Factors Shaping Student Participation in International Computer Mediated Communication

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Abstract

This paper explores the factors, shaping participation of university English learners from Japan, Mexico and Russia in international computer mediated communication. Based on the interview analysis, we classified the findings within the four dimensions: geopolitical structures, institutional settings, situated online activity, and agency. The study found the following shaping factors: culture and language valuation, discourses of the positioned subjects, Internet access, project integration, as well as affordances and constraints of the WebCT bulletin board. Most importantly, the study found that those shaping factors differed across cultures. We conclude with the discussion of the findings and implications.

Key terms: international collaboration, participation, geopolitical structures, institutional contexts, situated activity, agency

Introduction

In our increasingly interconnected world, people face the urgency to communicate in a lingua franca with culturally diverse populations. Communication across cultural and linguistic boundaries is essential in the twenty-first century for resolving common global problems and potential intergroup conflicts in both domestic and international arenas. Cummins and Sayers (1995) remind us that: "unless students cross the cultural boundaries both within and beyond… national borders… they will be ill-prepared to address the myriad social and ecological problems their generation will face" (p. 161).

More and more people use electronic medium to connect with people all over the world. In the field of language education, international computer mediated communication (I-CMC) is used to give learners access to new environments, where they can gain intercultural communicative competence for developing a broader sense of identity associated with global citizenship (Cummins, 1996). I-CMC, also known as telecollaboration, is defined as "internationally-dispersed learners in parallel language classes using Internet communication tools such as e-mail, synchronous chat, threaded discussion and MOOs … in order to support social interaction, dialogue, debate and intercultural exchange" (Belz, 2003; p.1).

Whereas recent studies on I-CMC illustrate how students' cultural beliefs and values impact their participation (Belz, 2003; Chase et al. 2002; Kramsch &Thorne, 2002; Reeder et al, 2004; Thorne, 2006; Ware, 2005), the effect of local contexts and larger geopolitical structures on students' participation in online environments has not been sufficiently explored. Therefore, this study (which was the part of a broader dissertation research by Basharina, 2005) sets the goal to explore the interplay between the broader social contexts and student agency. To meet this research goal we focused on the 12-week long online interaction among 52 Japanese, 37 Mexican, and 46 Russian college English language learners on the WebCT[1] bulletin

board. The students were located in the three International sites – the Japanese students in a large Southwestern Canadian university, the Mexican students in a major university in Northern Mexico, and the Russian students in one of the universities in the North Eastern Russia. The WebCT interaction was integrated into the face-to-face English courses the participants of this study took in their home countries. The purpose of the project was to promote thought-provoking, engaging and active interaction in English as a second/foreign language in order to improve students' L2, intercultural awareness and critical thinking. The students were 18-22 years old with approximately similar English proficiency.

In what follows we present the conceptual framework of the study, followed by the methodology, findings and discussion sections.

Conceptual Framework

Compared to face-to-face communication, in online interaction we deal with at least two contextual layers – off-line, sitting in front of the computer screens in the context of our local cultures; and online – through textual representations (Lam, 2000) in the context of situation (Kramsch, 1993). Recent research pays increasing attention to the complex interrelationship between structure and agency and illustrates the complexity that occurs when multiple contextual layers affect our perceptions and performances online. It was found, for example, that the broader socio-cultural contexts inform linguistic choices of students. The newly identified factors shaping student participation include differences in students' frames of reference with regard to local discursive norms of language use (Kramsch and Thorne, 2002), language valuation (Belz, 2002), the ways students co-construe the context of online communication (Ware, 2005), and their communication partners (Meagher & Castanos, 1996; O'Dowd, 2003, 2005). In Kramsch and Thorne's (2002) study of German-American online collaboration, for example, each group mapped the communicative genres they were familiar with onto their foreign language communicative practices in cyberspace. Consequently, the educational implication drawn from this study is to prepare students to deal with global communicative practices that require mastering "far more than local communicative competence" (p. 99).

A number of recent studies found additional shaping factors such as misalignment of academic calendars, institutionalized classroom scripts, methods of learning accreditation, academic socialization, and access to the Internet (Basharina, 2007; Belz, 2002; Belz & Muller-Hartmann, 2003; O'Dowd, 2005; Thorne, 2003). These studies emphasize the importance of physical contexts consisting of mediating tools and other people in shaping online interaction. Thorne (2003), for example, argues that online and other activities emerge on the "intersection of histories of use with the contingencies of emergent practice" and represent the "culture-of-use" of a tool (p. 40). Therefore, the activity of online interaction can be different for different students in part because the Internet communication is used differently in every single case (Basharina, 2007; Thorne, 2003).

By giving credit to external contextual factors, we should not undermine the role of the agency defined by Murray as "the satisfying power to take meaningful action and see the results of our decisions and choices" (quoted in Kramsch, A'Ness & Lam, 2000; p. 97). Learners do not merely conform to their world but actively transform it with their agency: "no amount of experimental or instructional manipulation can deflect the overpowering and transformative agency embodied in the learner" (Donato, 2000, p. 47). Lantolf and Pavlenko (2001) argue that agency is never just a "property" of a particular individual, rather, it is a relationship that is constantly co-constructed and negotiated with those around the individual and with the society at large.

Methodology

Project Background

The table 1 illustrates that by the end of the project the Japanese students posted half as many messages as the Mexican and Russian students. On the average, the largest number of messages was posted by the Mexican females. The high standard deviation indicates that there was a big difference in student participation within cultures – ranging from those who posted only 5 messages to 60 messages and higher.

Table 1. Posting Activity - Student Averages

Females	Mean	STD	Males	Mean	STD
Japanese	15.1	16.2	Japanese	12.9	7.2
Mexican	36.8	17.9	Mexican	25.0	13.5
Russian	32.8	17.6	Russian	26.3	15.1

The reading activity revealed a surprising finding – despite the fact that the Russian students posted the largest number of messages, they read the least (Table 2). At the same time, the Japanese students, who posted the least, on the average, actively engaged in reading at a much higher rate than the Russians. The Mexican students posted the same amount of messages as the Russians but consistently had the highest rate of hits.

Table 2. Reading Activity – Student Averages

Female	Mean	STD	Male	Mean	STD
Japanese	359.1	303.2	Japanese	221.6	140.5
Mexican	436.4	266.0	Mexican	292.4	211.4
Russian	195.6	206.9	Russian	172.3	155.3

Note: "Number of messages read" is somewhat overstated as it is calculated by WebCT in cases when students might have only hit on the messages, but not necessarily read them.

These statistical findings left us wondering: Why did students participate in the same project in three different ways? Would it be possible to find the situational and institutional factors that contributed to those differences in hit/read ratios?

Methods

In order to answer the above questions, our study focuses on the factors shaping culturally diverse students' participation in international telecollaboration. The study undertakes a social realism qualitative research paradigm. According to Belz (2002),

> Methodologically, social realism reflects the complex and layered nature of the empirical world. It relies on an exploratory, theory-generating, multi-strategy approach which attempts to make as many "analytic cuts" (Layder, 1993, p. 108) into the research site as possible in order to elucidate the meanings of particular social actions for the people involved. (p. 61)

The object of investigation becomes "the multi-directional inter-relationship of structure (i.e., *context* and *setting*) and agency (i.e., *situated activity* and *self*) in the investigation of human activity" (p. 61). The complex interrelationship of structure and agency can be presented as the four overlapping dimensions linking more locally situated aspects of language use and language learning to the macro issues of social institutions, beliefs,

and ideologies (table 3):

Table 3. The Interrelationship between Structure and Agency (Adapted from Layder, 1993)

Context: Cultural & geopolitical structures	Setting: Institutional contexts	Situated Activity: Communicative activities	Agency: Individual experiences
- *Large-scale, society-wide worldviews* encompassing beliefs, values, and attitudes toward social phenomena; - *Group identities* such as social class, gender, and ethnicity; - *Social issues* such as linguistic rights and language education policies	- *Social institutions* within communities and groups in which people hold memberships including families and schools; - *Communicative practices and activities* of particular educational contexts	*Activities* constituting a particular learning context that shape and are shaped by individual involvement.	- *Ways* individuals index and construct their own social identities and roles and those of others; -*Ways* that individuals in their interactions with each other create social concepts such as motivation, affiliation and competence

The major source of data represented interviews with participants, which were content analyzed for recurrent themes (Miles & Huberman, 1994; Neundorf, 2002). To determine when it was time to stop processing data, we used the four criteria proposed by Lincoln and Guba (1985): exhaustion of sources, saturation of categories, emergence of regularities, and overextension.

Findings

The findings were categorized within the four overarching dimensions: geopolitical structures, institutional settings, situated online activity, and agency.

1. Geopolitical Structures

1.1 Discourses of the Positioned Subjects

The Japanese Students: Canadian Multiculturalism

One of the main themes emerged through the interviews with the Japanese students, was the influence of the Canadian context, where they were on exchange program during the project, on their interest in other cultures. Many Japanese students said that living in a "mono-cultural" country like Japan and moving to the multicultural Canada "makes us to be interested in cultures more" (Mariko). They brought up this argument as an incentive to participate in the international online project. On the other hand, some of the Japanese students said that they would rather interact with the students who they could meet face-to-face in a Canadian context.

The Russian Students: Anxiety to Seem Less Knowledgeable

Many Russian students had elevated anxiety at the beginning of the project because they thought their English would be less advanced than the English of the Japanese and Mexican students. Kostya said in the interview: "I thought Japanese and Mexicans would be so advanced. If they read my poor messages, I would disgrace my department of World Economics and myself. Therefore, I had to learn grammar again, such as, e.g. the word order." This happened because the Russian students perceived the project not as a mere interaction, but something having the broader international significance. Lena, for example, said: "It is an international project and we are the face of our Republic" (interview). This fact motivated the Russian students, and, at the same

time, raised their anxiety level. Later, the Russian students found out that their English language proficiency was on the same level, if not superior, to the proficiency of the Japanese and Mexican students. This finding significantly reduced their anxiety level. As Shura, a Russian student said: "I was afraid that I would seem odd compared to Japanese and Mexicans, but it seems to me that the level of their knowledge is similar to ours."

1.2 Culture Valuation

The limited knowledge about other countries became an incentive for some students to find out more about the other cultures and countries and. Most of the Japanese students (72.1%), for example, indicated that they had poor/no knowledge about Russia and 58.2% had poor/no knowledge about Mexico. Therefore, Japanese students more often reported they wanted to find out more about Russia. The Mexican and Russian students knew more about Japan than about the countries of each other. For example, 62.6% Mexican students indicated that they had poor/no knowledge about Japan, and 90.7% had poor/no knowledge about Russia. A little less than a half of the Russian students (48.8%) reported that they had poor/no knowledge about Japan and 87.8% had poor/no knowledge about Mexico. Therefore, the Mexican and Russian students recurrently said that they wanted to learn more about cultures of each other. Such curiosity was reported at the beginning of the project, however, in the course of interaction it became clear that it was easier for students to build on their conversation on the common background knowledge.

Some students were driven by pragmatic interest in the countries of their participation partners. George, one of the most active Russian students, wrote that he was interested more in interaction with the Japanese students, because "our relations with Japan are growing." In contrast, "…Mexico is very far from Russia, and I know there are some trading relations, but they are very small." Jose, a Mexican student, said: "I like to learn about other cultures, especially Japanese and Russian, I think that we can learn very much about them, *they are powerful* cultures and we have to take them as an example" (mid-interview, italics added). In comparison, Yuki, a Japanese student, wrote in his journal: "Now the most interesting thing for me is about the relationship among Japan, Asia and the United States economically and politically. In this context, I can say that I am not interested in Russia and Mexico."

Olga, a Russian student, explained such different levels of interest in one another by unequal power relations that she thought existed among "developed" and "developing" countries: "I think that developing countries want to know more about the developed. We, the developing countries, have to follow and watch the developed countries and they don't have to" (Interview).

1.3 Dialect Valuation

If in Belz's (2002) study the language valuation (English vs. German) was singled out as one of the motivating factors, in this study native vs. non-native English dialect valuation became one of the factors impacting students' motivation to participate.

The post-survey revealed that the majority of the Mexican (85.3%) and Russian (73.5%) students had a positive attitude toward interaction with non-native speakers, which was not the case with the Japanese students (Table 4). Almost 45% of the Japanese students had negative attitude toward interaction with non-native speakers, perhaps, because they felt an urgency to practice their English with native speakers during their short remaining time of stay in Canada.

Table 4. Students' Attitudes toward Interaction with Non-Native English Speakers

Attitudes	Japanese (%)	Mexicans (%)	Russian (%)
Positive	55.6	85.3	73.5
Negative	44.4	0.0	2.9
Neutral	0.0	14.7	23.5

2. Institutional Contexts

2.1 Internet Access

Whereas all the Japanese and Mexican students had free and unlimited Internet access, the Russian students had to pay for their access and many of them did not have Internet at home. For this reason, many Russian students composed their messages off-line and logged on the Internet for the short period of time just to post them. As a result, their messages were not that interactive and appeared on the bulletin board with delay. The limited access to the Internet also explains why the Russian students engaged in such a limited reading activity. Furthermore, participation in the project was more time consuming for them than for the Japanese and Mexican students. Therefore, many of them said in the interview: "If I had unlimited access I would have participated much more."

2.2 Project Integration

The Japanese students engaged with the project and the two other lab activities- webquests and journal writing during their lab time twice a week. They were also encouraged to post on the bulletin board in the out of class time. They felt that the webquests and journal writing were more important for them as they were graded for doing them on a weekly basis, which was not the case with the WebCT activity. In addition, because webquests and journals had a finite nature, they could not be as easily postponed as a 12-week long, process-oriented WebCT activity.

The Mexican students did not have to choose among several tasks as in the case of the Japanese students. Moreover, the project was conducted instead of their essay writing, which assured the participation of all the students. Therefore, most of the Mexican students demonstrated balanced participation by posting and reading an equally large number of messages

In the case of the Russian students, the telecollaborative project was the only activity they engaged in during their lab time. Their instructor gave them the specific topics and expected them to write half-page long essays. She controlled her students very strictly by checking their messages every week. Whereas the Japanese and Mexican students engaged in the interactive activity, the Russian students' participation was generally more monologic. In addition, for the Russian students this project was the only task they did in the English section worth 100% of the grade. On the other hand, the Japanese students received only 20% and the Mexican students 25% of the total grade for their participation in the project. Thus, for the Russian students the project was a high stakes activity, whereas for the Japanese and Mexicans it was an activity of less importance.

3. Situated Online Activity

3.1 Affordances and Constraints of the Bulletin Board

Along with such affordances of the bulletin board as authenticity, availability at any time and any place, extra-time to think through one's ideas, contingent interaction and a possibility to directly address cultural topics, avoiding preliminary interaction moves, the students mentioned several constraints, discussed next.

Message Overload

Many Japanese and Russian students said that the online activity was very time-consuming: "When I tried to enter WebCT it took so much time" (Keiko, interview). Furthermore, the problem of message overload, also identified by Sengupta (2001), discouraged many students to participate in the interaction. Miki, a Japanese student, said: "I do not have enough time to read every single message. If I can't read every message it makes me feel that I am not sure what exactly is going on" (Interview). In addition, the overwhelming number of messages caused their devaluation. As Yukako, a Japanese student, said,

> Sometimes, I have no idea what to say about some specific topics because, I feel there are too many topics to discuss something deeper and *I am not sure how and how much I can do that.* Many topics seem very superficial, I sometimes feel.

Message overload also resulted in difficulties to form a community. Stella, a Mexican student, said: "Something that i didn't like was that the messages was so difficult to find.. you know .. you didn't know if somebody answered you.. and you couldn't keep a conversation with one person" (mid-interview).

Interestingly, only four (11.4%) of the Russian students said that they were overwhelmed with the large number of messages. This was because the Russian students had limited time to work on the Internet at the lab, and therefore, many of them thought: "you are not frustrated that many messages remain unread because you know beforehand that we would not have time anyway to read everything. You just come on a couple of hours to the lab" (Tina, interview).

Name and Gender Confusion

Because an online text-based interaction did not afford visual cues, students could determine the gender of their partners only by names. The problem that students faced was that the Japanese students could not distinguish between the Mexican and Russian names. As Kaneko, a Japanese student, said: "Sometimes I confused that this opinion is from which country's people. I wish I could recognize them. I'm trying to mention my nationality every time, but it's troublesome" (Journal entry). The Mexican and Russian students, on the other hand, could not distinguish between Japanese female and male names.

4. Agency

Not only was student participation shaped by the external factors, but they themselves shaped the online environment with their agency, manifested through their identities and choices.

4.1 Identity Investment

Salvador, one of the most active Mexican participants, who consistently produced very thoughtful messages said that he posted messages in the following cases:

> (1) I might try to *complement* their [my classmates] posts if I feel something might be missing. (2) If there are a *lot of posts*, I might want to see why everybody is writing something or (3) if *no mexican has posted* something in that topic. I'll read it and see if I can make a good post 4) maybe if there are names of *foreign students that I know* that have written something (Interview).

Salvador positioned himself as being responsible to complement his classmates' messages and responding to the Japanese and Russian students' messages, in case they were left unanswered. In another example, Erika congratulated all women with Women's Day, described the position of women in Mexico and asked about the status of women in Japan and Russia. She explained her choice of this topic as follows:

> I chose to write about the international women day, because i'm a little bit feminist, and i knew that my topic would create some controversy, and i liked to know how other women feel in their countries

and how women live in the other countries (IRC interview).

Erika truly invested herself in this topic – not only did she initiate the thread, she acted as its moderator by keeping track of replies, posting her feedbacks and asking additional questions. In this case, her gendered identity helped her to initiate and moderate a dialogue with the Japanese and Russian female students.

4.2 Choices

Interesting Topics

All students chose to read messages that were interesting for them: "I don't care if the message is addressed to me personally, if *it is interesting* I reply." Most of the participants found that interesting topics were more important than messages of the students from particular cultures. As Amador, a Mexican student, said: "Interesting stuff is brought by a student, not by a country" (Mid-interview). The interest was usually expressed as follows: "If I am struck by a message e.g. by differences between cultures." "If I have an opposite opinion." "If I have an opinion on a message which I am reading. I wrote the topics that I knew and was sure about." All students tended to avoid "long, academic, culture-specific messages."

Replies and Questions

The students wrote their messages not only when they received replies, but when they were asked questions: "I did not reply to many messages because they did not ask any questions, just comments. I did not feel like I need to reply."

Interest in Students from Own vs. Other Cultures

The interviews revealed that most of the students were equally interested to read messages of their classmates and their international partners. Miki, a Japanese student, said: "Actually, it is very interesting to read messages *by my classmates* as well. I know them, but I do not know exactly what they are thinking about different cultures" (Interview). The study found that the third year Russian students felt attracted to messages of their quiet and reserved female classmate Alla:

> Alla e.g. for me she has such an attractive aura. It was interesting what kind of person she is. I don't know …it is difficult to approach her in the face-to-face context. ...Due to this forum I began to treat our students …not differently, but simply knew more about them, about those people who were interesting to me. (Semyon, Interview)

Debates

Many students reported that they were motivated by the topics that could promote debates, rather than simple narratives: "We should have more chances to discuss, have argument, and not just simply post narratives" (Olesya, RS, Interview). Also Stella, a Mexican student, said:

> I was discouraged when i couldn't find some interesting topic because i wanted to participate but i didn't know what to say in some topics. I would like more interesting topics that *people can debate* not just to comment and say yes this is interesting..and bla bla.. i prefer topics that people is against other..and so on (Mid-intreview).

Discussing and Contesting Stereotypes

The students were willing to discuss and contest stereotypes about their countries on the bulletin board. As Salvador, a Mexican student, said:

> I do it [participate] more of a "nationalistic pride" so to say. I want people to know something about Mexico other than a stereotype. I want to tell them about my country, and tell them the truth as I see it. (Salvador, Mexican student, IRC interview)

Interestingly, because of the Mexican students' deeper frustration with misrepresentation of their country

by the USA, they were more willing to engage in counter-discourses about their country than the Japanese and Russian students. In case of the Russian students, because of the lack of access to the Internet they felt that it was impossible to over-persuade someone through online mode of communication: "You can not make them think differently on this bulletin board anyway, so it is useless to try to over-persuade them" (Sasha). There were only a few messages in which the Japanese students engaged in counter-discourses about their country, because as Aya and Kei said, "There are only positive stereotypes about Japan, so I do not want to break them."

Discussion

The students were embedded in their classrooms, broader contexts of their local cultures, and the online global community which informed their choices to participate in the online project. The students from the three cultures participated differently in the project because their participation was shaped by the different factors (Table 5).

Table 5. Factors shaping student participation across three cultures

	Japanese Students	Mexican Students	Russian Students
Geopolitical structures	Lack of knowledge about Russia and Mexico Native dialect valuation, Canadian multiculturalism	Lack of knowledge about Russia, Opposing stereotypes	Lack of knowledge about Mexico
Institutional contexts /instructor mediation	Project as one among 3 lab activities (web-quests and journal writing), worth 20%	Balanced integration of the project instead of essay writing, worth 25%	Strict instructor control, Project as a high-stake activity worth 100%, Novelty/Unpredictability of the project, Lack of Internet access
Online context	Message overload	Message overload	
Agency	Identity investment & choices -- interesting topics, discussing and contesting stereotypes, attraction to interesting students	Identity investment & choices -- interesting topics, discussing and contesting stereotypes, attraction to interesting students	Identity investment & choices -- interesting topics, discussing and contesting stereotypes, attraction to interesting students

When conducting international telecollaboration, the reality dictates that there will always be differences in factors shaping student participation in various contexts due to the differences in the socio-economic, cultural, educational, and material conditions in different cultural contexts. (Castells, 1996) In addition, there will be differences in the discourses prevalent in each context. As Rassool (1999) argues, "materially constituted within specific ideological milieu, texts enter into dialogue with social and political discourses and the institutions, processes and practices in which they are embedded" (p. 158-159). The discourses of unequal power relations between developed and developing countries, spread by media, for example, became an additional dimension shaping student participation, at least at the beginning of the project. For example, the Mexicans and Russians did not have any pragmatic interest in each other because they perceived themselves and their partners as too distant economically and geopolitically from each other. Furthermore, the Japanese students valued more interaction with native English speakers. For these reasons, it is important to engage students in counter-discourses by teaching them to value different cultures no matter how distanced they are perceived to be. In addition, it is important to emphasize the importance of learning other dialects of English in our international world where non-English speakers outnumbered native speakers (Crystal, 1997).

While instructors can change students' beliefs, shaped by those discourses, and boost their motivation, it is not in their power to change physical contexts in which the project is embedded. For example, it would not be possible for one instructor to provide Internet access to all students. In this case, the students with limited access should be evaluated differently – for example, they should be instructed to respond to fewer messages, but make sure their messages are more interactive and less monologic. They should be also instructed to invest more time in reading and not just posting activity.

Students should learn to understand behaviors as originating from particular cultural-historical contexts (Agar, 1994). In this regard, the misalignments in cultures-of-use may serve as teachable moments about intercultural differences and tolerance (Belz & Muller-Hartmann, 2003). There should be some time allocated to explore communication partners' local contexts and educational systems. The participants might exchange videos with information about their cities and universities. Instructors need to communicate better with one another and discuss the goals and rules of the use of the bulletin board in their instructional contexts.

In order to relieve students' anxiety about the overwhelming number of messages, they should relinquish the idea of tracking all newly-appeared messages. Students may be instructed to go to the bulletin board two or three times a week, at a particular time and read only the threads that are interesting to them. Instructors may also inform students of interesting ongoing discussions on the bulletin board in the classroom. To avoid name and gender confusion among students from different cultures, instructors should conduct mini-lessons at the beginning of the project on popular names of the communication partners countries.

One of the key findings is that in the course of interaction the students reported that they became attracted the most to interesting topics rather than to the students from particular cultures, confirming that "it is not a question of different culture and language systems which confront each other in cultural encounters, but of interacting individuals who produce, negotiate or defend meanings and capitals" (Christensen, 1994, p.37; translation by Byram, 1997; p. 40). Therefore, instead of developing students' discrete skills, it is important to educate them to be better communicators, learners, and people in general, remembering that education is all about student identity formation (Cummins, 1996; Norton, 2000). It is in our power to educate the learners who may become facilitators of the globalization processes by means of exercising their agency in the similar international telecollaborative projects, and despite the differences in factors shaping their participation.

Notes

1. WebCT courseware was first developed at the University of British Columbia and is now commercially available to public and private schools and universities throughout the world. The courseware has a variety of components including web-based resources and links, an assessment grid, a calendar, private chat-rooms, and an electronic bulletin board. The different components can be put together by the instructor to provide materials and information that are specific to each course. On a WebCT bulletin board students' entries can be organized chronologically or in threads that follow a particular theme or topic. Students can see who wrote the latest posting, follow the line of an argument among a group of students, and interject at any point. Each posting includes a student's name, a date a message was posted, and a subject of the message. The instructor and students can use a quote function to incorporate the text from a previous posting in order to comment on it in a new posting. Students can post their academic essays and pictures onto the electronic bulletin board by using an attachment, or by copying and pasting their document onto a message.

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