduate web-based course on Computer Supported Collaborative Learning in the fall semester of 2006 and about twelve graduate students in the fall semester of 2007.

Context of the Study

The setting of this research is a graduate-level online course. Participants attended all of the course activities collaboratively through online communications. The course website provides participants with the course content and the instructions for the assignments. The course consists of four learning modules. A brief overview and demonstration about Weblog were given in the first module. The students were taught how to create Weblog and post entries; they were required to share personal experiences in the first activity and write reflective journals about their learning experiences at the end of every module. To foster their online interaction, they also were required to read and response to other students' postings.

Data Collection

The primary data of this research are from interviews with participant. Face-to-face interviews are audio-taped with participants' consent and then transcribed. Also, printouts of messages on Weblog are the data source for this study.

Data Analysis

To analyze the data, the researchers used the techniques and procedures of the grounded theory approach, originally developed by Barney Glaser and Anselm Strauss. Data gathered were immediately analyzed using coding procedures: open coding, axial coding, and selective coding (Strauss & Corbin, 1998). As a result of open coding, the researchers will develop several categories on peer trust relationships from the data. Also as a result of axial coding, the researchers will emerge the variety of conditions, actions, and consequences related to peer trust relationships. Lastly, selective coding will be conducted to process of integrating and refining categories. In integration, categories are organized around a central explanatory concept that can represent the main theme of the research. For the integration process, the researchers will use techniques such as using diagrams and sorting and reviewing memos written by the researchers throughout the analysis process.

The Use of Weblog in an Online Collaborative Learning Environment

In this study, we found that most students were new to the Weblog environment but they did not have any problem to use Weblog during the course. This may be because the user-friendly designs of the Weblog that becomes intuitive for any basic users. Based on the interview data, most of them mentioned that they liked the Weblog activity as they could personalize their blog and some decided to create another Weblog for their personal use.

In this online collaborative learning environment, the students learned about other members in the group and develop trust and relationship in order to accomplish their tasks; although each group might accomplish at a different level and their relationship varied among each team. With a respect to the initial thought on communication via Weblog; the interaction, cohesiveness, and identity, could influence trust-building in an online collaborative learning environment, we tried to find an evidence to support that influence. Based on the interview data, the following themes appear from the initial analyses.

Personal background

As described earlier, the first activity was to have the students create their blog and posted an entry about their personal experiences. An intention was to provide an opportunity for them to get to know each other in a casual way. Many researchers (Johnson and Johnson, 1996; Taylor, 2005) have discussed about creating an activity that allows the students to share their personal experiences. Taylor (2005) explains that “the engagement phase” (p. 31) would be when the group members learn about other members and form a group that would then develop shared values. From our data, we found that a student mentioned about how he learned about other members through Weblog:

First of all, you introduce yourself, then people get basic idea about you, then you also put some pictures about your country, your culture, and I think it is easier for online interaction and establishing team because you need to understand team members first, then you can kind of build up trust, or, you know, how to communicate with them, because each person has their personality (line 981-992).

Tone of writing

In an online course, the students have to communicate with others by posting entries on their Weblog. Although the students also have to use different communicative tools such as the FirstClass TeachNet and email, the awareness of their writing on their Weblog was different from the use of other tools. As Weblog environment is opened in public and anybody can view or respond to their blog, the students become more conscious about their writing styles or expression, and how other people would perceive about them. Although only one student mentioned explicitly about the tone of writing, we believe that this could also be an important factor, particularly when the students are not familiar with writing for intended audience or publication of their thoughts in an online community. A student who was not familiar with Weblog mentioned:

I think it helped in that, the way we were writing. Tone of the writing. It was different with e-mail, and it helped us to communicate better and the way we wrote to the other people (line 512-514).

Reflection to self and others

As a requirement for this online course, the students had to write reflective journals at the end of each module. There was no specific requirement on the topics; the students could generally reflect on their learning experiences or their group work. Although not all students were productive in writing their blog or respond to other students' blog, we found that some students express their thoughts about the course and expectations about their group work in their blogs. From the interview data, the students explicitly mentioned the benefits of writing Weblog which helped them know how other people thought about them.

I think lots of times... we would write what I was thinking to. It was very much like what I was thinking too. And it helps you because it is a personal journal thing helps you know more about them and what they are thinking about (line 780-782).

You could check your blog; you will see what they think about you (line 994).

Ice-breaking moment

Daradoumis and Xhafa (2005) discussed in their study about an importance of giving the time and the opportunity for the students to informally interact with each other before forming a group. By taking time to build relationships, the team tends to accomplish the tasks more effectively. Based on our interview data, an ice-breaking moment should be initiated at the beginning of the course; and the designer of online collaborative learning course should also give an opportunity consistently throughout the course for the students to develop their relationships. The followings show how students perceived the use of Weblog and its effects on developing relationships.

Because some people like their privates, so it is hard to know about them. However, when you read about them, you may know how they think about. I think it is helpful (line 785-787).

It was simple and I've set up a blog before, but it was nice to go and read about other people, it was my first semester here in UT so just getting to know people and they come to mine and so forth. You know, I guess this is the beginning of sort of collaboration I guess (line 1464-1467).

First assignment is maybe leave message to on his introduction. So through that assignment, we can know each other. I think that was great experience (line 2259-2261).

Each theme described above show us an evidence of how the students perceive the use of Weblog. Personal background presents identity of the students; tone of writing and reflection on self and others presents an awareness of their interaction; and an ice-breaking moment presents how the students develop their cohesiveness within the groups. Although it is difficult to specify how much time it will take for the students to develop positive interdependence and trust, we believe that our findings could confirm an importance of a tool selection and an activity design to support group relationship and collaborative group learning.

Interdependence within groups

Another aspect of this study is to be able to answer the question of how trust-building and sense of community appear in students' Weblog, besides examining each individual blog, the researchers decided to compare the interaction of three groups of the students in CSCL. In addition, the researchers identify group cohesiveness by counting numbers of pronouns used within each group.

Reflection Activities		Group A		Group B		Group C	
		content	reply	content	reply	content	reply
2	We	17	2	3	0	2	1
	Our	13	0	3	1	4	0
	Us	2	0	1	0	1	0
3	We	18	4	13	0	6	0
	Our	12	1	7	0	1	0
	Us	3	0	1	0	0	1
4	We	13	0	0	1	7	1
	Our	10	2	0	2	2	0
	Us	2	0	1	0	0	0

From the table above, the researchers can interpret how each group use pronouns to express himself or herself as a group. Group A contains a higher number of pronouns in Weblog posts. When the researchers examine the data from the interview coding from the co-conducting study, the sense of community and knowledge building within the group are also in a high quantity. The interview data of Group B and C and the quantitative data from counting pronouns are also supportive to each other.

Conclusions

This paper has presented the use of Weblog as an important instructional tool and the use of Weblog for reflective writing activity in an online collaborative learning environment. The

students' perceptions on Weblog writing activity show us how it helped them learn about identity, develop interaction pattern and cohesiveness in their group learning. These might take time to develop particularly in an online environment; and it is difficult to guarantee the success of the group. In fact, there are many other factors involving in group cognitive development as well as socio-emotional aspect within the group learning. We hope that this paper would present an important aspect of the design of an online collaborative learning environment and a selection of suitable tools to support student's online collaborative learning.

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