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**Being Polite in Your Second Life:**

**A Discourse Analysis of Students' Interchanges in an Online Collaborative Learning Environment**

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**Being Polite in Your Second Life:  
A Discourse Analysis of Students' Interchanges in an Online  
Collaborative Learning Environment**

by

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**Being Polite in Your Second Life:  
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The University of Texas at Austin, 2010

Supervisors: Paul Resta & Diane L. Schallert

With the improvement of computer technology and the prevalence of the Internet, learning activities taking place in cyberspace by means of computer-mediated communication have become more common and accessible than even a decade ago. Being interested in how politeness phenomena as universal principles in human interaction played a role in the process of online collaborative learning in a graduate-level course, I conducted a naturalistic inquiry to explore students' interaction through the lens of Brown and Levinson's politeness theory (1987). I analyzed the exchanges of 18 students divided into four teams with a consideration for such contextual factors as concerns about netiquette, time, modes of online communication, discourse functions, and sense of community.

Influenced by the tradition of interpretivist/constructivist research paradigm, I adopted diverse data collection methods and discourse analytical techniques. Data are reported as a case study of a purposefully selected focal team of five students with supporting evidence interweaving multiple data sources (online discussion, self-reflective blog entries, self-report portfolios, peer/self assessments, field notes, videotapes of voice chat sessions, audiotapes of interviews, and online survey responses).

Given the context of students being required to work collaboratively as a team throughout the semester, the findings of this study suggested that the focal team used a variety of politeness strategies to establish cohesion among members and to moderate the force imposed by presupposing too much underlying solidarity. Five contextual factors also emerged as influencing the focal team's use of politeness strategies: norms/convention, online communication medium, topics and content of discussion, social distance, and personal differences.

Instructional technology is subject to innovation and is meant to facilitate learning. Incorporating new technology (e.g., Second Life) into instructional settings can create new opportunities for learning on which learners' use of politeness strategies depends. Thus, this study about politeness in an online collaborative learning context not only contributes to enriching views of politeness theory, but also in being able to help prepare learners to collaborate effectively in new immersive learning environments with comfort in the ways of fostering awareness of face-saving concerns to avoid or redress face threat situations that may damage team collaboration and lead to a negative learning experience.

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## Chapter 1 Introduction

Computer-mediated communication over the Internet creates cyberspace where humans around the globe can meet, converse, and exchange information in a virtual space (Gibson, 1984). With the improvement of computer technology and the prevalence of the Internet, communicating in cyberspace has become more accessible and frequent than ever a decade ago. Interacting in cyberspace can expand our real life interactions by overcoming time and location limitations. Individuals can even develop a second identity in cyberspace that can differ drastically from their real-life identity (Thomas, 2007). Individuals' lives in cyberspace are their *second lives*. Thus, the phrase *second life* used in the title of this study refers broadly to the multiple identities constructed in cyberspace rather than narrowly limited to the particular three-dimensional online virtual world called *Second Life* created and developed by Linden Lab (Linden Research, 2008), even though it was this very tool that students were using in the context and studied for this project.

The main purpose of this study was to understand students' use of politeness strategies in a graduate-level online collaborative learning environment. In addition to identifying the types of politeness strategies that were used frequently when students engaged in a computer-supported collaborative learning (CSCL) context, I examined the relations between students' use of politeness strategies and the following factors: concerns about netiquette, the influence of modes of computer-mediated communication

(e.g., synchronous vs. asynchronous), discourse functions (the functions served by each posted online message or utterance), and sense of community in this study. Furthermore, I attempted to explore how the use of politeness strategies could contribute to students' learning and influence their learning experience.

In the next sections, I introduce the studied constructs with definitions and rationales in the following sequence: (a) computer-supported collaborative learning (CSCL), (b) netiquette, (c) politeness strategies, (d) discourse functions, (e) modes of communication, and (f) sense of community. The relations among these constructs are discussed as well. I then present a conceptual framework to organize these constructs, and I end the chapter by presenting the research questions guiding my study.

### Computer-Supported Collaborative Learning

Computer-supported collaborative learning (CSCL) incorporating computer technology with collaborative learning is an emerging instructional model in education. Drawing on Piaget's (1985) constructivism, Vygotsky's (1978) sociocultural theories, and Lave and Wenger's (1991) situated learning, the early developers of CSCL saw it as providing a learning context that enables students to construct knowledge actively through social and intellectual interactions with peers and more knowledgeable others. Koschmann (1996) identified CSCL as an emerging paradigm within the field of computer-based learning systems. Through the lens of this paradigm, learning is seen as a process that helps students with the support of technology to become members of knowledge communities whose common property is different from the common property

of the knowledge communities to which they already belong. Based on Koschmann's definition, the centrality of technology to the learning process can vary on a continuum from being the very prerequisite in order for collaboration to take place, to merely providing an image on a screen about which two or more students discuss face-to-face. In this study, online communication technology plays a pivotal role in facilitating collaboration and learning in cyberspace.

Learning in cyberspace increases the possibilities of human interactions via the Internet. When more and more people rely on the Internet to facilitate the occasions of human interaction, including in educational settings, a virtual society in cyberspace is created. As Gumperz (1987) mentioned in the foreword to Brown and Levinson's treatise on politeness, the concern for courtesy is the foundation of human social life because it is the basis of the production of social order, and a prerequisite of human collaboration. Virtual society in cyberspace consists of human interaction just as much as traditional face-to-face interaction does. Thus, the concern for courtesy is also needed in virtual society, especially when more and more people are involved in cyber-society.

### Netiquette

The emergence of the word *netiquette* served as evidence showing the importance of taking courtesy into consideration in cyberspace. *Netiquette* is a combination of *network* and *etiquette* and includes a set of core rules indicating what should or should not be done in online communication to ensure common courtesy (Shea, 1994).

Suggested by Shea (1994, pp. 32-33), the set of core rules includes:

Rule 1: Remember the human [side of Internet use].

Rule 2: Adhere to the same standards of behavior online that you follow in real life.

Rule 3: Know where you are in cyberspace.

Rule 4: Respect other people's time and bandwidth.

Rule 5: Make yourself look good online.

Rule 6: Share expert knowledge.

Rule 7: Help keep flame wars under control.

Rule 8: Respect other people's privacy.

Rule 9: Don't abuse your power.

Rule 10: Be forgiving of other people's mistakes.

Resta (2004-2009) emphasized that bearing these core rules of netiquette in mind can contribute to clear, positive, and respectful online communication, which leads to an effective online collaborative learning experience.

### Politeness Strategies

According to Brown and Levinson (1987), politeness strategies are reflected in linguistic markers when people engage in social interaction. A possible relation between netiquette and politeness strategies examined in this study was that being aware of the core rules of netiquette, the participants would apply different politeness strategies to their discourse if they were likely to be perceived as violating the core rules of netiquette. Drawing on the work of Goffman (1967) and Brown and Levinson (1987), Morand and

Ocker (2003) defined politeness strategies in a computer-mediated discussion (CMD) environment as any attempt to “phrase things so as to show respect and esteem for the face of others throughout social interchange” (p.1). Face can be divided into two aspects based upon two types of individuals’ desires: positive face and negative face. Positive face addresses an individual’s desire to be needed. Negative face addresses an individuals’ desire for freedom from impingement (Morand & Ocker , 2003). Throughout interaction in CMD, face can be threatened by some acts, such as disagreements, criticisms, requests for information or help, giving directives, and requests for clarification of a prior message. These acts are called *face-threatening acts* (FTA) (Brown & Levinson, 1987; Morand & Ocker, 2003). As proposed in this study, violating the core rules of netiquette, among other types of discourse moves, can be considered as face-threatening acts. In order to redress such face-threatening acts, individuals adopt various politeness strategies. Brown and Levinson (1987) categorized politeness strategies into positive and negative politeness strategies, in accordance with which aspect of face an individual wants to redress. Thus, positive politeness and negative politeness do not refer to opposite ends of a single dimension that might be termed a *good manners* continuum. Positive politeness strategies include moves “showing an appreciation of something that the speaker believes the listener would like to hear,” whereas negative politeness strategies include moves “attempting to reduce any imposition on the hearer” (Yang et al., 2006, pp.341-342).

## Discourse Functions

The term *discourse function* used in this study is defined as the purpose of an interlocutory move occurring in an interactional event. Examples include information seeking, discussion generating, information providing, experience sharing, elaborating, presenting alternative perspective, evaluating on another's comment, self-evaluating, conversation managing, and socializing (Zhu, 1996; Chiang et al., 2008; Schallert et al., 2009). According to Cameron (2001), the degree of face-threat carried by the words making up an utterance can influence politeness work. As abovementioned, disagreements, criticisms, requests for information or help, giving directives, and requests for clarification of a prior message are potential face-threatening acts (Brown & Levinson, 1987; Morand & Ocker, 2003). These fact-threatening acts carry different discourse functions. For example, the disagreement acts can be associated with discourse moves that function as presenting an alternative perspective or negatively evaluating another's comments. The acts of requesting information can be associated with a discourse move that has the function of information seeking. These associations show that the discourse functions served by the words making up an utterance reflect different degrees of face-threat, which can influence the politeness work of interlocutors. Therefore, I proposed that students' use of politeness strategies would be associated with the discourse functions their messages served.

## Modes of Online Communication

As to the modes of online communication, this study included a focus on describing differences between synchronous and asynchronous online communication modes. When communicating through an asynchronous CMD mode, participants are not required to be online at the same time. Asynchronous technologies include Email, mailing lists, and message boards. The synchronous CMD mode, on the other hand, allows for more real-time interaction but requires that participants be online simultaneously. Synchronous technologies include chat room, audio conferencing, and video conferencing (Box, 1999). Many prior studies have investigated the discourse of asynchronous CMD in terms of different learning aspects including knowledge construction (e.g., Henri, 1992; Zhu, 1996; Gunawardena et al., 1997); social presence (e.g., Rourke et al., 1999); interaction patterns (e.g., Fahy et al., 2000); and learning strategies (e.g., Lockhorst et al. 2003). Comparing the amount of research conducted on asynchronous CMD modes, prior research of synchronous CMD are relatively few. Kneser et al. (2001) focused on the analysis of turn-taking and the roles participants play in synchronous online discussion. Abrams (2001) compared the participant roles in synchronous online discussion with pencil-and-paper group journal discussion. Lately, more researchers have attempted to compare and contrast learning occurring in the asynchronous and synchronous CMD modes. Johnson and Johnson (2006), Perez (2003), and Chou (2001) examined students' preferences for and perceptions of synchronous versus asynchronous CMD modes. Tomas and Macgregor (2005), Perez (2003), and Abrams (2003) compared students' learning performance in synchronous and

asynchronous CMD modes. These prior studies suggested that different modes of online discussion provide different affordances and constraints on the discussions, which in turn affect students' learning performance. Thus, the study attempted to take the modes of online communication into consideration to examine if this construct also influenced students' use of politeness strategies in the CSCL environment.

In my own and my colleagues' work, I compared students' use of politeness strategies across synchronous and asynchronous modes in a hybrid learning environment where the face-to-face interaction was the main communication channel delivering instruction accompanied by three synchronous and three asynchronous online discussions spaced throughout the whole semester. The online discussions focused on making intellectual sense of the assigned readings via pure text-based online synchronous and asynchronous communication tools (Chiang et. al., 2008; Schallert et al., 2009). Results showed that there was no significant difference between synchronous and asynchronous modes in the use of politeness strategies in the learning context; however, this study was conducted in a different learning environment that may increase the likelihood of finding different results when comparing the modes in the current study. The context of this study was an online collaborative learning environment where almost all communication occurred online, and the participants were required to finish several authentic group projects collaboratively with their team members throughout the whole semester. The content of the discussions focused on finishing their authentic projects rather than on making sense of academic readings. In order to finish their group projects, the participants needed to communicate via both synchronous and asynchronous online

communication tools. The asynchronous discussion tool was a text-based discussion board in TeachNet (see Figure 1.1), although students could also use e-mail as an additional asynchronous tool. The synchronous communication tool was the voice chat function of Second Life (see Figure 1.2), a 3D online virtual world. Participants in Second Life can communicate not only via text and voice chat, but also can signal additional contextualization cues through their avatars. Synchronous communication in Second Life is richer than in pure text-based online discussions because Second Life enriches the communication by means of visual and auditory aids. Given the differences in the nature of the online discussions between prior studies (Chiang et al., 2008; Schallert et al., 2009) and this study, such as the purpose of the online discussions, the frequency of using online discussions, and the features of different communication tools, I proposed that the relation between the use of politeness strategies and the modes of communication in the studied context may offer interesting new insights about how politeness was enacted when students were interacting online to fulfill different functions.

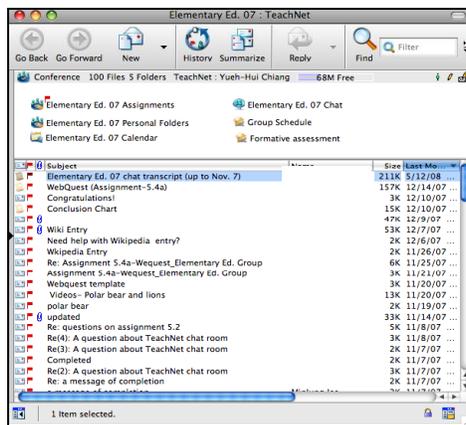


Figure 1.1 Asynchronous discussion board in TeachNet



Figure 1.2 Synchronous voice chat in Second Life

### Sense of Community

The last construct woven into my study was sense of community. It has been argued that the establishment of a sense of community plays an important role in developing a learning community (Wenger, 1998), especially in a collaborative learning context (Terrell et al., 2008). According to Rovai (2002a), the development of learning communities contains two components: connectedness and learning. Connectedness refers to a sense of solidarity among team members. Learning refers to a feeling that knowledge is constructed actively within the community. Thus, the development of sense of community in a collaborative learning environment is reflected by an increasing sense of solidarity among the community members and by the contributions to learning offered by the community. As Cameron suggested (2001), the sense of solidarity among interlocutors in a human interaction can influence the interlocutors' use of politeness strategies. Therefore, in this study I investigated the relation between the use of politeness strategies and the development of sense of solidarity over time, and further

related the use of politeness strategies to the establishment of sense of learning community.

### Conceptual Framework for the Study

To summarize the abovementioned rationale for the study, Figure 1.3 outlines the conceptual framework for this study. I attempted to understand the main construct, politeness strategies, in a particular computer-supported collaborative learning environment, and to explore the relations among the constructs of netiquette, politeness strategies, modes of communication, discourse functions, sense of community, and learning. The explored relations are presented as lines connecting the constructs in the figure.

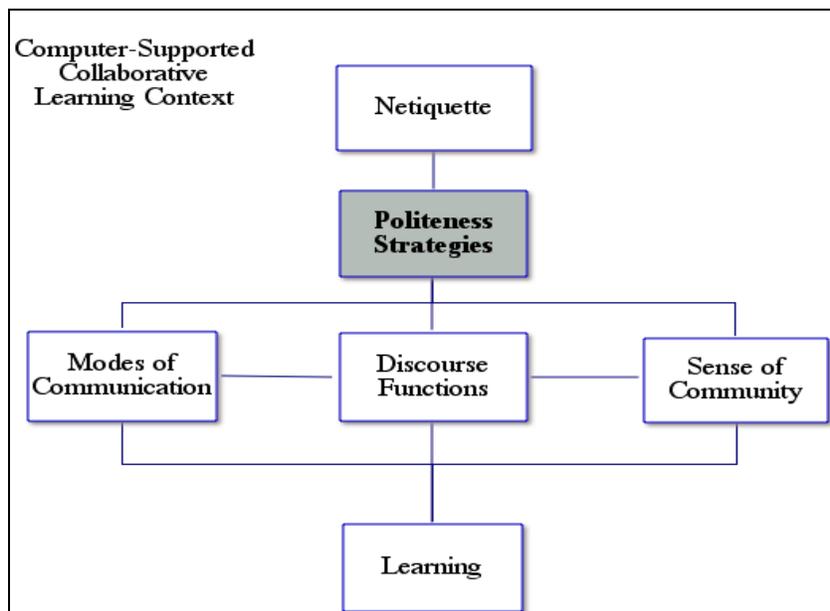


Figure 1.3 Conceptual Framework for the Study

## Research Design and Questions

Based upon the conceptual framework of this study, I conducted a naturalistic inquiry in a graduate-level online collaborative learning course, consisting of five learning modules requiring different degree of collaboration in a semester. I adopted Brown and Levinson's Politeness Theory (1987) as the main theoretical framework. In order to understand students' use of politeness moves during the course of their participation in online collaborative learning activities, I assumed an interpretivist/constructivist paradigm, and mostly relied on discourse analysis technique to analyze the transcripts of students' online discussions in terms of politeness moves and discourse functions. In addition, I used open-ended questionnaires and interviews to understand students' perspectives on politeness-related concerns. Peer/self assessments, self-report portfolios, and students' contributions to discussions were gathered to allow for a fuller understanding of students' learning and of the relation between students' use of politeness moves and their learning process. A survey was administered several times to measure the establishment of sense of community as the course proceeded and to explore the relation between students' use of politeness moves and the development of sense of community. These multiple data sources from the whole class (four collaborative teams, 18 participants) were collected throughout the semester. Taking into consideration the degree of data informing this study (theoretical sampling), and the completeness and availability of each data source (methodological sampling), I purposefully selected one

particularly interesting team of students from the four teams as the focal studied case. (more details about purposive sampling are described in the chapter of Method).

I present the findings in the form of a case report of the focal team to address the following five research questions in a naturally occurring graduate-level computer-supported collaborative learning environment:

1. What politeness strategies do students use when they work collaboratively via online synchronous or asynchronous communication tools?

A previous study I had done with fellow research team members also attempted to address this question (Chiang et al., 2008; Schallert et al., 2009). However, the context of this study was different from that of the prior study in the purpose of the online discussions, the frequency of using online discussions, and the features of different communication tools. Therefore, I attempted to answer this question again given the new, specialized context of this study.

2. How do students' concerns about netiquette relate to their use of politeness strategies?

A prior study (Schallert et al., 2008) examined the relation between students' self-perception of their politeness concerns and their use of politeness strategies, and found that students' self-perception of their politeness concerns influenced their use of politeness strategies. However, there is no prior study directly examining the relation between students' concerns about netiquette and their use of politeness strategies. Thus, I aimed to fill this gap by exploring this relation in the present study.

3. How do students' use of politeness strategies change over time?

In a prior study (Schallert et al., 2009), students were assigned to different groups for each online discussion, which posed some difficulties in examining changes in students' use of politeness strategies over time. In the present study, students remained in the same group throughout the semester; thus, I was able to address this question of change in this study.

4. How do the following contextual factors relate to students' use of politeness strategies?

a. The discourse function each posted message/utterance serves

The previous studies in which I contributed suggested that discourse functions of posted messages influenced students' use of politeness strategies. For example, online messages with discourse functions more related to the writer, such as experience sharing and self-evaluation, had fewer politeness strategies than messages serving discourse functions seeming to be more directed to others, such as evaluating others' messages and presenting a contrasting view (Chiang et al., 2008; Schallert et al., 2009). Given that the contexts of the previous studies were different from the context of the present study as abovementioned, I examined this relation in the present study to see whether results from the previous study would be confirmed.

b. The modes of online communication

The previous studies to which I was a part suggested that students' use of politeness strategies did not significantly differ across different modes of online communication (Chiang et al., 2008; Schallert et al., 2009). Given that the context of these previous studies was different from the context of the present study as abovementioned, I needed to test this relation in the context of the present study.

c. The sense of community among group members

Some theoretical literature has suggested that the establishment of a sense of community among interlocutors influences their use of politeness strategies (Cameron, 2001; Morand & Ocker, 2003). Therefore, I set out to explore the relation between a sense of community among group members and their use of politeness strategies in the present study.

5. How does students' use of politeness strategies influence the learning process in the online learning community?

A learning community involves not only the development of sense of community, but also of learning (Wenger, 1998). Thus, in addition to examining the relation between sense of community and students' use of politeness strategies, I explored students' use of politeness strategies as these influenced the learning process.

## Chapter 2 Literature Review

This chapter reviews the available theoretical and empirical literature related to this study. The focus of this study is on understanding students' use of politeness strategies in a graduate-level online collaborative learning environment, and on exploring the relation between the use of politeness strategies and a set of contextual factors, including concerns about netiquette, discourse functions, modes of online communication, and sense of community. As the context of this study, computer-supported collaborative learning (CSCL) is reviewed first. Then, politeness theory, the construct of netiquette, discourse functions, modes of communication, and sense of community are discussed respectively. Finally, a review of the methodological literature informing the methodology of this study is presented at the end of this chapter.

### Computer-Supported Collaborative Learning

As Koschmann(1996) described it, Computer-supported collaborative learning (CSCL) incorporates computer-based learning systems with collaborative learning to provide a learning context where students can construct knowledge actively with their peers or more knowledgeable others by means of social and intellectual interpersonal interaction mediated by computer technology. Collaborative learning, in contrast to two kinds of learning contexts with which it has often been compared, namely individualistic learning and competitive learning, is the type of learning that occurs through the exchange and sharing of information and opinions among peers to reach shared learning

goals jointly. Students work together to improve understanding, making sense of information or searching for solutions. Thus, collaborative learning is seen as an act of shared creation and/or discovery of knowledge (Johnson & Johnson, 1996; UNESCO, 1999). Johnson and Johnson (1996) identified five elements of effective collaboration, including positive interdependence in terms of learning product as well as learning process, individual and group accountability, promotive interaction among group members, appropriate adoption of interpersonal social skills, and group processing. Accordingly, collaborative learning emphasizes that by opening up the minds of members of a collaborative team to each other, the team members are able to reach beyond any one individual's learning (Mason, 1970). With the support of computer technology, collaborative learning can take place beyond spatial and time boundaries, which means that collaborative learners in a computer-supported environment do not have to be present in the same physical location at the same time (McDonald & Gibson, 1998; Vinagre, 2008). From a conceptual perspective, CSCL is identified as a paradigm that views learning as a process mediated by computer technology and helping students to become members of knowledge communities whose common property is different from the common property of the knowledge communities to which they already belong.

As a learning paradigm, the concept of CSCL resonates with Lave and Wenger's (1991) situated learning theory. However, from a practical perspective, based on Koschmann's definition, the significance of computer technology can vary on a scale from being the very prerequisite in order for collaboration to take place, to merely providing, for instance, an image on a screen that two persons or more discuss face-to-

face. Given the variation of the importance of technology in CSCL environments, Piaget's cognitive constructivism theory (1985), Vygotsky's sociocultural theory (1978), and Lave and Wenger's (1991) situated learning theory can be applied to account for CSCL. These three learning theories can be individually applied to explain the learning that can take place in a CSCL context. However, these theories are very much interrelated, so that together, they can provide an integrated account of the learning in a certain CSCL situation. Thus, the rest of this section reviews in brief the three learning theories grounding CSCL respectively.

### Cognitive Constructivism

Cognitive constructivists draw insight from Piaget (1985) and focus on individual constructions of knowledge discovered in interaction with the environment. Cognitive constructivists view learning as an active process of constantly developing and changing cognitive schemas, as an ongoing process of resolving cognitive disequilibrium.

Cognitive equilibrium and disequilibrium are not static statuses. When individuals encounter a new situation, they compare the new situation with their current cognitive schemas. If they find that the new situation or a part of it can fit in with their current cognitive schemas, they will assimilate the new situation or the new part into existing cognitive schemas. Assimilation works as a reinforcement of their current cognitive schemas. On the other hand, if they find that the new situation cannot be aligned with their current cognitive schemas, they will accommodate their current cognitive schemas

to account for the new situation by virtue of differentiation and/or integration. When differentiating, they expand their current schemas to account for the new situation by creating a new schema or reorganizing the current schemas. When integrating, they establish associations among different existing schemas in light of the new situation.

Through the process of assimilation and accommodation, individuals' cognitive system will achieve a new state of equilibrium until a next disequilibrium happens. As long as individuals keep interacting with the external environment, cognitive disequilibrium will always occur. By repeating the process of resolving disequilibrium, individuals' cognitive schemas will become more complicated, organized, and useful. People learn actively through this ongoing process of encountering disequilibrium and achieving equilibration to refine their cognitive system and to broaden or deepen their knowledge.

### Sociocultural Theory

Social constructivists take as foundational the work of Vygotsky (1978) and view learning as connection with and appropriation from the sociocultural context within which humans are all immersed. Sociocultural theorists view learning as social and dialogic, as the result of interaction between an individual and other individuals or cultural artifacts. Learning is not a closed activity happening only within an individual's cognitive system. Learning is not a unidirectional activity occurring as a result of a sender reaching a recipient, either. Learning is more like a complicated network among individuals. Each individual influences others' learning. Each individual's learning is also

influenced by others. Usually, individuals influence others through dialogue, but this dialogue is not limited to verbal conversation. Body language, text, gesture, facial expression, experienced individuals' or experts' guidance, and even eye contact could be regarded as the medium for learning.

Learning starts from inter-speech, which is the dialogue between individuals and their external environment. Then, individuals internalize the interactions between themselves and outside entities through inner-speech, such as reflection. Through internalization, individuals appropriate the various outside voices to make their own voice. Subsequently, individuals are able to externalize what they have internalized through inter-speech to share what they know in their external environment. Then, the cycle of externalization and internalization continues. Inter-speech and inner-speech are social and dialogic between individuals and the external environment, and among individuals themselves respectively. Learning thus happens during the process of inter-speech and inner-speech socially and dialogically.

### Situated Learning

Situated Learning is a construct from within a Communities of Practice (CoP) perspective, first advanced by Lave and Wenger (1991). Community of practice is directly informed by Vygotsky's work as an extension of a social view of learning. A community of practice refers to a group of people who share common interests in some subject or problem and collaborate over an extended period to exchange ideas, find solutions, build knowledge, and construct identity. In this view, learning emerges from

the social practices in which participants engage. Communities of practices are everywhere as an integral part of our daily lives. Individuals inevitably participate in many communities of practitioners, and the mastery of knowledge and skills requires newcomers to move from legitimate peripheral participation toward full participation in the sociocultural practices of a community. Learning in communities of practice occurs among the interconnection of the four mutually defining components: (1) practice in learning as doing, (2) meaning in learning as experience, (3) identity in learning as becoming, (4) community in learning as belonging.

### Politeness Theory

This section reviews some of the theoretical literature about Politeness Theory. From Goffman's Face work (1967) through Brown and Levinson's (1987) Face-threatening Acts (FTAs) and politeness strategies to Morand and Ocker's (2003)'s work applying politeness theory to computer-mediated discussion, these serving as the main theoretical framework of this present study are reviewed in this section accordingly. Next, I review previous studies that have looked at the construct of politeness in computer-mediated learning context.

### Face

Sociologist Goffman's work on "Face" (1967) was the grounds for Brown and Levinson's Politeness Theory (1987). According to Goffman (1967), the term *face* was

associated with the social-emotional notions of being embarrassed or humiliated.

Drawing on Cupach and Metts's (1994) definition of *face* as the "concept of self that each person displays in particular interactions with others" (Cupach & Metts, 1994, p.3), Walsh, Gregory, Lake, and Gunawardena (2003) defined *face* as one's conception of self-image while participating in interpersonal interactions. Face can be lost, maintained, or enhanced when people participate in any interpersonal interaction. Generally speaking, when people interact with others, they not only pay attention to saving their own face (i.e., concerns for self-face), but also attend to helping others not lose face (i.e., concerns for other-face) because face is mutually vulnerable (Ting-Toomey & Kurogi, 1998). Goffman's notion of face emphasized its universality. Accordingly, Brown and Levinson (1987) assumed that concerns with face represent wants that all competent adult members of a society have and know each other to have. Expanding on Goffman's (1967) face work, Brown and Levinson defined two types of face: positive face and negative face. *Positive face* means "the positive consistent self-image or 'personality' (crucially including the desire that this self-image be appreciated and approved of) claimed by interactants." *Negative face* means "the basic claim to territories, personal preserves, rights to non-distraction—i.e. to freedom of action and freedom from imposition" (Brown & Levinson, 1987, p.61). In short, *positive face* refers to individuals' desire to be needed; whereas *negative face* refers to individuals' desire for freedom from impingement (Morand & Ocker, 2003).

## Face-threatening-acts (FTAs)

Given the assumption of the universal wants of face in a society, when individuals engage in interpersonal interactions, some acts have the potential to threaten face. These acts are called “face-threatening acts” (FTAs) (Brown & Levinson, 1987; Morand & Ocker, 2003). Brown and Levinson (1987) identified two dimensions to classify FTAs, first, based on the kinds of face threatened (positive face or negative face), and second, based on whose face is threatened (the hearer’s or the speaker’s). Combining these two dimensions, there are four types of FTAs: offending the hearer’s negative face, threatening the hearer’s positive face, damaging the speaker’s negative face, and offending the speakers’ positive face. Table 2.1 presents examples of speech acts that represent these four types of FTAs.

Table 2.1 Types of Fact-Threatening Acts

	Negative Face	Positive Face
Offending Hearer’s	<ul style="list-style-type: none"> <li>(a) orders, requests</li> <li>(b) suggestions, advice</li> <li>(c) reminding</li> <li>(d) threats, warnings, dares,</li> <li>(e) offers</li> <li>(f) promises</li> <li>(g) compliments, expressions of envy or admiration</li> <li>(h) expressions of strong (negative) emotions toward hearer.</li> </ul>	<ul style="list-style-type: none"> <li>(a) expressions of disapproval, criticism, contempt or ridicule, complaints and reprimands, accusations, insults</li> <li>(b) contradictions or disagreements, challenges</li> <li>(c) expressions of violent (out-of-control) emotions</li> <li>(d) irreverence, mention of taboo topics, including those that are inappropriate in the context</li> <li>(e) bringing of bad news about hearer or good news (boasting) about speaker</li> <li>(f) raising of dangerously emotional or divisive topics, e.g. politics, race, religion, women’s liberation</li> <li>(g) blatant non-cooperation in an activity, e.g. disruptively</li> </ul>

	Negative Face	Positive Face
		interrupting hearer's talk, making non-squinters or showing non-attention (h) use of address terms and other status-marked identifications in initial encounters
Offending Speaker's	(a) expression thanks (b) acceptance of hearer's thanks or hearer's apology (c) excuses (d) acceptance of offers (e) responses to hearer's faux pas (f) unwilling promises and offers.	(a) apologies (b) acceptance of a compliment (c) breakdown of physical control over body, bodily leakage, stumbling or falling down (d) self-humiliation, shuffling or cowering, acting stupid, self-contradicting (e) confessions, admissions of guilt or responsibility, e.g. for having done or not done an act, or for ignorance of something that speaker is expected to know (f) emotion leakage, non-control of laughter or tears.

Note that the distinctions between these four types of FTAs are not entirely mutually exclusive because some FTAs intrinsically threaten both the hearer's and speaker's negative and/or positive face, such as complaints, interruptions, threats, expressions of strong emotions, and requests for personal information.

### Politeness Strategies

Given that there are so many potential FTAs that may occur while individuals interact with others as well as the mutual vulnerability of face, Brown and Levinson (1987) claimed that individuals will employ strategies to avoid or minimize the threat

when they realize that they are likely to perform an FTA. These strategies mentioned in Brown and Levinson's claims are similar with a later notion of facework from the field of communication proposed by Oetzel, Ting-Toomey, Yokochi, Masumoto, and Takai (2000), that is, the communicative strategies individuals use to enact self-face and to interact with other-face. According to Brown and Levinson (1987), there are five types of strategies that can be used for doing FTAs: (a) Do not do the FTA; (b) go off record (e.g., ignoring the FTA); (c) do the FTA baldly without taking redressive action; (d) do the FTA with positive politeness strategies to redress the FTA; and (e) do the FTA with negative politeness strategies to redress the FTA. Individuals decide to use different strategies by considering the following three factors: (a) the need to communicate the content of the FTA, (b) the need to be efficient or urgent, and (c) the need to maintain the hearer's or/and speaker's face to any degree. For example, when the needs to maintain the hearer's face outweigh the needs to be efficient or urgent, speakers will choose to minimize the threat of the FTA with positive and/or negative politeness strategies.

In accordance with Brown and Levinson's (1987) notion, politeness strategies are linguistic/verbal acts used to redress the intrinsic FTAs. They categorized politeness strategies into positive and negative politeness strategies, in accordance with which aspect of face the individuals want to save. Positive politeness strategies refer to moves "showing an appreciation of something that the speaker believes the listener would like to hear," while negative politeness strategies refer to moves "attempting to reduce any imposition on the hearer" (Yang et al., 2006). Note that according to Yang et al.'s (2006) explanation, positive politeness and negative politeness do not refer to opposite ends of a

single dimension, like a “good manners” continuum. Instead, these two kinds of strategies represent the kinds of face they address. Table 2.2 summarizes the definitions of 15 positive politeness strategies and 10 negative politeness strategies (Brown & Levinson, 1987) and gives examples of each strategy from previous studies applying Brown and Levinson’s politeness theory to analyze online written discussion messages (Chiang et al., 2008; Schallert et al., 2008; Schallert et al., 2009).

Table 2.2 Brown and Levinson’s Politeness Strategies and Examples

Strategy	Example
Positive politeness strategies	
1. Notice and attend to reader’s wants or needs –Showing that the writer is attending to what the reader has said or wants	Mehmet— <u>I agree with your point</u> that writing is closely linked to reading. [Janice, 3rd Asynch, Grp. 1, #4]
2. Exaggerate interest in, approval of, or sympathy with a previous message –Using exaggeration or enthusiasm in responding	<u>Great question!!</u> [Renee, 3rd Synch, Grp. 3, #96]
3. Intensify interest in the writer’s own contribution –Using words that make one’s own comment more interesting by exaggerating or overstating facts	<u>I was amazed to find some of my own experiences described in it.</u> [Janice, 3rd Asynch, Grp. 1, #20]
4. Use in-group identity markers to convey in-group membership – Connecting with the reader by using words to indicate the reader is a member of the writer’s own discourse community	Well actually, this is the problem :). [Ayshugul, 3rd Asynch, Grp. 2, #10]
5. Seek agreement –Saying what the writer believes the reader will agree with by repeating or by seeking a safe topic	<u>Like Doris</u> , I really struggled with thinking about how the literacy practices of “gangsta” adolescents could/should have a place in classrooms. [Andrea, 3rd Asynch, Grp. 2, #25]
6. Avoid disagreement –Saying something so as to soften disagreement, or hedging one’s	Mehmet, <u>I think both</u> . I think you can bring emotions with you to a framework based on prior experiences, but those emotions can

Strategy	Example
opinion, or being vague so as to seem to agree	change and expand during the framework and speech activity. [Doris, 2nd Synch, Grp. 2, #29]
7. Gossip and small talk –Showing interest in the reader by starting a message with small talk, greetings, or unrelated topics	<u>Hi Connie. So good to see your name in the discussion! Last I saw you, it was for such a brief time in the session at AERA!</u> [Donna, 3rd Asynch, Grp. 2, #14]
8. Joke –Using humor to indicate shared connections with the reader	<u>Do we then have nine lives in Cyberspace just like cats have here on earth?</u> [Brittany, 3rd Synch, Grp. 2, #141]
9. Assert or presuppose the writer’s knowledge of the reader’s wants –Using language to show that the writer knows what the reader wants and is willing to fit his/her wants or needs in with the reader’s	<u>Doris, you would think I could answer your plea directly about what’s the difference between the three pictures</u> but I must admit that I cannot [Donna, 1st Synch, Grp. 1, #117]
10. Make an offer or promise –Saying that the writer will help the reader obtain the reader’s wants	(Long explanation followed by the key phrase) <u>I hope this helps.</u> [Mehmet, 2 <sup>nd</sup> Asynch., Grp. 2 #14]
11. Be optimistic –Using optimistic words to show the writer hopes that imposition on the reader is not much	<u>I hope I could make my point clear.</u> [Ayshugul, 3rd Asynch, Grp. 2, #5]
12. Include the writer and reader in the activity –Using 1 <sup>st</sup> person plural pronouns to refer to writer only or reader only	I think <u>we</u> should define what is feeling good...before to generate that theory~~!!! [Sun Young, 2nd Synch, Grp. 1, #65]
13. Give (or ask for) reasons –Giving/asking for reasons for an imposition on the reader	<u>Zelda—when you say it like that, it makes me want to ask, but with some trepidation, about what happened.</u> [Donna, 2nd Synch, Grp. 3, #34]
14. Assume or assert reciprocity –Showing the writer has acted so as to now obligate the reader	<u>I’m just throwing out some ideas. Hope someone can come up with a better idea.</u> [None in these data; example from Yang et al., 2006]
15. Give gifts to the reader (sympathy, understanding, cooperation) –Giving praise and statements of appreciation and gratitude	Thank you, Young Hee. [Ya-Wen, 3rd Synch, Grp. 2, #121]
Negative politeness strategies	
1. Be conventionally indirect	Cathy...When you read these categories

Strategy	Example
<ul style="list-style-type: none"> <li>-Imposing indirectly on the reader by relying on Gricean principles that check for the “felicity” conditions of a request</li> </ul>	<u>could you</u> make connections from your classroom experiences? [Andrea, 2nd Synch, Grp. 3, #46]
<p>2. Hedge</p> <ul style="list-style-type: none"> <li>-Using words to indicate that the writer is not assuming that the reader will want to comply or agree with the writer</li> </ul>	<u>I would think maybe</u> outgroup. [Doris, 2nd Synch, Grp. 2, #17]
<p>3. Be pessimistic</p> <ul style="list-style-type: none"> <li>-Saying that the writer doubts that the conditions apply for even imposing on the reader</li> </ul>	<u>Luke, I think I would engage more if I could type a bit faster and speak better... maybe not</u> [Brittany, 2nd Synch, Grp. 3, #53]
<p>4. Minimize the imposition</p> <ul style="list-style-type: none"> <li>-Using words to imply a lesser imposition on reader than it seems</li> </ul>	<u>I am just wondering why</u> other teachers can adopt the model teacher’s strategies ...? [Ya-Wen, 3rd Synch, Grp. 3, #74]
<p>5. Show deference</p> <ul style="list-style-type: none"> <li>-Using words to abase the writer, or to raises the reader’s status</li> </ul>	<u>I haven’t read much research on tutoring so I don’t know all the facts</u> [Linda, 1st Asynch, Grp. 2, #12]
<p>6. Apology</p> <ul style="list-style-type: none"> <li>-Using words to indicate that the writer is reluctant to impinge on the reader</li> </ul>	<u>Sorry</u> , inappropriate [Zelda, 2nd Synch, Grp. 3, #78]
<p>7. Impersonalize the situation</p> <ul style="list-style-type: none"> <li>-Requesting or imposing on reader indirectly by using general words</li> </ul>	Are <u>we</u> ready to discuss the Moje article? [Andrea, 3rd Asynch, Grp 2, #23]
<p>8. State the face threatening act as a general rule</p> <ul style="list-style-type: none"> <li>-Referring to an underlying principle or document that regulates the reader and writer</li> </ul>	So then there would be the <u>question of culture and discourse and how that effects emotions and humor</u> [Doris, 2nd Synch, Grp. 2, #87]
<p>9. Nominalize the request or imposition</p> <ul style="list-style-type: none"> <li>-Instead of using a verb, using a nominalized form to make the request or to state the imposition</li> </ul>	<u>It’s my feeling that</u> this assessment that they did is insufficient because it has the possibility of being impacted not only by the other factors that are measured (domain knowledge and interest). [Example from Yang et al., 2006]
<p>10. Go on record as incurring a debt or as not indebting the reader</p> <ul style="list-style-type: none"> <li>-Stating that the writer will feel grateful for help that the reader may in the future provide</li> </ul>	Last week you said that approximately 95% of your students can’t put two phonemes together (if memory serves me well). <u>Will you please provide an example?</u> [Luke, 2 <sup>nd</sup> Asynch., Grp. 3, #26]

## Politeness in Computer-Mediated Discussion

Drawing on Brown and Levinson (1987), Morand and Ocker (2003) applied Politeness Theory to analyze written messages in computer-mediated discussion (CMD). These researchers proposed that in CMD, politeness moves are attempts to phrase words so as to show respect and esteem for the face of readers throughout the social interchange mediated by computer technology. Positive politeness moves address the need to save positive face, referring to every individual's basic desire for one's public self-image to be shown engagement, ratification, and appreciation from others. Thus, positive politeness moves address this kind of psychological desire through the demonstration of esteem. Negative politeness moves address the need to save negative face, which means the want of every individual not to be impeded. Thus, negative politeness moves address this kind of psychological want by demonstrating distance and circumspection (Morand & Ocker, 2003). This conceptual work provided a ground for studying politeness construct in computer-mediated written discussion by noticing what speakers (as writers) and hearers (as readers) do in their exchanges.

In addition to Morand and Ocker, following Brown and Levinson's Politeness Theory, another branch of face-relevant studies, adopting Ting-Toomey's face-negotiation theory (1988), explored individual's facework in online learning environment across cultures (Gunawardena, Walsh, Reddinger, Gregory, Lake, & Davies, 2002; Walsh et al., 2003). Because this study adopted Brown and Levinson's Politeness Theory as

theoretical foundation, the subsequent review focuses on the branch of empirical studies grounded in Politeness Theory in computer-mediated learning environment.

### Review of Empirical Studies of Politeness Theory in Computer-Mediated Learning

This sub-section reviews empirical studies that have been published about the application of Politeness Theory in computer-mediated learning contexts. Some previous empirical work has been situated in online discussion learning environment (Yang et al., 2006; Chiang et al., 2008; Schallert et al., 2008; Vinagre, 2008; Schallert et al., 2009). Some are relevant to computer-based tutoring systems (Mayer et al., 2006; Wang et al., 2008).

Yang et al. (2006) conducted a discourse analysis of graduate students' uses of politeness strategies in an asynchronous online discussion. In addition to finding the most frequently used politeness strategies in the given learning context, they discussed the psychological antecedents and consequences of politeness moves in the online asynchronous learning environment. Their discussion provided a ground connecting politeness theory to online learning.

In a computer-mediated discussion (CMD) learning environment, many students worry that their messages might be misinterpreted or misunderstood in the following two aspects. First, they worry that they might say something that threatens others' face or hurts other people's feelings. Second, they worry that they might themselves lose face if others consider their comment as not very intelligent. Based on Yang et al.'s (2006)

study, the students who have these worries tend to use negative politeness moves in their online discussion messages. These two types of worry about their messages being misinterpreted or misunderstood are the psychological antecedents of students who use politeness moves in the CMD.

In addition to the worries of being misinterpreted or misunderstood, Yang et al. (2006) mentioned another psychological antecedent of politeness moves. Students participating in a CMD learning environment may have expectations and hopes of receiving responses or feedback when they post their messages. They hold this expectation because they believe they themselves would have responded if they had read their message. Acknowledging this expectation, students use positive politeness moves to fulfill this expectation.

Based on Yang et al.'s study (2006), in a CMD learning environment, the use of politeness moves may result in two kinds of consequences. On the one hand, politeness moves can enhance learning. On the other hand, politeness moves can hinder learning. As to enhancing learning, the concerns for politeness can encourage students' deeper thinking and reorganization of previously held conceptions or opinions. When students care much about avoiding any loss of face, they tend to organize their thoughts better and to state their comments more carefully. In addition, politeness can help students' learning by creating a safe learning environment that increases students' willingness to participate. Some politeness moves can be used to build a sense of community or safe environment, such as using in-group identity markers to convey in-group membership, and including both writer and reader in the message. Moreover, drawing on the psychological

antecedent of expectation of being responded to, politeness can help students' learning and motivating students' participation by fulfilling students' desire to receive feedback for their ideas and questions.

As to hindering learning, too much concern for face, at the same time, can limit participation and learning in a CMD learning environment in three ways. First, students' concerns about saving face may lead them not to state their true thoughts and feelings. Second, too much concern for face may decrease some students' participation in the discussion. Accommodations for politeness may determine students' decision of which messages to respond to, the length of their own messages, and the number of postings that they make in the discussion. Last, students' preference for remaining in their comfort zone instead of pursuing new understandings in an online discussion environment may impede learning. As discussed by Schallert et al. (2004), one of the key factors contributing to students' learning in an online discussion is to negotiate meaning and even to challenge ideas. However, because students want to save their own face as well as the reader's face, the negotiation process may come to a standstill, and learning may be hindered. For example, when students have doubts about a misunderstanding expressed by others, they apply politeness moves to minimize their imposition on the reader's face and also to minimize the risk of themselves losing face. Because they do not engage fully in negotiation of meaning, their discussion may lead them to appropriate others' misunderstandings as their own view rather than helping them clarify their understanding.

Extending Yang et al.'s (2006) work, Schallert et al. (2008) included graduate students' self-perceptions of their own and others' politeness to investigate whether students' self-perceptions about their politeness concerns would be associated with their use of politeness strategies in terms of amount and kind of actual politeness moves in their online contributions. Schallert et al. used students' self-reflection papers to understand students' self-awareness of their politeness concerns and chose two focal students who explicitly stated that they were less concerned with politeness and three focal students who reported that they were highly concerned with issues related to politeness. A micro-discourse analysis on the written messages composed by these five selected focal students was conducted to understand the kinds of politeness strategies that they used in three synchronous and three asynchronous online discussions. Results showed that the two students who were less concerned with politeness used fewer politeness moves and the politeness strategies they used had less variety; whereas the three students who self-reported as having high concerns about politeness used more politeness moves in their online discussion messages, and a greater variety was found in the kinds of politeness strategies they used. This study shed light on taking students' self-awareness of politeness into consideration when studying students' use of politeness moves in their actual online discourse.

Schallert et al. (2009) adopted a discourse analysis approach to examine graduate students' use of politeness strategies while fulfilling different discourse functions when they engaged in synchronous and asynchronous online discussions. Informed by Zhu's (1996) work, Schallert et al. defined the term discourse function as "the purpose of an

interlocutory move occurring in an interactional event” (p.714). They developed a set of discourse functions emerging from their data, including information seeking, discussion generating, information providing, experience sharing, elaboration, alternative perspective, positive evaluation, negative evaluation, self-evaluation, managing the group’s conversation, previewing organization of the sender’s message, and social function. The study was conducted in a hybrid learning environment where the face-to-face interaction was the main communication channel of the course supplemented by three synchronous and three asynchronous online discussions throughout the whole semester. The online discussions focused on making intellectual sense of the assigned readings via pure text-based online synchronous and asynchronous communication tools. Results showed that students’ use of politeness strategies significantly differed while their messages fulfilled different discourse functions; however, there were no statistically significant differences between synchronous and asynchronous modes in the use of politeness strategies. This study suggested that different discourse functions did pose different degrees of face threat to the reader or/and writer, and the degree of face threat influenced students’ use of politeness strategies in their online discourse. That is, online messages with discourse functions more related to the writer, such as experience sharing, previewing one’s own message, and self-evaluation, had fewer politeness strategies than messages serving discourse functions seeming to be more directed to others, such as evaluating others’ message, presenting a contrasting view, attempting to generate discussion, and managing the group’s conversation.

Believing that the social interaction plays an important role in the success of computer-mediated collaborative learning, Vinagre (2008) examined language learners' use of politeness strategies in collaborative e-mail exchanges. Results indicated that politeness influences to a large extent the efficiency and effectiveness of social interaction. In the context of e-mail tandem exchanges among college level English learners and Spanish learners, twenty-two introductory emails were coded based on their use of politeness strategies. Findings showed that in the introductory email exchanges, the language-learning partners did not use negative politeness strategies frequently given that the social distance between the partners was high at that time. Instead, they mainly relied on positive politeness strategies, especially those relating to claiming common ground, assuming or asserting reciprocity, and conveying cooperation. This study emphasized the different face desires that the positive and negative politeness strategies addressed. Positive politeness strategies focus on closeness, solidarity, and cohesion; whereas negative politeness strategies center on formality and impersonality. The social distance between the interlocutors influences their preferred type of politeness strategies.

Even though Brown and Levinson's (1987) politeness theory focuses on human-human interaction, some researchers have applied politeness theory to study human-computer interaction by treating computer systems as social actors. Mayer et al. (2006) and Wang et al. (2008) are two examples incorporating politeness concerns with the development of educational computer software.

Mayer et al. (2006) asked 47 college students to rate 16 feedback sentences provided by computer-based tutors in terms of the degree of respecting students' freedom

to decide what to do and the degree of working with students. The first, respect for students' freedom to decide what to do, reflects taking negative politeness strategies into consideration. The second, working with students, presents the concerns of positive politeness strategies. Results showed that students rated direct commands (i.e., Click the ENTER button) and commands attributed to machines (i.e., The system is asking you to click the ENTER button) as lowest in negative and positive politeness. Students rated guarded suggestions (i.e., You could use the quadratic formula to solve this equation) and guarded questions (i.e., What about using the quadratic formula to solve this equation?) as highest in negative politeness, and guarded suggestions and statements expressing a common goal (i.e., We should use the quadratic formula to solve this equation) as highest in positive politeness. In addition, the pattern of results was more evident for students with low rather than high computer experience.

Wang et al. (2008) employed politeness strategies to describe pedagogical agents' social intelligence when students interact with the intelligent tutoring system. They hypothesized that an intelligent tutor adopting appropriate politeness strategies can promote learners' motivation and improve learning outcomes. They compared students who learned to use a training system with an on-screen agent who used polite requests to students who learned with an on-screen agent who used direct requests. Results showed that the polite on-screen agents yielded better learning outcomes, especially for those students who expressed a preference for indirect feedback, who had less computer experience, and who lacked engineering backgrounds.

## Netiquette

The emergence of the word *netiquette* indicates the importance of taking courtesy into consideration when interacting in cyberspace. *Netiquette* combines *network* and *etiquette*, and refers to a set of core rules indicating what should be or should not be done in online communication to ensure common courtesy (Shea, 1994). Schallert et al. (2008) defined *netiquette* as the use of such conventions that represent proper manners in online communication. These core rules or conventions address the dynamic social relationship among individuals, which plays an important role in the success of online learning because it affects not only cognitive but also socio-emotional processes taking place during learning (Schallert et al. 2008; Vinagre, 2008). Problematic online social interactions may impede learning when there are conflicts between the efficiency and pleasure of interaction. Thus, netiquette indicates ways to balance the tension between efficient and pleasant interactions (Schallert et al., 2008). Table 2.3 summarizes the set of core rules suggested by Shea (1994).

Table 2.3 Core Rules of Netiquette

Rule 1: Remember the human. Never forget that the person reading your mail or posting is a person with feelings that can be hurt. Corollary 1: It's not nice to hurt other people's feelings. Corollary 2: Never mail or post anything you wouldn't say to your reader's face. Corollary 3: Notify your readers when flaming.
Rule 2: Adhere to the same standards of behavior online that you follow in real life. Corollary 1: Be ethical. Corollary 2: Breaking the law is bad netiquette.
Rule 3: Know where you are in cyberspace. Corollary 1: Netiquette varies from domain to domain. Corollary 2: Lurk before you leap.

<p>Rule 4: Respect other people's time and bandwidth.</p> <p>Corollary 1: It's OK to think that what you are doing at the moment is the most important thing in the universe, but do not expect anyone else to agree with you.</p> <p>Corollary 2: Post messages to the appropriate discussion group.</p> <p>Corollary 3: Try not to ask stupid questions on discussion groups.</p> <p>Corollary 4: Read the Frequently Asked Questions (FAQ) document.</p> <p>Corollary 5: When appropriate, use private email instead of posting to the group.</p> <p>Corollary 6: Do not post subscribe, unsubscribe, or FAQ requests.</p> <p>Corollary 7: Do not waste expert readers' time by posting basic information.</p> <p>Corollary 8: If you disagree with the premise of a particular discussion group, do not waste the time and bandwidth of the members by telling them how stupid they are. Just stay away.</p> <p>Corollary 9: Conserve bandwidth when you retrieve information from a host or server.</p>
<p>Rule 5: Make yourself look good online.</p> <p>Corollary 1: Check grammar and spelling before you post.</p> <p>Corollary 2: Know what you are talking about and make sense.</p> <p>Corollary 3: Do not post flame-bait.</p>
<p>Rule 6: Share expert knowledge.</p> <p>Corollary 1: Offer answers and help to people who ask questions on discussion groups.</p> <p>Corollary 2: If you have received email answers to a posted question, summarize them and post the summary to the discussion group.</p>
<p>Rule 7: Help keep flame wars under control.</p> <p>Corollary 1: Do not response to flame-bait.</p> <p>Corollary 2: Do not post spelling or grammar flames.</p> <p>Corollary 3: If you have posted flame-bait or perpetuated a flame war, apologize.</p>
<p>Rule 8: Respect other people's privacy.</p> <p>Do not read other people's private email.</p>
<p>Rule 9: Don't abuse your power.</p> <p>The more power you have, the more important it is that you use it well.</p>
<p>Rule 10: Be forgiving of other people's mistakes.</p> <p>You were a network newbie once too!</p>

Resta (2004-2009) emphasized that bearing these core rules of Netiquette in mind can contribute to clear, positive, and respectful online communication, thereby contributing to an effective online collaborative learning experience.

## Discourse Functions

The term *discourse function* used in this study is defined as “the purpose of an interlocutory move occurring in an interactional event” (Schallert et al., 2009, p.714). As Cameron (2001), Chiang et al. (2008), and Schallert et al. (2009) suggested, the words making up an utterance and fulfilling a specific discourse function pose different degrees of face-threat, which can influence interlocutors’ politeness work. As one of the constructs I studied, which I proposed as having something to do with students’ use of politeness strategies in a CSCL environment, discourse functions are reviewed in this section in terms of similar concepts defined and developed in previous studies. I also present relevant background to the development of a categorization scheme of discourse functions that was used in the present study.

Zhu’s (1996) work categorized the online asynchronous written messages in a graduate seminar. The categories include information seeking question, discussing question, answering, information sharing, discussing, commenting, reflecting, and scaffolding. Table 2.4 summarizes the characteristics and gives example of each category.

Table 2.4 Zhu's Categories of Online Message Functions

Category	Characteristics	Examples
Information seeking question	Ask for information or requesting an answer	What does hypermedia mean?
Discussing question	Inquire, start a dialogue	How can we resolve the control issues such as governing the shared space when using a collaborative tool?
Answer	Provide answers to information seeking questions	Hypermedia means...
Information sharing	Share information	My colleague and I have done a lot of thinking about the nature and defect of simulations...
Discussion	Elaborate, exchange, and express ideas or thoughts	What intrigues me from this week's readings is not how we define a tool...but rather how tools change ourselves...
Comment	Judgmental	I agree with A that Schorr's article was...
Reflection	Evaluation, self-appraisal of learning	I found the class last night to be completely frustrating yet intellectually stimulating...it is what makes me thinks!
Scaffolding	Provide guidance and suggestions to others	...let us not move our lives in this same "scripted" direction. Use the tool as an idea generator, a place holder of ideas...

The concept of discourse function is similar to the terms *discourse strategies* (Wade & Fauske, 2004) and *speech genre* (Na, 2004). Wade and Fauske (2004) defined *discourse strategies* as the way interlocutors use to fulfill different goals, for participating

in a dialogue, such as the desire to bring everyone to a consensus or to examine multiple possibilities and alternative hypothesis. They came up with the following set of discourse strategies: supporting, perspective taking, inquiring, self-questioning, challenging, non-supporting, and posturing. *Speech genre* refers to the various types of utterances such as narrating memories and experiences, abstracting, interpreting, evaluating, eliciting, testing, etc., that are fused together to adapt, develop, and negotiate a speech activity (Na, 2004).

Emerging from Schallert et al.'s data set, the categories of discourse function included information seeking, discussion generating, information providing, experience sharing, elaboration/clarification/explanation, alternative perspective, positive evaluation, negative evaluation, self-evaluation, managing the group's conversation, previewing organization of sender's messages and social function. Table 2.5 summarizes definitions and examples for each discourse function.

Table 2.5 Schallert et al.'s Category of Discourse Functions

Discourse Functions	Definitions	Example from Schallert et al.'s data (2009)
1. Information seeking	Whether marked by a question mark, this chunk seeks a particular answer that the writer seems to assume others know	What do you mean by multiplexity? [Renee, 3rd Synch, Grp. 3, #25]
2. Discussion generating	The writer seems to want to generate from others their interpretations and extensions on a topic	I was wondering about what came first? Feeling outgroup or not participate? [Renee, 2nd Synch, Grp. 2, #15]
3. Information providing	This function refers to when a writer is providing a relatively contained information chunk, often in	Multiplexity means multiple ways [Mehmet, 3rd Synch, Grp. 3, #26, an answer to the above example of function 1]

Discourse Functions	Definitions	Example from Schallert et al.'s data (2009)
	response to a chunk that was coded a "1" (information seeking).	
4. Experience sharing	The writer gives a personal example of a construct from the readings or of what someone else has said in a previous post. The example should be specific.	I can't help but think of my 3 ½ yr old son. When I am not as attentive as he feels I should be, he says, "Daddy, I'm talking to you!" in a tone that is a mix of exasperation and adamancy. I immediately oblige [Luke, 1st Asynch, Grp. 2, #26]
5a. Elaboration/ Clarification/ Explanation	This kind of posting has the general function of discussing an idea. The author is elaborating what he or she thinks about something, explaining what a concept is about, analyzing what someone has said, etc. Use the code 5b when posting seems to offer an alternative view.	5a. It's like emotions and self, too complicated to answer and list. [Doris, 2nd Synch, Grp. 2, #23]
5b. Alternative perspective		5b. What is more important and I think unaddressed in this article, is that there are so few chances for students to safely self-assess (which might mean to reveal ignorance) that the process is itself foreign [Luke, 1st Asynchr, Grp. 2, #4]
6a. Positive evaluation	Writer is agreeing with or appreciating a previous message. Use 6b when posting a disagreement with a previous post.	6a. Ah, that's a nice way to put it. [SoonJa, 3rd Synch., Grp. 3, #24]
6b. Negative evaluation		6b. Janice, that might not be necessarily true. [SoonJa, 3rd Synch, Grp. 3, #88]
7. Self-evaluation	Writer says something about what he or she feels about his or her own learning or understanding, or an emotional reaction to a posting or reading	I see a lot of myself in Janet. I don't think I really view myself as one who can be critical and reject the claim or argument that an author said in the book. [Min-Hua, 3rd Asynch, Grp. 1, #3]
8a. Managing the group's conversation	For 8a, the writer suggests what others should do in the conversation or asks what	8a. Is anyone interested in talking about the medical humor article? [Janice, 2nd

Discourse Functions	Definitions	Example from Schallert et al.'s data (2009)
8b. Previewing organization of sender's message	others want to do.  For 8b, the writer describes what he or she has done or will do in with his or her posting.	Synch, Grp. 1, #5]  8b. Back to my point. [Renee, 3rd Synch, Grp. 3, #73]
9. Social	Messages that show none of the previous functions but that seem to have the function of connecting to the group.	Hello, Group #1~~~!!! [Sun Young, 2nd Synch, Grp. 1, #1]

### Modes of Communication

This section reviews the literature on comparisons of two modes of online communication: synchronous and asynchronous, and the relevant studies that have been conducted in and have addressed directly the differences between these modes. Additionally, a theoretical and empirical review of the use of virtual worlds or multi-user virtual environments (MUVES) in educational settings is presented.

### Modes for Computer-Mediated Discussion

When describing modes of computer-mediated discussion, practitioners and researchers have highlighted two modes: asynchronous and asynchronous modes. When communicating through an asynchronous CMD mode, the participants are not required to be online at the same time. Asynchronous technologies include Email, mailing lists, BBS (Bulletin Board System), and online discussion forums. Synchronous CMD mode, on the other hand, allows for more real-time interaction but requires the participants to be online

simultaneously. The synchronous technologies include chat room, audio conferencing, and video conferencing (Box, 1999; Simmons, 1994).

Many prior studies have investigated the discourse of asynchronous CMD in terms of different learning-related aspects including knowledge construction (e.g., Henri, 1992; Zhu, 1996; Gunawardena et al., 1997); social presence (e.g., Rourke et al., 1999); interaction patterns (e.g., Fahy et al., 2000); learning strategies (e.g., Lockhorst et al., 2003); teacher's discourse strategies (Wade & Fauske, 2004), knowledge change (Schallert et al., 2004), and politeness strategies (e.g., Yang et al., 2006; Vinagre, 2008). Comparing the amount of research conducted in asynchronous CMD mode, studies conducted on synchronous CMD are relatively fewer. Starting from 1994, Schallert and her research team conducted a series of studies comparing face-to-face oral communication with synchronous online written discussion in terms of social construction of disciplinary knowledge (Schallert et al., 1994; Schallert et al., 1999), students' participant and socially constructed coherence (Schallert et al., 1996), the development of discussion topics (Dodson et al., 1997), and students' perspectives on these two types of discussion (Amador et al., 1999). Kneser et al. (2001) focused on the analysis of turn-taking and the roles participants play in synchronous online discussion. Abrams (2001) compared the roles taken on by participants in synchronous online discussion when compared to pencil-and paper group journal discussion.

More recently, more researchers have attempted to compare and contrast the learning occurring in asynchronous and synchronous CMD modes. Johnson and Johnson (2006), Perez (2003), and Chou (2001) examined students' preferences for or perceptions

of synchronous versus asynchronous CMD modes. Tomas and Macgregor (2005), Perez (2003), and Abrams (2003) compared students' learning performance in synchronous and asynchronous CMD modes. For example, Abrams (2003) compared three groups of students learning German in terms of their subsequent oral performance, one group that had had synchronous online discussion, one that had participated in asynchronous discussion, and a control group. Only the synchronous group differed from the other two, showing a significant increase in quantity of oral language produced subsequent to synchronous discussion. Chou (2001) reported that students were more likely to engage in task-oriented rather than in social and off-task messages whether in the synchronous or asynchronous online activity, although the synchronous mode led to a higher proportion of social and emotional messages than the asynchronous one. When contributing to the asynchronous discussion, students seemed to be more interested in presenting their own opinions whereas they seemed more interactive and interested in the views of their peers in the synchronous discussion mode. Thomas and Macgregor (2005) reported on the online activities of undergraduate students involved in a problem-based assignment, finding that the asynchronous mode was preferable for tasks that required more reflection whereas the synchronous mode was best for aspects of the tasks that needed brainstorming and building group cohesion.

Moreover, though some studies did not explicitly compare and contrast students' learning in asynchronous and synchronous CMD modes, the researchers conducted their studies in a learning context that included both modes, and took a qualitative and interpretive approach to understand students' learning in these two modes of CMD,

implicitly suggesting a comparison of modes to some degree. For example, Reed et al. (2001) studied students' psychological engagement in these two CMD modes, and concluded that students tended to have moment-to-moment fluctuations in their level of engagement in synchronous CMD; whereas, they tended to have a reflective type of engagement in asynchronous CMD, given the affordance and constraints provided by these two modes of CMD. Schallert et al. (2008), Chiang et al. (2008), and Schallert et al. (2009) explored students' use of politeness strategies in these two modes of CMD as well. Though they did not find significant differences in these two modes of CMD in their influence on students' discourse practice in terms of their use of face saving strategies in the studied context, this series of studies informed my study to a large degree.

#### Virtual Worlds/MUVEs in Education

As a recent trend, immersive three-dimensional (3D) virtual environments, called virtual worlds or MUVEs (Multi-User Virtual Environments), are of increasing interest to education for the potential to broaden instructional possibilities. Over 300 educational institutions have a presence in Second Life (Jarmon, Traphagan, Mayrath & Trivedi, 2009). Many universities and institutions worldwide have conducted classes and had field trips with their students in virtual worlds (Lamb, 2006; Graves, 2008). The idea of using the virtual world for education is growing, perhaps simply because the virtual world environment is growing everyday (FitzGerald, 2007; Keegan, 2008), so that the number of people using virtual worlds is increasing as well. As Gartner Research predicted, by

2011 “80 percent of active Internet users will have a ‘second life’” (Petty, 2007). Like the title of this study, the term *second life* here refers to being a participant or having an avatar in such virtual world environments as Second Life, World of Warcraft, Club Penguin, Kaneva, and Sun Microsystems’ MPK20 virtual workspace using the Project Wonderland Toolkit.

The presence of a virtual world in educational settings changes the nature of social interactions in computer-mediated online learning by means of involving more contextualization cues (Schiffrin, 1994) compared to purely text-based online discussion, whether the communication occurs synchronously or asynchronously. Schiffrin (1994) defined *contextualization cues* as “aspects of language behavior (verbal and nonverbal) that relate what is said to the contextual knowledge (including knowledge of particular activity types) that contributes to the presuppositions necessary to the accurate inferencing of what is meant (including, but not limited to, the illocutionary force)” (pp. 99-100). Although virtual worlds are different from games (New Media Consortium and EDUCAUSE Learning Initiative, 2007), some of the positive instructional effects of games are still likely to apply to virtual worlds such as accommodating learning preferences of Net Generation students, enhancing student motivation and engagement, facilitating collaboration, and providing immersive, experiential learning opportunities unavailable in traditional learning environments (Gee, 2003; Kirriemuir & McFarlane, 2003; Dede, Clarke, Ketelhut, Nelson, & Bowman, 2005; Prensky, 2006; Jarmon, et al., 2009). Additionally, there are positive effects that have been suggested for virtual worlds such as the abundant opportunities for social interactions, increased sense of shared

presence and experience, affordances for free exploration and discoveries, and capacity for user creation, appropriation, and redistribution of the environment, data, and media content (Craig, 2007; Jenkins, 2007, cited in Craig, 2007; FitzGerald, 2007; Lamb, 2006; New Media Consortium and EDUCAUSE Learning Initiative, 2007). Consequently, researchers (Dickey, 2005; Bronack, Riedl & Tashner, 2006; Rosenman et al., 2007; DiPaola, 2008; Jarmon et al., 2009) have suggested that the virtual world environment like Second Life is particularly suitable for collaborative learning, grounded by social constructivist (Vygotsky, 1978), and supporting the experiential learning process, based on Kolb's (1984) experiential learning theory. In contrast, Steinkuehler (2004, 2006) views virtual world in the way of Massively Multiplayer Online Gaming (MMOG) and studies learning as literacy practices by means of Discourse analysis, drawing on Gee's Discourse theory (1996).

#### Studies of Effectiveness of Educational Virtual Worlds

Previous studies have explored the educational effectiveness of virtual worlds empirically. Barab and colleagues (Barab, Hay, Barnett, & Keating, 2000; Barab, Hay, Barnett, & Squire, 2001) reported that the use of 3D modeling software to develop virtual worlds helped learners to become "knowledgeably skillful (gain conceptual understanding and practical skills together)" by affording them opportunities to experience learning content directly. Dede, Ketelhut, and Reuss (2003) used *River City*, a virtual world for students, to form and test hypotheses on causes of illness, and found that although the use of this tool did not result in statistically significant content test score

improvements for students as a whole, it did so for low-achieving students. A simulation of the outbreak and spread of a virtual epidemic among students' avatars, using *Whyville*, also helped students to understand better the nature of infectious disease (Neulight, Kafai, Kao, Foley, & Galas, 2007). A recent ethnography study conducted by Fields and Kafai (2009) explored how knowledge sharing and diffusion among teenagers across virtual world (*Whyville*), home and classroom spaces. Hudson & Degast-Kennedy (2009) conducted a simulated experience with students in *Second Life* for Canadian border training. Through role-play activity with three groups of students in various roles in a simulated border situation, the students were able to perform and learn at the same time while going through the experience. Conducting a project-based learning course in *Second Life*, Jarmon et al. (2009) asked the students questions about their learning expectation/experience and their feelings about the platform before and after the course, and concluded that *Second Life* is suitable for facilitating project-based experiential learning in interdisciplinary communication. Recently, a series of studies were conducted to understand students' learning from various aspects, such as pedagogy, motivation, and social interaction, when they engaged in transformational plays in a 3D virtual world gaming environment, *Quest Atlantis* (Barab, Dodge, Ingram-Goble, Volk, Peppler, Pettyjohn & Solomou, 2009; Thomas, Barab & Tuzun, 2009). Moreover, Soukup (2004), in an ethnographic study of his own use of a virtual space called *Palace* discovered that the ability to construct the environment collectively enhanced participants' sense of social community, to which I now turn.

## Sense of Community

Sarason (1974, p.157) defined *sense of community* as “the perception of similarity to others, and acknowledged interdependence with others, a willingness to maintain this interdependence, ... a feeling that one is part of a larger dependable and stable structure.” Unger and Wandesman (1985, p. 155) defined *sense of community* as “feelings of membership and belongingness and shared socio-emotional ties.” McMillan and Chavis (1986, p.9) offered the following definition of *sense of community*: “a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together.” The various definitions of *sense of community* imply the essential elements of which it is composed: mutual interdependence among members, connectedness, trust, interactivity, and shared values and goals (Rovai, 2002b). Additionally, Wenger (1998) pointed out three characteristics contributing to the coherence of a community: mutual engagement, a joint enterprise, and a shared repertoire. Reaching the three characteristics of community more or less involves the essential elements identified by Rovai (2002b). For example, mutual engagement involves mutual interdependence among members, connectedness, and interactivity. Joint enterprise requires connectedness and trust. Shared repertoire includes connectedness, shared values, and shared goals (Wenger, 1998). Note that connectedness relates to the three characteristics of community. Thus, it stands out as the umbrella element to represent sense of community.

In our daily lives, communities can be formed in various ways. However, Wenger (1998) argued that not every community is a Community of Practice (CoP). For instance, a residential neighborhood is often called a community, but it is usually not a CoP. To be a CoP, a community must yield a more tractable characterization of the concept of practice—in particular, by distinguishing it from less tractable terms such as *culture*, *activity*, or *structure*. A CoP is also a specific type of community, such as a learning community (Wenger, 1998) or a classroom community (Rovai & Lucking, 2000).

*Learning community* refers to a group of people who share common interests in some subject or problem and who collaborate over an extended period to exchange ideas, find solutions, build knowledge, and construct identity (Wenger, 1998). *Classroom community* is a community whose members share a feeling of belonging, a feeling that members matter to one another and to the group, that they have duties and obligations to each other and to the group, and that they possess shared expectations that members' educational needs will be met through their commitment to shared goals (Rovai & Lucking, 2000). According to Rovai (2001), a classroom community is a community of learners. Thus, a classroom community can be treated as a learning community based on Wenger's definition (1998).

As abovementioned, connectedness is the key element to sense of community. A learning community, as a CoP, is specified as having learning as the goal of the community; thus, learning is another key element of sense of community in a learning context. Connectedness, as the first element of sense of community, is the sense of solidarity among community members, that is, to a feeling of belonging and acceptance

and the creation of bonding relationships resulting from mutual interdependence among members, trust, interaction, and shared values and goals. Connectedness in a learning community particularly denotes recognition of membership in the community and the feelings of friendship, cohesion, and satisfaction that develop among learners (Rovai, 2002b). As the feeling of connectedness is developed, learners' sense of safety and trust among learners increase. With safety and trust, learners are more willing to expose gaps in their learning and feel that other members of the community will respond in supportive ways (Preece, 2000). Learning, as the second element of sense of community, in addition to being the goal of the community, is the feeling that knowledge and meaning are actively constructed within the community. That is, learners are confident that participating in the community can enhance the acquisition of knowledge and understanding, and that their learning needs are being satisfied. As a learning community is established, members must identify themselves with the community as well as internalize at least partial acceptance of the community's shared values (Rovai, 2002b).

Learning mediated by computer and Internet technology provides learning opportunities that are not limited to physical location and time, such as asynchronous learning networks. The physical separation of learners may hinder learning in both cognitive and socio-emotional aspects and result in higher dropout rates. Carr (2000) reported that dropout rates are 10 to 20 percentage points higher in online educational settings than in traditional face-to-face learning settings. As Kerka (1996) pointed out, the high dropout rates in online learning programs result from the physical separation of learners, in that it reduces sense of community among learners by increasing sense of

disconnectedness, isolation, distraction, and lack of personal attention (Besser & Donahue, 1996; Twigg, 1997). Thus, many studies have emphasized the importance of understanding and further establishing sense of community in online learning environment (Ashar & Skenes, 1993; Baym, 1995; Dede, 1996; Donath, 1999; Reid, 1995; Rheingold, 1993; Shale & Garrison, 1990; Tinto, 1993; Wellman, 1999).

In response to the call for understanding sense of community in online learning community, Rovai (2002a) developed a 20-item instrument called the Classroom Community Scale to measure sense of community among university students in online learning environments. The instrument mainly measured two factors contributing to sense of learning community: connectedness and learning. The Classroom Community Scale was reported as having high content and construct validity. Excellent reliability of the full Classroom Community Scale was indicated by a 0.93 of Cronbach's coefficient  $\alpha$  and 0.91 of the equal-length, split-half coefficient. Excellent reliability of the connectedness subscale was indicated by a 0.92 of both Cronbach's coefficient  $\alpha$  and the equal-length, split-half coefficient. Good reliability of the learning subscale was indicated by 0.87 of Cronbach's coefficient  $\alpha$  and 0.80 of the equal-length, split-half coefficient. Appendix A presents the Classroom Community Scale modified to fit the context of the present study.

Rovai (2002b) employed the Classroom Community Scale to examine the relation between sense of community and learners' self-perceived cognitive learning. Results indicated that online learners who have a stronger sense of community perceive greater cognitive learning and have greater satisfaction with their learning. Rovai and Wighting (2005) studied the relation between a set of three alienation variables (i.e., social

isolation, powerlessness with society, and normlessness with society) and the two factors of sense of community (i.e., connectedness and learning) measured by the Classroom Community Scale in college-level virtual classrooms. Findings showed that social isolation and powerlessness with in society were inversely related to sense of connectedness and learning. Normlessness with society was only inversely related to learning in the virtual learning community. Terrell et al. (2008) modified the Classroom Community Scale to measure sense of community in a limited-residency doctoral program by distinguishing faculty-to-student and student-to-student connectedness and additionally measuring isolation and students' willingness to help one another.

### Methodological Issues

As mentioned in the Introduction chapter, the present study follows the interpretivist/constructivist paradigm as the main methodological framework and adopts discourse analysis as the major data analytic technique. Thus, I review the relevant literature on discourse analysis informing the methodological design of this study by first considering definitions of discourse analysis, the rationale for analyzing online discourse in computer-mediated learning context, previous studies that have used discourse analysis in CMD learning environment, and how these prior studies inform the present study.

### Discourse Analysis

Gee (1996) defined *Discourse* as “a socially accepted association among ways of using language, other symbolic expressions, and ‘artifacts,’ of thinking, feeling, believing, valuing, and acting that can be used to identify oneself as a member of a socially meaningful group or ‘social network,’ or to signal (that one is playing) a socially meaningful ‘role’” (p. 131) (Gee has distinguished *Discourse* from *discourse*, with lower case discourse, referring to “connected stretches of language which hang together so as to make sense to some community of people” (p.90)). Based on Gee’s definition, Discourse is more than just language and is highly context-related. Discourse analysts are not centrally focused on language as an abstract system, but instead are interested in what happens when people draw on the contextual knowledge they have about language, situated knowledge based on their memories of things they have said, heard, seen, or written before, to do things in the world (e.g., exchanging information, expressing feelings, making things happen, creating beauty, entertaining themselves and others, and so on). Discourse is both the source of this context-related knowledge and the result of it. Thus, Discourse is shaped by its context, and shapes its context reciprocally in the following six facets: (1) Discourse is shaped by the world, and Discourse shapes the world. (2) Discourse is shaped by language, and Discourse shapes language. (3) Discourse is shaped by participants, and Discourse shapes participants. (4) Discourse is shaped by prior discourse, and Discourse shapes the possibilities for future discourse. (5) Discourse is shaped by its medium, and Discourse shapes the possibilities of its medium. (6) Discourse is shaped by purpose, and Discourse shapes possible purposes (Johnstone, 2008). Given the definition of Discourse and the six facets of Discourse, Cameron (2001)

suggested that discourse analysis should not simply focus on the linguistic forms of Discourse but also on its communicative functions. For example, the same linguistic form (e.g., a sentence with interrogative syntax) can have different functions in discourse (e.g., question or request), and the same function (e.g., request) can be realized by different linguistic forms (e.g., interrogative or imperative). Therefore, a discourse analyst should take linguistics form, context, and communicative function into consideration when analyzing discourse.

There are various approaches of analyzing discourse, such as speech act theory, pragmatics, variatists, conversation analysis, discursive psychology, the ethnography of communication, interactional sociolinguistics, narrative analysis and critical discourse analysis (Schiffrin, 1994; Cameron, 2001), originating from diverse disciplines and focusing on different facets or their combinations to different extent though these approaches are not necessary to be exclusive to each other. Consequently, the influence on my adoption of discourse analysis as the primary data analytic technique was not limited to only one approach. Speech act theory, pragmatics, and interactional sociolinguistics inform my methodological framework to different degrees. Austin's speech act theory (1962) brought up a focus on the performative aspect of human utterances in the way that when we say something, we also do something; that is to say, speaking as acting. He classified three types of speech acts: locution (the words/utterances themselves), illocution (the force carried by the words/utterances, i.e., intentions), and perlocution (the results of the words/utterances, i.e., reactions to the words/utterances). Austin's speech act theory influences my use of discourse analysis in

the epistemological way of inferring illocutionary intentions via analyzing locutionary utterances while informed by perlocutionary contextual information. The pragmatics approach influences me with Brown and Levinson's politeness theory (1987) as universal principles of human social interaction that make up my theoretical and methodological framework. In addition, an interactional sociolinguistics approach informs me with the focus on social and linguistic meanings negotiated during and through interaction (Schiffrin, 1994) both in terms of philosophical and methodological aspects of being open to the possibilities of multiple viable inferences, and in terms of the theoretical aspect of considering contextual factors when studying the linguistic use of politeness strategies in socially conditioned interactions.

#### Rationale for Analyzing Online Discourse in CMD Learning

Increasingly prevalent in educational settings, computer-mediated discussion (CMD) allows learners to participate in and build a learning community to construct knowledge collaboratively online (Schallert, Reed, & the D-Team, 2003-2004). Learners participating in CMD produce written discourse as they fulfill different course activities. Transcripts of online discussions can be saved easily, allowing researchers to examine the discourse in order to understand students' learning processes. According to Vygotsky (1978), learning happens through the course of engaging in discourse. Wells (2001) suggested that educators should not only look for learning products as evidence of learning after students have received input from teachers' instruction or textbooks. But rather, we should pay attention to the learning process occurring as students participate in

the activities that make up the curriculum. In analyzing CMD discourse, we can examine the learning process itself rather than learning products or outcomes. As Schallert, Reed, Kim, Beth, Chen, Yang, and Chang (2004) reported, students give evidence of their learning even as they are involved in online discussions.

### Studies Using Discourse Analysis in CMD Learning

Schallert and her research team have done many studies looking into the discourse occurring in computer-mediated discussion (CMD) in the field of educational psychology and psycholinguistics. They have conducted studies in the contexts of undergraduate and graduate level courses whose classroom discussion occurred via synchronous and asynchronous computer-mediated communication. In the early stages of their work, they were interested in the differences between oral and written classroom discussion (Schallert, Fowler, & Reed, 1994). Then, they started to explore how discussion topics were developed in synchronous CMD (Dodson et al., 1997). By studying the online discourse itself, Schallert et al. (1999) noticed the important relation between the social aspect of knowledge construction and students' learning experience in CMD. Continuing on Schallert et al.'s (1999) work, Amador et al. (1999) particularly focused on the issues of international students' learning experience as they participated in the socially negotiated discourse mediated by computers. Reed et al. (2001) further reported that using synchronous and asynchronous CMD fosters students' learning by engaging them in the socially negotiated online discussions. More recently, the team has focused on the influence of various social and cognitive constructs, such as politeness, uncertainty, and

social positioning, as students participate and interact in CMD (Chiang et al., 2008; Schallert et al., 2008; Jordan et al., 2009; Schallert et al., 2009; Schallert, Song & the D-Team, 2009).

The methodological approach that Schallert and her research team have taken in their work points to influences from conversational analysis traditions, classroom discourse research, as well as more general qualitative, interpretive models. Because Schallert and her research team's intent has been to understand more deeply the students' experiences as they negotiated the meanings afforded by the CMD, they have used several different approaches for, on the one hand, describing the publicly shared aspects of the CMD experience such as the written transcripts themselves, and on the other hand, capturing somehow the more private psychological experience of the participants through interviews, think-aloud protocols, and self-reports. Thus, they have analyzed the conversations themselves for coherence, topic progression, and voice, interviewed students and teachers asking them how they chose what to say and what they thought and felt as they read each comment, asked students to respond to open-ended questionnaires, and even asked participants to provide simultaneous think-aloud data as they read and wrote in synchronous online discussions.

Their research settings were the classroom discussions of assigned readings that took place in both advanced graduate seminars as well as upper division undergraduate classes. These classroom discussions occurred in oral, face-to-face discussions, synchronous online discussion, and asynchronous online discussion depending on their research questions. Their data sources have included (1) the printouts of the written

conversations, (2) transcripts of some of the oral session audiotaped, (3) “coherence graphs” of both the written and face-to-face conversations, (4) students responses to short questionnaires, (5) informal interviews with several teachers and with many students, (6) participant observation notes taken during class meetings, and (7) transcripts of think-aloud audiotaped as participants took part in written conversations.

One data source, the *coherence graph*, deserves special description, is an analytic tool developed by Schallert and her research team to help them understand how the written discussions were constructed (Schallert et al., 1996). The coherence graph consists of the written comments numbered consecutively in the order in which they were posted in the CMD, and represented on the graph as small ovals shifted down a line. Comments are linked by lines to subsequent related comments. The outcome of this visual analytic tool is a list of topics, initiators of the topics, and messages involved in each topical exchange. The coherence graph is quite useful in analyzing synchronous online discussions. Coherence graphs can present the thread of discussion topics visually and chronologically by linking. It links the relevant messages together. Thus, a researcher can easily see the coherent relationship among the synchronous discussion messages and see the density and life span of each discussion topic appearing in the online discussion.

As another researcher with several relevant studies, Abrams’ research interests include applied linguistics, computer-mediated discussion, foreign language pedagogy, and the teaching of culture. She has also used discourse analysis technique to analyze her data. Her research studies were related to second language learning, in particular, a focus on undergraduate level classes learning German. Abrams (2001) reported a study that

compared students' ability to recognize and adopt a variety of social participant roles in synchronous CMD activities versus group journal writing events. In addition, Abrams (2003) conducted a study to investigate the effect of synchronous and asynchronous CMD on students' oral performance in German to test a suggestion that CMD can help learners improve their oral proficiency.

Abrams' methodological approaches have varied from quantitative to qualitative methods. In her quantitative study, she used a quasi-experimental design to address her research questions and related hypotheses. The participants in her study were grouped into a control group (no CMD), treatment group A (synchronous CMD), and treatment group B (asynchronous CMD). Because the synchronous and asynchronous CMD were different treatments aimed to measure the effect of these two treatments on students' oral performance in German, she did not collect the writing discussions the students produced in the synchronous and asynchronous online discussions. Her data sources included the audiotapes (transcribed) of students' oral discussions before and after the treatments were applied. The data were analyzed according to gains in scores between the pre-treatment and post-treatment oral discussions in terms of the number of communicative units, lexical richness, lexical density, and syntactic complexity.

In her qualitative study, Abrams used the transcripts of the synchronous online discussions and written discussions of group journal writing events as data sources to look into and compare the participant roles the students took in these discussions. Abrams coded the participant roles based on categories suggested by Goffman (1974), Larson (1995, 1997), Schiffrin (1994), and Smith and Mackie (2000), including speaker,

respondent, scolder, commenter, informant, questioner, creator of in-group identity, knower, attacker, challenger, supporter, and joker.

### How Prior Studies Inform the Present Study

Schallert's and Abrams' works inform the present study in two aspects: the construct I am going to look into and the methodology. As to the constructs, inspired from Schallert's works, I looked into students' adoption of politeness strategies in the computer-supported collaborative learning (CSCL) environment. In the CSCL environment, students' online discussions focus on how to complete their group projects, not on making sense of assigned reading materials. In addition, inspired from Abrams' work about participant roles, I also looked into a similar construct, called discourse function, in the CSCL environment. The term *discourse function* used in this study refers to the function an interlocutory move served in an interactional event. Unlike Abrams' work on participant roles treating the person as an agent in the CMD, my study treated the message itself in the CMD as the unit of analysis. In this study, I looked into the relationship between discourse functions and students' use of politeness strategy in a CSCL environment, which consisted both of synchronous and asynchronous online discussion.

As to methodology, Schallert's descriptive and interpretive qualitative methods influenced my research design to a large degree. However, I remained open to using some quantitative techniques if needed. The technique that both Schallert and

Abrams used to analyze discourse based on an existing coding scheme with some modifications to fit the features of data was applied to my study as well.

## Chapter 3 Method

This chapter discusses the methodological design I used in conducting the study. This study was a naturalist inquiry examining a selected focal team's online collaborative interactions, guided by the assumptions of an interpretive/constructivist research paradigm (Lincoln, 1997; Lincoln & Guba, 1985), and mostly informed by interactional sociolinguistics, pragmatics, and speech act theory approaches to discourse analysis (Cameron, 2001; Schiffrin, 1994) to analyze the focal team's online discourse. The chapter is divided into four sections, descriptions of the research site and participants, data sources and collection procedures, data analysis, and how issues of the trustworthiness of the study were addressed.

### Research Site and Participants

#### Research Site

The research site was a graduate-level computer-supported collaborative learning (CSCL) course in a public university in the southwest of the United States. I selected this course as my research site because it included several authentic projects requiring the students to work collaboratively as a team online throughout the semester to complete the projects. This course provided a natural online learning environment that I could observe through the lens of my theoretical framework and report a case study of a focal team in accordance with my naturalistic inquiry. The objective of the course was to provide students with opportunities to learn and employ diverse communication tools as these

applied to educational settings by reading about and engaging in comprehensive and intensive online collaborative learning experiences. Except for monthly face-to-face gathering sessions (webcast for off-campus students), students conducted all course activities collaboratively through online communication. The course material was mainly delivered via a course website (see Figure 3.1), providing students with the course schedule, course content, relevant resources, and the instructions for the activities and assignments. A conference system called TeachNet was the main tool for asynchronous online communication and allowed both private email and public discussion board. A 3D virtual world system, Second Life, was used for synchronous online communication via voice chat, text chat, and avatars. Other tools, such as Blackboard, Blog, and Wiki were introduced to the students throughout the semester based on the requirements of the collaborative learning activities.

CSCL 2008						
SYLLABUS	MODULE 1	MODULE 2	MODULE 3	MODULE 4	MODULE 5	HANDBOOK
1. Welcome . . . from Dr. Paul Reata	5. Course Schedule	9. Evaluating Your Role as Online Team Member				
2. Overview of Course	6. Conferencing Skills	10. Participating in the Conference Area				
3. Objectives	7. Technical Requirements	11. Survey: Is This Online Learning Course for Me?				
4. Course Requirements and Evaluation	8. Teamwork and Collaboration					

**1. Welcome . . .**

Welcome to our course on Computer Supported Collaborative Learning (CSCL). One goal of the course is to enable you to experience working as a member of a virtual learning team in a more authentic context.

Collaboration is not a solitary activity. We are always working with other people - colleagues, staff members, administrators, community members, family members - to accomplish almost anything worthwhile. Because we feel so strongly about the importance of collaborating with others, this course is organized around activities that are carried out in teams, along with other individual assignments. In fact, this course was created by a team.

We know from research on cognitive learning that engaging in dialogue and working collaboratively with others facilitates learning and the development of deeper levels of understanding. We also know that participating in activities that approximate "real-life" activities makes it easier for us to take our new skills into

Figure 3.1 CSCL Course Website

Because participating in the course depended highly on computer and the Internet technology, students needed, in order to take the course, to meet some technical requirements in terms of hardware, Internet connectivity, and software (see Appendix B).

The course consisted of five learning modules requiring different degrees of collaboration. Students worked in teams to complete these modules. I will explain shortly how teams were assigned and the size of each team. The objectives and CSCL activities of each module are described as follows (Resta, 2004-2008):

#### Module 1: Building a learning community

At the beginning of Module 1, an optional face-to-face gathering (webcast for off-campus students) was held to provide an overview of the CSCL course, and to introduce several communication tools (including Blackboard and Blogs) that would be used in this module.

This introductory module provided students with an opportunity to participate in a team-building process by virtue of sharing information about their interests, background, and expertise that would help other members to get to know them better both as a team member and as a person. The objectives of this module included understanding the concept and importance of learning community, understanding strategies and processes for building a virtual team, and understanding basic roles and responsibilities of being a member of a virtual team. Students were asked to get to know each other by setting up their own personal blog, introducing themselves in blogs, and viewing and responding to others' introductions. Students had an assignment to read several articles about personal knowledge publishing and the use of blogs, and to post their reflection on what they had read in their blogs. Following this activity of individually reflecting on articles about the use of blogs, students continued to learn more about working together online by reading relevant articles and discussing them asynchronously online via Blackboard discussion

boards in terms of myths about virtual teamwork, successful online collaborative dialogue and discussion, collaborative team roles, accountability in collaborative learning, preventing information overload, and core rules of netiquette. This module required the least collaboration of any of the modules. Students worked individually to complete the reading assignments but collaboratively to carry on discussions and information sharing. This module was aimed at preparing students for participating in the coming collaborative learning activities.

### Module 2: Understanding CSCL

At the beginning of Module 2, a webcast session was held to introduce the asynchronous communication tools, TeachNet, and to discuss the norms of online collaborative work. In the middle of Module 2, the synchronous communication tool, Second Life, was introduced to students in another webcast session with an orientation to Second Life.

Students were divided into teams and started to work collaboratively with their team members from this module on. Continuing on the objectives of the first module, academic readings about CSCL and relevant resources were provided online to the students. With their teammates, students discussed their emerging understanding of the concept of CSCL via TeachNet asynchronously or via Second Life synchronously. The topics students discussed included the key elements of CSCL, what CSCL is, cooperation vs. collaboration, the benefits of CSCL, and social aspect of learning in CSCL. At the end of this module, peer and self assessments were introduced to students to prepare them for doing the assessments at the end of Modules 3 to 5.

### Module 3: Collaborative writing

At the beginning of Module 3, a webcast was held to discuss how to conduct peer and self assessments. Then, a guest speaker was invited to describe collaborative writing. Last, the Internet tool for collaborative writing, Wikis, was introduced to the students.

As the title of this module indicated, the objectives of Module 3 were to have students understand and effectively use the strategies and techniques for collaboratively authoring a document, to understand and use effectively Wikis as a means of supporting online collaborative learning, to explore and use online tools for collaborative writing, to understand current research related to collaborative writing, and to work effectively as a member of a collaborative learning team. Students were asked to compose collaboratively a Wikipedia entry on a CSCL-related topic with their team members. The wikipedia entries served as their team products.

### Module 4: Multi-user virtual environment and collaborative controversy debate

At the beginning of Module 4, another orientation to Second Life was held in a webcast session, in order to prepare students for the coming academic debate activity in Second Life.

The objectives of this module were to enable students to navigate and communicate effectively through the use of avatars in a virtual environment, to carry out substantive dialogue and discourse in the virtual environment, to use strategies effectively to introduce and critique important points related to an academic issue or topic, and to understand the potential benefits and limitations of virtual worlds like Second Life in supporting collaboration, dialogue, and discourse. Students needed to read several online

articles about multi-user virtual environments and collaborative academic controversy to learn the theoretical and practical background knowledge related to the activity. Each team was asked to select an issue to serve as the focus of the academic controversy activity. The team was then divided into two groups and assigned to the pro or con position within each group on the selected issue. Each group needed to develop its position and the supporting information and arguments, to do research using the Web or other sources (e.g., textbook, library, personal experience) to support its position, to prepare a series of persuasive arguments to support its position, and to prepare a persuasive document to be given to the opposing group. Then, a debate session was held synchronously via Second Life. After the first debate session, groups in a team were asked to reverse their positions to have a second debate session. Lastly, as a team, the two groups wrote a consensus document on the selected issue as their team product. Except for the two synchronous debates that must be held on Second Life, students could interact with their members via any introduced synchronous or asynchronous communication tool.

#### Module 5: Strategies for collaborative online inquiry.

At the beginning of Module 5, a webcast session was held to introduce the concept of WebQuest, which was the form of the team product for this Module. A WebQuest is an inquiry-oriented lesson format in which most or all the information that learners work with comes from the web (Dodge, 2007). The WebQuest is a collaborative Web-based activity in which learners are presented with a problem, question, scenarios or

tasks, and are required to analyze and synthesize the information to come up with their own creative solutions to a specific problem, question, or issue.

The objectives of this module were to enable students to understand strategies and techniques for collaborative Web-based inquiry, to understand the purpose and structure of a WebQuest, and to design collaboratively a WebQuest that meets stated criteria. After the introduction of WebQuest, each team was asked to design and develop a WebQuest collaboratively. Each team had a chance to demonstrate its WebQuest in a final webcast session with the whole class.

### Assignments

In addition to producing team products assigned by each module by means of participating in synchronous and/or asynchronous online discussions with their team members, students were asked to produce a self-reflective individual journal about their learning experiences, and they posted this self-reflection in their blogs at the end of each module. They also needed to conduct peer/self assessments and created individual portfolios to indicate their contribution to the team products at the end of Modules 3 to 5. In addition, they needed to evaluate other teams' products and fill out a product evaluation form at the end of Module 5.

### Participants

Participants for this study were the 18 graduate students enrolled in the CSCL course in 2008. Of these, 10 were men, 8 were women; 16 were on-campus students, 2 were off-campus students; 12 were non-Asian, 5 were international students from Asian

countries who had never lived/studied in western countries before taking this course, I was Asian who had already lived in the United States. For the last categorical variable (non-Asian, Asians who had never lived/studied in the western countries before taking this course, and Asian who had already lived in the United States), I considered other variables to reflect students' differences in cultural background, such as participants' ethnic backgrounds, native languages, and international student status. After a discussion with one of my chair who is also the instructor of this course, I decided to categorize participants' cultural background in this way. Based upon the instructor's experience of having taught this course for more than 10 years, he suggested that students' cultural background could influence students' participation and learning experience in this course to a certain degree. However, categorizing students by whether they were international students or not was not sufficient to reflect the cultural differences. Some students may be categorized as international students due to their nationality. But they can speak English very fluently and are accustomed to the U.S. educational system. Similarly, whether students' native language is English or not was not sufficient to reflect the cultural differences. Some students' native language was not English, but they could speak English like a native English speaker due to their previous living experience, such as having studied/lived in English countries long enough, so that they can communicate in English to express themselves without any problem. As to ethnic backgrounds, the instructor noticed that, in general, Asian students were different in their participation from the students with other ethnic backgrounds (e.g., White, Black or Hispanic), which might reflect the influence of typical Asian culture (e.g., shyness, passiveness, discomfort

in evaluating their peers, and hesitation to give themselves a high score in self-assessment). However, Asian students' previous living/studying experience in English countries was likely to moderate the difference. Therefore, I decide to categorize participants in this way (i.e., non-Asian, Asians who had never lived/studied in western countries before taking this course, and Asian who had already lived in the United States) to reflect cultural differences, taking languages and previous living experience into consideration (More discussion about cultural differences will be provided in Discussion chapter).

Students enrolled in this course were divided into several teams. There were 4 teams; two teams consisted of 4 students each, and two teams with 5 students each. In addition to taking students' preferences for area of interest (elementary education, secondary education, higher education, or business education) into consideration, the instructor and TA tried, but could not always succeed, to form teams that represented diversity in terms of gender, cultural backgrounds, on-campus/off-campus students, progress in their academic program, and the level of computer skills. Table 3.1 summarizes participants' demographics per team.

Table 3.1 Students' Demographics

<b>Team</b>	<b>Team A</b>	<b>Team B</b>	<b>Team C</b>	<b>Team D</b>
Male	2	1	4	3
Female	2	3	1	2
On-campus	4	4	4	4
Off-campus	0	0	1	1
Asian who has lived/studied in U.S.	1	0	0	0
Asian who has never been in U.S.	0	3	0	2
Non-Asian	3	1	5	3

The instructor of this course was a professor in the department of curriculum and instruction in the university. He had offered this course for more than 10 years. He hosted each face-to-face webcast session. Throughout the whole course, the instructor monitored and facilitated students' collaborative online learning by viewing students' asynchronous written messages in blogs or in discussion boards, and transcripts/videos of students' online synchronous chats. The instructor also occasionally participated in students' online discussions to provide necessary and immediate facilitation. For Modules 3, 4, and 5, the instructor also posted a feedback message to each team's discussion board to report on his evaluation of the students' team products.

Two teaching assistants were assigned to this course. The TAs participated in every webcast session to assist off-campus students viewing the webcast and to answer their questions via online synchronous chats. Throughout the semester, the TAs worked intensively with students to facilitate students' online collaborative learning process by

answering students' questions, providing necessary guidance and technical support, and collecting students' assignments.

### Researcher's Role

The role I played in this study was as an observer. I observed the online discourse to understand the students' social and intellectual interactions with the supports from multiple data sources while they engaged in the process of finishing the online learning projects collaboratively. Even though I tried to reduce the degree of intrusiveness introduced by my presence in the research site as much as I could, for collecting some data sources, it was inevitable that I have some interaction with the students/instructor/TAs. Regarding the relationship between the instructor/TAs and me, I received much assistance from the instructor and the TAs. They helped me get access to the systems storing the data sources that were part of the course activities. The instructor also helped me to find a secure web server space to upload the videos I took from the students' synchronous online discussion in Second Life to share with the students with password protection for each team. As to the students' confidentiality related to their participation in this study, the interaction between the instructor/TAs and me, as a researcher, was kept to a minimal level. Even though the instructor is one of my chairs, I did not discuss any detailed information from my study with him before the students' grades were submitted and only after the semester ended. Regarding the relationship

between the students and me, the degree of my involvement in interaction with them depended on the types of data sources I collected. When I collected the data sources that were part of the course activities, excluding the synchronous online chat sessions in Second Life, I could do this without imposing my presence on the students, except for their awareness that I was collecting data from their course activities. I was more like an outsider to the students at these points in time. When I attempted to collect online surveys to measure their sense of community at the end of each Module, I, as a survey collector, became more intrusive to the students as I sent emails to them, reminding them to fill out the online surveys. Considering the participants' workload during the semester, the way I tried to reduce the degree of intrusiveness introduced by my emails was to be polite and not to send them reminder messages more than once per Module.

Still, when I conducted interviews, I also increased the degree of intrusiveness by starting from sending them an email to schedule a time for the interview. When I interviewed them, I played the role of interviewer, having a direct face-to-face or phone conversation with them. The degree of intrusiveness posed by my role as interviewer was higher than my role as a survey collector. My attempts to reduce the intrusiveness included sending invitations for scheduling an interview one time. Considering their schoolwork at the end of the semester, if they did not respond, I did not take any follow-up action. For those who decided to participate in the interviews, I provided the options of a face-to-face or phone interview at their convenience and preference. When I asked in Second Life to videotape the students' synchronous voice/text chats, I posed the highest degree of intrusiveness on the participants because they noticed my avatar's presence in

their conference area and were aware of my videotaping of their conversation as an observer/researcher who was involved in the site, even if to a minimal extent. Even though I had tried my best to minimize the degree of intrusiveness introduced by my presence in Second Life, such as introducing myself, explaining my presence and the videotaping at the very first chat session for each team, using a small dog avatar, staying in the peripheral area around the conference area, being careful not to involve in their conversations, and not talking but typing if they talked to me, I found it was impossible to pretend completely I was not there, particularly in the beginning period of my data collection. For example, in one group two members, Yi-Jun and George, were late to join their first voice chat in Second Life. After they arrived, Yi-Jun saw a dog, not realizing it was my avatar. She asked “*Whose dog is there?*” George replied, “*I thought that would be yours, Yi-Jun?*”

*Yi-Jun: Not mine.*

*George: Yeah...I'm just joking.*

*Bill: The dog is Vanessa. She is the one doing the study on collaborative work.*

Nevertheless, being an intrusive observer who videotaped the students’ avatars was not always a drawback. It sometimes gave me the chance to develop rapport with the participants. When the students realized that they had to prepare a portfolio to report their own contributions to the team discussions and team products at the end of each module, they noticed that it was difficult for them to write down notes on their contribution to the discussion while they were simultaneously engaged in synchronous voice chats in Second Life. I promised each team I would upload the videos I took from their discussion to a secure server space to share with them after each chat session. I hoped this effort could at

least allow my study have some benefit for the students, rather than only creating more disturbance to them. The following example shows the situation:

*Katrina: ...my question is since we are doing voice, how we were gonna do that [the portfolio]? Are we gonna record our voice? ....*

*Bill: We are gonna given a video of this conference.*

*George: Got it. Vanessa is recording right now. And then she will send us the password and username.*

*I typed: I will post the video online*

In sum, the effort to reduce the degree of intrusiveness as much as possible was how I addressed the ethical concern a researcher should keep in mind when entering a research site.

### Data Sources and Data Collection

Data sources for this study included students' demographic and background information, all written messages posted on the asynchronous discussion board, videos/text taken from synchronous voice/text chats, observation field notes taken during synchronous chats in Second Life, netiquette questionnaires about students' perspectives on netiquette, peer/self assessments, self-report portfolios about the individual contributions to team products, self-reflection posted to blogs, team products, team product evaluations, online surveys to measure sense of community, and interviews. Table 3.2 lists the research questions of the study, and primary and supplementary data sources collected to address the corresponding research question.

Table 3.2 Research Questions and Corresponding Data Sources

Research Questions	Primary Data Sources	Supplementary Data Sources
RQ1: What politeness strategies do students use when they work collaboratively via online synchronous or asynchronous communication tools?	<ul style="list-style-type: none"> <li>• Written messages posted on asynchronous discussion boards</li> <li>• Video/text taken in synchronous voice/text chats</li> </ul>	<ul style="list-style-type: none"> <li>• Observation field notes taken during synchronous chats in Second Life</li> <li>• Demographic and background information</li> </ul>
RQ2: How do students' concerns about netiquette relate to their uses of politeness strategies?	<ul style="list-style-type: none"> <li>• Netiquette questionnaires about students' perspectives on netiquette</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Written messages posted on asynchronous discussion boards</li> <li>• Video/text taken during synchronous voice/text chats</li> <li>• Observation field notes taken during synchronous chats in Second Life</li> <li>• Self-reflection posted in blogs</li> <li>• Demographic and background information</li> </ul>
RQ3: How do students' uses of politeness strategies change over time?	<ul style="list-style-type: none"> <li>• Written messages posted on asynchronous discussion boards</li> <li>• Video/text taken in synchronous voice/text chats</li> </ul>	<ul style="list-style-type: none"> <li>• Observation field notes taken during synchronous chats in Second Life</li> <li>• Demographic and background information</li> </ul>

Research Questions	Primary Data Sources	Supplementary Data Sources
RQ4a: How do discourse functions in posted messages/utterances relate to students' use of politeness strategies?	<ul style="list-style-type: none"> <li>• Written messages posted on asynchronous discussion boards</li> <li>• Video/text taken in synchronous voice/text chats</li> </ul>	<ul style="list-style-type: none"> <li>• Self-reflection posted in blogs</li> <li>• Demographic and background information</li> </ul>
RQ4b: How do modes of online communication relate to students' use of politeness strategies?	<ul style="list-style-type: none"> <li>• Written messages posted on asynchronous discussion boards</li> <li>• Video/text taken in synchronous voice/text chats</li> </ul>	<ul style="list-style-type: none"> <li>• Self-reflection posted in blogs</li> <li>• Demographic and background information</li> </ul>
RQ4c: How does the development of sense of community relate to students' use of politeness strategies?	<ul style="list-style-type: none"> <li>• Online surveys to measure sense of community</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Observation field notes taken during synchronous chats in Second Life</li> <li>• Self-reflection posted in blogs</li> <li>• Peer/self assessments</li> <li>• Self-report portfolios about the contribution to team products</li> <li>• Written messages posted on asynchronous discussion boards</li> <li>• Video/text taken in synchronous</li> </ul>

Research Questions	Primary Data Sources	Supplementary Data Sources
		voice/text chats • Demographic and background information
RQ5: How does students' use of politeness strategies influence the learning process in the online learning community?	<ul style="list-style-type: none"> <li>• Written messages posted on asynchronous discussion boards</li> <li>• Video/text taken in synchronous voice/text chats</li> <li>• Interviews</li> <li>• Online surveys to measure sense of community</li> </ul>	<ul style="list-style-type: none"> <li>• Team products</li> <li>• Demographic and background information</li> <li>• Peer/self assessments</li> <li>• Self-report portfolios about the contribution to team products</li> <li>• Self-reflection posted in blogs</li> <li>• Team product evaluations</li> </ul>

To request for and gather students' consent to participate in this study, I made a presentation about the study in the second webcast session on Sept 29<sup>th</sup> with the instructor's permission. The purpose of this study and information about my overall research plan were communicated to the students. Then, informed consent forms were provided to all the students attending the webcast session on-campus. For the off-campus students, I sent the informed consent form to them via email and asked for their consent by replying to my email with their written agreement. As written consent forms were gathered, data collection procedures started with the students who had agreed to participate in this study. Given that the study was conducted on a graduate-level course, participants were all adults. The consent form included the purpose of this study and

requested agreement to the collection and use of online discussion data, including text and video, as well as to field notes, demographic and background information, peer and self assessment forms, self-reflection journals, portfolios, team products, team product evaluations, responses to a netiquette questionnaire, online surveys to measure sense of community, and interviews. In addition, the consent form pointed out that the interviews would be recorded. In order to protect the participants' personal identity, I replaced the participants' real names with pseudonyms. It turned out that all of the 18 students agreed to participate in this study with the right to decide to opt out at any time.

Data collection process started immediately as I gathered all participants' written consents and it continued throughout the semester until the last interview session occurring one month after the course had ended. Data collection procedure is described in the chronological order of when the data were collected.

#### Demographic and Background Information Questionnaire

At the beginning of the semester, students were asked to provide demographic and background information by filling out a questionnaire online. For instructional purposes, part of this information served as the basis of team formation, including work experience (including current position), educational background, experience in using computer software, the type of computer the student was using, and internet access. Only members of the course were able to access this information.

In addition to using students' demographic and background information, I collected students' blog entries in which they introduced themselves to the class posted for Module 1. Students' self-introductions focused on sharing their goals or expectations

for taking this course, on describing an educational experience that had had a big impact on who they were today, and on adding any special interests and hobbies, and interesting things about themselves that they wanted to share with other class members. I collected 17 blog entries on self-introductions. One student restricted the public access to his blog.

#### Open-ended Netiquette Questionnaire

At the end of Module 1, participants answered an open-ended questionnaire asking for their perceptions of netiquette as part of the activity about establishing norms for effective online collaboration. The questionnaire asked students to share any past experiences in which they had observed a violation of good Netiquette and to identify the ways such problems could be avoided in their teams.

Students' responses to this questionnaire were posted on discussion boards in Blackboard. Other students could post responses to the students' initial posts. I collected these online asynchronous written messages after the activity was completed in 17 discussion threads, consisting of 80 posts.

#### Online Discourse

As participants engaged in the collaborative learning activities to complete their team products, they communicated through two types of online discussion: asynchronous and synchronous discussions. The online discourse generated by these two types of online discussions allowed me to infer participants' learning process and interactions.

For the asynchronous online discussions, discourse was presented in written form on TeachNet or Blackboard when students discussed their projects asynchronously with their team members. The written messages posted on the asynchronous discussion boards

were collected once per day as the course proceeded. A total of 442 messages were posted on the teams' asynchronous discussion boards.

For the synchronous online discussion, communication was exchanged either in the format of voice chat or of text chat in Second Life. Students scheduled time with their team members to meet virtually in Second Life in accordance with each team's needs and project progress. Hence, the number of meetings and timing for each team were not the same. It seemed that at first every team preferred voice chat to text chat. However, some teams encountered technical difficulties for voice chat in Second Life, particularly at the beginning of the semester. Therefore, some teams went with text chat completely for a whole chat session, and sometimes, they used text chat when they encountered problems with voice in a chat session. Most of the time, the chat sessions were still mainly in the form of voice chat.

Automatically saving the transcripts of text chat to my local hard drive was a function provided by Second Life after the proper configuration. I collected the saved transcripts at the end of each chat session. The voice chat and participants' avatar movement in Second Life needed to be videotaped, which posed a challenge to this study because the capture of audio and avatar movement in Second Life was not officially supported at the time I collected my data. I decided to use a third-party screen and voice capture software (Camtasia Studio) to capture participants' avatar movements and audio in Second Life. To record a voice chat session, before the chat session began, I had to contact one of the team members to ensure their meeting time. When it was close to the meeting time, I, as an observer, logged in to Second Life, and stayed around the team

conference area, adjusting my avatar's view to ensure that the participants' voices could be heard and each team member's avatar could be viewed on my computer. At the very first session with each team, before the meeting started, I introduced myself to them again, and informed them I would record and observe their chats. When the chat sessions took place, I used Camtasia Studio to record my computer screen and the voice coming out from my computer's speaker. After the chat session, I saved the recording and converted it to a portable video file. Then, I uploaded the video to a password-protected server space, and sent the link to the video (with access code) to the team, so that the team members could review the videos when they had to prepare their portfolios to self-report their contributions to the project at the end of each module. One disadvantage of collecting data in this way was that my presence in the conference area may have posed some degree of obtrusiveness to the participants. Therefore, at my committee chair's suggestion, I adjusted my avatar in Second Life to be a small dog and stayed in the peripheral area of the team conference area (See Figure 3.2). In the end, I recorded a total of 21 synchronous chat sessions. The length of each chat session varied from 30 minutes to 120 minutes.



Figure 3.2 Researcher's Avatar

### Observation Field Notes

For the 21 synchronous chat sessions in Second Life, in addition to recording the participants' voices and their avatars' movements with Camtasia Studio, I took field notes as I observed them. Because the use of Camtasia Studio could capture almost everything occurring during the chat, these observation field notes served as supplementary documents. I mainly focused on writing down the contextual description about the chat sessions, including any technical problems that happened on the students' end or on my end (e.g., Ida's voice cannot be heard so she communicated by typing; I lost the voice connection, so that my recording was interrupted. [Field notes started from 7:14pm on Oct 2, 2008]), the team members' special social interactions with their avatars or the objects in Second Life (e.g., they found their team logo was replaced with another team's meeting agenda. They tried to fix it. [Field notes started from 7:30pm on Oct 14, 2008]; Ike tried to put a straw hat on Zelda's head while her avatar showed she was away. [Field notes started from 7:30pm on Oct 15, 2008]). I also noted the meeting time for the

next chat session if they decided on their next meeting. Field notes were expanded after each chat session by adding theoretical, methodological, and personal notes (adapted from Corsaro, 1982).

### Self-reflections

At the end of each module, students reflected on their learning in the modules and posted their self-reflective journals to their blogs. These blog entries were collected at the end of each module to allow me to understand participants' self-perceptions of their own learning. I collected 85 blog entries across the module (17 participants X 5 Modules; one student did not open his blog to public).

### Peer and Self Assessments

Starting from Module 3, students were asked to fill out peer and self assessment forms online to evaluate their own and other team members' learning at the end of the modules. Peer assessment involved making critical judgments about the learning of peers. It was important for the students to apply the same standards to both peer and self assessments. Self assessment involved taking responsibility for making judgments and monitoring aspects of students' own learning. The goal of this task was to enhance students' problem-solving techniques in the complex skills of peer and self assessment and to help students feel comfortable with and to apply standards to these assessment processes (Resta, 2004-2009). The form for gathering peer and self assessments is presented in Appendix C. I collected the results of the peer and self assessments at the end of each module to understand participants' perceptions of their own and other team

members' learning as collaborative team members, 18 students' self assessment scores and peer assessment scores from each team member for Modules 3, 4, and 5.

### Self-report Portfolios

Starting from Module 3, students also needed to make entries in a portfolio about their own contributions to team projects at the end of each module. The self-report portfolio included excerpts from what each student considered to be his or her best contributions to online discussions, as well as his or her specific contributions to the team project. I collected these 18 self-report portfolios from TeachNet discussion boards each of for Module 3, 4, and 5.

### Team Products

The team products for Module 3 were the team written Wikipedia entry. The team product of Module 4 was the consensus document on each team's debate issue posted on the TeachNet discussion board. The team product of Module 5 was the WebQuest website. I collected these team products to understand participants' learning products at the end of each module.

### Team Product Evaluations

After students had submitted their team products, the instructor posted a message to each team's TeachNet discussion boards to provide feedback and suggestions to students about their team products. In addition, students had a chance to evaluate other teams' WebQuest in Module 5 by filling out an online evaluation form. I collected these two types of team product evaluations at the end of the modules to understand teachers' and other team members' perceptions of each team's learning products.

### Online Surveys

Starting from Module 2, online surveys measuring sense of community were used at the end of each learning module to measure the development of sense of community. Participants filled out the survey based on their learning experience of each module by responding to 20 survey items on a sense of community scale (see Appendix A). However, filling out the online survey was not a required task for the students taking this course. I measured sense of community to address one of the research questions. Therefore, I prepared the online survey and email participants to remind them to fill out the surveys at the end of each module. Because filling out the online survey was not a course requirement, the return rate of the survey was not 100%. For Module 2, 8 out of 18 students filled out the survey. For Module 3, 13 out of 18 students filled out the survey. For Module 4, 13 out of 18 students filled out the survey, and for Module 5, 8 out of 18 students filled out the survey. Only three students filled out the survey after every module. This return rate influenced the data availability for further microanalysis, and had an impact on my methodological decision in terms of narrowing down the scope of the later micro analysis and helping me choose my focal team. (More discussions about the methodological decision on purposefully selecting a focal team will be covered in the section on Data Analysis).

### Interviews

Like the online surveys of sense of community, interviews were not part of the CSCL course requirements. At the end of the semester, one formal interview was planned to be scheduled with each participant to allow me to understand participants' perceptions

of their own and other peers' use of politeness strategies, their concerns over netiquette, and their perceptions of the development of sense of learning community (the interview questions are presented in Appendix D). Close to the end of the semester, I sent an email to participants to schedule a 60-min face-to-face (or telephone) interview session with each of them. Considering the coursework during the final week of the semester and that some students might be leaving town soon, the interview sessions were held during the last week of the course, finals week, and the first week of the subsequent semester at students' convenience. Face-to-face interviews were conducted on campus in a Library group study rooms. Both face-to-face and telephone interviews were audio taped with participants' agreement and awareness. Because participating in interviews was not required for taking the course, it is not surprising that only 8 out of 18 students participated in interview sessions. This also affected the data availability of further microanalysis and contributed to my decision about selecting the focal group for detailed analysis. (More discussions about the methodological decision on purposefully selecting focal team will be covered in the section on Data Analysis). Six interviews were conducted face-to-face; two interviews were conducted via phone. All interviews were conducted in English, except for one being conducted in Mandarin because the participant indicated that she felt more comfortable when she spoke in her mother tongue, and Mandarin is my native language as well.

#### Problems and Solutions for Different Data Gathering Challenges

As a researcher conducting a naturalist study, collecting data that could demonstrate students' online discourse in Second Life was an emerging challenge. Using computer screen and voice capture software to recode students' interaction in Second Life could produce videos that included students' voice and avatar movements. However, just like videotaping a normal face-to-face classroom discussion, I encountered some difficulties when videotaping the chat sessions in Second Life. These difficulties influenced the quality of the video recordings and even the availability of this data source. I categorize the difficulties into two types: problems occurred on my end and those on the students' end. Unsurprisingly, the problems occurring on the students' end also influenced students' team discussion to a large extent. Therefore, the solutions discussed below to the problems occurring on the students' end can also serve as instructional suggestions for future courses using Second Life as a communication channel.

#### Problems Occurring on Researcher's End

The first challenge I encountered in videotaping students' interactions in Second Life was when two teams scheduled to meet in Second Life at the same time or their meeting periods overlapped somewhat. Second Life does not allow one avatar login twice at the same time. Therefore, to solve this issue, I prepared two computers to videotape the simultaneous Second Life conversations and created two avatars (two separate accounts) in Second Life. However, after I started to videotape the simultaneous conversations with two Second Life avatars on two computers, another problem occurred. I found that in the case of having two avatars in Second Life, the avatar which entered Second Life first lost

the voice connection after the other one entered Second Life. I searched the Internet to find out the reason causing this problem. It turned out that at the time when I collected data, Second Life only allowed one avatar login to Second Life from the computers behind the same DSL modem, such as is true with a common DSL setting in a household. Thus, I had one DSL internet connection service account with my service provider, but I used a router at home to split the service. Every computer at my place was connected to the router and had external internet connection through the router; thus, more than one computer at my place could share the external internet connection. However, no matter how many computers I could use at home, the outgoing internet connection only occupied one IP address because I only had one DSL service account. It seemed that different avatars entering Second Life from the same IP address caused a conflict in voice connection. When I realized this problem, I tried to purchase another type of internet service, which can give me one more IP address, to solve it. At that time, I chose a 3G wireless connection card as my solution. By doing this, I solved the problem of losing the voice connection in Second Life. However, the stability and speed of the wireless data service I had were not good enough to support a smooth recording of a Second Life conversation. In addition, having two computers recording the voice from different teams deteriorated the quality of audio recording because Camtasia recorded the voice coming out from the speakers with the built-in microphone by default. The built-in microphone did not just capture only the voice from the speakers but also all voice sound around the computers. The voice coming out from the speakers on different computers interfered with each other if I located the two computers too close. Thus, I had to separate the two

computers far enough to avoid this kind of interference. Running from one room to another room continually also made me not able to concentrate on taking field notes. Changing the Camtasia audio recording source from built-in microphone to headset should solve this issue. However, at that time, I failed to find the solution in time. Hence, I did not record/observe the simultaneous conversations completely. Nevertheless, this experience benefitted my later projects collecting data in Second Life.

Another challenge I encountered was that running both Second Life and Camtasia on the same computer required much computer system resource. Even though I did my best to designate two powerful computers to do the recordings, still when the length of recording ran over one hour, Camtasia became unresponsive and the computer was very likely to crash. In the case of Camtasia becoming unresponsive, I still could find a way to dig out the recordings from the temporary folder on the hard drive if the computer had not crashed. In the case of a computer crash before I had a chance to save the recordings, I had no solution because the temporarily-saved recordings were gone as the crash happened. I lost the entire recordings of two sessions because of system overload.

#### Problems Occurred on Students' End

The first challenge students encountered was when two teams had chat sessions in Second Life simultaneously, they could sometimes overhear the other team's conversation even though the team conference areas were separated by some distance. The solution to this situation was that team members of one team muted the voice of the avatars of the other team. This is a function provided by Second Life interface to filter out voices a user does not need to hear in Second Life.

In spite of solving the overhearing issue, the voice-related problems continued to interfere with students' conversation. The volume was the first problem. Each avatar had a different level of volume, and students did not know how their voices sounded to other team members. They needed to remind each other when they found that one member's voice was too soft or too loud. It usually took a while for them to adjust the volume to the correct level. Moreover, after they got used to the Second Life interface, they noticed there was a white circle above each avatar's head when the avatar's voice chat function was enabled. When the avatar talked, the white circle would become green with ripples around the circle. The range of the ripples expanding indicated the level of volume. In the case that the volume was too loud, the circle and the ripples would even turn to a red color. By paying attention to the voice indicator above the avatar's head, team members could have a general sense of their volume level.

Furthermore, sometimes, the voice could become distorted and team members would hear voice feedback or an echo. This situation interrupted the conversation badly because no one could hear others. The feedback occurred whenever team members used built-in microphones and speakers; the voice coming out from the speaker would be re-captured by the microphone. Thus, using a headset was the solution. The voice-related issues took students a long time to solve throughout the whole conversation, especially at the beginning of each chat session.

The next observed challenge related to students' internet connections. I noticed that some team members' avatars would suddenly disappear in Second Life or look like a mist even as the conversation was taking place. When this occurred, the students would

have to re-log in to solve the problem, causing them to miss part of the team conversation. One of the reasons causing this problem may have been the unstable internet connection, usually in the case of using a wireless internet connection. Therefore, the solution to this issue was to ask students to switch to cable internet connection if possible.

Last but not least, embarrassing moments could occur in the Second Life voice chat session when students forgot to toggle off the talk button after they finished talking. In this case, other team members could hear background voices from the team member's location. When one forgot to do this, sometimes, we overheard that his/her baby was crying, and sometimes, we overheard side conversations between the student and his/her family members. In these cases, either I or another team member would use text or just speak out to remind the student to toggle off the talk button. In addition to avoid possibly embarrassing moments, toggling off the talk button could also reduce the possibility of getting feedback.

### Data Analysis

Data analysis featured a recursive and iterative on-going process. It consisted of two overarching phases: macro-analysis and microanalysis. The main purposes for macro-analysis were, first, to review all the collected data in a general manner to understand the participants and the researched context better, and then to refine the preliminarily interview questions to fit with the collected data. In addition, macro-analysis provided me with guidance for microanalysis, narrowing down the analysis to a

manageable scope, identifying the focal team for further detailed analysis. Considering the amount of data I collected, selecting a focal team to do microanalysis in detail increased the feasibility of conducting this study within a reasonable period of time. Grounded by macro-analysis, the main objectives for microanalysis were to refine the preliminarily coding schemes to fit with the selected data set, and to examine the data related to the selected focal team in detail to address the five research questions by presenting the result in the form of case report with supportive evidence from multiple data sources. Figure 3.3 outlines my data analysis process, showing the phases and stages as process and the rounds of analyses within each stage as sub-processes. Note that for the sake of simplicity for reading, I demonstrate the process (phase and stage) and sub-process (rounds) in their overall sequence in the flow chart. The recursive arrows among processes/sub-processes are omitted, and the iterative feature within each process/sub-process cannot be shown by this flow chart. In the rest part of this section, I will describe in more detail the macroanalysis phase, including the rationale for my purposeful sampling of the focal team, and the microanalysis phase, in that order.

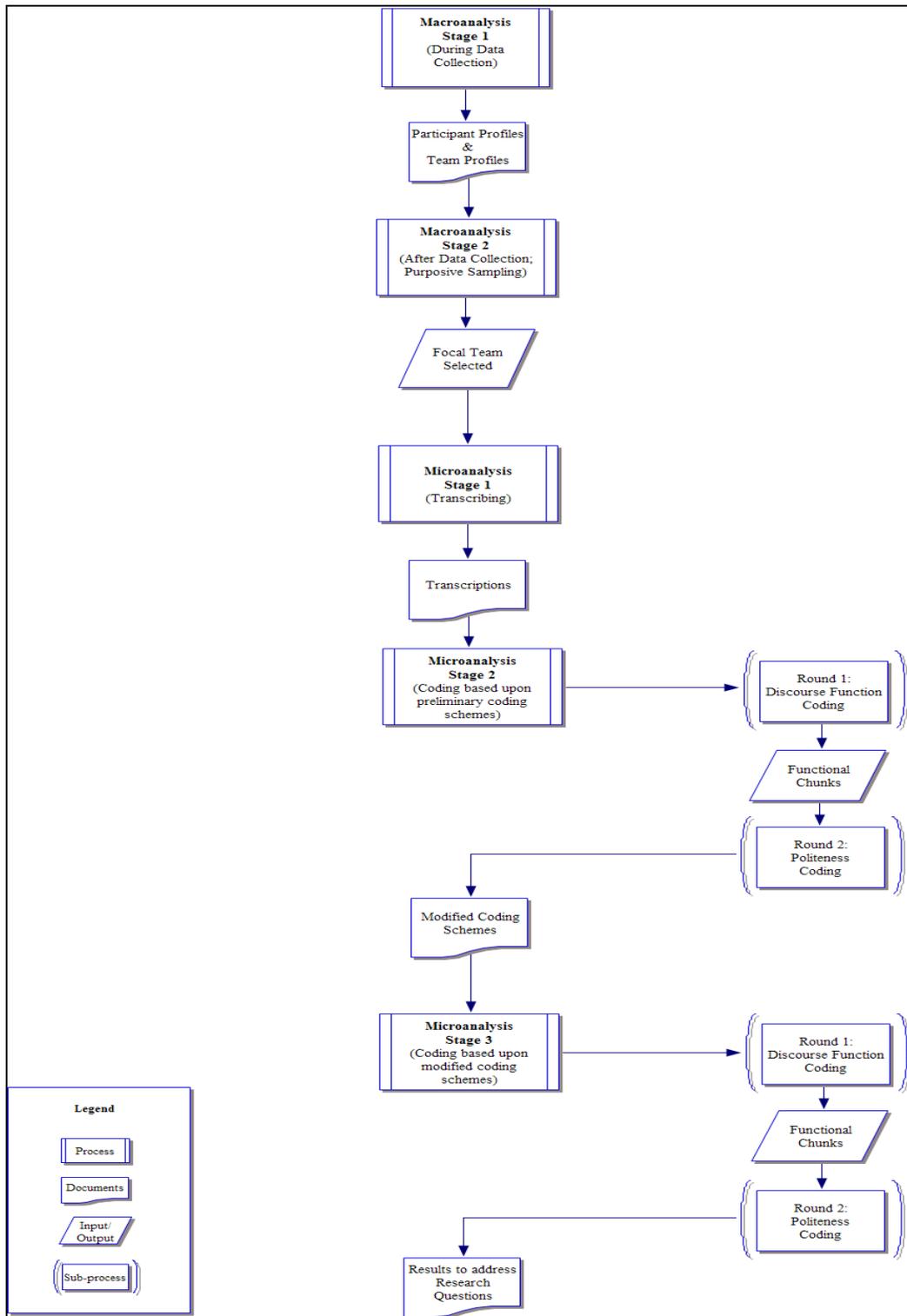


Figure 3.3 Flowchart of Data Analysis

## Macroanalysis Phase

In the macroanalysis phase, I took a relatively broad view at all the data. This phase began immediately as data collection began, and it lasted until three months after data collection had finished. It consisted of two stages: the stage during data collection and the stage after data collection. Even though I engaged in almost the same process, going through all available data recursively and iteratively, in each stage, I bore in mind different goals and came out with different output from each stage.

### Stage 1

During data collection, I viewed participants' blog entries (including self-introductions and self-reflections), their asynchronous written posts on Blackboard or TeachNet (including their responses to the open-ended netiquette questionnaire, online discussions when they worked on projects, and their self-report portfolios), peer and self assessments, and the results from online surveys, at the same time as I collected these data. I viewed the videos taken from the participants' synchronous voice chats and the transcripts saved from their text chats, and expanded my rough observation field notes by adding theoretical, methodological, and personal notes after each synchronous chat session in Second Life (adapted from Corsaro, 1982). In this stage of macroanalysis, I tried to be as much an objective observer as I could to understand each team and the team members without too much inference. I particularly focused on gathering objective facts related to each participant (e.g., gender, age, academic program, current progress in academic program, educational background, work experience, native language, on/off-campus status, international student or not, Asian or Non-Asian, Asian who has ever

studied/lived abroad or not) and each team (e.g., the composition of the team—team members and the number of team members, the frequency of meetings in Second Life, the dates and times of their meetings, how many posts they posted to the TeachNet discussion board, who took the leader role for each module, who spoke/wrote most and who spoke/wrote less). This information was scattered throughout every data source. To organize them together, I wrote a simple profile for each participant and each team. With these profiles, I obtained a general picture of each team, trying to understand each team member's background and the collaborative atmosphere among team members. Based upon this understanding, I adjusted and refined my interview questions for each participant who agreed to be interviewed. Some of the facts in the profiles were also confirmed in the interview sessions.

## Stage 2

After data collection had finished, I entered the second stage of macroanalysis. In this stage, I mainly focused on deciding which focal team I should use for microanalysis. The analyses I did in this stage were intended to prepare enough resources that I could use to make the purposeful sampling decision. I approached the decision in two ways: theoretical sampling and methodological sampling. For theoretical sampling, I reviewed the collected data again through my theoretical framework lens. This time, bearing my research questions in mind, I particularly focused on finding and marking instances related to politeness, modes of communication, discourse functions, or sense of community from the data. Video recordings, saved transcripts and field notes of the synchronous chat sessions in Second Life, written messages posted on the TeachNet

discussion boards (asynchronous discussion), audio recordings of interviews, online surveys to measure sense of community, and peer/self assessments were the major data sources I used to identify interesting instances. Other data sources served as supplementary sources because asynchronous and synchronous online discussions showed the processes when the participants engaged in the collaborative learning activities, and interviews, online surveys and peer/self assessments could be mined for each student's perception of himself/herself, peers and the team collaborative experience in terms of aspects pertinent to the theoretical framework (politeness, mode of communication, discourse function, sense of community) of the current study. I used the participant profiles and team profiles as worksheets to take theoretical and personal notes. I identified two potential teams having many of the instances I wanted to examine. Interestingly, I found that these identified instances were likely to be situations when one member had an arguments or conflict with another member. The two potential teams were Team B and Team D.

For methodological sampling, I checked the completeness and availability of each data source for the participants. For the data sources that were part of the course activities, including asynchronous online discussion, excluding synchronous online discussion, I collected them completely, except that one participant set his blog to be a private blog (This participant was in Team C). As to the synchronous online discussion, the main data source was the videos taken from the synchronous chat sessions. According to the observation field notes, two major reasons affected the completeness and availability of recording the chats. The first involved technical issues on my end.

Throughout the whole data collection, it happened twice that my computer crashed before I could save the recordings at the end of the chat sessions, which made me lose the videos for these two sessions (one was for Team A; one was for Team B). The other reason was the participants' team decision about how to communicate to discuss about their team products and collaboration. Except for Module 4, the debate on an academic controversy, the instructor did not require students to gather in Second Life to work on their projects. Therefore, every team developed their own way to communicate. Some teams preferred to communicate asynchronously via personal email exchanges (e.g., Team A and Team B). In this case, I took relatively few videos from these teams. In addition, because collecting the email correspondence was not included in the data collection protocol, I did not have permission to collect these data from participants. For these teams, I had relatively few pieces of data to understand their collaborative process in detail. For example, one participant in Team A indicated that he had a conflict with one of the other team members during Module 5. He considered this conflict as a violation of politeness. However, this instance occurred when they used personal email to exchange ideas. Even though this was an interesting instance worthy for me to look into their actual discourse, due to the ethical concern, I did not have access to the detailed data I needed. Table 3.3 summarizes the number of videos I recorded successfully per module per team.

Table 3.3 Numbers of Videos from Second Life Chat Sessions

Team	Module 3	Module 4	Module 5
Team A	2	1	0
<b>Team B</b>	<b>0</b>	<b>2</b>	<b>0</b>
Team C	4	4	3
<b>Team D</b>	<b>2</b>	<b>2</b>	<b>1</b>

For the data sources that were not part of course activities, such as online surveys and interviews, not all participants took part. Table 3.4 presents the completeness of online surveys and interviews for each participant. The check marks in the cells of Table 3.4 indicate that I successfully collected the corresponding data from a specific participant.

Table 3.4 Completeness of Online Surveys and Interviews

Team	Participant (pseudonym)	Online Survey				Interview
		Module 2	Module 3	Module 4	Module 5	
Team A	Charles	√	√	√		√
	Zena		√			
	Fred		√	√	√	√
	Ida		√			
<i>Team B</i>	<i>Mao-Wei</i>	√	√	√		
	<i>Ya-Wen</i>		√	√		
	<i>Hye Kyo</i>			√		
	<i>Lily</i>	√		√		
Team C	Steve	√		√	√	√
	Cliff		√		√	
	Seth	√				
	Zelda	√	√	√	√	√
	Ike		√	√		
<i>Team D</i>	<i>Younghee</i>		√	√	√	√
	<i>Bill</i>		√	√	√	√
	<i>Yi-Jun</i>	√	√	√	√	√
	<i>Katrina</i>	√	√	√	√	√
	<i>George</i>		√	√		

The results from the theoretical sampling suggested that Team B and Team D were potential to be selected as the focal team. Incorporating these results with the results from

the methodological sampling (Team B and Team D in bold and italics in Tables 3.3 and 3.4) led me to select Team D as the focal team for microanalysis.

### Microanalysis Phase

In this phase, I took a detailed view to examine the data. The microanalysis phase started once the focal team was selected. The major task in this phase was to code the synchronous and asynchronous online discourse in terms of discourse functions and politeness when the focal team (Team D) was engaging in finishing the collaborative projects, in order to address the first four research questions. This phase consisted of three stages. Each stage had a major purpose and relied on the output from the previous stage. Nevertheless, the boundary of each stage was not rigid. The analyses in this phase were recursive and iterative.

#### Stage 1

The very first stage in this phase was to transcribe the focal team's (Team D's) video recordings of the synchronous chat sessions in Second Life. There were five video recordings ranging in length from 30 minutes to 75 minutes. Table 3.5 summarizes the transcription conventions:

Table 3.5 Transcription Conventions

Symbol	Speech Act	Notes
abe	Simultaneous speech	
(def?)	Tentative transcription	
[notes]	Explanatory comments	Notes about the avatar movement
xxx	Inaudible speech	
EMPHASIS	Emphasis	
uh~	Lasting the syllable	
uh...	Pausing	

I used Nvivo to facilitate my transcribing. On average, it took me about 1.5 hour to transcribe 10 minutes of recording.

### Stage 2

After finishing transcribing, I entered the next stage of microanalysis: Coding. In this stage, I purposefully selected to code the transcript of the first Second Life chat session based upon the preliminary coding schemes because during my data collection process and the macroanalysis phase, I had noticed that the online discourse that occurred in Second Life, particularly in the voice chat format, had the potential to involve different discourse functions compared to previous studies (Chiang et al., 2008; Schallert et al., 2009). The main purpose of this stage was to modify the existing coding schemes to fit with the nature of my data. This stage consisted of two rounds. The first round focused on coding for discourse functions and on deciding the unit of analysis (functional chunk) for the second round—coding for politeness. Before I describe the coding details of these two coding rounds, I discuss the unit of analysis and preliminary coding schemes.

### *Deciding on Unit of Analysis for Coding Online Discourse*

As suggested by De Wever, Schellens, Valcke, and Van Keer (2006), analysis of online discourse should pay attention to the unit of analysis as bounded by a study's theoretical rationale. Thus, the written asynchronous online messages and transcripts of synchronous online chats were analyzed using as a unit *functional chunks* grounded by the theoretical concept of discourse function (Chiang et al., 2008; Schallert et al., 2009). Each message or utterance was first coded for discourse function. Coding for discourse function was not limited to phrase, sentence, or paragraph units. The decision to give a message a discourse function code depended on whether the chunk of the message or utterance served a specific function in accordance with the preliminary discourse function categories. In other words, I added a separator to a message/utterance whenever I decided that a part of a message/utterance served a different function from the part before the separator served. As shown in Table 3.6, the utterance was divided into two functional chunks. The first functional chunk, "*I think you are right*", was given a discourse function code #6a, positive evaluation, showing that the speaker was agreeing with a previous utterance. The second functional chunk, "*But again anything we put in, it has to be well-documented*" was coded as serving the discourse function of presenting an alternative perspective (#5b), starting with "*But*" indicating a shift in conveyed meaning. Thus, one message/utterance could serve more than one discourse function. The codes given to a message/utterance divided the message/utterance into one or more functional chunks. Thus, each functional chunk only served one discourse function. In the few cases where the very same words seemed to serve more than one discourse function, the most evident discourse function was assigned to the chunk based on the interaction context.

Table 3.6 Example of Functional Chunk

Utterance #	Utterance Content	Functional Chunk	Discourse Function
1	I think you are right.	1	Positive evaluation (#6a)
	But again anything we put in, it has to be well-documented.	2	Presenting Alternative Perspective (#5b)

*Preliminary Coding Scheme*

To determine the discourse function(s) represented by each message/utterance, I adopted the coding scheme presented by Chiang et al. (2008) and Schallert et al. (2009) as a preliminary coding scheme for discourse function. The 12 discourse functions (9 major codes; several that are coded with two subcategories) are presented in Table 2.5 along with a definition of each function and an example from data from a previous study (see Chiang et al., 2008 and Schallert et al., 2009).

Next, I used a coding scheme for politeness strategies taken from Brown and Levinson (1987) depicting positive and negative instances of politeness strategies, described in Table 2.2 along with an example from data from previous CMD studies (Schallert et al., 2008; Chiang et al., 2008; Schallert et al., 2009).

The reason for identifying these two existing coding schemes as preliminary is that one, the discourse function coding scheme emerged from discourse occurring in online

asynchronous and synchronous discussions that were similar to the current study. However, the context of the previous studies and the current one differed to some degree. The prior studies were conducted in a hybrid learning environment where the face-to-face interaction was the main communication channel delivering instruction accompanied by occasional (three each) synchronous and asynchronous online discussions. The online discussions focused on making intellectual sense of assigned readings via pure text-based online communication tools. By contrast, the current study was conducted in an online collaborative learning environment in which almost all communication occurred online and the participants were required to finish several group projects collaboratively with their team members throughout the whole semester. The content of the discussions focused on finishing their projects rather than making sense of academic readings. In order to finish their group projects, the participants needed to communicate via both synchronous and asynchronous online communication tools. The asynchronous discussion tool was a text-based discussion board in TeachNet whereas the synchronous communication tool was the voice chat tool in Second Life, a 3D online virtual world. Given the differences in contexts between the prior studies and the current study, while coding my data, I did find the need to modify the preliminary coding scheme for discourse functions to fit the data I had gathered for this study, particularly for the oral synchronous online discussions. This was also the reason I selected the first transcript from the oral synchronous online discussions to code in this stage. (More discussion will be covered in the next session).

As to the coding scheme for politeness strategies, given that it drew on a long tradition of research in social anthropology, conversational discourse analysis, and in syntax and linguistic pragmatics (Gumperz, 1987), it turned out that I had no need to modify it.

The technique of constant comparative method (Strauss & Corbin, 1990) was used to refine the preliminary coding scheme as the ongoing analysis took place recursively and iteratively throughout the microanalysis phase.

#### *The First Round of Coding—Discourse Function*

This round of coding focused on discourse function to determine the functional chunks. Messages/utterances first were coded for their discourse functions using the function categories listed in Table 2.5. Data were divided into basic functional chunks for analysis. As the major purpose of this stage was to modify the preliminary coding schemes to fit with the data collected for this study, while I coded the first transcript of synchronous online discussion, I modified the discourse function coding scheme to a large extent.

Table 3.7 summarizes the discourse function categories adopted from a previous study (Schallert et al., 2009) with four additional categories emerging from the data and with explanatory examples from my data. The addition of discourse function categories was mainly caused by the different nature of communication media and the different types of learning activities between prior studies and current one. For example, I needed to add function #10a (Notifying receiving an utterance) and function #10b

(Supplementing others' utterance). It seemed that in text-based online communication, the need for function #10a and #10b was not as prevalent as in Second Life voice chat because these two functions reflected features of face-to-face oral communication to a certain degree. In addition, these two functions seemed associated with the intention of being polite (more discussion will be provided in the Results chapter). Thus, I added function #10a and #10b to describe my data better.

As to the difference in learning activities, prior studies examined a learning context in which the students were asked to make sense of the assigned academic articles in computer-mediated discussion. By contrast, the current study looked into a learning situation in which the participants were required to complete a group product collaboratively. Thus, the content of their discussion centered on different topics. Due to this difference, function #7b (Self-disclosure) and #8c (Managing the group's task) were added. Function #7b was designed to cover utterances in which the speakers wanted to disclose their current or future status, not related to their reflection on learning, but giving a reason for their participation in the group discussion and task. For example, George wanted to explain his limited available time to do the group task by disclosing his personal life during the upcoming few days.

*George: I'll do my best as I can tomorrow to do some research honestly tonight. But, the next couple of nights are football games, so I'll try to get some of the articles together, hopefully have something for you late Friday.*

Another example of function #7b can be found when the conversation was interrupted by the noise caused by sound problems in Second Life. Bill had to disclose his own situation

by saying, *“I am getting an echo”* to explain that he could not hear others’ voices or continue the discussion.

Function #8c was particularly generated for the collaborative project-based activity. To complete their group product, the team members needed to exchange some utterances about project management, like deciding/assigning tasks, and setting up deadlines or the next meeting time. For example, George suggested the next step to the team by saying, *“So let’s just give it a shot. Do our research and come back and see what we find on Friday. Those might be narrowed down by then after a periodical research.”*

Table 3.7 Codes for Discourse Functions along with Definitions and Examples

Discourse Functions	Definition	Example from my data
1. Information seeking	Whether marked by a question mark, this chunk seeks a particular answer that the speaker seems to assume others know	Yi-Jun, can you still hear me? [George, 1 <sup>st</sup> Synchronous, Module 3]
2. Discussion generating	The speaker seems to want to generate from others their interpretations and extensions on a topic	How about everyone else? [George, 1st Synchronous, Module 4]
3. Information providing	This function refers to when a speaker is providing a relatively contained information chunk, often in response to a chunk that was coded a “1” (information seeking).	Yeah, I can hear you. [Yi-Jun, 1 <sup>st</sup> Synchronous, Module 3, an answer to the above example of function 1]
4. Experience sharing	The speaker gives a personal example of a construct from the readings or of what someone else has said in a previous discussion. The example should be specific.	I can’t help but think of my 3 ½ yr old son. When I am not as attentive as he feels I should be, he says, “Daddy, I’m talking to you!” in a tone that is a mix of exasperation and adamancy.

Discourse Functions	Definition	Example from my data
		I immediately oblige [Example from Schallert et al., 2009]
5a. Elaboration/ Clarification/ Explanation	This kind of utterance has the general function of discussing an idea. The speaker is elaborating what he or she thinks about something, explaining what a concept is about, analyzing what someone has said, etc. Use the code 5b when utterance seems to offer an alternative view.	5a. I mean there are couple of articles I think talking about sources like that. [George, 2nd Synchronous, Module 3]
5b. Alternative perspective		5b. The other way we can look at it is there was the French, the British, the German, the Soviet, and the US. Okay, each had a different view. [Bill, Synchronous, Module 5]
6a. Positive evaluation	Speaker is agreeing with or appreciating a previous utterance. Use 6b when posing a disagreement with a previous utterance.	6a. I think you are right. [Bill, 2 <sup>nd</sup> Synchronous, Module 3]
6b. Negative evaluation		6b. I don't think [the instructor] is too stuck on what age level. [Bill, Synchronous, Module 5]
7a. Self-evaluation	Speaker says something about what he or she feels about his or her own learning or understanding, or an emotional reaction to an utterance or reading.	7a. Uh~I google some articles to read but uh~I haven't heard this before so I just read some articles. [Yi-Jun, Synchronous, Module 5]
7b. Self-disclosure	Use 7b when speaker seems to disclose his or her current or future status, not related to learning.	7b. I can't hear Younghee, I think. [Yi-Jun, 1 <sup>st</sup> Synchronous, Module 3]
8a. Managing the group's conversation	For 8a, the speaker suggests what others should do in the conversation or asks what others want to do. For 8b, the speaker describes what he or she has	8a. Okay, let's get started. [George, Synchronous, Module 5]
8b. Previewing		8b. There are some ideas for

Discourse Functions	Definition	Example from my data
organization of speaker's utterance  8c. Managing the group's task	done or will do in with his or her utterance. For 8c, the speaker seems to provide suggestions of how to proceed and complete the group project.	Wiki: [Bill, Asynchronous, Module 3]  8c. I think we need to narrow down to evaluations and assessments and in online collaborative study. [Bill, 1 <sup>st</sup> Synchronous, Module 3]
9. Social	Utterances seem to have the function of social connecting to the group.	Hi everyone [Yi-Jun, Asynchronous, Module 5]
10a. Notifying receiving an utterance	Speaker seems to send a signal to confirm that he or she is following the previous speaker's utterance	Got it. [George, 1 <sup>st</sup> Synchronous, Module 3]
10b. Supplementing another's utterance	Speaker helps another speaker by filling in missing information in their utterances.	George: Any of them. Voice chat or ~  Yi-Jun:  text chat  [1 <sup>st</sup> Synchronous, Module 3]  *Note:     indicates overlapping utterance, ~ indicates lasting the last sound of word.

### *The Second Round of Coding-Politeness*

For the second round of coding in this stage, I coded the functional chunks I had assigned based on the discourse function coding scheme for students' politeness strategies, identifying which of 16 positive politeness and 10 negative politeness strategies applied. Functional chunks could receive more than one politeness code as well as no politeness code. Table 3.8 provides an example demonstrating the politeness coding process. Continuing the example shown in Table 3.6, each functional chunk was coded

for politeness strategies in this round of coding. A coding of positive politeness strategy P1 (noticing and attending to the hearer’s wants or needs) was given to the phrase “*you are right*” of the first functional chunk in that the speaker showed his agreement with the hearer’s previous utterance, thereby attending to the hearer’s face. As to the second functional chunk, another positive politeness strategy P12 (including the speaker and hearer in the activity) was given to the first person plural pronoun “*we*” to redress the hearer’s face while the speaker was presenting an alternative view. At the end of this round of coding, I found that the preliminary politeness coding scheme adopted from Brown and Levinson (1987) was sufficient to be applied to my data. Therefore, no modification to the politeness coding scheme was made.

Table 3.8 Example of Coding Process

Message #	Message Content	First round		Second round
		Functional Chunk	Discourse Function	Politeness Strategies
1	I think <u>you are right</u> .	1	Positive evaluation (#6a)	P1
	But again anything <u>we</u> put in, it has to be well-documented.	2	Presenting Alternative Perspective (#5b)	P12

### Stage 3

After I discussed and confirmed the modified coding schemes with my advisor, I began the third stage of the microanalysis phase. The main purpose of this stage was to finish coding all transcripts of synchronous online discourse in Second Life and the written messages posted to the asynchronous online discussion board in TeachNet in accordance with the modified coding schemes generated by the previous stage, checking against other data sources to address my research questions. The two rounds of discourse function coding and politeness coding in stage 2 were repeated here to code all transcripts and written posts collected from the focal team. Throughout this stage, a meeting with my advisor was held weekly to discuss/resolve issues emerging from coding, and to decide on general methodological coding rules, while the two rounds of coding proceeding recursively and iteratively. Five general coding rules were discussed as follows:

1. Give “we” a politeness code one time per sentence if it occurred, no matter how many times “we” was used in the sentence, in order to avoid the inflation of the frequency of P12 code—including the writer/speaker and reader/hearer in the speech act. (from weekly meeting notes on September 23<sup>rd</sup>, 2009)
2. Add an indicator of topic shifting in the transcripts to separate different episodes that could be treated as a complete small story about the focal team, in order to identify specific instances easily. (from weekly meeting notes on September 30<sup>th</sup>, 2009)
3. In the transcripts for synchronous online discussion, when a functional chunk and the subsequent chunk from the same participant were actually the same utterance

(sentence) given the context, but they were interrupted or overlapped by another team member's very short utterance, I should treat the interrupted utterances from the same participants as two functional chunks. Even though in my theoretical and analytical framework, interruption was not a major theme, I would like to reflect the interruptible nature of oral synchronous online discourse in my coding for future possible studies. (from weekly meeting notes on October 21<sup>st</sup>, 2009)

4. The discourse function #8a—managing the group's conversation, was the code to be given to any utterance about providing instruction/suggestion for other team members to handle the Second Life voice issue (i.e., "*Once you are done talking, can you please turn the talk button off so we don't get the echo?*" [Katrina, October 22<sup>nd</sup>, 2008]). On the other hand, utterances like "*Okay, let's get started*" [George, October 27<sup>th</sup>, 2008] also fit with the definition of discourse function #8a, as such utterances suggest what others should do in the conversation. As the analysis went on, I noticed that the cases of discourse function #8a related to Second Life voice issue were noteworthy because they might contribute to a discussion about problems specific to an emerging mode of online communication—virtual environments. However, because this kind of discourse function #8a would only occur in Second Life voice chat and considering that the scope of my data sources also covered asynchronous written posts, instead of creating a new discourse function to categorize this kind of utterances, I added a column to my transcripts (my transcripts presented each new discourse functional chunk in a new row) entitled "Second Life related" as a checkbox to check

whether the functional chunk was related to Second Life voice issues, in order to distinguish the chunks that were specific to Second Life from the ones that were not. (from weekly meeting notes on November 4<sup>th</sup>, 2009)

5. Exclude the actual debate conversations in Module 4 (Academic Controversy); only code the utterances before and after the debates. Because the nature of debates made the debate conversations very different from other conversations, I decided to focus on the participants' use of politeness strategies when they were in the process of discussing how to finish their team products. I considered the debate conversations themselves the team's final product. In addition, by forcing participants to take a certain position in the debate activity, they had agreed to confront each other and, in a way, to be intentionally impolite, just because they wanted to advocate for the assigned position in the debate. In other words, to prepare for the debate tasks, the participants collaborated as usual. However, in the debates, they fought each other, and this adversarial state was not a normal situation at all. I worried that including the actual debate would inflate the occurrences of discourse functions #5b (Presenting Alternative perspective) and #6b (Negative evaluation; posing a disagreement with a previous utterance), and be very likely to distort my analysis on the participants' use of politeness strategies. Therefore, for Module 4, I decided to code only the utterances about how to have the debate, focusing on the participants' use of politeness strategies while fulfilling different discourse functions when setting up the debate tasks. A

future study on the use of politeness strategy in the debate is possible, but not included in this report. (weekly meeting notes on November 25<sup>th</sup>, 2009)

The transcript of the first synchronous online chat session that was coded in the previous stage to modify the coding schemes was re-coded at this point. The results of the coding of this transcript at this stage were compared with the results from the previous stage to ensure the quality of coding. Discrepancies between the coding results were identified and resolved to ensure one consistent coding. The initial numbers of identified discrepancies were noted to calculate intra-rater reliability. For the discourse function coding, the intra-rater reliability was 75%. For the politeness coding, the intra-rater reliability was 72%.

After I had finished coding of synchronous and asynchronous online discourse, I identified emerging themes/patterns based on the coded data, using supportive evidence from the raw data by means of constant comparative analytic technique (Strauss & Corbin, 1990) to address Research Questions 1. I then conducted statistical significance tests for frequencies or proportions based on the coded data using chi-squares to test the relation between politeness strategies and modules over time, between politeness strategies and discourse functions, between politeness strategies and modes of online communication, and between discourse functions and modes of online communication. These results were use to address Research Questions 3, 4a, and 4b. Last, by using the constant comparative technique with synchronous and asynchronous online discourse as supplementary evidences, I analyzed the open-ended netiquette questionnaires and interviews to address Research Question 2; online surveys to measure sense of

community and interview data to address Research Question 4c; peer/self assessments, self-report portfolios about the contribution to team products, self-reflection posted in blogs, team product evaluations, online surveys to measure sense of community, and interviews to address Research Question 5. Table 3.9 summarizes the analytical techniques used to address each research question, along with the primary data sources.

Table 3.9 Analytical Techniques Used for Addressing Research Questions

Research Questions	Analytical Techniques	Primary Data Sources
RQ1: What politeness strategies do students use when they work collaboratively via online synchronous or asynchronous communication tools?	<ul style="list-style-type: none"> <li>• Discourse Analysis</li> <li>• Constant Comparative Method</li> </ul>	<ul style="list-style-type: none"> <li>• Written messages posted on asynchronous discussion boards</li> <li>• Transcripts of synchronous voice/text chats</li> </ul>
RQ2: How do students' concerns about netiquette relate to their uses of politeness strategies?	<ul style="list-style-type: none"> <li>• Constant Comparative Method</li> </ul>	<ul style="list-style-type: none"> <li>• Netiquette questionnaires about students' perspectives on netiquette</li> <li>• Interviews</li> </ul>
RQ3: How do students' uses of politeness strategies change over time?	<ul style="list-style-type: none"> <li>• Discourse Analysis</li> <li>• Chi-squares</li> </ul>	<ul style="list-style-type: none"> <li>• Written messages posted on asynchronous discussion boards</li> <li>• Transcripts of synchronous voice/text chats</li> </ul>
RQ4a: How do discourse functions in posted messages/utterances relate to students' use of politeness strategies?	<ul style="list-style-type: none"> <li>• Discourse Analysis</li> <li>• Chi-squares</li> </ul>	<ul style="list-style-type: none"> <li>• Written messages posted on asynchronous discussion</li> </ul>

Research Questions	Analytical Techniques	Primary Data Sources
		boards <ul style="list-style-type: none"> <li>• Transcripts of synchronous voice/text chats</li> </ul>
RQ4b: How do modes of online communication relate to students' use of politeness strategies?	<ul style="list-style-type: none"> <li>• Discourse Analysis</li> <li>• Chi-squares</li> </ul>	<ul style="list-style-type: none"> <li>• Written messages posted on asynchronous discussion boards</li> <li>• Transcripts of synchronous voice/text chats</li> </ul>
RQ4c: How does the development of sense of community relate to students' use of politeness strategies?	<ul style="list-style-type: none"> <li>• Constant Comparative Method</li> </ul>	<ul style="list-style-type: none"> <li>• Online surveys to measure sense of community</li> <li>• Interviews</li> </ul>
RQ5: How does students' use of politeness strategies influence the learning process in the online learning community?	<ul style="list-style-type: none"> <li>• Constant Comparative Method</li> </ul>	<ul style="list-style-type: none"> <li>• Written messages posted on asynchronous discussion boards</li> <li>• Video/text taken in synchronous voice/text chats</li> <li>• Interviews</li> <li>• Online surveys to measure sense of community</li> </ul>

### Establishing Trustworthiness of the Study

Lincoln and Guba (1985) suggested several techniques a researcher should use to establish trustworthiness of naturalistic studies: the use of prolonged engagement, purposive sampling, triangulation of sources, triangulation of methods, negative case analysis, member checking, referential adequacy materials (i.e., archiving audio and video data in the original format with clear and organized labeling) and peer debriefing. I used all of these techniques to establish the trustworthiness of my study.

#### Prolonged Engagement

Extended contact with the research site is required to ensure trustworthiness by getting familiar with the context. In addition to participating in all synchronous online chat sessions as an observer, I also viewed the written asynchronous messages on a daily basis and viewed the recorded video and/or saved transcripts of synchronous online chats immediately after each chat session. When collecting data, I also paid attention to reducing the obtrusiveness brought on by a researcher in the research setting.

#### Purposive Sampling

Sampling of data should be based on emerging theories to decide where to look and when to start/stop observations. Data collection and data analysis can start broadly and then narrow the focus. In this study, the purposeful sampling took place at the macroanalysis phase, including theoretical sampling and methodological sampling. The microanalysis phase was informed by the purposive sampling results that emerged from the macroanalysis phase.

## Triangulation

There are four different modes of triangulation: the use of multiple and different sources, methods, researchers, and theories. Triangulation helps to eliminate biases that may result from relying exclusively on only one data source, collection method, researcher, or theory (Lincoln & Guba, 1985, p.305). Triangulation of sources was ensured by at least three data sources to address each research question (see Table 3.1). To triangulate the methods, various methods of data collection were used, such as observation, interviews, videotapes, and the collection of artifacts, written discourse, survey, questionnaire, peer/self assessments, and self-reports.

## Member Checking

Member checks is a process of taking data and tentative interpretations back to the individuals from whom they were derived and asking if conclusions seem plausible (Lincoln & Guba, 1985, p.314). During the interviews, I confirmed any preliminary findings related to the interviewees for member checking.

## Peer Debriefing

Peer debriefing is a process of “exposing the [researcher] to a disinterested peer in a manner paralleling an analytic session and for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the [researcher’s] mind” (Lincoln & Guba, 1985, p.308). Peer debriefing allows outside perspectives on the

research and therefore enhances the credibility of the findings. My peer debriefer was a fellow doctoral student who has been in the same research team with me for years. We are in a similar phase in terms of our academic program and have similar interest in using discourse analysis as the main methodological technique to analyze our dissertation data. Throughout data collection and analysis, I regularly discussed my observations, findings, and analysis with this peer debriefer. However, the participants' identification was not disclosed to the peer debriefer. Peer debriefing notes were recorded and utilized to guide the proceeding of the study.

## Chapter 4 Results

This chapter presents a case report of the selected focal team (Team D) based upon the results from data analysis grounded on my theoretical framework. I first provide a thick description of Team D and each team member, profiling their demographical characteristics, background information, and team interaction, to offer a broad context for this case study. I then address the five research questions in turn to report my exploration of the focal team members' exchanges in the online collaborative learning environment through the lens of politeness theory. I discuss Team D's use of politeness strategies from diverse perspectives: concerns about netiquette, time, discourse functions, modes of online communication, sense of community, and learning.

The multiple data sources used to provide evidence supporting this case report included the 231 asynchronous written messages that Team D posted to TeachNet, 80 asynchronous written messages that were generated when the whole class discussed their ideas about netiquette norms for effective online collaboration, the videos and transcripts of Team D's five synchronous chat sessions in Second Life, 30 blog entries from Team D members (5 for self-introduction; 25 for self-reflection for each Module), 15 portfolios from Team D members (for Modules 3, 4, and 5), 15 peer/self assessment reports of Team D members, 16 available online surveys measuring sense of community (2 for Module 2; 5 for Module 3; 5 for Module 4; 4 for Module 5) filled out by Team D members, and interviews with four Team D members.

For the sake of microanalysis, Team D's 126 asynchronous written posts (from Modules 3, 4, and 5) were divided into 393 functional chunks, and 248 politeness codes

were given to 177 functional chunks (216 functional chunks in the asynchronous online discussion were without any politeness move). Utterances in the five synchronous voice chat sessions were divided into 1477 functional chunks, and 1530 politeness codes were given to 917 functional chunks (560 functional chunks in the synchronous online discussion were without any politeness move).

### Team D's Composition

Team D consisted of five members, Bill, George, Katrina, Yi-Jun, and Younghee (listed in the alphabetical order of their pseudonyms). Table 4.1 summarizes their demographics, including gender, age, Asian or not, International student or not, whether their native language was English or not, on/off campus status, and whether their academic program was Instructional Technology or not. As mentioned in Chapter 3, the reason I emphasized whether the participant was of Asian origin or not is that according to the instructor's experience of offering this course for more than 10 years, there was a difference in students' participation in the course activities between Asian students and non-Asian students, particularly for those Asian students who had never studied or lived in western countries. Therefore, instead of listing the team member's ethnicity, I used the designation of Asian or not to reflect the instructor's experience. In Team D, there were two Asian students. Both of them had never studied or lived in any western country before they entered their current academic program and took this course. In addition, for their native language and academic program, instead of indicating their exact native language and academic program, for the sake of protecting participants' personal identity,

I only indicated whether their native language was English or not, and whether their academic program was Instructional Technology or not. Instructional technology was the academic program that offered this course. For their age, I only indicated their age range rather than their exact age. Each team member’s detailed profile appears in Table 4.1:

Table 4.1 Demographics of Team D Members

Participant	Bill	George	Katrina	Yi-Jun	Younghee
Gender	Male	Male	Female	Female	Male
Age	>40	> 40	30-40	20-30	30-40
Asian or not	Non-Asian	Non-Asian	Non-Asian	Asian	Asian
International student or not	No	No	Yes	Yes	Yes
Native language	Non-English	English	Non-English	Non-English	Non-English
On/off campus	On campus	Off campus	On campus	On campus	On campus
Academic Program	Instructional Technology	Non-IT	Instructional Technology	Non-IT	Instructional Technology

## Bill

Bill was a graduate student in the Instructional Technology program. Although his native language was not English, he was a native-like in his English ability. His prior work experience had mainly focused on technology and education. Thus, he seemed to possess a positive attitude to adapt to the new online communication tools introduced in this course. Based upon his long-term prior experience in teaching, he could also think about how to apply the innovative Internet technology to educational settings as he stated in his interview. Bill did not only participate actively in each course activity, but also took the leader role most of the time as Younghee stated in his interview, “...we did not elect leader so...virtually, Bill was the leader but officially we didn’t elect a leader....”

Figure 4.1 depicts the percentage that the numbers of functional chunks posted/uttered by Bill accounted for in the total functional chunks of Team D's online discussions for Module 3 to Module 5, and shows that Bill's level of participation was above average percentage (20%) across modules. The decrease in Bill's percentage of participation among Team D's member in Module 4 may have been caused by George volunteering to take the role of moderator and timer in the academic debate activities. Thus, more utterances were produced by George in the two debates of Module 4.

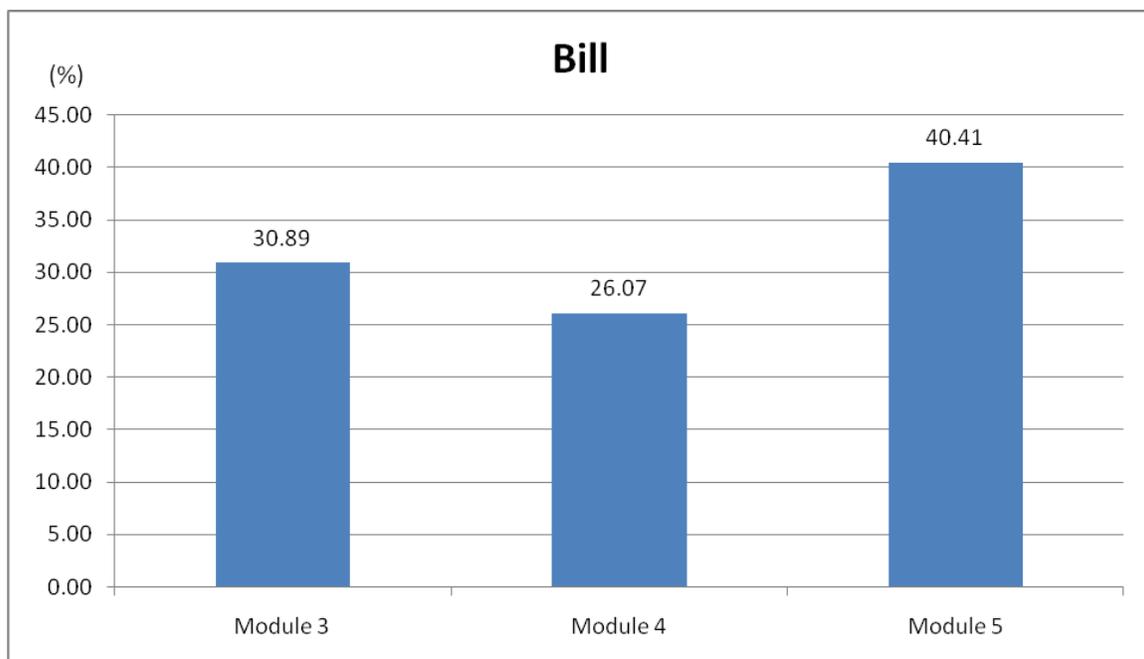


Figure 4.1 Bill's Percentage of Participation in Online Discussion across Modules

### George

George was a graduate student from a non-technology-related program in education, and a member of the administrative staff of a secondary school. His lack of technology background seemed to limit his contribution to team projects to that of providing content and handling project management tasks, rather than dealing with

technological tasks. However, he demonstrated his willingness to participate in the course activities as actively as he could. For example, he volunteered to take the leader role in Module 3 when Katrina asked, “*Who is gonna be the leader?*” explicitly. He also volunteered to be the moderator and timer for the academic debates in Module 4. Being an off-campus student and occupied with his current job position, he was considered as the least familiar member among the team by other team members because they had the least possibility to meet George in person, as they indicated in the interview sessions. Nevertheless, during the online discussion, George seemed to play a bridging role between Bill and Katrina when they were arguing from different points of view and could not reach a consensus, as Katrina stated in her interview:

*Our ideas [meaning Katrina’s and Bill’s] were always a little different from each other. The other members were just watching until almost got to a point like my tone was changing. And someone [George] jumped in and said, hey I think the person said... and the person said...*

Figure 4.2 depicts the percentages of George’s participation to the total number of functional chunks for Team D’s online discussions from Module 3 to Module 5, and shows that George’s participation for each module was also above average. His assuming the role of moderator for the academic debates in Module 4 led to the highest participation percentage across modules, whereas for Module 5, which required the highest level of technical skill to develop a website, his participation decreased to the lowest level, though still above average.

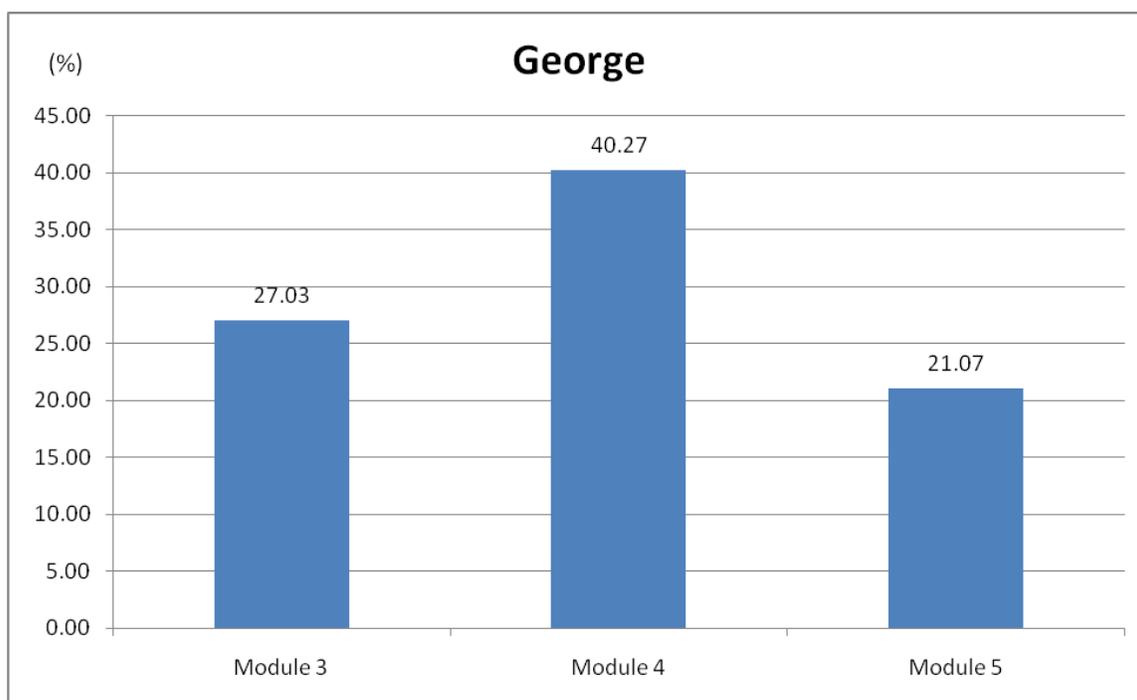


Figure 4.2 George's Percentage of Participation in Online Discussion across Modules

### Katrina

As a graduate student in the program of Instructional Technology and having teaching and work experience in the IT area, Katrina seemed to have sufficient background knowledge for this course. Her knowledge of Second Life was at a relatively high level compared with other team members as demonstrated by the fact that she taught every team member how to mute the voice coming from other teams having voice chat at the same time when they were about to start their first academic debate in Module 4.

Although she was an international student, she spoke English very fluently and was confident in her English writing. Katrina seemed to possess high levels of responsibility and commitment to the team projects as she wrote in her self-introduction posted on TeachNet, *"I know that I am not an easy person. I have high expectations: I give my best,*

*and because of that I expect others to do the same. I don't accept having a mediocre project because others do not believe in effort and quality.”* Figure 4.3 shows that Katrina's degree of participation in terms of quantity was about average across modules. The relatively low degree of participation in Module 4 was caused by her absence from the second debate because she was out of town at that time. Her active participation in the course activities was demonstrated by sometimes having arguments with Bill, which was considered beneficial for the team products and sharing leadership with Bill to some extent, as Younghee mentioned in his interview session:

*Only Katrina argued a lot with Bill. Bill knew about it so Bill tried to communicate frequently with Katrina. I think that was a good way to solve the problem....Katrina and Bill led our projects. They were leaders. Of course, we had opinion but they were the big guys. I thought they had good ideas always.*

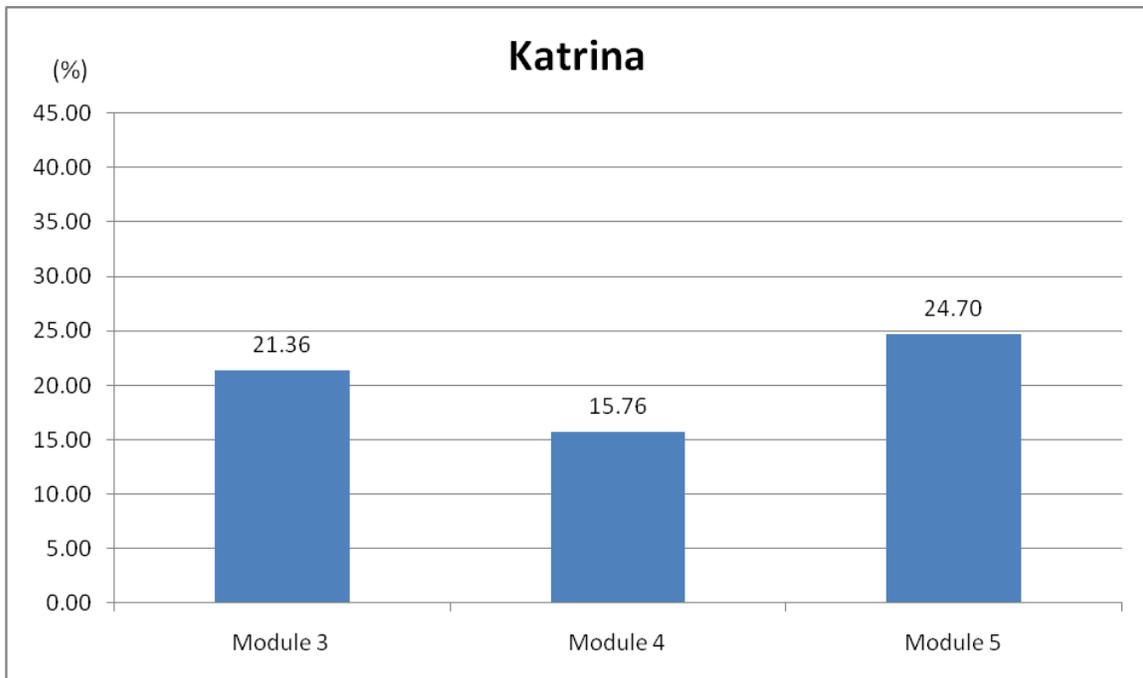


Figure 4.3 Katrina's Percentage of Participation in Online Discussion across Modules

## Yi-Jun

As a first-semester graduate student coming from an Asian country, Yi-Jun was a little bit shy and not fluent in her English oral expression. Also, because her major was not Instructional Technology, the program offering this course, she also seemed not confident of her background knowledge in technology. Her prior work experience and education background mainly focused on the field related to her academic program. It seemed that she had difficulty in participating actively in course activities, particularly in Module 3, the first module that started to require intensive collaboration among team members. She was relatively quiet and inactive in the first Second Life meeting partly due to her unstable internet connection causing her suddenly to disappear several times during the session, and she missed the next Second Life meeting due to a time conflict between the meeting time of Team D's second voice chat and one of the courses she took. Missing the team meeting seemed to make it difficult for her to catch up with the team's progress. Thus, her contribution to the collaborative writing project (Module 3) was somewhat limited. This led to her posting an apology message replying to George's post about the summary of the meeting at the end of Module 3:

*Thanks George. Sorry about that I couldn't join this meeting since I have class later that night. After reading the summary you [George] made, I really feel embarrassed that I have no contribution to our team. To be honest, I wanted to do something to help our team, but due to I am not an IT student (I am in xxx [taken out to protect participant's personal identity] program.....first semester) and didn't have the background or experience about IT, I just don't know how to keep up with you guys. I have the intention to do our assignment, but have no abilities to make it come true. I feel so sorry, especially when I see all of you are working hard on our assignment. The lack of knowledge of IT and the language barrier*

*are the 2 biggest important things I have to overcome now. Again, I apologize to the team for my no contribution. Yi-Jun*

Bill replied to her message writing,

*Yi-Jun, There is no need to feel bad about it. You did help with the references and I am sure there will be more for you to do. This is all a learning process and we all learn from our own perspective. I am sure that the others will agree that we are willing to help each other any way we can. If we need to we can meet in the tech lab so that you don't feel intimidated. Bill*

Bill's message, in addition to comforting Yi-Jun's uneasiness, offered his help to Yi-Jun, suggesting that if Yi-Jun was not comfortable in using Second Life alone, they could meet in a computer lab on campus, so that Bill could provide necessary support if needed. It seemed that Bill's offer took effect in Module 4 (academic debate). Bill and Yi-Jun were on the same side of the debates, and they met in the lab while the debates took place. Yi-Jun seemed well-prepared for the debate. Although she was a little bit uncomfortable in debating in English as she usually gave a little laugh whenever she said anything, she and Bill could take turns doing the rebuttal as a group. This experience seemed to bring a sense of closeness between Bill and Yi-Jun, as Yi-Jun stated Bill was the team member with whom she felt closest among Team D's members. Yi-Jun's below-average amount of participation as shown in Figure 4.4 reflected her uneasiness for this course. The increase in her level of participation in Module 4 may have resulted from Bill's help as described above.

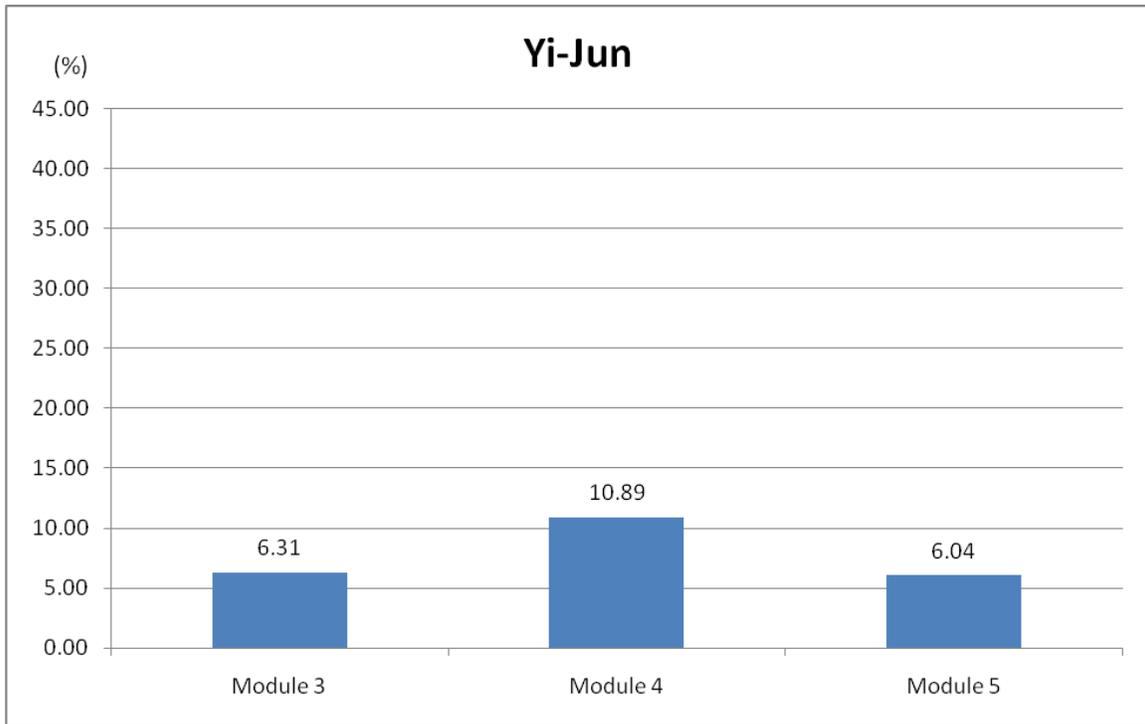


Figure 4.4 Yi-Jun’s Percentage of Participation in Online Discussion across Modules

### Younghee

Like Yi-Jun, this was Younghee’s first year to study abroad in U.S., and he also thought language was a barrier to participating in the course activities. However, before he had entered the IT program, he had already finished all course work fulfilling an IT doctoral program in his home country. Yonghee had prior experience in teaching, and seemed quite confident in his computer skills and willing to get accustomed to the new Internet communication tools introduced in this course. Unlike Yi-Jun, he had sufficient prior IT-related knowledge and computer skill level for this course. Although his participation in terms of quantity was seemingly below average across modules (see

Figure 4.5), he seemed more active than Yi-Jun (see Figure 4.4), except for Module 4. Because Younghee did not know how academic debates would proceed, he expressed that he felt uneasy to join the rebuttals against the opposite side of the debate topic during the first debate activity. His active participation in the course activities was demonstrated by his eagerness to contribute to the team products with his computer expertise. As he mentioned in his interview, he had taken this course because, considering his English level, he thought his computer skills could benefit the team, thereby making up for his English. In fact, technically speaking, he constructed the WebQuest site for Module 5 virtually entirely by himself.

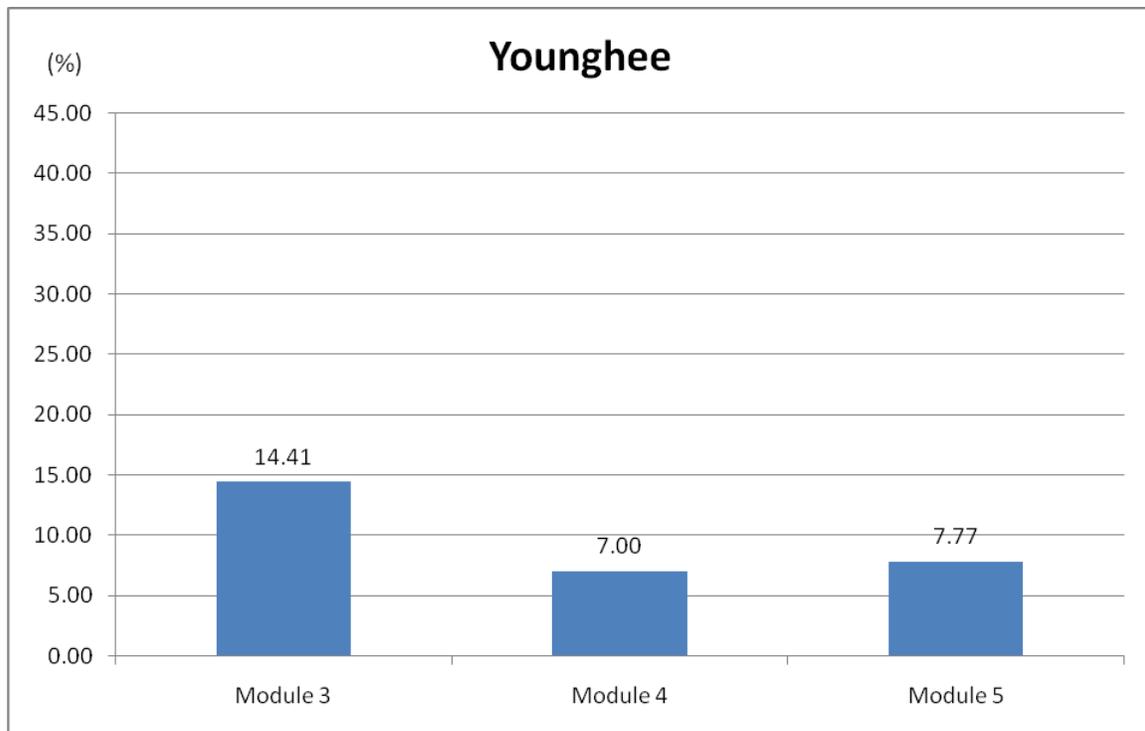


Figure 4.5 Younghee's Percentage of Participation in Online Discussion across Modules

## Team D's Interactions

In Module 2, Understanding CSCL, Team D was formed. In the activities of getting to know their team mates and making connection among team members, Team D members agreed to share their phone numbers in case they needed to contact each other, as Younghee stated, *“I prefer phone call or message to e-mail in some case. At the final stage of the project, it is necessary to contact each other more frequently to finish the work as a high quality. In addition, more detail description by phone call in doing something will be needed.”* They also decided the leader role of this team would be taken on a volunteer basis, rotating every two weeks. However, it turned out that the decision to rotate the leadership every two weeks did not really take place in Team D. Instead, they rotated the leadership role every module and it seemed that there was no distinct process for volunteering for the leadership role except for Module 3. A leader simply naturally emerged, and it seemed that Bill took the leadership role most of the time. In the activity asking students to discuss the factors most important in the success and failure of a collaborative activity based upon their previous best and worst collaborative experiences, Team D listed the following factors: good leadership, communication, commitment, trust, motivation, patience, accountability including a sense of individual and team responsibility, and project management including planning, clear understanding of roles and responsibilities in relation to projects, time management, and deadlines. They also concurred that these factors were interrelated with each other, creating a positive cycle, leading to success. At this moment, Team D seemed ready to immerse in their collaborative projects.

To complete Modules 3, 4, and 5, Team D met five times in Second Life and posted 126 written messages on the TeachNet discussion board. For Module 3, in order to finish the collaborative writing project, a Wiki entry, Team D met at 8:00pm on October 8<sup>th</sup>, and at 5:00pm on October 13<sup>th</sup>. The chat sessions lasted about 45 minutes and 35 minutes respectively. There were 86 messages posted to the TeachNet discussion board, including their responses to the instructor's feedback on their team product (the instructor's post was not included in the analysis). Before their first synchronous chat session in Second Life, Katrina initiated a discussion thread on the TeachNet discussion board, asking the team members to brainstorm their ideas about the potential topics of the wiki project. During the first meeting in Second Life, Bill, George and Yi-Jun arrived on time at their conference area and tried to sketch a plan for their wiki project, starting with a discussion of the tentative topic along with some small talk as they waited for Younghee and Katrina. Meanwhile, Yi-Jun encountered Internet connection problems, causing her avatar suddenly to disappear a few times. Thus, before Younghee and Katrina arrived, Bill and George were the two main interlocutors at the meeting. However, sometimes, Bill was irresponsive in Second Life because he was trying to contact Younghee in real life. After about 12 minutes into the meeting, Younghee arrived, and he explained that he had missed the bus so that he was late for the meeting. Then, Bill went over the whole plan for the Wiki project to fill in Younghee with what they had discussed.

At this point, they started to have feedback problems. Their voices became inaudible. They spent some time trying to solve this issue, but could not resolve it.

Around 13 minutes later, they decided to switch to text chat to avoid the feedback problem. Then, Katrina arrived 30 minutes after the meeting had started. Katrina did not explain why she was late but she asked why they were not talking. George and Bill tried to explain that they had “*problems with feedback and echo.*” Then, they naturally went back to use voice chat because the feedback problem seemed to have improved somewhat at that time. Bill and George continued to fill in Younghee and Katrina with their plans about doing some research related to their tentative topic. The team also went further in clarifying their tentative Wiki topic and some project-management-related issues, such as Katrina asked, “*Who is gonna be the leader?*” and then George volunteered to take the leader role for two weeks. Still, from when Katrina arrived to when they called it a night, during the 15 minutes, their conversation more or less was accompanied with feedback problems. After the meeting, there was some asynchronous discussion among Team D members via TeachNet. George posted the minutes of the meeting to the discussion board. George, Younghee, Bill, and Katrina shared their research findings and discussed more about the organization of their Wiki entry. George also decided to start to write the introduction section of the Wiki entry. Then, after George had set up the date and time for the second meeting in Second Life, Yi-Jun informed the team that she was unable to join the meeting because she had a class.

Hence, only four of the team members attended the second meeting in Second Life, in which Bill, George, Katrina, and Younghee handled the details about what to include in their Wiki entry, how to organize the content, how to edit a Wiki entry, dividing individual responsibilities (all of them, except for Yi-Jun, wrote a section of the

Wiki entry, with Yi-Jun helping to make the reference list, and Bill volunteering to be the final editor), and a timeline for completing their tasks. After the second meeting, George posted a meeting summary to the TeachNet discussion board. Team D also had some more asynchronous discussions following up on decisions made in their second synchronous Second Life meeting. After Team D had finished the draft of the Wiki entry, Yi-Jun posted a message in TeachNet apologizing for her absence at the second meeting and her lack of capability to contribute to the project. The pie chart shown in Figure 4.6 depicts the proportion of each team member's participation in terms of the number of functional chunks each one posted/uttered in the online discussions during this module.

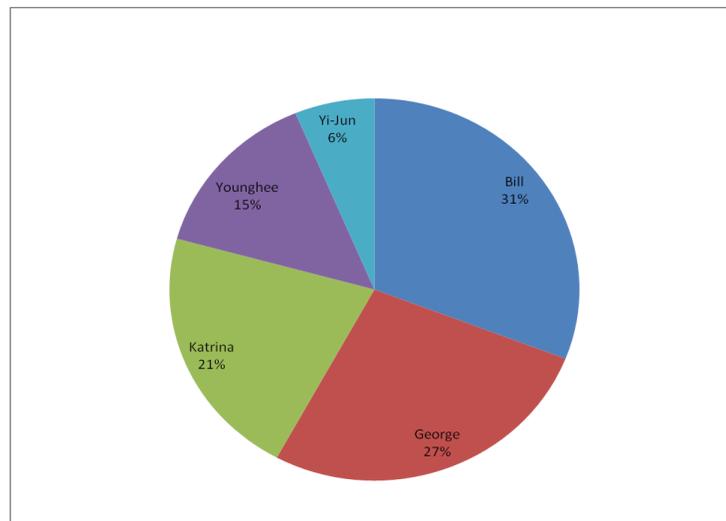


Figure 4.6 Proportion of Participation per Member in Module 3

For Module 4, Collaborative Controversy, Team D had their two debates in Second Life at 8:00pm on October 22<sup>nd</sup>, and at 4:30pm on October 27<sup>th</sup>, respectively. The session for the first debate lasted about 70 minutes, and the one for the second debate lasted around 50 minutes. There were 11 messages posted to the TeachNet discussion

board. Before the first debate, Team D prepared for the activity via asynchronous discussion on TeachNet. Like in Module 3, Katrina initiated the discussion thread inviting ideas for debate topics. After Team D had decided on their debate topic, they divided themselves into two sub-groups to represent the pro and con positions. Katrina, Younghee, and George were on one side; Bill and Yi-Jun were on the other side. The two sub-groups then split to prepare for their persuasive arguments separately. Therefore, except for the persuasive documents, which they were asked to give to the opposing sub-group before the debates, Team D did not post any written message that would reveal the process of their preparation, until they had finished the second debate.

During the first debate, because there was another team having a debate at the same time in Second Life, Team D found that they could overhear the other team's voices. They spent about 7 to 8 minutes dealing with this problem. Katrina taught each team member how to mute the sound coming from the other team. Meanwhile, they also handled the voice issue to make sure their voice could be heard clearly by all team members. Then, they started the debate, following the process (i.e., greeting, presentation, the 1<sup>st</sup> round of rebuttal, the 2<sup>nd</sup> round of rebuttal, and summary phases) showed on the guidelines provided by the instructor. George volunteered to be the timer. During the debate, because it was the first time they were going through the debate process, they sometimes were unsure of how to proceed. Thus, they also spent some time discussing and confirming what to do next. Also, in the first debate, even though every member was present, Younghee did not say anything because he did not know that, in addition to preparing the persuasive document, he needed to argue for the position that

his sub-group stood for during the debate. He was not confident to present argumentative points without any preparation in advance, as he explained to the team after the debate: “*I don’t imagine this process of debate, so...hehe...it’s uh...very unique....*” After they had finished the first debate, they spent around 15 minutes to schedule the date and time for the second debate, and to discuss what they should do to prepare for the next debate.

In the second debate, the two sub-groups had to switch their positions, going through the same debate process. Katrina did not attend this time because she was out of town, as she had informed the team in advance. As usual, at the beginning of the debate, they spent about five minutes to settle voice quality issues. However, as usual, during the debate, the voice issue still interrupted them occasionally, such as George said “*[laughing] I am gonna get docked points for what you said...*” after Bill’s distorted utterance. As in the first debate, George volunteered to be the timer. Their debate process went more smoothly this time, and Younghee was able to participate in presenting his argumentative points. After they had finished the second debate, Team D spent about six minutes discussing how to prepare for their next assignment, coming out with a consensus document as a whole team.

In this module, although Team D did not use an explicit method of deciding who would be the leader, Bill acted like a leader, taking the responsibility to guide the team and to be consulted by other team members when they were uncertain about how to proceed. For example, before the debates, Bill posted a message on the TeachNet discussion board to provide guidance information for the debate activity to the team, “*Team, the debate template tells you what is due tomorrow in assignment folder. Debate*

*format is what we do tomorrow on SL[Second Life].*” During the first debate, when they were about to enter the rebuttal phase for the first time, Bill shared his knowledge about what a rebuttal looks like by saying, *“a rebuttal you can pick different forms but essentially you...this is our argument part. You’re gonna either counter our proposal and with our points that we made, you know, you can counter that and reinforce your argument.”* At the end of the second debate, George confirmed with Bill after making a suggestion about what they should do next, *“[omit] we, I guess, come together and work out a compromise [omit] to turn it into words. Am I correct, Bill, by saying that?”* Figure 4.7 presents the quantitative proportion of each team member’s participation during Module 4.

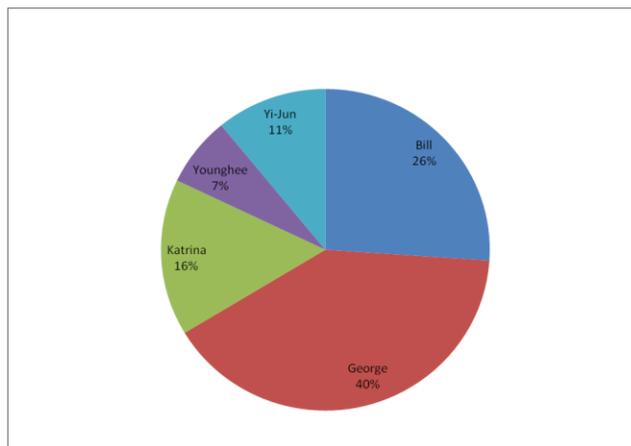


Figure 4.7 Proportion of Participation per Member in Module 4

For Module 5, which was to create a WebQuest as their collaborative online inquiry project, a voice chat was held in Second Life at 8:00pm on November 12<sup>th</sup> that lasted about 75 minutes. A total of 29 messages were posted to the TeachNet discussion board before the synchronous chat session in Second Life. Most of the 29 messages were

to address a warm-up exercise for the WebQuest, asking them to review several existing WebQuest websites provided by the instructor, and to choose the two best and the two worst WebQuests considering different aspects (e.g., technophile, affliator, altitudinist, moderator, and efficiency expert). Younghee took the task of summarizing each team member's selection and rationales to turn in as their team decision on the evaluation of existing WebQuests. Only two written messages were posted on TeachNet about the creation of Team D's WebQuest website. The first one was posted by Bill announcing their topic for the WebQuest and Younghee's role as the website producer for this project before the synchronous discussion in Second Life. The second one was posted by Younghee to inform the team of the url address for their WebQuest website after the meeting in Second Life and after his construction of the website. Therefore, before they met in Second Life, Team D had already decided the topic of this project. I did not find any data showing the decision-making process from the available data sources. As Katrina mentioned during the interview session, it seemed that Bill made a decision without discussing it with all team members. Bill may have discussed with some members, like Younghee, but at least for Katrina, the decision seemed to come out of the blue.

Once they decided their topic, Team D came to the details of the project after two minutes of greetings and settling the voice issue at the beginning of the Second Life voice chat session. Bill behaved as the leader in this discussion. He first checked if everyone had had a chance to read the module assignment by asking "*Does everybody get to look at the module?*" and then checked if everyone understood the U.S. history related to the

topic they had chosen by saying “*Okay, now uh...does anybody read anything?*”, “*uh...I think Younghee was telling that he looked at it a little bit,*” “*Younghee, you wanna share something?*” and “*Let’s see. Yi-Jun, did you find anything?*” Bill then briefly reviewed that part of U.S. history, starting with this utterance, “*Okay. Lemme go through some stuff out there,*” to make sure everyone share the common background knowledge about their topic. After Bill’s history review, Team D started to design the learning activity for the WebQuest, and assigned jobs for each team member to work on. Each team member, except for Younghee, took the task of writing up the content for the sections making up the WebQuest, and Younghee assumed the role of developing the WebQuest website. Even though they divided their tasks, they all acknowledged that they did not have to work individually and were willing to help each other if needed. For example, Bill mentioned that “*You know, they [the sections] kinda cross-related to each other and again that’s sort of part of the formatting. That’s why we need to get the materials together so we can work the final product.*” George also said, “*I will help with any, you know, with any part of it. I think we all have to maybe help out with each other,*” and Bill agreed with him by saying “*Yeah, I think so, too. I think we focus on each one of these and then kinda help the other ones.*” At the end of the Second Life meeting, Katrina asked Younghee about how he would like to develop the website and gave him some suggestions. Figure 4.8 demonstrates the proportion of each team member’s participation in terms of quantity of messages/utterances during Module 5.

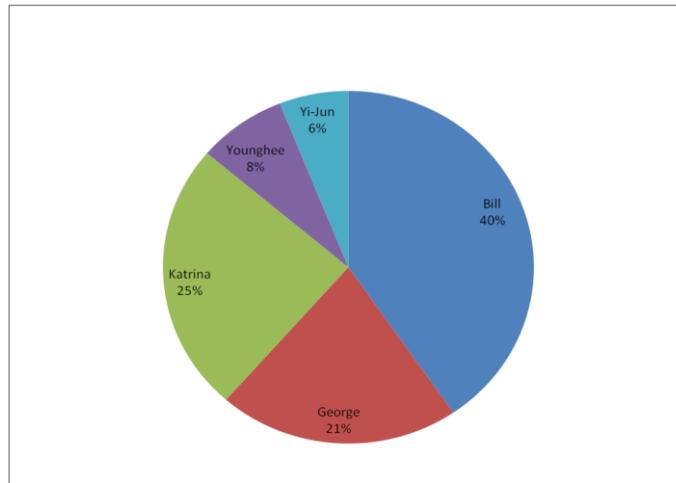


Figure 4.8 Proportion of Participation per Member in Module 5

#### Team D's Use of Politeness Strategies

This section attempts to address the first research question: what politeness strategies do students use when they work collaboratively via online synchronous or asynchronous communication tools? Table 4.2 summarizes the politeness strategies used by Team D members in both TeachNet asynchronous online discussion and Second Life synchronous online discussion, sorted by frequency in descending order. Columns 2 to 4 present the results for the asynchronous online discussion; the last three columns present the results for the synchronous online discussion. The codes in Column 2 and 5 denote politeness strategies. "P" refers to positive politeness strategies; "N" refers to negative politeness strategies. The number adjacent to "P" or "N" is the serial number of the strategies in the positive or negative category. The third and sixth columns are the percentage of the frequency for each politeness strategy used in each mode of online discussion (asynchronous and synchronous), calculated by dividing frequency of each

politeness strategy with the total occurrence of politeness strategies in asynchronous and synchronous online discussions, respectively, to minimize the impact of the discrepancy in total number of politeness strategies used in the two modes of online discussion.

As Table 4.2 shows, the number of types of politeness strategies used was different between synchronous and asynchronous online discussion. There were 20 politeness strategies (12 positive politeness strategies, and 8 negative politeness strategies) out of the total of 26 politeness strategies (16 positive politeness strategies, and 10 negative politeness strategies) used in asynchronous written messages, while there were 25 politeness (all 16 positive politeness strategies, and 9 negative politeness strategies) used in synchronous oral utterances. Four positive politeness strategies were not used in Team D's asynchronous online discussion: P6 (avoiding disagreement), P8 (joking), P9 (asserting or presupposing the writer's knowledge of the reader's wants), and P14 (assuming or asserting reciprocity). Two negative politeness strategies were not found in Team D's asynchronous discussion: N9 (nominalizing the request or imposition), and N10 (going on record as incurring a debt or as not indebteding reader). Only one negative politeness strategy was not used in Team D's synchronous online voice chat sessions: N9 (nominalizing the request or imposition). This difference may be due to the fewer amount of data from asynchronous online discussion because the major asynchronous online communication tool that Team D used to exchange ideas asynchronously was email, to which I did not have access. Also, the difference may be caused by the different purposes of Team D's use of the TeachNet discussion board and Second Life voice chat. That is, Team D used asynchronous online discussion tools (i.e.,

TeachNet discussion board) to report their work, elaborate their thoughts, and share a relatively huge amount of information either written in or attached to the posts, while they used synchronous online discussion tools (i.e., Second Life voice chat) to gather information, exchange their ideas back and forth and make decisions related to the projects in a real-time manner. (I provide more discussion of these points in the section on Modes of Online Communication and Politeness Strategies).

For both modes of online discussion (asynchronous and synchronous modes), the three most frequent politeness moves accounted for more than 50% of the total occurrence of politeness strategies. For asynchronous online discussion, the five most frequent politeness strategies were P12 (including the writer/speaker and reader/hearer in the activity), P15 (giving gifts to the reader/hearer), N2 (hedging), P4 (Using in-group identity markers to convey in-group membership), and P1 (noticing and attending to reader's/hearer's wants or needs). For synchronous online discussion, the five most frequent politeness strategies were P12 (including the writer/speaker and reader/hearer in the activity), N2 (hedging), P1 (noticing and attending to reader's/hearer's wants or needs), P3 (Intensify interest in the writer's/speaker's own contribution), and N4 (minimizing the imposition). The following paragraphs provide excerpts from the transcripts of online discussion to exemplify the five most frequent politeness strategies used in asynchronous and synchronous online discussion.

It seemed that positive politeness strategies P12, negative politeness strategies N2, and positive politeness strategies P1 were used frequently in both asynchronous and synchronous online discussion. First, I discuss these three politeness strategies in the

order of P12 (including the writer/speaker and reader/hearer in the activity), N2 (hedging), and P1 (noticing and attending to reader's/hearer's wants or needs). Next, I talk about P15 (giving gifts to the reader/hearer), P3 (Intensify interest in the writer's/speaker's own contribution), N4 (minimizing the imposition), and P4 (Using in-group identity markers to convey in-group membership) ordered by the percentage of their frequency in the mode of communication that they are ranked within the ten most frequently used, but the examples do not only come from asynchronous or synchronous transcripts. Note that a functional chunk could be given more than one politeness strategy code. For the convenience of exposition, only the particular politeness strategy code on which each section focuses is highlighted in the examples excerpted below.

Table 4.2 Frequencies of Politeness Strategies

Rank	Asynchronous			Synchronous		
	Politeness Strategies	Percentage (%)	Frequency (#)	Politeness Strategies	Percentage (%)	Frequency (#)
1	P12	33.1	82	P12	27.4	419
2	P15	12.5	31	N2	18.5	283
3	N2	9.3	23	P1	16.1	246
4	P4	6.9	17	P3	8.2	125
5	P1	6.0	15	N4	7.8	120
6	P13	5.2	13	P15	3.0	46
7	P2	4.4	11	P8	2.5	39
8	P7	4.4	11	P2	2.0	31
9	N6	3.6	9	P13	2.0	30
10	N4	3.2	8	P16	1.7	26
11	P5	2.4	6	P9	1.6	25
12	N3	2.4	6	P10	1.6	24
13	N8	1.6	4	N1	1.3	20
14	N1	1.2	3	P4	1.1	17
15	P3	0.8	2	P7	0.9	14
16	P10	0.8	2	N6	0.8	13
17	P16	0.8	2	N8	0.8	12
18	P11	0.4	1	P5	0.8	13

Rank	Asynchronous			Synchronous		
	Politeness Strategies	Percentage (%)	Frequency (#)	Politeness Strategies	Percentage (%)	Frequency (#)
19	N5	0.4	1	N3	0.6	9
20	N7	0.4	1	N5	0.3	5
21	P6	0	0	P6	0.3	5
22	P8	0	0	N7	0.3	4
23	P9	0	0	P11	0.1	2
24	P14	0	0	P14	0.1	1
25	N9	0	0	N10	0.1	1
26	N10	0	0	N9	0	0
	TOTAL	100	248	TOTAL	100	1530

*Including the writer/speaker and reader/hearer in the activity (P12).* In Team D’s asynchronous online discussion on TeachNet and in their synchronous online discussion in Second Life, the politeness strategy they used most frequently was a positive politeness strategy using first person plural pronouns (i.e., we, us, our, ours, and let’s) to include the writer/speaker and reader/hearer in the speech act (P12). As Brown and Levinson suggested (1987), instead of using “I,” the use of inclusive “we” assumes cooperation between writer/speaker and reader/hearer. For example, in Module 3, Katrina tried to add each team member’s email address to their team Wiki to grant everyone access to it. However, she did not get confirmation from George and Yi-Jun about which email address they would like to use for Wiki. She expressed this in one of her asynchronous posts replying to Bill’s message by writing “*Do we still have to add George and Yi-Jun? I don’t know what e-mail address they want to use.*” Even though Katrina used “we” in her question, Katrina was the person who would do the action of adding George and Yi-Jun to the Wiki. Using “we” instead of “I” to include the readers (Bill, George, Yi-Jun, and Younghee) and the writer (Katrina) seemed to be a polite way

to convey that the individuals' responsibility of confirming email addresses with Katrina should be shared among the team, so that Katrina could do her work for the team's benefit. Although this message was a response to Bill's message, all team members could view this post because it was posted on the discussion board. Thus, the "we" did not only address Bill but also the other three members. Another example, in the Second Life chat session for Team D's first debate for Module 4, after a seventy-minute long discussion, George wanted to propose an end to the discussion politely. Thus, he said, "*Alright, I guess we'll call it a night.*" The use of "we" here seemed to serve a purpose to soften George's request by grounding the request on the team's common need.

There were other occurrences of using "we" when "you" or "the" could have been used instead. For example, in the asynchronous discussion to prepare for the debate in Module 4, Younghee asked if they needed to create subfolders for each sub-group in TeachNet because the team was divided into two sub-groups and each of them had to prepare for their arguments separately. Creating sub-folders allowed each group to discuss and post their ideas without interfering with each other. However, Bill did not think it was necessary because he thought what they needed to post was only the final argumentative documents that they were asked to share with the opposite sub-group before the debate. Hence, Bill replied to Younghee with the following message, "*We post the Debate Document in Assignment folder.*" Although there seemed to be a misunderstanding between Bill and Younghee because Bill was referring to where they should submit their assignments, but Younghee was asking about a place for their discussion process, Bill's short and clear message was very likely to be intended to

clarify Younghee's misunderstanding of the assignment. The "we" here could be replaced with "you." Bill's choice of using "we" instead of "you" seemed to soften his comment by including himself in the message, making the comment look less like a command.

In addition, in the beginning of their first Second Life discussion for Module 3, George suggested that because they had confirmed the big direction of their Wiki topic, the focus of team conversation should be on narrowing down the Wiki topic by saying "*I guess it's about narrowing down our topic. Yes, doing the assessment and the evaluation but narrowing down our topic.*" In this utterance, "our topic" and "the topic" seemed interchangeable. George's use of "our topic" rather than "the topic" also emphasized the cooperative assumption and the team spirit among the team members. As another example, George suggested the next step for the Wiki project to the team by saying, "*So let's just give us a shot. Do our research and come back and see what we find on Friday.*" The use of "let's," "us," "our," and "we" when George's utterance seemed to function to manage the group's tasks was not only a politeness move to soften the suggestion/request to the team, but also a politeness move to convey in-group membership, claiming common ground among team members. Unsurprisingly, throughout the asynchronous and synchronous online discussion, first person plural pronouns were used frequently, particularly when the messages or utterances attempted to serve the function of managing the group's tasks (discourse function #8c). More discussion on the relationship between the use of politeness strategies and discourse functions is covered in the later section of Discourse Functions and Politeness Strategies.

It is interesting to see how frequently the inclusive form of “we” was used in Team D’s discussion: For asynchronous online discussion, 33% of the politeness moves used were P12; for synchronous mode, 27% were P12. The use of “we” denoted that the writer/speaker was not saying he/she was different from the reader/hearer, but instead saying they were alike. This politeness move emphasized that the writer/speaker and reader/hearer were joined in a common experience. They shared the same experience. This finding reflected the fact that this course required students to work collaboratively as a team. Team D’s choice of linguistic markers showing the inclusiveness among team members implied that they recognized the need of working as a team and wanted to promote a sense of community.

*Hedging (N2).* The negative politeness strategy of hedging (N2) was the third most frequent politeness strategy (9%) used in asynchronous online discussion and the second most frequent politeness move (19%) used in synchronous online chat sessions. According to Brown and Levinson (1987), a hedge is a particle, word, or phrase that is used to modify the degree of face threat that may be conveyed in a message/utterance. The major reason for using a hedge is to avoid coercing the reader/hearer to accept the cooperative assumption imposed by the writer/speaker on the reader/hearer. Even though assuming cooperation among the team would seem important for collaborative interaction, it could pose face threats to one’s interlocutors when presuming cooperation without a solid sense of community yet fully developed. This threat could even damage team spirit. Thus, hedging is a lubricious tool to modify the force of a speech act and to

disarm its thrust. For example, close to the end of the first Second Life meetings for Module 3, George brought up a suggestion about the next team meeting. He said: “*We might have a possibility to meet earlier, maybe the weekend, but I guess we’ll figure that out.*” In this utterance, three hedging codes were given to “might,” “maybe,” and “I guess.” It seemed that George did not want to presume that all team members would be able to cooperate to meet earlier, during the weekend. Therefore, he used hedges three times to soften the force of the suggestion.

The use of hedges in this utterance could be also interpreted as expressing that George was uncertain at that time about the feasibility of having one more live chat during the weekend, so that he used hedges to leverage the degree of certainty in his utterance. This interpretation would suggest that hedges can also be used when the writer/speaker is not sure about the degree of certainty of his/her proposition or statement. Although hedges can be used to express uncertainty (Jordan et al., 2009), determining the writer’s/speaker’s intention for using hedges is not easily done simply by looking at transcripts. This is one limitation of discourse analysis (more discussion about the limitations of the analytical technique adopted in this project will be presented in the Discussion chapter); however, sometimes, it may not be necessary to distinguish the writer’s/speaker’s intention to such a degree. The use of hedges could serve for both politeness and uncertainty purposes at the same time. The following example shows that when proposing an alternative opinion, hedges can serve for both politeness and uncertainty purposes to modify the force of the speech act. In the Second Life voice chat session for Module 5, when Team D was discussing how to design their WebQuest

activity, Katrina expressed an alternative perspective against one of Bill's ideas. After Bill said, "*The other way we can look at it is there was the French, the British, the German, and the Soviet and the American. Okay, each had a difference view,*" Katrina said, "*I think if we take parts on the side of the Allies for the other side, I don't know, if I'm saying things right. But if we take parts like that I think it's gonna be a little harder to create a limited activity. It would be like a larger project because we were giving, for example, our possible students, I don't know, uh...the possibility to act as a French or to act as an American or to act as and...to have them research the views like what the French thought about that, what the Americans think about that.*" In Katrina's utterance, there were four hedging codes (N2) given to "would be," "a little," and two "I don't know." Obviously, the phrase "I don't know" conveys a sense of uncertainty. The phrases "a little" and "would be" also seemed to express some uncertainty because Katrina was not certain of the degree of truth of her statements. Meanwhile, Katrina's use of these four hedges can be treated as politeness moves to redress the face threat imposed by her alternative view against Bill's opinion, as prior studies (Schallert et al., 2009; Morand & Ocker, 2003) have suggested that expressing disagreements has the potential of carrying a certain degree of face threat. In other words, in addition to using linguistic hedging markers to express uncertainty, it is possible that the writer/speaker also attempts to use this uncertainty as a politeness discourse strategy to soften the degree of face threat. This analysis suggested that human social interchange could be so complicated that one locutionary speech act could carry more than one illocutionary intention, even along with multiple possible perlocutionary interpretations.

*Noticing and attending to reader's/hearer's wants or needs (P1).* The positive politeness strategy of noticing and attending to the reader's/hearer's wants or needs was the fifth most frequent politeness strategy (6%) used in asynchronous online discussions and the third most frequent politeness move (16%) used in the synchronous online chat sessions. Based upon Brown and Levinson's (1987) definition, the discourse movements showing that the writer/speaker is paying attention to anything that the reader/hearer may want the writer/speaker to notice and approve of are what is meant by politeness strategy P1. In Team D's asynchronous online discourse, P1 was mostly found in written messages that expressed the writer's agreement with a previous message. For example, on the TeachNet discussion board for Module 3, while Team D was brainstorming possible topics for a Wiki entry, Younghee posted his idea of a potential topic with his rationale. After his elaboration, George showed his agreement, "*Hey, the topic sounds great,*" and Yi-Jun wrote, "*I agree with Younghee.*" As another instance, after Bill had posted a tentative outline for their collaborative writing project, George replied with "*looks good.*" Even though these P1s were expressed in very short messages, they did show that the writers, George, Yi-Jun, and Younghee, were attending to the readers', Younghee's and Bill's, needs by acknowledging what Younghee and Bill had written in the previous messages. In these two examples, Younghee and Bill were the writers of two long messages: one suggesting a tentative topic and elaborating his idea, and the other proposing an online for the Wiki entry. Both of them had made contribution to the collaborative writing project. It was reasonable that Younghee and Bill would expect to

get some feedback from their peers after their contributions. Thus, George's, Yi-Jun's and Younghee's agreements can be treated as politeness moves of noticing Younghee's and Bill's needs. Being recognized by the team could both boost the sense of community and develop an active communicative atmosphere. In short, this politeness strategy not only contributed to the progress of the team project, but also to the development of sense of community.

The importance of attending to peers' needs of being heard cannot be overemphasized in online discourse, especially for real-time online voice chats. In fact, politeness strategy P1 emerged as one of the most frequent codes used in analyzing the synchronous voice chat sessions in Second Life. In addition to using P1 to show their approval of their peers' contributions, many P1 codes were given to utterances whose function was to notify the reception of a previous utterance (discourse function #10a). The results showed that in the online synchronous chats in Second Life, the participants used short utterances like "*Got it*" and "*Okay*" frequently to signal confirmation that they were following the previous speaker's utterance. The prevalence of this kind of P1 codes highlighted the different and unique communication nature of the Second Life environment. Because in Second Life interlocutors could not see each other in person, there were insufficient clues to tell if the hearers were following the speakers. In particular, when Team D had their very first voice chat in Second Life, they were not familiar with the gestures and avatar movements possible in Second Life. Thus, a signal to let speakers know that their utterances had been received served as a politeness move from the hearers showing attention to the speakers' needs. In this situation, this politeness

move was not to redress a face threat act that have already occurred; instead, it was a politeness move to prevent the potential face threat due to being unresponsive in the conversation. In other words, it is not what one does that will threaten another's face; it is what one fails to do. Especially when the hearers do not have much to say in response to the speakers, instead of simply being quiet, the hearers give a short response acknowledging receipt to be polite. The following example demonstrates how failure to provide this signal can cause a face threat situation and cost many subsequent face redressing moves. In the beginning of Team D's first chat session in Second Life, while George, Bill, and Yi-Jun waited for the other two members to arrive, they chatted about Bill's children.

*George: You have a couple of kids?*

*Bill: Yeah, I have an older son. He is 22.*

*George: Wow*

*Yi-Jun: Wow wow*

*Bill: And I have a daughter who is 15 now.*

*George: They keep you very busy.*

After George's utterance, Bill did not respond to him. A couple of seconds later, George asked Bill another question but still no response: "*Do they live in the Austin area, Bill?*" Bill's absence seemed to represent a face threat to George because he made two attempts to save his own face. The first attempt was to attribute the situation to communication media problem by checking with Yi-Jun to see if she can hear his voice.

*George: Yi-Jun, can you still hear me?*

*Yi-Jun: Yeah, I can hear you.*

*George: Okay, I wanna make sure that.*

After George made sure that the situation was not caused by the communication media, his second attempt was to seek another reason for Bill's lack of response by asking "*Are you still there, Bill?*" After a while, Bill finally gave his response. Even though Bill did not make any direct redressive move to the face threat act, he redressed the situation by explicitly stating what he had been doing when he had not responded to George's questions, saying "*Yeah, I was just talking to Younghee. He's having some tech problem, but he says in 5 minutes, he will be in.*"

In face-to-face conversation, being unresponsive can be viewed as impolite. However in Second Life, and perhaps in other kinds of computer-mediated communication as well, individuals know that no response can be caused by many other factors that are not intentionally rude (i.e., picking up a phone call, computer crash, and so on). When individuals are used to face-to-face communication conventions and are new to Second Life, the non-response situation can be easily perceived as a face threat to the interlocutor who does not get any response. In Team D's case, if Bill had continued to be unresponsive to George, it would likely have been taken "personally" and further damaged the team spirit. Therefore, utterances serving the function of notifying receipt of another interlocutor's previous utterances, that is, being responsive in real-time online conversation, seemed to work as a necessary politeness strategy of noticing and attending to others' needs or wants.

Additionally, Brown and Levinson (1987) pointed out another aspect of noticing and attending to a reader's/hearer's needs or wants in the case when a reader/hearer makes a face threat to himself/herself, the writer/speaker should show notice and express

that the reader/hearer should not be embarrassed by the face threat. For example, in face-to-face conversation, if a hearer is having a runny nose, and the speaker gives the hearer a tissue or expresses comfort for having the symptoms of a cold, what the speaker does is the positive politeness strategy of noticing and attending to the hearer's needs or wants. Another strategy to deal with this situation is to ignore this face threat situation. Ignoring the embarrassing situation connotes a negative politeness strategy as Morand and Ocker (2003) suggested that negative politeness strategies are more associated with mutual formality, impersonality, and circumspection, which may be suitable for some occasions. In Team D's interaction, there were some instances that one team member did or said something situating the team members in a face-threatened position. Team D chose to ignore the situation rather than to express notice and to give comfort, to avoid paying more attention to the embarrassing moment.

For instance, in the Second Life chat sessions, George sometimes misidentified the team members' avatars. No matter in which type of communication, misidentifying others by calling them the wrong name can cause a face threat. However, communicating via an Internet tool relatively new to the interlocutors can provide other possible interpretations of the situation. For Team D, Second Life voice chat was new to all members, especially in the first chat session. Team D was still in the process of becoming familiar with the Second Life environment and getting used to how to communicate in Second Life, such as how to control their avatars. The following example shows a misidentifying situation between Yi-Jun and George. After Younghee had joined the chat, he saw everyone but Katrina. He asked, "*Where is Katrina?*"

Immediately after his question, Yi-Jun's avatar suddenly stood up on the conference table without any reason. Then George misidentified Yi-Jun as Katrina by saying "*Oh, here she is. Oh no that is Yi-Jun.*" This situation can be viewed as a face threat situation that George made to himself, or even to Yi-Jun as well because George not only failed to recognize Yi-Jun's avatar but also seemed not to pay attention to Yi-Jun's avatar name appearing right above Yi-Jun's avatar. However, this situation could be caused by the context of Younghee's question being followed by Yi-Jun's unexpected operation of her avatar, and George's unfamiliarity with Second Life. Thus, Team D's reaction to this situation was simply to ignore it and switch to a different topic. It was not surprising at this situation would create more face threats, so that team members chose to ignore the situation in a negative polite way. According to Brown and Levinson (1987), the decision to ignore the situation is chosen when the danger of face threat is high if notice is made explicit, the concern of saving both the hearer's and speaker's faces is high, and the necessity of being clear is low. It seemed that the abovementioned situation fit these conditions. Therefore, in Team D's case, they did not redress this kind of face threat with the positive politeness strategy of noticing and attending to others' needs or wants, given the context of the situation. That is to say, it is possible to choose different politeness strategies to redress a face threat act. Many contextual factors could affect the choice of politeness moves. More discussion with respect to this issue will be covered in later sections addressing Research Questions 2 to 4.

*Giving gifts to the reader/hearer (P15).* As Brown and Levinson (1987) clarified, in the positive politeness strategy P15, giving gifts to the reader/hearer, the gifts here do not necessarily mean tangible gifts. The gifts could also be sympathy, understanding, cooperation, and appreciation. As a matter of fact, most of the P15 codes found in Team D's online discourse were expressions of appreciation. Team D's use of P15 was ranked as the second most frequent politeness strategy (12.5%) used in the asynchronous online discussion whereas it was ranked as the sixth most frequent politeness strategy (only with 3%) in the synchronous online voice chats. It seemed that most of the occurrences of P15 in the asynchronous online discussion were attempts to give praise and state gratitude for what the reader had done for the team, such as, "*Thank you for the information,*" "*Thanks for the great start,*" "*Thanks for arranging the meeting,*" "*Thank you for setting this up,*" "*Thank you for the suggestions and feedback,*" and "*I appreciate your guidance.*" This gift could also be referred generally to the whole team as a boost of team spirit, as when Katrina posted the following message to TeachNet after Team D had completed the warm-up assignment for WebQuest project in Module 5, "*Thank you all for the work!*" The majority of giving gifts expressing appreciation in Team D's asynchronous written posts may be the result of the fact that Team D used the TeachNet discussion board mainly to report their work, elaborate their thoughts, and share a relatively huge amount of information either written in or attached to the posts. On the other hand, there were two instances in Team D's asynchronous online messages in which Bill used P15 to express his understanding of Younghee's situation. The first instance was after Bill had posted a message on a Friday night to suggest a meeting with Younghee to work out

details of the collaborative writing project on Saturday. Younghee responded stating, “*Sorry, Bill. On Saturday, I should take care my son since my while go to school.*” Then, Bill replied with, “*I understand about the family duties.*” The second instance occurred after Younghee had indicated his worry about his tight schedule for the coming week, writing, “*Time is so fast. Next week is expecting a rush of assignment to me...*” Bill replied, “*I understand. I am presenting at ISD as well.*” In the above two instances, Bill showed his understanding of or even sympathy for Younghee’s family duties and the workload from this and other courses. Bill’s gifts to Younghee can be also inferred to be empathy because Bill also had family duties needing his care, and particularly for the second instance, as both Younghee and Bill were taking the ISD course and had an assignment due in the coming week.

Similarly, in Team D’s synchronous online discussion, the P15 codes were given mostly for gifts showing appreciation, some for understanding, and some for cooperation. An example for showing understanding was when Yi-Jun apologized for her sudden disappearance from Second Life during the discussion due to her unstable Internet connection. George expressed his understanding of Yi-Jun’s situation by saying “*Not a problem. I’m just glad we can talk to each other today.*” Here, “not a problem” was coded as P15 given that Yi-Jun did not intend to disappear. This was Yi-Jun’s first time to use her home Internet when connecting to Second Life. It was reasonable that Yi-Jun had not realized the problem until this moment. An example showing P15 as cooperation occurred when George suggested another meeting in Second Life, and Katrina said,

*“Okay, I’m ok with that,”* to express her cooperation with George, the official leader of Team D for Module 3.

In this project, there was not enough evidence to support the claim that expressions of P15 were more diverse in synchronous than in asynchronous online discussions. However, the result that P15 codes expressing appreciation were used more frequently in asynchronous than in synchronous online discussions might be explained by the difference in the nature of the two modes of communication. In Team D’s case, the asynchronous mode of communication allowed more time to deliver a relatively big chunk of message, which usually involved more effort, and was more likely to elicit other team members’ appreciation; by contrast, the synchronous mode of communication required real-time interchange among the interlocutors in a prompt manner, and the length of utterances tended to be relatively short. Given the time pressure in the real-time online conversation, speakers probably did not feel they should hold the floor too long, and thus did not give much elaboration about the project in a single turn, and furthermore the hearer may not have time, as much as in the asynchronous mode, to give the gift of expressing his/her appreciation, especially when the hearer also had other things to say that overweighed giving an appreciation gift.

The different nature of the asynchronous and synchronous online discussions, particularly in terms of the needs to interact in a timely manner, has been considered in previous research (Reed et al., 2001) as a factor influencing the use of politeness strategies. That is to say, the synchronous online discussion might be expected to be less polite with fewer politeness moves. However, this proposition was not confirmed by a

previous study (Schallert et al., 2009) doing an overall comparison of the use of politeness strategies between the two communication modes. The findings from my study suggested that it might be worth doing a detailed comparison of the use of politeness moves for each politeness strategy between the two modes of online discussion to see if there is any strategy that would be used significantly differently in the two modes (see further discussion of this point in a later section entitled Modes of Online Communication and Politeness Strategies).

This positive politeness strategy of the writer/speaker giving gifts to the reader/hearer (P15) can look similar to politeness strategy P1, noticing and attending to the reader's/hearer's wants or needs. When coding Team D's online discourse, I found that sometimes, it was difficult to decide between giving code P1 or code P15. After reviewing Brown and Levinson's definitions of these two politeness strategies and some peer debriefing, I distinguished the two politeness strategies in the following way: Brown and Levinson defined politeness strategy P1 as "S [speaker] should take notice of aspects of H's [hearer's] condition (noticeable changes, remarkable possessions, anything which looks as though H would want S to notice and approve of it)" (Brown and Levinson, 1987, P103), and defined politeness strategy P15 as "S may satisfy H's positive-face want by actually satisfying some of H's wants. Hence we have the classic positive-politeness action of gift-giving, not only tangible gifts, but human-relations wants such as those illustrated in many of the outputs considered above—the wants to be liked, admired, cared about, understood, listened to, and so on" (Brown and Levinson, 1987, P129) in the form of goods, sympathy, understanding, cooperation, and appreciation. I

interpreted Brown and Levinson's definitions of these two politeness strategies, first, by taking P1 as emphasizing the action of noticing the hearer's condition whereas P15 emphasizes the action of actually giving something tangible or intangible to satisfy the hearer's wants.

The following example could be used to demonstrate the difference between expressing notice and giving gifts. At the end of Team D's first voice chat session in Second Life, George said, "*Vanessa, thanks for recording this and the dog is so cute*" to me, the researcher. The first half part of George's utterance, "thanks for recording this," I coded as a gift giving (P15) to the researcher, showing his appreciation of the fact that I had recorded Team D's conversation and shared the recording with them for their future use to prepare the self-report portfolio at the end of each module. This gift of thanks may be said to satisfy "Vanessa's" wants to be welcomed by the team, partly fulfilling my needs to develop rapport with the participants. The second half of George's utterance, "the dog is so cute," I coded as P1 because with these words, George expressed that he had noticed that my avatar was a dog. It can still be argued that giving gifts to the reader implies noticing the reader's wants to some degree, and might suggest a need merge these two politeness strategies. Accordingly, I further distinguished these two politeness strategies in that P1 was used to indicate the writer's/speaker's approval to reader/hearer; whereas, P15 was used to indicate the writer's/speaker's sympathy, understanding, cooperation, and appreciation to the reader/hearer. This distinction between P1 and P15 can be of help in differentiating the short messages/utterances "I agree" from the short messages/utterances "Thanks" because these two short messages/utterances were

commonly found in the online discourse. I expected that would be interesting to see whether P1 and P15 would be used to fulfill different discourse function as a previous study (Schallert et al., 2009) suggested that when a message served the function of presenting an alternative view, “I agree” tended to be used frequently at the beginning as a politeness strategy to show notice of the previous point of view and approval of it, and then to redress the subsequent alternative view, often beginning with the word “but.” Therefore, using P1 and P15 to distinguish “I agree” and “Thanks” respectively seemed to be needed.

Lastly, the emergence of using a virtual world like Second Life as a communicative tool for synchronous online discussion could also reinforce the need to keep these two politeness strategies separate because P1 seemed designed to indicate noticing and attending to the reader’s/hearer’s remarkably changed appearance in Second Life, and P15 could also be applied to the situation when a writer/speaker gave a tangible virtual gift to the reader/hearer. In pure text-based online discussion, whether synchronous or asynchronous, interlocutors’ appearances become invisible and giving a tangible gift is impossible unless the interlocutors are in the same location while they are communicating online. The lack of presence of appearance or feasibility of giving tangible gifts in pure text-based online discussions probably contributed to the confusion between P1 and P15 because the text-based environment eliminated the distinctive features of these two politeness strategies, that is, P1 focused on noticing the reader’s/hearer’s condition and P15 focused on actually giving something to the reader/hearer as gifts. In a virtual world, awareness of interlocutors’ conditions can be

resumed with the avatars' appearance, gestures, or other avatar movements. For example, in Team D's first synchronous voice chat in Second Life, after Younghee had arrived, both Bill and George noticed that Younghee's avatar had an outfit similar to Bill's. Bill said, "*Younghee is my twin,*" and George said, "*Yeah, see you wear the same shirt today.*" Another example in Team D's first debate for Module 4, after the debate activity, when Team D was attempting to figure out the date and time for the second debate, George noticed that Katrina's avatar's head looked bent forward as if she had fallen into asleep, which was caused by Katrina being away from her Second Life window for a while. George asked, "*Are you okay, Katrina?*" and Katrina replied, "*I guess my avatar is having a neck stroke.*" These utterances showing the speaker's noticing of the hearer's change in appearance that would be invisible in pure text-based online conversation became possible in the virtual world. Also, in the virtual world, giving tangible gifts virtually online becomes feasible. As an example from Team C, in one of their Second Life meetings, one member, Seth, brought a wooden tree house for the team, so that they could have their meeting there given that they were a little bit bored with sitting tightly crowded on the sofa in their conference area. Although this may require a certain degree of familiarity with Second Life, the emergence of the virtual world provides affordances for the occurrence of the distinction between P1 and P15 politeness strategies, thereby, requiring the need to keep P1 and P15 as two separate politeness strategies.

*Intensify interest in the writer's/speaker's own contribution (P3).* The positive politeness strategy P3, intensifying interest in the writer's/speaker's own contribution,

was ranked as the fourth most frequent politeness action (8%) used in synchronous online discussion while it was ranked as the 15<sup>th</sup> most frequent politeness move (only 0.8%; 2 instances) in asynchronous online discussions. As Brown and Levinson (1987) defined, intensifying interest in the writer's/speaker's own contribution to the conversation is a way for a writer/speaker to claim common ground between reader/hearer and writer/speaker. Because a conversation is a joint experience that involves both writer/speaker and reader/hearer, increasing the degree of interest in the reader/hearer can be viewed as an attempt to make the joint interaction joyful. There are four techniques that can be used to reach this goal: (1) use of the vivid present to make a good story; (2) use of directly quoted speech rather than indirect reported speech; (3) use of tag questions or expressions that position the reader/hearer as a participant of the conversation, such as, "you know," "see what I mean?," "isn't it?"; and (4) exaggerate facts, like saying "There were a million people in the store!" All of these techniques seem to be used to draw the reader's/hearer's interest to engage in the conversation as a partner. From Team D's online discourse, the third technique was used dominantly as a way to express politeness strategy P3. This result was probably caused by the nature of the content of the online discussion. Because Team D's discussion centered around finishing the collaborative projects on time, given the pressure from time and workload, using the vivid present or direct quotes, and exaggerating facts may not be suitable for Team D's conversation, whereas the third technique might be relatively easy to use in the colloquial form. It seemed that the use of tag questions or expressions drawing the reader/hearer as a participant into the online discussion was more colloquial because such phrases as "you

know,” “correct?,” “right?” were frequently used in Second Life voice chats, representing by themselves about 8% of occurrence among the total of 1530 occurrences of politeness strategies. On the other hand, this technique only occurred twice (the percentage of occurrence was 0.8%) among the written messages posted to the TeachNet discussion board. One was a message from Bill adding “No?” to the end of his written message that suggested Katrina directly put the content she had written for the collaborative writing project into the Wiki site. The other one was from Katrina’s appending “*right?*” to her message, “*Apparently, the part that does not match the Wikipedia style is mine (Process vs. Product)*” to invite responses from other team members. It was also interesting to find that almost all “you know” in the Second Life synchronous discussions were uttered by George, as he seemed to have the habit of saying “you know” in his utterances. This finding suggested that one’s use of politeness strategies might be affected by his/her colloquial habits, as I will discuss further in Chapter 5.

*Minimizing the imposition (N4)*. The literature suggested that the seriousness of face threat that a message/utterance carries affects the writer’s/speaker’s choice of politeness strategies. In addition, the degree of face threat is contingent on some contextual factors. Social distance, power, and a rating of imposition of the face threat act, given the context, are the three social factors that may influence people’s sense of the degree of seriousness of a face threat act (Brown & Levinson, 1987; Cameron, 2001; Morand & Ocker, 2003; Schallert et al., 2009). The negative politeness strategy N4, minimizing the imposition, is a politeness move attempting to defuse the face threat by

decreasing the rating of imposition inherent in the message/utterance itself, which leaves social distance and power as the two major social factors weighting the seriousness of the face threat act. One way to minimize the imposition is to use expressions conveying the meaning of “only” or “merely,” such as, by using “just.” Another way is to use expressions like: “a sip, a taste, a drop, a little, and a bit” to reach the goal. For example, in a sentence like “*I just want to ask you if I can borrow a tiny bit of paper,*” “just” and “a tiny bit” are the negative politeness moves (N4) meant to minimize the imposition of the borrowing request (Brown & Levinson, 1987).

In Team D’s online discourse, the use of N4 (minimizing the imposition) was found as the fifth most frequent politeness strategy used in synchronous online discussion and the 10<sup>th</sup> most frequent politeness move used in asynchronous online discussion. The following example is excerpted from Team D’s asynchronous online discussion. On the TeachNet discussion board, Bill posted a message suggesting the next steps to finish their collaborative writing project in Module 3, “*Maybe the next step is to divide and conquer. We can each take a section and flesh it out. Just a thought.*” In this message, the phrase “Just a thought” was given a N4 politeness code. It seemed that Bill’s message served the function of directing the team’s next actions. After his message to manage the group’s tasks, he added the phrase “Just a thought” to minimize the imposition posed by his suggestion to the team, denoting that Bill was simply sharing his thought, and was not forcing the team to obey his suggestion. Another example came from an episode (a series of utterances) in Team D’s synchronous online discussion. At the beginning of the first academic debate for Module 4, Team D found that there was another team holding their

debate in Second Life at the same time, and that they could overhear the other team's conversation. Katrina tried to teach Team D members how to mute the voice coming from the other team's members:

*Katrina: It's right by...on the top button that you have on the left side. There is a button like two little bubbles.*

*George: Okay, I see those.*

*Katrina: You just click there and then you're gonna get a list of people who are connected right now.*

*George: Yes.*

*Katrina: And that you can hear them. And then you just lower their volume.*

*George: Okay.*

In this example, when Katrina taught George how to mute the other team's members' voices, she used "just" twice. Each was coded as politeness strategy N4 (minimizing the imposition). When Katrina said, "just click there" and "just lower their volume," it seemed that she implied that it was going to be very easy for George to perform these actions. N4 may occur frequently in instructional situations (i.e., one teaches another one to do something). By using "just," the one providing instruction may mean "it is not a difficult task that I am asking you to do—you do what I am instructing you to do and it will work." Even though minimizing the imposition carried by a message/utterance itself was a politeness strategy, sometimes, the use of N4 may be taken as rude because it usually used on the occasion of requesting/requiring the reader/hearer to do something, and the use of N4 seems a decoration intended to minimize the request asked (Brown & Levinson, 1987), implicitly conveyed a force to the reader/hearer to do the thing requested, taking advantage of the reader/hearer. The interpretation of the use of N4 as polite or rude may depend on other contextual factors, such as the speaker's tone (in oral

communication), the speaker's and hearer's facial expressions (in face-to-face communication), whether the request is more for the writer's/speaker's benefit or not, and the relationship between the writer/speaker and the reader/hearer. In the above two examples, taking the context factors into consideration, Bill's written messages and Katrina's utterances seemed to serve the team's benefit more than their own personal needs. Therefore, the use of N4 was less likely expected to be interpreted as impolite.

The following example, in addition to focusing on the use of the N4 politeness strategy (minimizing the imposition), allows me to discuss other politeness strategies that were less frequently used in Team D's online discourse, and also to expand on the broader politeness-related discussion. This example came from an episode in Team D's synchronous voice chat in Second Life during the second meeting to complete the collaborative writing project (Module 3). Bill expressed his thoughts about George's group work. He pointed out that the part of the Wiki entry written by George did not include the citation for references by saying, "*You didn't...yeah...and also on your links on your references, you hadn't cited it for references. And you can go...just go in there and type them in.*" This utterance was divided into two functional chunks: the first chunk, "*You didn't...yeah...and also on your links on your references, you hadn't cited it for references*" seemed to function as Bill elaborating his thoughts about George's work (discourse function #5a—Elaboration/Clarification/Explanation) without any politeness move. The second functional chunk was "*And you can go...just go in there and type them in*" serving the function that Bill was asking George to perform some task for the team project (discourse function #8c—managing the group's task). The "just" was coded as

N4, an attempt to minimize the imposition posed by Bill's utterance requesting that George go to the Wiki system to type in the citations. However, given the broader context set by Bill's whole utterance, particularly by the preceding functional chunk, which looked as if Bill had expressed a negative evaluation of George's work, the degree of face threat seemed not only coming from Bill's request, directing George to do something. Bill's evaluation of George's Wiki product also posed a face threat to George's face, but Bill did not redress this face threat when he uttered his thoughts about George's work. The functional chunk, "*You didn't...yeah...and also on your links on your references, you hadn't cited it for references*" seemed very direct to the point, with no politeness strategy. Accordingly, the subsequent utterances showed a series of politeness speech acts from both George and Bill to redress the face threat:

*George: Got it. Got it (P1). I just (N4) hadn't put them in but I will cite them (P10). Yes.*

*Bill: I put them in but they're sketchy (N5). I just (N4) put the name and the year.*

*George: Yes, I know the rest of them (P9).*

*Bill: Just (N4) put it in the standard and you divide it with periods.*

*George: Sure I can do that (P10). I'm getting in.*

After Bill's turn in the episode, George said "*Got it. Got it*" to notify Bill that he heard him, which was given a P1 code as I discussed in the previous section. Then, in George's next utterance, two politeness codes, N4—minimizing the imposition, and P10—making an offer or promise, were given to "*just*," and "*I will cite them*," respectively. The "*just*" here, as discussed above, conveyed the meaning of "merely," and served as the politeness act of minimizing the imposition carried by Bill's feedback of George's work.

Notably, in this utterance, this politeness move can be regarded more as an attempt to save the speaker's (George's) own face, rather than the hearer's (Bill's) face. The face threat that the speaker (George) would like to redress was derived from Bill's previous utterance in the conversation, not carried by the current utterance from George. In the nature of social interaction, a conversation usually consists of more than one utterance; one is consecutively followed by another until the conversation ends. In the case that the conversation involves more than one interlocutor, it is common that interlocutors take turns to play the roles of speaker and hearer, which makes the conversation an interchange of ideas among interlocutors. It is possible that one face threat can be delayed to be redressed by politeness moves in subsequent utterances. As the example shows, Bill's first utterance in the episode posed a face threat to George's face, but Bill as the speaker did not take care of the hearer's (George's) face even as he uttered a FTA. Therefore, George, as the hearer of the previous utterance, taking his turn to be the speaker, first acted to save his own face threatened by Bill's utterance by using a negative politeness strategy N4 (minimize the imposition). Then, in the same utterance, George, as the speaker, took care of Bill's (hearer's) face by making a promise, "*I will cite them,*" as a positive politeness strategy (P10) to address Bill's expressed worry about the quality of the team product. The politeness strategy, making an offer or promise, assumes that speaker and hearer are cooperators by emphasizing the speaker's good intentions to cooperate with the hearer, denoting that whatever the hearer wants, the speaker will help to obtain (Brown & Levinson, 1987). In this example, George knew

what Bill wanted. He made the promise that he would do whatever Bill wanted to reduce Bill's worry and to satisfy Bill's positive-face needs to be listened to.

After George's utterance, Bill said, "*I put them in but they're sketchy (N5). I just (N4) put the name and the year.*" In this utterance, Bill seemed to realize the face threat he had posed on George previously because he did two face-saving moves here. The first was to say "*they're sketchy*," coded as a negative politeness strategy N5, showing deference, which can be reached by the speaker using words either to abase himself or herself or raise the hearer's status (Brown & Levinson, 1987). In this example, Bill abased his own work by saying "*they're sketchy*," denoting that his work was not superior to George's, further implying that Bill believed that George could make it better. This can be viewed as an attempt to save George's face that was threatened by Bill's first utterance (Bill's feedback to George's work). Meanwhile, this can be regarded as an attempt to save Bill's own face that was threatened by the fact that he failed to take care of his team mate's face when he provided feedback. In accordance with Brown and Levinson's (1987) point that politeness phenomena ground human social life as a universal principle of human interaction, failing, as a highly educated human being, to take others' face into consideration while engaging in social interaction can potentially threaten one's own face. Again, this was a delayed politeness move to redress a prior face threat. Bill's second face-saving work was "*just*" coded as the negative politeness strategy N4, minimizing the imposition. The "*just*" here conveyed a meaning of "*only*," denoting that Bill only did part of the correct things needing to be taken care, resonating with the preceding N5 strategy (abasing Bill's own work), to reduce the degree of

imposition carried by his previous feedback to George's work, as well as implying that Bill was confident that George would know what else needed to be added.

Next, George said, "*Yes, I know the rest of them (P9).*" The phrase "I know the rest of them" was coded a positive politeness strategy P9, asserting or presupposing the speaker's knowledge of the reader's wants. George's explicit assertion seemed to demonstrate his uptake of the implied wants embedded in Bill's previous utterance, assuming that George knew what needed to be included in the citation for references. Then, Bill said, "*Just (N4) put it in the standard and you divide it with periods.*" The "just" at the beginning of Bill's utterance was given the N4 code as a politeness strategy to minimize the imposition from the rest of the utterance, seeming to guide George about what to do. Subsequently, George replied, "*Sure I can do that (P10). I'm getting in.*" The "Sure I can that" was coded as the positive politeness strategy P10, making an offer or promise. George assured Bill that he could do what Bill wanted him to do.

This conversation episode showed that maintaining the face work in a conversational interchange seemed to be a shared responsibility assumed by all interlocutors, both writer/speaker and reader/hearer. Accordingly, a politeness move may not only be used to save a hearer's face but also to redress a speaker's face because of the possibility of delayed redressing speech acts, given that the speaker and hearer switch their roles continually in a conversation, as the above analysis of the conversation between Bill and George suggested. In addition, it may be that a face threat act can pose face-danger to both the speaker's and hearer's faces to different degree from different

aspects, as the analysis of Bill's utterance "*I put them in but they're sketchy (N5). I just (N4) put the name and the year*" showed.

Furthermore, it seemed possible that a face-saving move may convey different meaning to different hearers in the case of multiple hearers involved in the conversation. For example, imagine sitting in a research team meeting when the leader of the team praises one team member for completing a task related to this team's research project in front of the whole team. In the case that the task was expected to be completed by more than only one member, the leader's praise may be regarded as a P15 (giving gift to hearer) to the member who completed the task individually; however, to other team members who were supposed to help, the praise is not a face-saving speech act, and may even act as blame, a face threat, to some extent, in a subtle way. This possibility can lead to the issue of double coding to a single phrase when analyzing the discourse. I decided to avoid double coding at the beginning of data analysis because this kind of double coding may inflate the number of politeness moves used per functional chunk. Besides, allowing double coding meant the possibility of allowing triple, quadruple, quintuple coding, and so on, depending on how many interlocutors were involved in the conversation, in that different interlocutors would hold different positions, and may interpret the same message/utterance from various aspects. Drawing from a previous study (Schallert et al., 2009), in the case of double coding, I chose to give the code that was most obvious, taking all available contextual factors into account.

Speaking of coding rules, when I coded Team D's online discourse, I sometimes found it difficult to distinguish between politeness strategies N2 (hedging) and N4

(minimizing the imposition), as for example, comparing the uses of “a little” in the following two examples: (1) In Second Life voice chat session for Module 5, when Team D was discussing how to design the learning activity for their WebQuest project, Katrina expressed an alternative point of view against one of Bill’s previous ideas. Katrina said: “...*But if we take parts like that I think it’s gonna be a little harder to create a limited activity...*” (This example has been described more completely in the section discussing the negative politeness strategy, N2—hedging. Therefore, I omit here the relatively irrelevant parts). (2) Earlier in the same chat session, when Bill was talking about his thought of how to proceed for the WebQuest project, he said “*What we need to do is figure out how to turn that format into a WebQuest,*” Katrina found the volume of Bill’s microphone too loud causing a distortion, so that she said “*Uh...can you turn the volume down just a little?*” In the first case, the “a little” was coded as N2 (hedging) while in the second case, the “a little” was given a N4 (minimizing the imposition) code.

Distinguishing the instances that should be coded N2 from ones that should be coded N4 was somewhat unclear for me. After reviewing Brown and Levinson’s definitions of these two politeness strategies and obtaining input from an experienced discourse analyst, I decided to differentiate N2 and N4 in the following way: first, in light of Brown and Levinson’s politeness theory (1987), the assumption of politeness strategy N2 (hedging) is avoiding the presumption of the agreement assumption posed by the writer/speaker on the reader/hearer via modifying the illocutionary force conveyed by a message/utterance. Also, the assumption behind politeness strategy N4 (minimizing the imposition) is the attempt not to coerce the reader/hearer to do whatever the

writer/speaker asks by minimizing the intrinsic seriousness of the imposition conveyed by the message/utterance itself. Although these two assumptions may look somewhat similar, by examining my data practically, I then decided that N2, in most cases, was used to make one's statement/claim ambiguous; N4, usually, was used to disambiguate one's request but also reducing the degree of its seriousness. As shown in the first case, Katrina's use of "a little" in her statement seemed to serve the function of making her utterance uncertain, and not presuming that Bill and other members would agree with her suggestion. The "a little" here seemed to modify Katrina's claim, and to avoid presuming the agreement of other team members; as a result, it was coded as N2 (hedging). On the other hand, in the second case, Katrina's use of "a little" in her request seemed to reduce the intrinsic seriousness of her utterance, and meant not to coerce Bill to follow her request, even though in this situation, Bill's microphone being too loud leading to distortion, could really affect the conversation. The "a little" here seemed to be used to minimize the imposition of Katrina's request itself; thus, it was coded as N4 (minimizing the imposition).

Although the abovementioned way of differentiating instances of N2 and N4 may be applicable for most instances found in my data, the possibility of negative cases that may not completely fit with this rule of thumb should not be overlooked. For example, in Team D's second meeting in Second Life for the collaborative writing project (Module 3), after Bill invited Younghee to express his comment, saying, "*Any more thoughts on this? Younghee, do you have any comment?*" Younghee said, "*Yeah, I have a little comment about assessment tools, uh...because I read some articles about dividing tools*

*into three groups....*” The “a little” was given the N4 (minimizing the imposition) code, instead of N2 (hedging) code. Even though it was in the form of statement, not a request, the “a little” in this utterance seemed more to reduce the seriousness of the comment Younghee would like to propose, rather than to make the comment ambiguous in terms of presuming agreement from other team members. Another way to look at this example could be that considering Younghee’s Asian cultural background (shy and indirect), it is possible that Younghee’s statement of “*I have a little comment about assessment tools...*” indirectly implied a request to other team members to hear out his comment. That is to say, discourse analysis should not only focus on the form of a message/utterance, but also should take into consideration the function that the message/utterance seemed more possibly to serve given the available contextual factors.

*Using in-group identity markers to convey in-group membership (P4).* The positive politeness strategy P4, using in-group identity markers to convey in-group membership, was the fourth most frequent politeness move (6.85%) used in Team D’s asynchronous online discussion and the 14<sup>th</sup> most frequent politeness act (1.11%) used in Team D’s synchronous online discourse. Brown and Levinson (1987) suggested that this politeness strategy is used to claim the common ground implicitly, carried by the group’s definition, shared by the writer/speaker and reader/hearer. There are three major ways to convey in-group membership: (1) the use of address forms, (2) the use of language or dialect, and (3) the use of jargon or slang. The results of data analysis showed that most of the occurrences of politeness strategy P4 were of the first kind: the use of address

forms. There were some instances demonstrating the use of jargon, and only one instance representing to the use of dialect.

Address forms were used frequently in asynchronous online discussion because I noticed that when Team D's members wrote their asynchronous written messages, they sometimes formatted the messages similar to email messages; that is, the content of their written posts usually started with an address along with a greeting, then was followed by the message body, and lastly ended with the writer's name as a signature. The use of address form to convey in-group membership thus occurred at the beginning of the posts. Sometimes, the addresses were a specific team member's name, but most of the time, the addresses were to the whole team, such as "*Hello Team,*" "*Hey Group,*" or "*Team.*" In Second Life synchronous online voice chats, there were a few instances of using address forms that seemed to be more applicable to colloquial form, such as "*Are you guys thinking of something like narrowing down to some kind of particular content...?*" Obviously, this use of address forms in Team D's asynchronous written messages and synchronous oral utterances conveyed in-group membership to Team D members. The discrepancy in the frequency of Team D's using address forms between asynchronous and synchronous online discussion could be caused by the nature of Team D's written posts and oral utterances. As described above, most of the time, Team D's written posts looked like email messages. That is, they added the address in the beginning of the message. If they needed to address the whole team, they used "Team" or "Group" that was coded as P4 in the way of using address forms. Adding an address at the beginning of oral utterance would not be necessary in synchronous oral conversation. Unlike in

synchronous written online discussion that could have multiple topics going on at the same time, during which it often becomes difficult to tell to whom a message is addressed, in synchronous oral online conversation, there would be only one person holding the floor (excluding collision and interruption situations) at a certain point in time. Each subsequent utterance usually addressed the speaker of the preceding utterance or possibly addressed the whole team. Thus, there was no need to indicate address at the beginning of the utterance unless interlocutors had to call on a specific person's attention, but in the case of addressing the whole team, there was no need to add "Hello Team" at the beginning of every utterance.

The use of jargon, in Team D's case, referred to the use of acronyms without any explanation. Most of the occurrences of using acronyms appeared in asynchronous written messages. There were some instances that Team D used CSCL to refer to Computer-Supported Collaborative Learning. As CSCL was the name of the class, using CSCL without any further explanation claimed the common ground among Team D's members whoever taking the same course. There was one instance that Younghee indicated where he was before he summarized his research findings in his post. He wrote, "*I searched some books in UT PCL.*" UT PCL referred to the main library of the university. Because all Team D members were students of the university, there was no need to explain to other team member what UT PCL stood for. The use of this acronym conveyed in-group membership associated with Team D members' common affiliation.

However, the use of acronyms did not necessarily always imply in-group relationship among all members. Sometimes, it could only apply to part of the team. For

example, in Team D, three of the members (i.e., Bill, Katrina, and Younghee) were taking another course together in addition to this course. The acronym of the other course was ISD. In Team D's asynchronous online discussion, Bill, Katrina and Younghee all made reference to ISD in their written messages without any explanation. The use of ISD indeed served as politeness move P4, claiming common ground shared among Bill, Katrina and Younghee. But, for George and Yi-Jun who were not taking the ISD course, they probably needed to guess what ISD meant by considering the context of the whole written messages posted by Bill, Katrina, and Younghee. It was also possible that the use of ISD claiming the common ground shared among part of the team could lead to a sense of segregation for George and Yi-Jun, interpreted as an impolite move. Thus, as I discussed earlier, it was possible that a face-saving move could be interpreted differently by different readers/hearers.

Another instance of using acronym claiming common ground among part of the team occurred in the synchronous Second Life voice chat for Module 5. In Team D's discussion for designing the learning activity of their WebQuest, they argued if they should follow TEKS (Texas Essential Knowledge and Skills). Bill, Katrina, and George were the interlocutors actively participating in the discussion, and using the acronym TEKS directly without any elaboration while Younghee and Yi-Jun were there as well. The use of TEKS conveyed implicitly that Bill, Katrina, and George all had had teaching experience in Texas, claiming their common prior experience to some extent. Although it could be argued that TEKS should be a common acronym known by all students in a college of education in a university in Texas, for the two Asian students, Younghee and

Yi-Jun, who were in their first semester of studying in Texas, they probably did not understand what TEKS meant when they first heard the syllable. Nonetheless, it is interesting to find that tracing back to Team D's online discussion for the previous module, in one of the asynchronous written message, while brainstorming potential topics for the academic debate activity in Module 4, George wrote "*These are just ideas: grade retention, TAKS (state assessment and its impact on high school graduation), corporal punishment in schools.*" This was the first use of TAKS (Texas Assessment of Knowledge and Skills) in George's message before the abovementioned Second Life voice chat session for Module 5. Although George did not explain what TAKS meant in his message, either, there was a chance that after Younghee and Yi-Jun read his message, if they did not understand the meaning of TAKS, they could ask others or search online for what TAKS meant. By doing so, they were likely to find the relevant acronym, TEKS. Therefore, it seemed that Team D's prior discourse provided a possibility to share background knowledge in terms of TAKS and TEKS among all Team D members. In this sense, the use of TEKS in the Second Life voice chat session did not only claim the common ground of prior teaching experience in Texas among Bill, Katrina, and George, but also the joint experience from Team D's prior discourse among all members, though the first occurrence of TAKS in Module 4 was still possibly at risk of being interpreted as an impolite move. This analysis reflects the point mentioned above that discourse analysis should take all available contextual factors into account.

From Team D's data, the use of dialect was only found in their asynchronous written messages when Team D members used emoticons to substitute for their facial

expression. There was only one message found using emoticon. That is, in Team D's asynchronous online discussion for Module 3, Team D decided that each team member would do some research individually on the topic related to their collaborative writing project, and then they would post their research findings on TeachNet. Younghee posted a comment to Bill's research result. He wrote, "*Hi Bill, I have not seen your research results before I post my own result. You have similar idea. We are seeing similar target. ;)* *In your comment, following paragraphs are interesting..... Great Job. ;)*" In this message, Younghee used two emoticons, coded as P4 (using dialect to convey in-group membership), to show his happy emotion in response to the similarity between his and Bill's research findings. I regarded the use of emoticons as the use of dialect because the use of emoticons has emerged as has the prevalence of various computer-mediated discussion tools affording communication via Internet in written form (e.g., MSN, discussion boards, BBS, and so on). Emoticons are used to address a long-discussed limitation of computer-mediated discussion in pure written form, that is, the lack of partial contextualization cues (Schiffrin, 1994), such as facial expressions, tones, intonation, and volume. Using emoticons signaled that the user of the emoticons belonged to the generation of Internet users. Therefore, I treated emoticons as a dialect of the Internet generation who are accustomed to and apt at using those computer-mediated communication tools supporting online written conversation. Younghee's use of emoticons in his message to Bill seemed to denote in-group membership of the Internet generation between Bill and himself, though there was no evidence whether this claim of common ground of being part of the same Internet generation could be applied to the

other team members as well. Because the use of emoticons was only applicable to online discussion in written form, there was no case of using emoticons in Team D's Second Life voice chat sessions.

*Summary.* This section discusses what politeness strategies Team D members used when they worked collaboratively via online synchronous or asynchronous communication tools. For asynchronous online discussion, the five most frequent politeness strategies were P12 (including the writer/speaker and reader/hearer in the activity), P15 (giving gifts to the reader/hearer), N2 (hedging), P4 (using in-group identity markers to convey in-group membership), and P1 (noticing and attending to reader's/hearer's wants or needs). For synchronous online discussion, the five most frequent politeness strategies were P12 (including the writer/speaker and reader/hearer in the activity), N2 (hedging), P1 (noticing and attending to reader's/hearer's wants or needs), P3 (intensify interest in the writer's/speaker's own contribution), and N4 (minimizing the imposition).

Positive politeness strategy P12 (including the writer/speaker and reader/hearer in the activity) was used most frequently by Team D in both asynchronous and synchronous online discussion. Team D members used the first plural pronouns (i.e., we, us, our, ours, and let's) to indicate an assumption of cooperation between writer/speaker and reader/hearer and to soften a request/suggestion to the team by grounding the request/suggestion on the team's common need. The high frequency of using P12 showing the inclusiveness among team members implied that Team D recognized the need for working as a team and wanted to promote a sense of community. Meanwhile,

the negative politeness strategy N2 (hedging) was used frequently as well by Team D to avoid coercing the reader/hearer to accept the cooperative assumption imposed by the writer/speaker on the reader/hearer.

Positive politeness strategy P1 (noticing and attending to reader's/hearer's wants or needs) was used frequently in asynchronous online discussion as a way to express team members' approval of their peer's contributions, which may both boost team spirit and develop an active communicative atmosphere. In synchronous online discussion in Second Life, an additional usage of politeness strategy P1 was intended to be responsive to interlocutors when Team D had a real-time oral online conversation. Serving the similar purpose to boost the team spirit, another positive politeness strategy P15 (giving gifts to the reader/hearer) was used to express appreciation of other team members' contributions. However, this kind of expression of gratitude was found more frequently in asynchronous online discussion than in synchronous discussion.

Positive politeness strategy P3 (intensify interest in the writer's/speaker's own contribution) was used frequently in synchronous online discussion as a way for a speaker to claim common ground between hearer and speaker. The most frequent way of expressing politeness strategy P3 was to use tag questions or expressions that position the hearer as a participant in the conversation, such as, "you know," which seems a common colloquial form. In addition, positive politeness strategy P4 (using in-group identity markers to convey in-group membership) was used to claim common ground implicitly, carried by the group's definition, shared by the writer/speaker and reader/hearer. The

major way that Team D expressed politeness strategy P4 was the use of address forms, the names of team members, in their asynchronous written messages.

Although Team D used various positive politeness strategies to claim the common ground among the team members, like the use of negative politeness strategy N2 (hedging) to avoid the presumption of agreement/cooperation imposed by the writer/speaker on the reader/hearer, another negative politeness strategy N4 (minimizing the imposition) was used to minimize the intrinsic seriousness of the face threat conveyed by the message/utterance itself.

Team D’s use of positive politeness strategies showing affective ties, such as in-group membership, friendship, solidarity, and cohesion reflected their needs to get ready to work collaboratively as a team in the short period of time imposed by the course schedule. Meanwhile, their use of negative politeness strategies demonstrating social distance, circumspection, formality, and impersonality reflected their concerns to moderate the force imposed by presupposing too much underlying solidarity.

To end this section, I present in Table 4.3 a list of the politeness strategies with definitions and examples from Team D’s data.

Table 4.3 Politeness Strategies: Definitions and Examples from Team D

Strategy	Example from Team D’s Data
Positive politeness strategies	
1. Notice and attend to reader’s/hearer’s wants or needs –Showing that the writer/speaker is attending to what the reader/hearer has said or wants	Thanks for recording this and <u>the dog is so cute</u> . [George, 1st Synchronous, Module 3]
2. Exaggerate interest in, approval of, or sympathy with a previous message/utterance	Excellent job. Bill. [Younghee, Asynchronous, Module 3]

Strategy	Example from Team D's Data
-Using exaggeration or enthusiasm in responding	
3. Intensify interest in the writer's/speaker's own contribution -Using words that make one's own comment more interesting by exaggerating or overstating facts	Yi-Jun, what we talked about for this point, I guess, we're gonna do it, <u>you know</u> , our wiki on the online collaborative, <u>you know</u> , how to work online collaboratively. We're gonna do our wiki over that. [George, 1 <sup>st</sup> Synchronous, Module 3]
4. Use in-group identity markers to convey in-group membership - Connecting with the reader/hearer by using words to indicate the reader/hearer is a member of the writer's/speaker's own discourse community	Are you guys thinking of something like narrowing down to some kind of particular content? [Katrina, 1 <sup>st</sup> Synchronous, Module 3]
5. Seek agreement -Saying what the writer/speaker believes the reader/hearer will agree with by repeating or by seeking a safe topic	Bill, I liked your ideas as well. <u>Like you</u> , I also read the article on process and product (one of the links you provided). [Katrina, Asynchronous, Module 3]
6. Avoid disagreement -Saying something so as to soften disagreement, or hedging one's opinion, or being vague so as to seem to agree	<u>I have that as a possibility</u> that you can use the actual people they were living there as part of it, too. [Bill, Synchronous, Module 5]
7. Gossip and small talk -Showing interest in the reader/hearer by starting a message/utterance with small talk, greetings, or unrelated topics	Oh..Yi-Jun [Yi-Jun suddenly appears on the table]. <u>Welcome back</u> . [George, 1 <sup>st</sup> Synchronous, Module 3]
8. Joke -Using humor to indicate shared connections with the reader/hearer	Maybe <u>he played with the evil now</u> . [George, 1 <sup>st</sup> Synchronous, Module 3]
9. Assert or presuppose the writer's/speaker's knowledge of the reader's/hearer's wants -Using language to show that the writer/speaker knows what the reader/hearer wants and is willing to fit his/her wants or needs	I thought uh.. <u>Geroge has a game</u> . I though <u>he said lunch time</u> [Katrina, 1st Synchronous, Module 4]
10. Make an offer or promise -Saying that the writer/speaker will	Whenever you're ready, Katrina, <u>I will start keeping time</u> . [George, 1 <sup>st</sup> Synchronous,

Strategy	Example from Team D's Data
help the reader/hearer obtain the reader's/hearer's wants	Module 4]
11. Be optimistic –Using optimistic words to show the writer/speaker hopes that imposition on the reader/hearer is not much	I'll try to get some of the articles together, <u>hopefully have something for you late Friday</u> . [George, 1 <sup>st</sup> Synchronous, Module 3]
12. Include the writer/speaker and reader/hearer in the activity –Using 1 <sup>st</sup> person plural pronouns to refer to writer/speaker only or reader/hearer only	Do <u>we</u> still have to add George and Yi-Jun? I don't know what e-mail address they want to use. [Katrina, Asynchronous, Module 3]
13. Give (or ask for) reasons –Giving/asking for reasons for an imposition on the reader/hearer	Sorry, Bill. On Saturday, I should care my son, <u>since my wife go to school</u> . [Younghee, Asynchronous, Module 3]
14. Assume or assert reciprocity –Showing the writer/speaker has acted so as to now obligate the reader/hearer	I'm just throwing out some ideas. <u>Hope someone can come up with a better idea</u> . [None in these data; example from Yang et al., 2006]
15. Give gifts to the reader/hearer (sympathy, understanding, cooperation) –Giving praise and statements of appreciation and gratitude	Thank you all for the work! [Katrina, Asynchronous, Module 5]
16. Make room for others' discussing	Yi-Jun, <u>what do you think?</u> [Bill, 1 <sup>st</sup> Synchronous, Module 3]
Negative politeness strategies	
1. Be conventionally indirect –Imposing indirectly on the reader/hearer by relying on Gricean principles that check for the "felicity" conditions of a request	Just a second, Younghee, <u>could you please</u> turn your talk off? [Katrina, 2nd Synchronous, Module 3]
2. Hedge –Using words to indicate that the writer/speaker is not assuming that the reader/hearer will want to comply or agree with the writer/speaker	We <u>might</u> have a possibility to meet earlier, <u>maybe</u> the weekend, but <u>I guess</u> we'll figure that out. [George, 1 <sup>st</sup> Synchronous, Module 3]
3. Be pessimistic –Saying that the writer/speaker doubts that the conditions apply to or would impose on the reader/hearer	I'll be glad to <u>unless anyone else would like to take it up</u> . I'd be glad to take it up be the leader for this. [George, 1 <sup>st</sup> Synchronous, Module 3]
4. Minimize the imposition	Maybe the next step is to divide and

Strategy	Example from Team D's Data
–Using words to imply a lesser imposition on reader/hearer than it seems	conquer. We can each take a section and flesh it out. <u>Just a thought.</u> [Bill, Asynchronous, Module 3]
5. Show deference –Using words to abase the writer/speaker, or to raises the reader's/hearer's status	I put them in but <u>they are sketchy</u> [Bill, 2 <sup>nd</sup> Synchronous, Module 3]
6. Apology –Using words to indicate that the writer/speaker is reluctant to impinge on the reader/hearer	Again. <u>I apologize</u> to the team for my no contribution [Yi-Jun, Asynchronous, Module 3]
7. Impersonalize the situation –Requesting or imposing on reader/hearer indirectly by using general words	We can divide up by going okay, <u>you do introductory, you do the task, somebody else has process, the other one.</u> [Bill, Synchronous, Module 5]
8. State the face threatening act as a general rule –Referring to an underlying principle or document that regulates the reader/hearer and writer/speaker	<u>It says</u> we'll post it on teachnet assignment folder. [George, 2nd Synchronous, Module 4]
9. Nominalize the request or imposition –Instead of using a verb, using a nominalized form to make the request or to state the imposition	<u>It's my feeling that</u> this assessment that they did is insufficient because it has the possibility of being impacted not only by the other factors that are measured (domain knowledge and interest). [Example from Yang et al., 2006]
10. Go on record as incurring a debt or as not indebting the reader –Stating that the writer/speaker will feel grateful for help that the reader/hearer may in the future provide	Now, Younghee, <u>if you'll finish the closing, conclusion or closing of our group, I'd appreciate it.</u> [George, 2nd Synchronous, Module 4]

### Concerns about Netiquette and Politeness Strategies

This section addresses the second research question: how do the students' concerns about netiquette relate to students' uses of politeness strategies? The last

activity in Module 1 that students completed to prepare for the upcoming collaborative projects required the students first to understand the core rules of netiquette, then to think about how netiquette could influence the effectiveness of online collaboration, and lastly to share and establish their own norms or rules for effective online collaboration as a whole class via a Blackboard discussion board (asynchronous online discussion). At the end of the activity, the students seemed to reach a consensus of some netiquette norms for effective online collaboration. The TA summarized their discussion, listing six factors: (1) Time/Punctuality, (2) Communication, (3) Summary/Documentation, (4) Leadership, (5) Technological Support, and (6) Respect. In the rest of this section, I select a few points among the six factors to discuss further with examples or counter-examples from Team D's online interaction, in order to associate them with Team D's use of politeness strategies, if applicable.

For the factor of Time/Punctuality, the students discussed the importance of having prompt, efficient, and scheduled synchronous online meetings given that students may have to commit themselves not only to this course but also other courses they were taking. Among Team D's synchronous online voice chat sessions in Second Life, the very first meeting looked like a violation of this norm in that two team members were late to join the meeting for different reasons. This meeting seemed not to be efficient in that when each latecomer arrived, the other team members who had arrived on time had to repeat what they had discussed so far. They did this twice because the two late members did not arrive at the same time. Therefore, in this meeting, Team D repeated the same discussion at least three times. However, this situation never occurred in Team D again

throughout the rest of the semester. It seemed that Team D followed this norm, and the first meeting can be regarded as an exception demonstrating the effort they spent to get accustomed to the online synchronous meetings.

Students also talked about the importance of being responsive to their team members in online communication. When students mentioned this point in this activity, they focused on email exchanges. For example, one student, Fred, wrote:

*Granted, everyone is busy. When I'm expecting a response from somebody and don't get one, it comes across that they place a low value on communicating with me. I greatly appreciate when someone goes out of the way to send me a "temporary response" to say, "I'm working on it, and will have an answer for you soon." This is rarely the case. Especially when working on a project with deadlines, regular feedback is very important.*

In addition, the expectation of responsiveness was brought up in Katrina's interview. She thought that the fact that team members were not very responsive in email exchange was the worst violation of netiquette in Team D's interaction. Katrina said,

*Every time we had an assignment, we would meet in Second Life first, planning everything in Second Life, and then doing the activity. We were supposed to communicate via email. But apparently I was the only one who was really engaged in the email writing, and some of the students would reply but some others, I wouldn't hear from them until it was like the due date. And that bothered me because there was no communication, it was supposedly to be happened via email, and some people just didn't reply to the email at all.*

Fred's and Katrina's statements highlighted the importance of responsiveness in collaborative learning projects. It seemed that in a collaborative learning situation, being responsive was equated with being responsible to some extent.

Although when they first thought about this concern before they started to engage in the collaborative projects, they referred to asynchronous online written discussion, particularly for email exchange, the emergence of discourse function #10a (Notifying

receiving an utterance) from Team D's synchronous online discussion exemplified that this concern could also be applied to synchronous oral online communication. Short utterances such as "Got it" and "Okay" in Team D's Second Life conversation were coded as a politeness strategy, P1—Noticing and attending to hearer's wants or needs (refer to the previous discussion of the P1 politeness strategy for more details) because the use of these short utterances in online oral communication seemed to work like the "temporary response" in asynchronous email exchanges mentioned in Fred's comment above. In addition, non-responsiveness could even be harmful to team communication no matter the mode of communication, asynchronous or synchronous. For example, in Bill's interview, he mentioned that during the course of Team D's interactions, he worried mostly about "*the quiet members who didn't ask for clarification. It's dangerous when they didn't say anything, there was miscommunication, and you were not aware of it.*" Bill thought that miscommunication was inevitable because that "*it may just be the human nature. There were times we see it from our view, but when you present it to other people, they don't see it in the same way. It's just the nature of communication and the difficulty of it,*" but asking for clarification, as a way of being responsive, provided a chance to fix the miscommunication.

As to the factor of communication, the students talked about their thoughts of the use of italics, boldface, capital letters, and large font in written messages. They seemed to agree that this usage tended to trigger emotional reactions to some extent. For example, Bill mentioned that "*italics solicit attention instead of demanding it like bold does,*" Steve wrote that "*as with boldface, they somehow disrupt the narrative of the message, like*

*characters in a movie or television show speaking directly to the camera,”* Bill said that “*At work, we have an office person who always sends her emails in large capital letters. They do take the effect of being YELLED AT.*” Finally, Ya-Wen shared how frustrated she was when she got a rejection from a professor with an email message composed in 19-point font size. Awareness of the meaning these team members constructed from this usage of font forms did not mean necessarily that Team D would completely avoid using italics, boldface, capital letters, and large font. Instead, they seemed to be agreeing to use them with caution, and when they used them, it was likely that they would like to convey the meaning carried by the font forms. For example, in the beginning of Module 3, Katrina posted a written message to TeachNet discussion board to invite ideas for possible topics for Team D’s collaborative writing project. She wrote,

*Hello everyone,  
module 3 requires us to write a Wikipedia topic entry related to CSCL. We, as a group, are the ones to choose our topic of interest. **Please reply to this thread with suggestions for possible topics.** Think of your area of interest in CSCL.*

In her message, the use of boldface could be viewed as Katrina’s attempt to demand attention from team members as well as responses to this important issue (topic of the Wiki entry) for the beginning of their team project. It seemed that using italics, boldface, capital letters, and large font by itself did not necessarily violate the norms of netiquette. Instead, it was such use when done inappropriately without considering the possible face threat that could be perceived by readers as a violation of good netiquette, and could seem rude or impolite.

Another point discussed by the students, related to the communication factor, was “*to limit the use of web-acronyms and to use proper, written language at all times*” (by Seth). By web-acronyms, they were referring to the use of acronyms created in written communication in cyberspace such as “LOL,” “brb,” and so on. For example, Ida mentioned “*Be honestly, it took me quite a while to figure out what LOL stands for... Please don't laugh at me. Effective and clear communication is very important,*” and Ike shared a story:

*The worst was in a dungeon battle; my partner sends me a message that says BIOM. I was like “What is that? A new beast somewhere?” It meant back in one minute. Shoot man, the English language is complicated enough; do we need to make it even more complicated?*

The creation of these web-acronyms and the habit of using them might originate from the need to communicate efficiently in cyberspace. However, this efficiency seemed to be used at the expense of losing communication effectiveness. When readers were not clear about what the web-acronym meant, it did not convey any meaning even though writers could type it in a prompt fashion. As these students stated, there may be some occasions when efficiency could be prioritized over effectiveness. However, when it comes to the situations that, as Ida stated, “*effective and clear communication is very important,*” like participating in classroom collaborative learning projects, effective communication should take the priority over efficient communication.

The concern with avoidance of the use of web-acronyms in online written messages seemed to echo the finding that in Team D’s online discourse, most occurrences of using politeness strategy P4 (using in-group identity markers to convey in-

group membership) were through how they used address forms, and there were only two instances of using emoticons (the use of dialect) in a single written message. The use of web-acronyms seemed more similar with the use of emoticons as an example of dialect than with the use of acronyms as the use of jargon because they were the byproducts of the prevalence of online written communication and served to claim the common ground of Internet generation among writers and readers as politeness strategy P4. This suggested that a potential politeness move did not always seem polite. The decision to use a politeness strategy still depended on many other contextual factors, such as when the necessity of being clear was higher than the need to convey in-group membership, reducing the likelihood of using P4. Furthermore, this suggested that concerns about netiquette did not necessarily mean an increase in the use of politeness strategies, but rather possibly leading to a decrease in the use of certain expressions of a politeness strategy that may be considered as a violation of netiquette.

The last point that I discuss in this section is related to setting up an environment for constructive criticism. The students seemed to agree that constructive criticism was good for improving the quality of team work, as HyeKyo stated, “*constructive criticism is the best way to develop and broaden our point of view,*” and as Charles wrote:

*Your constructive criticism is far more valuable to me than your smiley-face emoticon. Please trust that I will not take it personally or hold a grudge later during peer evaluation. In summary, being polite and positive is important--but not (I believe) at the expense of withholding feedback that may be beneficial to a fellow student beyond the college classroom.*

Katrina brought up another point of view considering the use of politeness moves to redress the potential face threat carried with constructive criticism. She mentioned,

*...a critique doesn't have to be necessarily bad. One suggestion, starts with the problems, but then try to point the good things on the person's work... When revising someone else's work, one could say: "you might wanna..."; or "maybe you should..."; or yet "have you also thought of...?" Sometimes we say things that sound rude even though we don't mean it that way. But that can create a problem.*

Interestingly, Katrina's message seemed to suggest the use of positive politeness strategies P15 (giving gifts to reader) or P1 (noticing and attending to reader's wants or needs), of the negative politeness strategy N2 (hedging), and of the negative politeness strategy N4 (minimizing the imposition). In her suggestion, "*starts with the problems, but then try to point the good things on the person's work,*" the part, "point the good things on the person's work," would be possibly fulfilled by giving praise or appreciation as a gift to readers (P15) or by acknowledging part of a reader's work with an agreement (P1). To some degree, this suggestion was consistent with the results suggested by a previous study (Schallert et al., 2009) that when writer was about to offer an alternative view to a previous message, he/she tended to use politeness strategy P15 (e.g., Thank you for the thorough elaboration, but I think...) or P1 (I agree with...; however, for the rest...) before the presentation of the alternative point of view. For example, in Team D's Second Life meeting for Module 5, Katrina and Bill gave a series of constructive criticism to each other while they were designing the learning activity for their WebQuest. Even though they kept challenging each other's ideas back and forth, the constructive criticism led to a decision that satisfied all team members. During the process, Katrina wanted to propose an alternative idea to Bill's previous idea. She said, "Yeah, I understand but for example, if we do...from the point of view of journalists, okay, we have to think about

*product that our journalists would do. So maybe an article for a magazine like national geography let's say.....*” Before Katrina started to elaborate her alternative idea, she expressed her understanding of Bill’s previous utterance as a gift to hearer (P15). Moreover, in Katrina’s first two examples listed in her message, “*you might wanna...*,” and “*maybe you should...*,” the “might” and “maybe” would definitely be coded as N2 (hedging), avoiding presuming that the reader would agree with the writer’s alternative view if they appeared in an online discussion. Her third example, “*have you also thought of... ?*,” provided the possibility of using N4 (minimizing the imposition) to reduce the seriousness of the request itself, asking the reader to consider a revision. This finding seemed consistent with the finding, reported in the previous section addressing research question 1, that these four politeness strategies, P15, P1, N2, and N4, were used frequently in Team D’s online discussion.

To sum up, it seems that students’ concerns about netiquette had a relation with their use of politeness strategies in the following aspects: (a) the concern about being responsive was consistent with a high frequent use of the politeness strategy P1 (Noticing and attending to hearer’s wants or needs) in Second Life voice chats; (b) the concern about using font forms, such as, italics, boldface, capital letters, and large font in written messages seemed to be reflected by Team D’s cautious and infrequent use of these font forms unless there was need to convey special meanings carried by the font forms; (c) the concern with avoidance of the use of web-acronyms in online written discussion seemed consistent with the finding that Team D rarely used web-acronyms as a way to convey in-group membership as politeness strategy P4; (d) the concern about setting up an

environment for constructive criticism and still keeping a cordial learning atmosphere seemed to be reflected by Team D's frequent use of positive politeness strategies P15 (giving gifts to reader) or P1 (noticing and attending to reader's wants or needs), of negative politeness strategy N2 (hedging), and of negative politeness strategy N4 (minimizing the imposition).

### Team D's Use of Politeness Strategies over Time

This section intends to address my third research question: how do students' uses of politeness strategies change over time? I address this question by discussing Team D's use of politeness strategies across modules (Module 3, Module 4, and Module 5).

Table 4.4 shows the number of functional chunks with and without at least one kind of politeness move across modules and modes. The percentage number in the parentheses in the cells indicated the percentage of functional chunks with or without any politeness move over the total number of functional chunks per module. For example, for Module 3 in synchronous online discussion, Team D had a total of 499 functional chunks; 180 (36%) of the 499 chunks had no politeness move; 319 (64%) of the 499 chunk had at least one kind of politeness move. Although for each module, Team D seemed to use politeness moves for more than half of the total functional chunks per module, a chi-square test of significance revealed that the frequencies of functional chunks without any polite move and with at least one politeness move were independent of modules,  $\chi^2(df=2)= 5.267$ ,  $p>0.05$ , not significant. That is, as the semester went on,

Team D's percentages of functional chunks with or without any polite move were not significantly different across modules in synchronous online communication.

On the other hand, in asynchronous online discussion, the result of a chi-square test of significance indicated that Team D's frequencies of functional chunks without any polite move and with at least one politeness move significantly differed across modules,  $\chi^2(df=2)= 16.111, p<0.05$ . This significant difference seemed to be caused by the relatively little amount of data collected in Module 4 and Module 5 (for Module 4, only 11 written message were posted to the TeachNet discussion board; for Module 5, 29 written messages were posted), leading to relatively few numbers of functional chunks for these two modules. In addition, it seemed that in Module 5, Team D used fewer politeness strategies in their written posts (only 28% of the total functional chunks with at least one politeness move). This may be explained by the fact that for Module 5, Team D mainly used the TeachNet asynchronous discussion board to address a warm-up exercise for the WebQuest, asking them to review several existing WebQuest websites provided by the instructor, and to choose the two best and the two worst WebQuests considering different aspects (e.g., technophile, affiliator, altitudinist, moderator, and efficiency expert). Each Team D member chose a role and reported his/her choice of the two best and the two worst from his/her role's perspective. The messages serving this purpose seemed very direct and clear, simple reports of the result of their reviews without any politeness strategy. The following message from George exemplified this kind of posts:

*Two best: (1) Conflict Yellowstone Wolves (2) The Gilded Age  
Two worst (1) Extra, Extra (2) Who Wants to be a Millionaire*

A message like the above example would not receive any politeness codes. Even though Team D's members included their rationale and elaboration for their choices in some messages, this kind of post still seemed to have fewer politeness strategies. For example, in Katrina's message elaborating her reasons for selecting the two worst WebQuest, she wrote:

*Two worst ones:  
1- The Gilded Age  
I don't think the goal and the tasks for this WebQuest match. The goal here is related to documentary production only. Why not explore History content instead, and just use the technology as a tool for developing the final product. Not only that, but the roles seem to be not very well thought of. The historian just has too much to research. Besides if the teacher wants the students to learn about documentary, a PowerPoint is not the best tool for that. It's actually completely inappropriate.  
2- Extra, Extra  
The same thing happens in this WebQuest. How are the students going to explore the world of The Great Gatsby if there is nothing on the WebQuest that supports that. The students are dealing here with interview. I don't see the connection.*

In this message, Katrina only used one politeness move (N2—hedging) even though her message seemed to evaluate something, a type of message that had the potential to be face-threatening. However, this evaluation did not function to evaluate other team members' work, utterances, or messages, but rather to evaluate the existing public WebQuest sites that were developed by unknown others. Therefore, it was possible that a message mainly evaluating the works done by someone who was not directly and explicitly related to the interlocutors involved in the conversation was regarded as having less potential for face-threatening, thus, leading to fewer politeness moves used.

Table 4.4 Frequencies of Functional Chunks with and without at Least One Kind of Politeness Move across Modules and Mode

Modes	Synchronous			Asynchronous		
# of chunks	Module 3	Module 4	Module 5	Module 3	Module 4	Module 5
Total # of chunks	499	486	492	278	28	87
Total # of chunks without any polite move (%)	180 (36%)	203 (42%)	174 (35%)	139 (50%)	11 (39%)	63 (72%)
Total # of chunks with politeness moves (%)	319 (64%)	283 (58%)	318 (65%)	139 (50%)	17 (61%)	24 (28%)

Although it seemed that from Team D's data, there was no evidence to support the use of politeness changing over time as the semester progressed, it may be worth looking into Team D's use of positive and negative politeness strategies across modules. In order to cancel out the effect of discrepancy in the amount of raw data and in the total number of functional chunks per module, instead of reporting raw frequencies, Table 4.5 presents the number of positive and negative politeness strategies used per functional chunk. The numbers in the cells of Table 4.4 were calculated by dividing the number of positive or negative politeness strategies by the total number of functional chunks with at least one politeness move for a certain module given a specific mode of communication.

Table 4.5 Number of Positive and Negative Politeness Strategies Used Per Chunk with Politeness Move across Modules and Modes

Modes	Synchronous			Asynchronous		
	Module 3	Module 4	Module 5	Module 3	Module 4	Module 5
Positive	1.1	1.1	1.3	1.1	1.1	1.0
Negative	0.5	0.3	0.7	0.3	0.4	0.2
Total	1.6	1.4	2.0	1.4	1.5	1.2

Figure 4.9 depicts trends in the number of politeness strategies used per functional chunk with politeness move across modes in Team D's synchronous online discussion. Figure 4.10 presents the same trends for the number of politeness strategies used per functional chunk with politeness move across modes in Team D's asynchronous online discussion. It seemed that the trends from Module 3 to Module 5 for both modes of communication were consistent with the trends in percentages shown in Table 4.4. There was no evidence to show either an increasing or decreasing trend across modules. However, it was apparent that Team D used positive politeness strategies more than negative politeness strategies no matter which module and no matter which mode of communication. This may be explained by the fact that there were more categories of positive politeness strategies than negative politeness strategies (16 vs. 10). Nevertheless, this finding may also suggest that in a collaborative group, like Team D, needing a large degree of collaboration among team members in order to complete their team products, the positive politeness strategies may be used more frequently than the negative politeness strategies, in that, according to Morand and Ocker (2003), positive politeness strategies can be used to shorten social distance among interlocutors, while negative politeness strategies are used to demonstrate distance and circumspection. In that this course required a great deal

of collaboration, Team D's members may have used more politeness strategies as an effort to develop sense of community in the group within a short period of time.

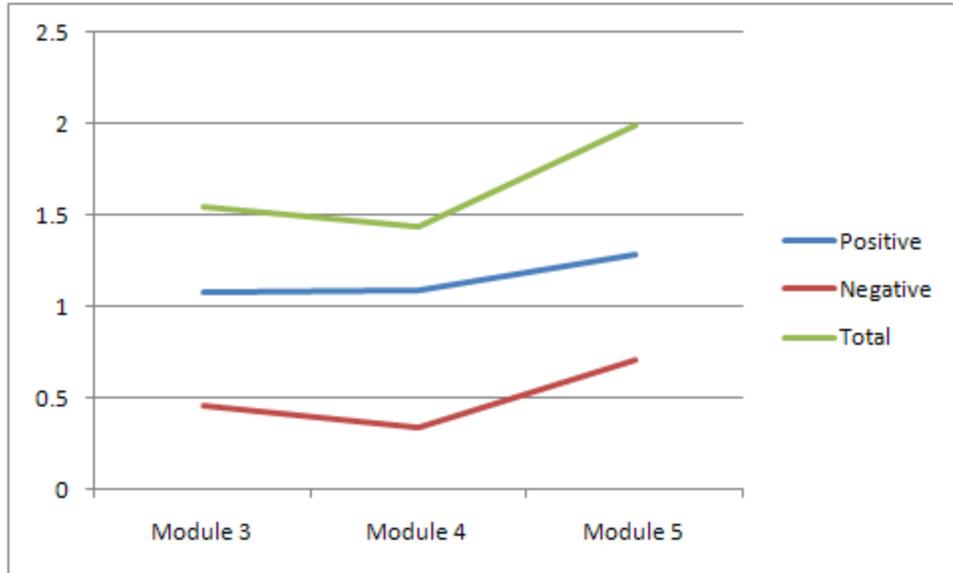


Figure 4.9 Trend of Number of Politeness Strategies Used Per Chunk with Politeness Move in Synchronous Online Discussion

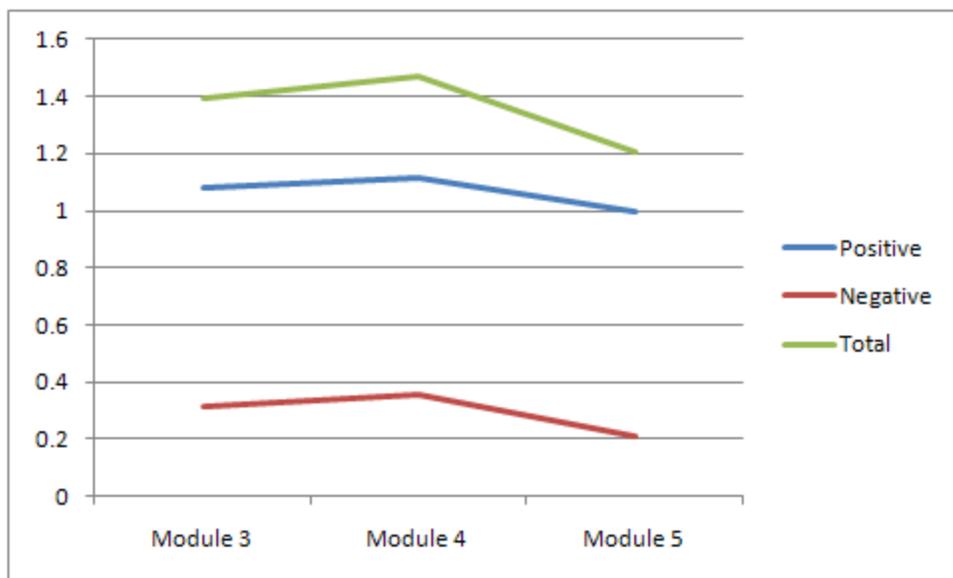


Figure 4.10 Trend of Number of Politeness Strategies Used Per Chunk with Politeness Move in Asynchronous Online Discussion

## Discourse Functions and Politeness Strategies

The following three sections, including this one, report the results addressing research question 4 in three aspects: (a) discourse functions, (b) modes of online communication, and (c) sense of community respectively. This section aims at exploring the relationship between discourse functions in posted messages/utterances and Team D's use of politeness strategies. I first discuss discourse functions, and then talk about the relationship of discourse functions to Team D's use of politeness strategies.

### Discourse Functions

Table 4.6 presents the frequency and percentage of each kind of discourse function occurring in Team D's asynchronous and synchronous online discussion, and the total frequency for both modes. As shown in Table 4.6, when summed across the two modes (see the last column), the two functions that were most common were idea explaining (function #5a) with 233 chunks and social function (function #9) with 228 chunks. Frequencies for the functions of managing the group's task (#8c), positive evaluation (#6a), information seeking (#1), and information providing (#3) were fairly high, and the functions of experience sharing (#4), supplementing others' utterances (#10b), as well as negative evaluation (#6b) were rarely used. A chi-square test of significance revealed that the distribution of functional chunks across the different functions was not random,  $\chi^2 (15) = 859.5, p < .05$ .

Table 4.6 Frequency of Discourse Function in Team D's Online Conversation

Discourse Function	Asynchronous	%	Synchronous	%	Both modes
1—Information seeking	5	1.27	171	11.58	176
2—Discussion generating	5	1.27	32	2.17	37
3—Information providing	24	6.11	140	9.48	164
4—Experience sharing	2	0.51	4	0.27	6
5a—Idea explaining	36	9.16	197	13.34	233
5b—Giving alternative view	18	4.58	53	3.59	71
6a—Positive evaluation	52	13.23	142	9.61	194
6b—Negative evaluation	1	0.25	9	0.61	10
7a—Self-evaluation learning	55	13.99	23	1.56	78
7b—Self-disclosure	16	4.07	96	6.50	112
8a—Managing the group's talk	20	5.09	94	6.36	114
8b—Previewing own message	27	6.87	24	1.62	51
8c—Managing the group's task	47	11.96	166	11.24	213
9—Social	84	21.37	144	9.75	228
10a—Notifying receiving an message	1	0.25	174	11.78	175
10b—supplementing others' utterance	0	0.00	8	0.54	8
TOTAL	393		1477		1870

The finding that the chunks of discourse serving social function (#9), idea explanation (#5a), managing the group's task (#8c), and positive evaluation (#6a) appeared frequently in Team D's online discussion seemed to reflect the nature of a collaborative group. The social functional chunks (#9) can be used to connect team members. For synchronous online discussion, social utterances usually occurred close to the end of the voice chat session, such as saying "goodbye" to each other before signing

off. For asynchronous online discussion, many social functional chunks were found at the beginning and the end of written messages when they were composed like email messages; for example, when Team D's members posted a message beginning with a greeting with address such as "Hey Team", and ending with the writer's name as a signature, the beginning and ending parts would be coded as two social functional chunks. This may have led to the result that social functional chunks were the most frequent function (21.37%) found in Team D's asynchronous online discussion. The frequent occurrence of idea explanation (#5a) and positive evaluation (#6a) suggested that Team D engaged in an elaborative and discussing process, and they tended to give positive feedback to peers in both synchronous and asynchronous modes of online discussion. The frequent appearance of functions managing the group's task (#8c) in both communication modes particularly highlighted the fact that Team D worked collaboratively as a team to complete their team projects, showing that they brought up and negotiated the issues related to project management frequently. The high frequency of information seeking (#1) and information providing (#3) functions particularly in synchronous online discussion reflected the voice issue occurring in Second Life voice chat sessions. The utterances used to confirm if other team members could hear one's voice clearly, such as "Can you hear me?" were coded as information seeking functional chunks because the speakers seemed to seek a particular answer that he/she assumed others know. Likewise, the utterances that other team members addressing the previous information seeking questions by answering "Yes, I can hear you clearly" were coded as information providing functional chunks. This phenomenon would not be found in

asynchronous online discussion, and inflated the frequency of information seeking and providing functional chunks in synchronous online discussion, which highlighted the degree of voice issues in Second Life influencing the team conversation.

The functional chunks of sharing experience (#4) were used least frequently in Team D's both synchronous and asynchronous online discussions. This finding suggested that in Team D's online discourse, they rarely needed to give a specific personal example of a construct related to their projects or of what someone else had said in a previous discussion. This may be caused by the fact that associating what is being learned from a course with a personal example is used to demonstrate the application of the learned knowledge. However, engaging in hands-on collaborative projects related to the course itself seemed to provide many chances to apply prior knowledge, probably replacing the need to show application by associating knowledge with personal experiences. In addition, the course required students to do self-reflection at the end of each module. The sharing of personal experiences was usually found in students' self-reflection blog entries, and the online discussion seemed to be more centered on the business of the projects given the tight project schedule. This finding may further suggest that distribution of discourse functions could reflect the nature and the focus of the online discussion. The discourse function of supplementing others' utterance (#10b) emerged from Team D's synchronous online discussion in Second Life. Although it was a discourse function category that may be seen commonly in real-time oral conversation, supplementing others' utterances seemed to carry the risk of being interpreted as an impolite move, especially when the speaker made a wrong guess of what others wanted

to say. Accordingly, even though this function was a new emerging category from these data, it seemed reasonable to see this function occurring less frequently in Team D's synchronous online conversation. The few occasions of negative evaluation (#6b) seemed to be consistent with the finding that there was a high frequency of positive evaluations (#6a) in both synchronous and asynchronous online communication, though these two categories were not necessarily exclusive of each other. There were two members, Katrina and Bill, who tended to "argue" with each other during Team D's online discussion. However, they rarely directly expressed their disagreement. Instead, Katrina would do what she suggested in the whole-class online discussion about netiquette as described in the section of concerns about netiquette and politeness strategy: she would give a short agreement or appreciation first and then present her point of view. By contrast, Bill would often omit expressing his disagreement explicitly and go directly to elaborating his ideas.

#### Relationship of Discourse Function to Politeness Strategy

Table 4.7 shows the number of functional chunks without and with at least one politeness strategy for each discourse function. The two percentage columns were calculated by dividing the number of chunks without or with at least one politeness move by the total number of chunks for each discourse function (the number in the Total column).

Table 4.7 Numbers of Chunks without and with at Least One Politeness Move for Each Function

Discourse Function	Without Polite Move	%	With at Least One Polite Move	%	Total
1—Information seeking	127	72.16	49	27.84	176
2—Discussion generating	5	13.51	32	86.49	37
3—Information providing	127	77.44	37	22.56	164
4—Experience sharing	5	83.33	1	16.67	6
5a—Idea explaining	80	34.33	153	65.67	233
5b—Giving alternative view	21	29.58	50	70.42	71
6a—Positive evaluation	26	13.40	168	86.60	194
6b—Negative evaluation	8	80.00	2	20.00	10
7a—Self-evaluation learning	46	58.97	32	41.03	78
7b—Self-disclosure	73	65.18	39	34.82	112
8a—Managing the group’s talk	42	36.84	72	63.16	114
8b—Previewing own message	38	74.51	13	25.49	51
8c—Managing the group’s task	47	22.07	166	77.93	213
9—Social	103	45.18	125	54.82	228
10a—Notifying receiving an message	27	15.43	148	84.57	175
10b—supplementing others’ utterance	1	12.50	7	87.50	8
TOTAL	776		1094		1870

A null hypothesis that the number of chunks either with or without at least one politeness move would be independent of discourse function was tested by a chi-square test of significance. Results indicated that the null hypothesis should be rejected, that is, the use of politeness strategies differed across the different functions,  $\chi^2$  (df = 15) = 395.7,  $p < .05$ . It seemed that for the functions of information seeking (#1), information providing (#3), experience sharing (#4), negative evaluation (#6b), self-evaluation learning (#7a), self-disclosure (#7b), and previewing own message/utterance (#8b), Team D’s members tended to use fewer politeness moves. For the functions of discourse generating (#2), idea

explaining (#5a), presenting alternative view (#5b), positive evaluation (#6a), managing the group's talk (#8a), managing the group's task (#8c), social function (#9), notifying receipt of a message (#10a), and supplementing others' utterance (#10b), they tended to use more politeness moves. This finding was consistent with the results of Schallert et al. (2009) that students seemed to worry less about politeness when their messages/utterances were relatively more related to themselves such as experience sharing (#4), self-evaluation learning (#7a), self-disclosure (#7b), and previewing own message/utterance (#8b). On the other hand, when their messages/utterances seemed to be more directed to others, they seemed to worry more about potential face threats.

The exceptions for this point found in Team D's online discussion were the cases of information seeking (#1) and information providing (#3) functions, and of negative evaluation (#6b) function. For the case of information seeking (#1) and information providing (#3) functions, although these two functions may not be as potentially face-threatening as other functions more directed to others, posing an information seeking question held the possibility of carrying a certain degree of face threat because it demanded a sort of response. However, in Team D's online discussion, as mentioned above, the utterances related to voice issues in Second Life were coded as information seeking and the corresponding responses were coded as information providing. The relevant utterances seemed short and clear, such as "Can you hear me?" "Yes, I can hear you," and "Your voice is choppy." It was reasonable that when Team D members worried more about their voice quality that could impact their conversation to a large degree, they seemed to worry less about politeness. The concerns with hearing each other

clearly so that the discussion could continue outweighed the concerns with face saving. The prevalence of voice-related utterances in Second Life conversation led to the finding that Team D tended to have fewer politeness moves for the discourse function of information seeking (#1) and information providing (#3).

The case of the negative evaluation (#6b) function, posing a disagreement with a previous utterance/message, seemed to carry a high potential for face threats. A situation that could explain Team D's exception to this expectation was that, as suggested by the Schallert et al. (2009) study when one posed a disagreement with a previous utterance/message, the politeness move may not be associated with the functional chunk expressing the disagreement, but rather accompanying the subsequent functional chunk from the same person. For example, in Team D's voice chat session for Module 5, Katrina suggested the team consider the age level of potential visitors when they designed the learning activity for their WebQuest project. However, Bill did not agree with this idea. He said:

*I don't think our instructor is too stuck on what age level. (Chunk 1:#6b)  
We (P12) can xxx it on the age level. I mean (N2) it could (N2) go down to the middle schools. I mean (N2) it could (N2) go all the way down to the sixth grade or to 12th grade. (Chunk 2:#5b)*

This utterance was divided into two functional chunks. The first functional chunk was given a function code of negative evaluation (#6b) because Bill posed a disagreement with Katrina's previous utterance. The second functional chunk was coded as presenting an alternative perspective (#5b). There was no politeness move associated with the first functional chunk expressing the disagreement. However, five politeness moves were

coded in the subsequent functional chunk from Bill to redress the face threat posed by both the preceding and current functional chunks: one positive politeness strategy, including the speaker and the hearer in the speech act (P12), and four negative politeness strategies, hedging (N2). This finding was consistent with the results described previously about the possibility of delayed face saving moves.

Table 4.8 presents the number of positive and negative strategies that different function chunks received excluding the chunks with no politeness move whatsoever. The two percentage columns were calculated by dividing the number of positive and negative politeness moves by the total number of politeness moves found for each discourse function (the number in the Total column). I tested the null hypothesis that positive and negative politeness strategies would be displayed equally across different discourse functions. Results of a chi-square test indicated that discourse function was differentially associated to a significant degree with the use of positive versus negative politeness strategies,  $\chi^2 (df = 15) = 225.3, p < .05$ . Overall, Team D used positive politeness strategies more than negative politeness strategies. As discussed in the previous section, this may be caused by the fact that the categories of positive politeness strategies were more than the categories of negative politeness strategies (16 vs. 10). This may also reflect that working collaboratively as a team to complete three complex collaborative projects in a semester may lead to more positive politeness strategies used to shorten social distance and to develop sense of in-group membership in a short period of time.

Table 4.8 Numbers of Positive and Negative Politeness Moves Used for Different Functions

Discourse Function	Positive Politeness Moves	%	Negative Politeness Move	%	Total
1—Information seeking	47	88.68	6	11.32	53
2—Discussion generating	43	84.31	8	15.69	51
3—Information providing	32	59.26	22	40.74	54
4—Experience sharing	0	0.00	1	100.00	1
5a—Idea explaining	235	58.60	166	41.40	401
5b—Giving alternative view	68	56.20	53	43.80	121
6a—Positive evaluation	189	96.92	6	3.08	195
6b—Negative evaluation	1	33.33	2	66.67	3
7a—Self-evaluation learning	35	60.34	23	39.66	58
7b—Self-disclosure	27	50.94	26	49.06	53
8a—Managing the group’s talk	61	57.55	45	42.45	106
8b—Previewing own message	8	44.44	10	55.56	18
8c—Managing the group’s task	240	66.12	123	33.88	363
9—Social	113	79.02	30	20.98	143
10a—Notifying receiving an message	150	100.00	0	0.00	150
10b—supplementing others’ utterance	7	87.50	1	12.50	8
TOTAL	1256		522		1778

Figure 4.11 presents the analysis in a bar chart. Each bar represents the number of positive (dark) and negative (light) politeness strategies associated with each discourse function per functional chunk. To allow a comparison of preponderance of positive and negative politeness strategies corrected for the number of chunks serving a particular function, the numbers of positive and negative politeness per function used to draw the chart was calculated by dividing the numbers of positive and negative politeness strategies for each discourse function showed in the second and the fourth column of

Table 4.8 with the total number of functional chunks with at least one politeness move for each discourse function showed in the fourth column of Table 4.7.

For the functions of idea explaining (#5a), presenting an alternative view (#5b), self-disclosure (#7b), and managing the group's conversation (#8a), the use of positive politeness moves was more than the use of negative politeness moves but only slightly so. For the functions of information seeking (#1), discussion generating (#2), information providing (#3), positive evaluation (#6a), self-evaluation learning (#7a), managing the group's task (#8c), social function (#9), notifying receiving an utterance (#10a), and supplementing others' utterance (#10b), the use of positive politeness strategies seemed to exceed the use of negative politeness strategies more obviously, especially for the functions of positive evaluation (#6a) and notifying receiving an utterance (#10a). The two most frequent positive politeness strategies associated with the chunks serving the function of positive evaluation (#6a) were noticing and attending to the reader's/hearer's wants or needs (P1) and giving gifts to the reader/hearer (P15). It seemed that Team D usually expressed their positive evaluation by showing agreement and appreciation. As to the function of notifying receiving an utterance (#10a), it emerged from Team D's synchronous voice chat in Second Life due to the need for being responsive when engaging in such a real-time oral conversation in a virtual world with the presence of an avatar but lack of clues about the presence of the real person behind the avatar. The occurrence of this function category seemed to be highly associated with positive politeness strategy P1, noticing and attending to the reader's/hearer's wants or needs. For the functions of experience sharing (#4), negative evaluation (#6b), and previewing own

message/utterance (#8b), the use of negative politeness strategies exceeded the use of positive politeness strategies. This finding may result from the relatively fewer number of functional chunks serving these three discourse functions found in Team D’s online discussion.

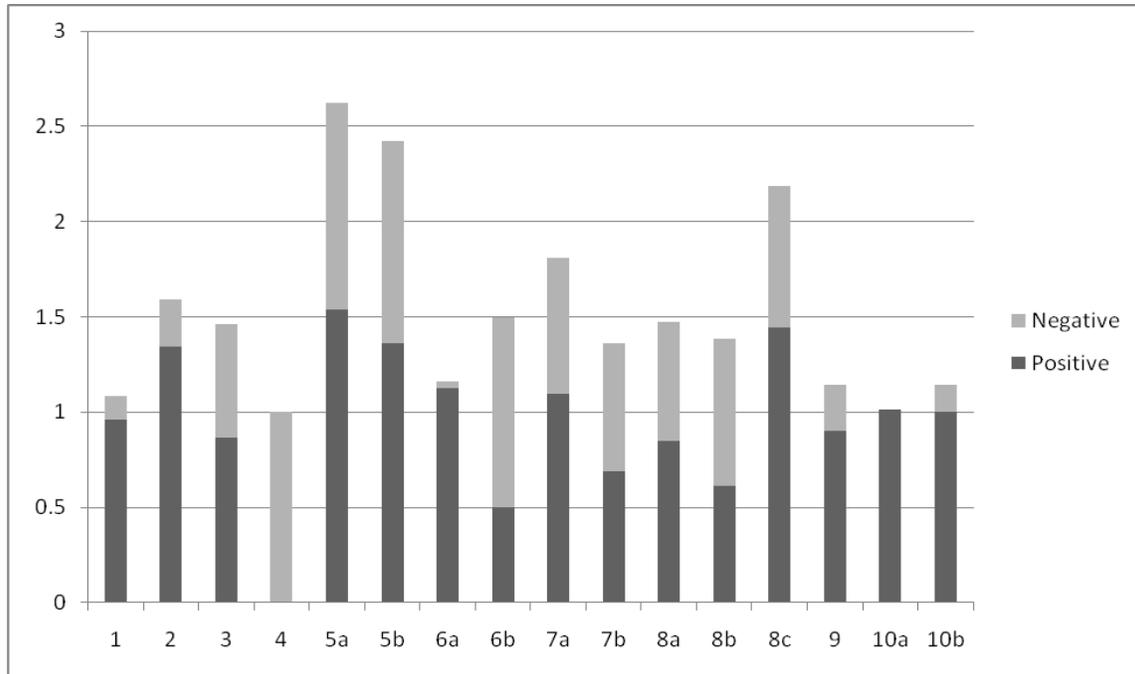


Figure 4.11 Number of Positive and Negative Politeness Strategies per Functional Chunk

### Modes of Online Communication and Politeness Strategies

This section addresses the second sub-question of Research Question 4: how do modes of online communication relate to students’ use of politeness strategies? Although the discussion on Team D’s use of politeness strategies across the two modes of online communication (synchronous and asynchronous) have been considered throughout this chapter, this section particularly focuses on the different nature of online discussion in

these two modes of communication with an overall comparison of Team D's use of politeness strategies in the two modes followed by a detailed comparison of Team D's use of politeness strategies in turn.

#### Different Nature of the Two Modes of Online Communication

Team D's synchronous online discussion took place in Second Life using real-time voice chat, while the team's asynchronous online discussion available for my data collection occurred in TeachNet via posting written messages to discussion board. Based upon Team D's online discourse, I categorize the differences between the two modes of online communication into three aspects: first, the purposes of using these two modes of communication tools, second, the characteristics of messages/utterances exchanged in these two modes, and last, the flow of conversation in these two modes. With regard to purpose for using these two modes of communication tools, Team D used asynchronous online discussion tools (i.e., TeachNet discussion board) to report their work, elaborate their thoughts, and share a relatively huge amount of information either written in or attached to the posts, while they used the synchronous online discussion tools, that is, Second Life voice chat, to gather information, exchange their ideas back and forth, and make decisions related to their projects in real-time. This difference in purposes for using the two types of communication media also led to differences in the topics/content discussed in these two modes. This proposition may be supported by the different distribution or combination of discourse functions across the two modes of communication, as discussed in the section of Discourse Functions and Politeness

Strategies and shown in Figure 4.12. For example, Team D proportionally had more self-reflection learning (#7a) functional chunks in asynchronous mode than in synchronous mode because the team's purposes for using TeachNet were primarily to report assigned tasks, elaborate thoughts, and share resources and information, functions that seemed to be more suitable for self-reflection on their learning. In addition, because except for Second Life as the major synchronous communication media for Team D, their major asynchronous communication tool was email, rather than TeachNet, the data available for me to collect was different. I collected relatively less data from TeachNet than from Second Life.

As for aspects of characteristics of messages/utterances exchanged via these two modes of communication media, several differences were observed in the written form when compared to the oral form of communication. Utterances in Second Life may show repetition (e.g., "*I guess, I guess my question is...*") and colloquial fillers (e.g., *like* and *kinda*) that are commonly heard in oral communication. For the repetition example, I did not code the *I guess* twice as N2 (hedging) politeness move to avoid unnecessary inflation of politeness moves in synchronous online discussion. By contrast, if it was the case of "*I guess, maybe....*," the *I guess* and *maybe* would be coded as two N2 (hedging) politeness moves because they were different enactments of a politeness move that I considered I needed to take into account. As for repetition involving rephrasing of the complete sentence with almost the same politeness moves, such as "*I mean(N2) it could(N2) go down to the middle schools. I mean(N2) it could(N2) go all the way down to the sixth grade or to 12th grade,*" I decided to code these two sentences as two separate

ones to reflect the speaker's effort to rephrase the whole sentence. As to the colloquial filler, *like*, it seemed not to be associated with any politeness strategies; however, *kinda* would be coded as N2 (hedging) if applicable. In addition, many utterances in Second Life sounded unclear to me when I transcribed and analyzed them. When transcribing, I put "xxx" as place holders for inaudible words. When coding discourse function, if I could make a decision on what function the unintelligible chunk of utterance seemed to serve based on the context, I would give a discourse function code to the chunk. However, if the inaudible part made the utterance unclear as to discourse function, I ignored the whole utterance. When I coded politeness, no politeness code was given to the place holders.

Moreover, utterances in Second Life may have more contextualization cues (e.g., tone, intonation, speech speed, volume, avatar gesture, and avatar movement) that could help me in deciding the codes for discourse function as well as for politeness strategies. These three characteristics of utterances in Second Life voice chat sessions would not be found in the TeachNet written posts that mostly were composed in an email-like form as discussed earlier. Furthermore, the asynchronous mode of communication allowed more time to deliver a relatively big chunk of written message; whereas, the synchronous mode required the real-time interchange among the interlocutors to occur in a prompt manner. Accordingly, the average length of oral utterances tended to be shorter than the length of written posts. This led to differences in average length of functional chunks derived from the utterances and posts. The discrepancy in affordance and constraint provided by these two modes of communication in time and length aspects also reflected that Team D used

these two modes for different purposes. Speaking of the flow of these two modes of online communication, in addition to the needs to interact in a timely manner or not in Second Life or in TeachNet respectively, the asynchronous online discussion in TeachNet allowed the possibility of more than one discussion topic going on at the same time through different discussion threads, whereas the synchronous online discussion in Second Life afforded only one person to hold the floor at a time (excluding temporary interruptions and collisions) to avoid interfering with each other. The differences between synchronous and asynchronous modes of communication discussed above may provide the grounds for the following comparison in Team D's use of politeness strategies between these two modes.

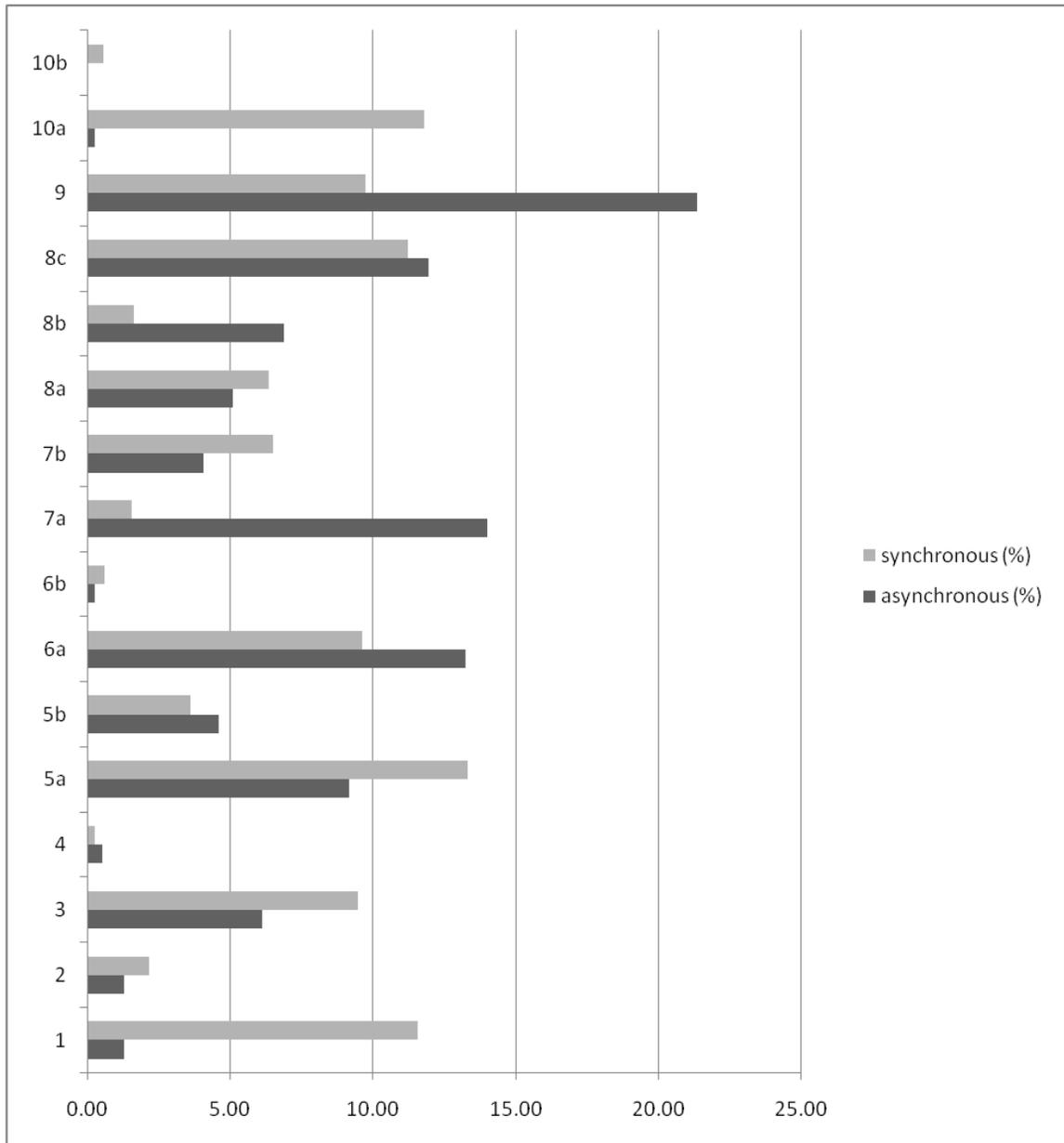


Figure 4.12 Percentages of Discourse Functions in Asynchronous and Synchronous Modes

## Team D's Use of Politeness Strategies across Modes of Communication

Table 4.9 presents the numbers of functional chunks without and with at least one politeness move across modes of online communication (asynchronous and synchronous). Result of a chi-square test revealed that the number of functional chunks without and with at least one politeness move differed significantly across modes,  $\chi^2$  (df = 1 with Yates' correction) = 36.458,  $p < .05$ . It seemed that Team D tended to be more polite in synchronous online discussion than in asynchronous online discussion. This result may have been caused by Team D's different purposes for using these two communication media. When Team D's members used the TeachNet discussion board to report/submit their assigned work and to share relevant information and resources, they tended to use fewer politeness moves because they were reporting or sharing some relatively objective information. Team D mainly used the TeachNet discussion board for these purposes as discussed above. In addition, the characteristic of colloquial repetition commonly seen in Second Life voice chat sessions may possibly have contributed some inflation in the number of politeness moves found in the synchronous mode of communication.

Table 4.10 presents the numbers of positive and negative politeness strategies associated with the functional chunks having at least one politeness strategy across modes of online communication (asynchronous and synchronous). A second chi-square test also revealed that mode of discussion influenced the distribution of positive and negative politeness strategies,  $\chi^2$  (df = 1 with Yates' correction) = 6.770,  $p < .05$ . Although for both modes, Team D seemed to use positive politeness strategies more than negative

politeness strategies, the preponderance of using positive politeness strategies over negative politeness strategies seemed to be more obvious in asynchronous mode than in synchronous mode. Following this overall comparison in the use of positive and negative politeness strategies across modes, a detailed comparison is presented in the rest of this section.

Table 4.9 Numbers of Chunks without and with at Least One Politeness Move across Modes

Modes of Communication	Without Polite Move	%	With at Least One Polite Move	%	Total
Asynchronous	216	54.96	177	45.04	393
Synchronous	560	37.91	917	62.09	1477
TOTAL	776		1094		1870

Table 4.10 Numbers of Positive and Negative Politeness Moves Used across Modes

Modes of Communication	Positive Politeness Move	%	Negative Politeness Move	%	Total
Asynchronous	193	77.82	55	22.18	248
Synchronous	1063	69.48	467	30.52	1530
TOTAL	1256		522		1778

Figure 4.13 presents the percentage of each politeness strategy used in asynchronous (dark) and synchronous (light) modes of online communication. Note that to cancel out the effect of discrepancy in the amount of data collected in the two modes, I used percentage instead of raw frequency to draw the chart. For each mode of discussion, the percentage numbers were calculated by dividing the frequency of a politeness strategy used in the mode with the total number of politeness moves found in the mode. The distribution of the use of each politeness strategy seemed to differ across

modes, consistent with the results from the overall comparison. The difference in the use of a certain politeness strategy between synchronous and asynchronous modes seemed to be obvious in the following politeness strategies: P1(Noticing and attending to reader's/hearer's wants or needs), P3(Intensifying interest in the writer's/speaker's own contribution by using words that make one's own comment more interesting) , P8 (Joking—Using humor to indicate shared connections with the reader/hearer), P9 (Asserting or presupposing the writer's/speaker's knowledge of the reader's/hearer's wants), N2 (hedging), and N4 (minimizing the imposition) in the direction of occurring more often in the synchronous mode than in the asynchronous mode; P2 (exaggerating interest in, approval of, or sympathy with a previous message/utterance), P4 (Using in-group identity markers to convey in-group membership), P5 (Seeking agreement), P7 (Gossiping and small talk), P13 (Giving or asking for reasons for an imposition on the reader/hearer), P15 (Giving gifts to the reader/hearer), N3 (Being pessimistic), and N6 (Apology) in the direction of occurring in asynchronous mode more frequently than in synchronous mode.

This finding suggested the likelihood that some politeness strategies may be more appropriately used in oral synchronous online communication than in written asynchronous online discussion, and some may be more appropriate in the opposite fashion. As discussed above, given the affordance and limitation provided by the two modes of online communication in terms of expected response time and average length of messages/utterances, the results may suggest that some politeness strategies tended to require more time and length to express, that is, more sophisticated language than others.

In other words, some politeness moves may be given up when there are time or length constraints, whereas some others may seem necessary no matter in which mode of communication. One example would be the result that P15 (Giving gifts to the reader/hearer) politeness strategy occurred much more frequently in the asynchronous mode than in the synchronous mode, as discussed in the section of Team D's Use of Politeness Strategies. Also, the result that P12 (Including the writer/speaker and reader/hearer in the speech act) occurred frequently in both modes implied the importance of this politeness strategy in Team D's collaboration. In addition, given the difference in form of expression between synchronous oral communication and asynchronous written communication, the results suggest that some politeness strategies were more suitable or required for synchronous oral communication; some were more applicable for asynchronous written communication. For example, the preponderance of using P3 (Intensifying interest in the writer's/speaker's own contribution by using words that make one's own comment more interesting) in synchronous oral mode than in asynchronous written mode emphasized a colloquial feature in expressing P3 politeness move. The dominance of using P4 (Using in-group identity markers to convey in-group membership) in asynchronous written mode over that in synchronous oral mode highlighted the expressions of P4 were more applicable in written form than in oral one. The prevalent occurrences of using P1 (Noticing and attending to the reader's/hearer's wants or needs) in synchronous oral mode reflected the fact that there were insufficient clues indicating the presence of real persons behind avatars in Second Life voice chats. Also, given that Team D used the two modes of communication for different purposes

which entailed that different types of topics/content covered in the two modes of online discourse as mentioned above, the results suggested that different politeness strategies may be suitable for different types of discussion content across modes. This is shown in Figures 4.14 and 4.15, presenting the numbers of positive and negative politeness strategies per functional chunk in synchronous and asynchronous online discussion respectively, and Tables 4.11 and 4.12, listing the frequencies of each politeness strategy for the different functions in synchronous and asynchronous modes, corresponding to Figures 4.14 and 4.15 respectively. For example, the functional chunks of self-disclosure (#7b) seemed to be associated differently in distribution of positive and negative politeness strategies across modes (See Figure 4.14 and Figure 4.15).

Further examination of Tables 4.11 and 4.12 revealed that N2 (hedging) was associated mostly with functional chunks of self-disclosure in synchronous mode, whereas N6 (apology) and P13 (giving reasons for an imposition on the reader/hearer) were most frequently used for self-disclosing in asynchronous mode. By looking into the actual discourse (transcripts and written messages), I saw in synchronous mode that Team D members frequently self-disclosed the situation that they were having difficulty hearing other members' voice. For example, in the first Second Life voice chat meeting, Younghee's presence brought on the problem of voice distortion and feedback. When Younghee tried to confirm something with Katrina, every time he started to talk, the distortion occurred, and Katrina had to interrupt him several times by saying "*I couldn't (N2) hear you.*" Politeness strategy N2 (hedging) seemed to apply to the example above for softening the imposition of Katrina's interruption of Younghee's talk. On the other

hand, in asynchronous mode, the self-disclosure function mostly occurred on the occasion of expressing personal/family reasons when negotiating meeting time. For instance, on the TeachNet discussion board, Bill invited Younghee to meet up either online or face-to-face to work on their assigned tasks for the Wiki project. Younghee was unable to accept this invitation due to a family obligation on Saturday. He said, *“Sorry(N6), Bill. On Saturday, I should care my son, since my wife go to school(P13).”*

Politeness strategies N6 (apology) and P13 (giving reason for an imposition on the reader) were applied to Younghee’s self-disclosure. Apparently, the same example of self-disclosure from the synchronous mode would not happen in the asynchronous mode, but the example from the asynchronous mode could easily occur in the synchronous mode as well. The above two examples suggested that, first, even under the same discourse function, modes of online discussion could still influence the variety of topics covered within the function due to the different affordances and constraints provided by each mode of communication. The second suggestion was that politeness strategy N2 (hedging) seemed suitable for the discussion content regarding self-disclosing a communication tool problem to soften the face threat imposed on the person who caused or was affected by the problem in a prompt manner. Politeness strategy N6 (apology) and P13 (giving reason for an imposition on the reader/hearer) seemed applicable for the discussion content concerning self-disclosing a personal/family reason to redress the face threat caused by a turn-down of a request.

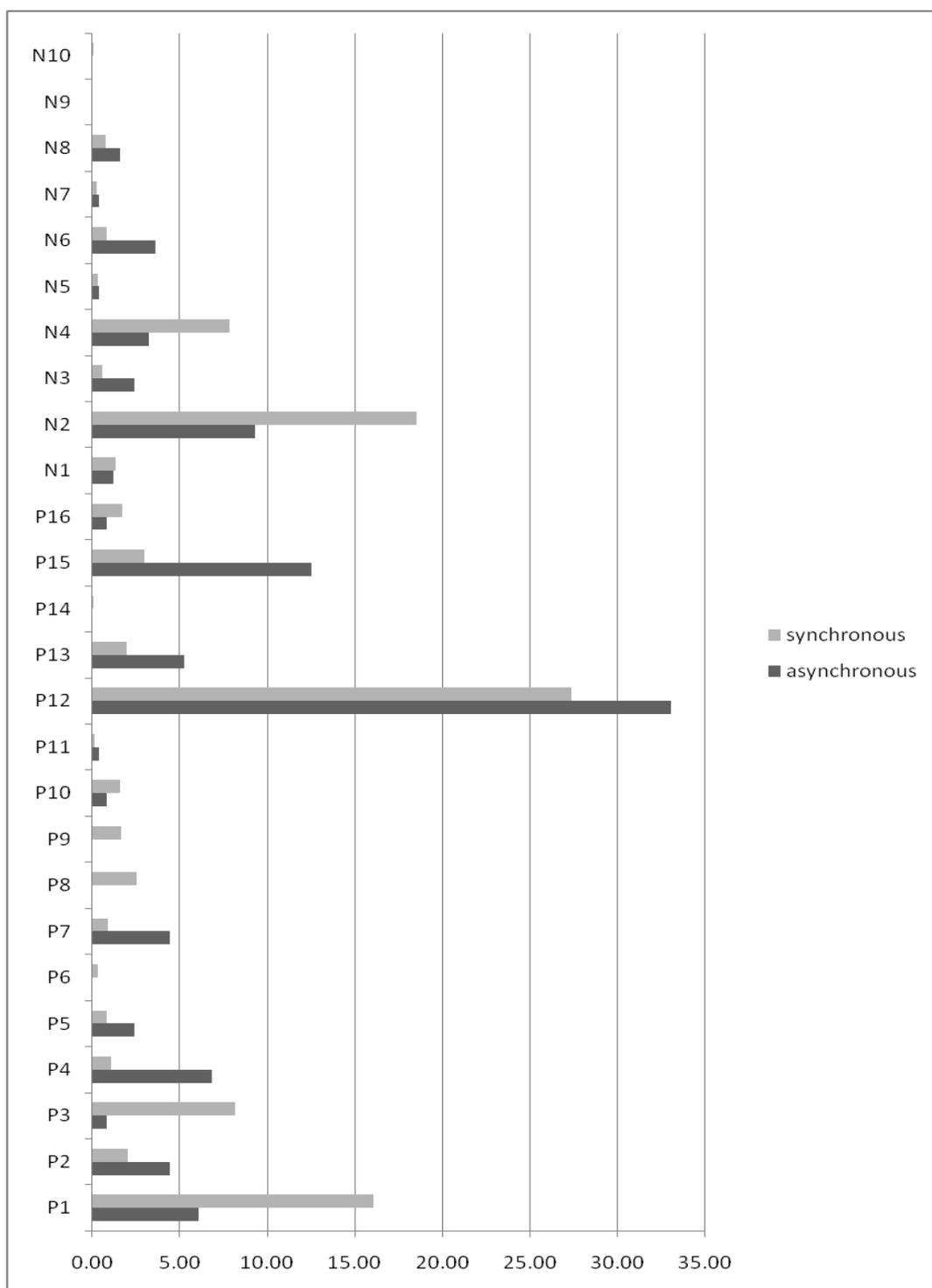


Figure 4.13 Percentages of Politeness Strategies Used in Asynchronous and Synchronous Modes

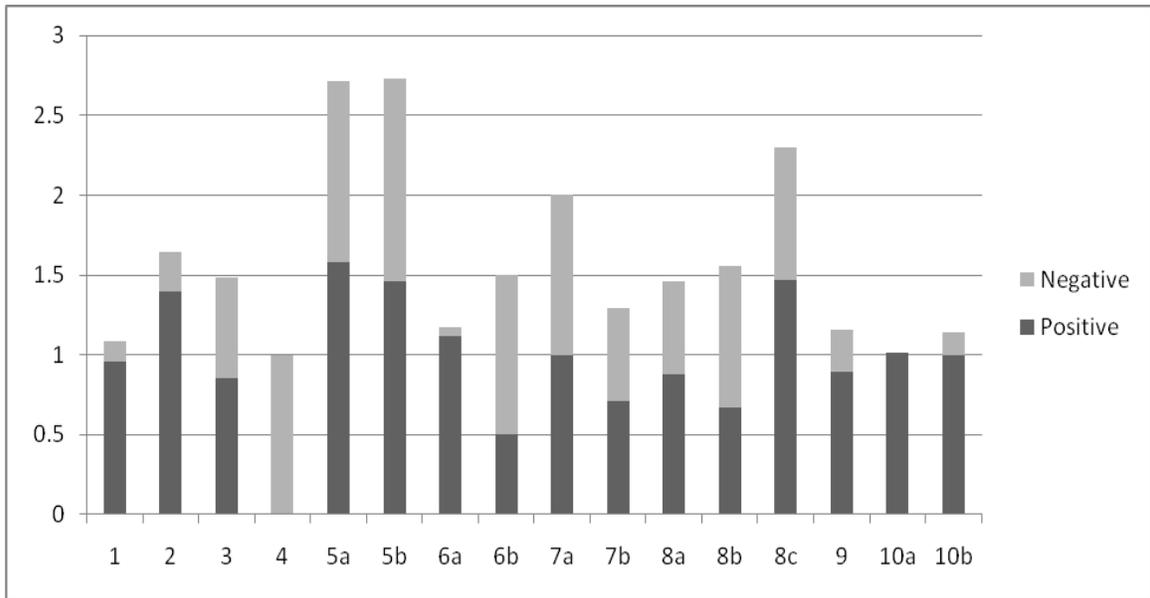


Figure 4.14 Number of Positive and Negative Politeness Strategies per Functional Chunk in Synchronous Online Discussion

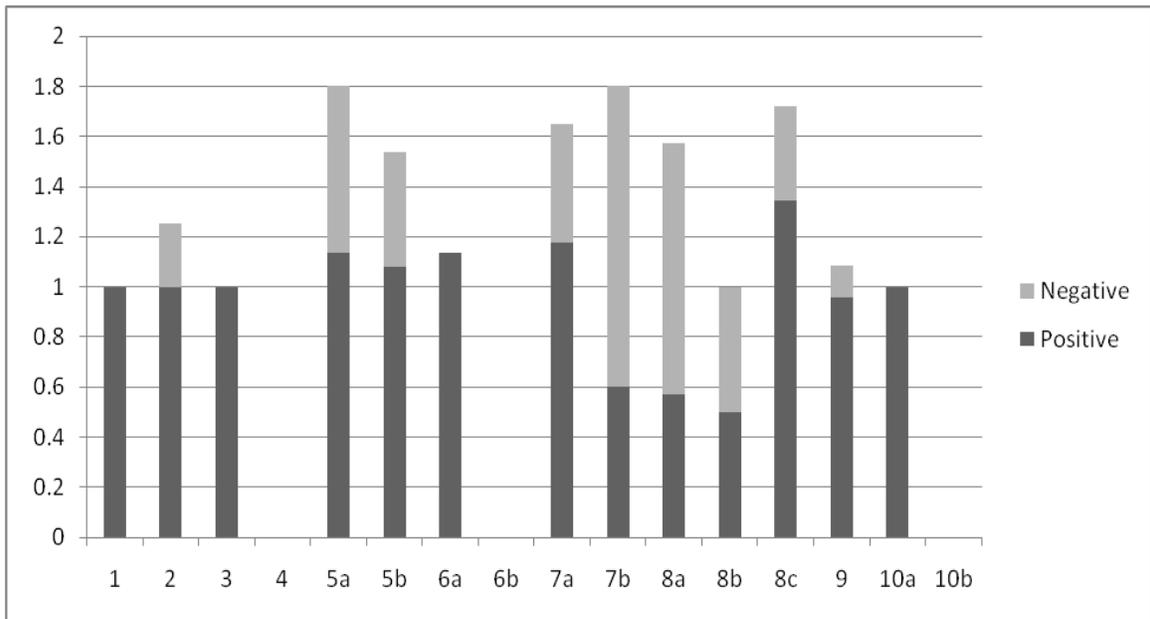


Figure 4.15 Number of Positive and Negative Politeness Strategies per Functional Chunk in Asynchronous Online Discussion

Table 4.11 Frequencies of Each Politeness Strategy for Different Functions in Synchronous Online Discussion

Function / Politeness	1	2	3	4	5a	5b	6a	6b	7a	7b	8a	8b	8c	9	10a	10b	TOTAL
P1	8	1	3	0	3	0	73	0	0	2	2	0	1	13	140	0	246
P2	1	0	1	0	2	0	15	0	0	0	0	0	2	4	6	0	31
P3	12	1	4	0	45	12	6	0	5	3	8	2	27	0	0	0	125
P4	1	1	1	0	3	0	0	0	0	5	2	0	2	1	1	0	17
P5	0	0	0	0	11	1	0	0	0	0	0	0	1	0	0	0	13
P6	0	0	0	0	1	0	3	1	0	0	0	0	0	0	0	0	5
P7	0	0	0	0	0	0	0	0	0	0	1	0	0	13	0	0	14
P8	0	0	1	0	0	0	1	0	0	0	1	0	1	35	0	0	39
P9	1	0	0	0	6	2	0	0	1	1	4	0	1	2	0	7	25
P10	0	1	0	0	5	1	0	0	1	4	3	0	9	0	0	0	24
P11	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
P12	14	25	19	0	133	36	7	0	4	2	23	3	147	5	1	0	419
P13	5	0	1	0	5	0	0	0	3	6	3	1	3	3	0	0	30
P14	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
P15	0	0	0	0	3	1	25	0	0	0	1	0	0	15	1	0	46
P16	3	10	0	0	1	0	0	0	0	1	9	0	2	0	0	0	26
N1	0	0	0	0	0	1	0	0	0	0	10	0	9	0	0	0	20
N2	3	4	5	1	119	31	3	1	9	11	13	5	61	17	0	0	283
N3	0	0	1	0	4	1	0	0	0	0	1	0	2	0	0	0	9
N4	2	3	9	0	30	13	2	1	5	5	13	3	32	1	0	1	120
N5	0	0	0	0	0	0	0	0	1	2	0	0	2	0	0	0	5
N6	0	0	0	0	0	0	0	0	0	2	1	0	1	9	0	0	13
N7	1	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	4
N8	0	0	7	0	2	0	1	0	0	0	0	0	2	0	0	0	12
N9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N10	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
TOTAL	51	46	52	1	374	101	136	3	30	44	95	14	308	118	149	8	1530

Table 4.12 Frequencies of Each Politeness Strategy for Different Functions in Asynchronous Online Discussion

Function / Politeness	1	2	3	4	5a	5b	6a	6b	7a	7b	8a	8b	8c	9	10a	10b	TOTAL
P1	0	0	0	0	0	0	12	0	2	0	0	0	0	0	1	0	15
P2	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	11
P3	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
P4	0	0	0	0	0	0	1	0	2	0	1	1	3	9	0	0	17
P5	0	0	0	0	0	0	3	0	2	0	0	0	1	0	0	0	6
P6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P7	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11
P8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P10	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
P11	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
P12	2	2	2	0	13	10	2	0	9	0	3	1	37	1	0	0	82
P13	0	0	0	0	2	3	0	0	3	3	0	0	2	0	0	0	13
P14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P15	0	0	0	0	0	0	30	0	0	0	0	0	0	1	0	0	31
P16	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
N1	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	3
N2	0	1	0	0	8	5	0	0	2	2	2	0	3	0	0	0	23
N3	0	0	0	0	1	0	0	0	1	1	2	0	1	0	0	0	6
N4	0	0	0	0	0	0	0	0	0	0	3	2	3	0	0	0	8
N5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
N6	0	0	0	0	0	0	0	0	3	3	0	0	0	3	0	0	9
N7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
N8	0	0	0	0	1	1	0	0	0	0	0	0	2	0	0	0	4
N9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	5	2	0	27	20	59	0	28	9	11	4	55	25	1	0	248

### Sense of Community and Politeness Strategies

This section aims at addressing the third sub-question of Research Question 4: how does the development of sense of community relate to students' use of politeness

strategies? Results from the available self-report surveys measuring sense of community showed that Katrina seemed to have the least sense of community in Team D, in terms of both the sense of connectedness subscale and the learning subscale. In addition, the lack of sense of community expressed by Katrina seemed to become worse as the semester went on. The survey filled out at the end of Module 2 by Katrina still showed her as holding a positive view of Team D's sense of community. However, as time went on, Katrina's survey results presented a decreasing trend in her ratings for sense of community. On the other hand, Yi-Jun expressed her lack of sense of community the most for the survey filled out at the end of Module 2, particularly for the learning subscale. However, as time went on, her doubt in sense of community seemed to improve. For the other three team members (Bill, George, and Younghee), their survey results showed that they were relatively consistent in holding positive views of Team D's sense of community across modules.

Although Katrina seemed to have developed the least sense of community from Team D's collaboration, there was no evidence to support that her lack of sense of community had a relationship with her overall use of politeness strategies in Team D's online discourse, in terms of both the numbers of functional chunks with and without at least one politeness move, and the numbers of positive and negative politeness moves used in the functional chunks with at least one politeness move. This was true whether comparing her with herself over time or comparing her with other team members. It seemed that either Yi-Jun or Younghee were the ones to have the least percentage of functional chunks with at least one politeness move across modules compared with other

team members. When using at least one politeness move for the functional chunks, Younghee's tendency to use more positive strategies than negative ones seemed to be the most obvious among Team D's members. This may be related to Yi-Jun's and Younghee's status as nonnative speakers of English; thus, they had relatively few choices and little linguistic knowledge to express politeness moves, and address face work. The results from discourse analysis of Team D's online discussion process suggested that in this case study, I did not have enough evidence to find a relationship between students' use of politeness strategies and their self-perspective of development of sense of community. More studies with a larger sample size may inform this aspect in the future. Also, the results suggested that taking participants' cultural background into consideration may be a direction worth examining in future studies related to politeness in computer-mediated communication.

In spite of the lack of evidence from Team D's online discourse about a relationship between their use of politeness strategies and the establishment of sense of community, in the interview sessions, Katrina and Yi-Jun both indicated a preference for using negative politeness strategies over positive politeness strategies in their online discussion. In an interview question asking the participants about their preference of being formal and demonstrating circumspection (negative politeness strategies) or being informal and showing closeness (positive politeness strategies) when they communicated with peers in online discussion, Katrina said:

*I tried to make it more formal than personal....There were some people in the group that I didn't find myself very much with them so with those people that I didn't trust, that I didn't feel comfort, I decided to be formal. With those people*

*that I found I was very comfortable with, and that I could trust, and that I like them, I was like very informal. I just go straight. I didn't put the flowers on [meaning politeness moves] and that works fine because it's almost like a friend...*

Yi-Jun also mentioned that she chose to use formal words, complete sentences and apologies in her messages when she sensed that some team members felt unhappy with her relatively few contributions to the collaborative writing project (Module 3). On the other hand, Younghee said:

*I used "Great Job," "Excellent Job" in front of the message. I have heard that the expression of the...like "great job," "excellent job" assuring other members' work is the very important thing in CSCL. So I used a lot of expressions like "good job," "great job," "excellent job."*

Younghee's answer indicated his preference for using positive politeness strategies. The examples he mentioned above to recognize peers' works, such as "great job," "excellent job," and "good job," would be coded as P1 (Noticing and attending to reader's/hearer's wants or needs) or P2 (Exaggerating interest in, approval of, or sympathy with a previous message/utterance). The interview results show Katrina's, Yi-Jun's, and Younghee's self-perceptions of their preference for using either positive or negative politeness strategies in Team D's online discussion seemed consistent with their self-rating of sense of community in Team D. That is, the team members with lower levels of sense of community tended to use negative politeness strategies, while those with higher levels of sense of community preferred to use positive politeness strategies. The suggestion made by Morand and Ocker (2003) that positive politeness strategies demonstrated closeness and short social distance, whereas, negative politeness strategies showed circumspection with larger social distance, may in part explain this finding.

## Politeness Strategies and Learning

This section briefly answers the fifth research question: how does students' use of politeness strategies influence the learning process in the online learning community? Assuming that having effective online collaboration could lead to a positive learning experience in a computer-supported collaborative learning environment, students seemed to agree that setting up a learning environment for constructive criticism was one of the factors contributing to effective online collaboration when the whole class discussed the norms for effective online collaboration. Katrina's post in the asynchronous discussion board seemed to suggest the use of politeness strategies may be beneficial in a learning environment welcoming constructive criticism, given that criticism has a high potential for posing face threats. The underlined part in Katrina's message indicated the possibilities of using diverse politeness strategies (P1—Noticing and attending to reader's/hearer's wants or needs, P15—Giving praise and statements of appreciation as gifts to the reader/hearer, N2—Hedging, and N4—minimizing the imposition), as discussed in the section of Concerns about Netiquette and Politeness Strategies.

*...a critique doesn't have to be necessarily bad. One suggestion, starts with the problems, but then try to point the good things on the person's work... When revising someone else's work, one could say: "you might wanna..."; or "maybe you should..."; or yet "have you also thought of...?" Sometimes we say things that sound rude even though we don't mean it that way. But that can create a problem.*

Additionally, in Katrina's interview session, she mentioned the situation of non-responsiveness occurring in Team D's collaboration process as an example of being

impolite as well as a violation of good netiquette, preventing effective online collaboration.

*We [Team D] were supposed to communicate via email. But apparently I was the only one who was really engaged in the email writing, and some of the students would reply but some others I wouldn't hear from them until it was like the due date. And that bothered me because there was no communication, it was supposedly to be happening via email, and some people just didn't reply to the email at all.*

This concern may have contributed to her negative learning experience and low level of sense of community in this collaborative team, indicated by the results of her online surveys measuring sense of community. In this sense, the politeness strategies that could deliver acknowledgment of one's effort and time invested in the team products and show responsiveness in a timely manner (e.g., P1—Noticing and attending to reader's/hearer's wants or needs, P2—Exaggerating interest in, approval of, or sympathy with a previous message/utterance, P15—Giving praise and statements of appreciation as gifts to the reader/hearer) would be of help to improve the collaborative learning experience.

## Chapter 5 Discussion

Grounded in Brown and Levinson's (1987) politeness theory, and based on a framework derived from sociocultural theory (Vygotsky, 1978), situated learning theory (Lave and Wenger, 1991), and cognitive constructivism (Piaget, 1985), the study presented herein explored the use of politeness strategies in a computer-supported collaborative learning environment. Using discourse analytic approaches, I examined how the use of politeness strategies interrelated with such contextual factors as concerns about netiquette, time, modes of online communication, discourse functions, and sense of community. The rich data that resulted from this analysis encouraged me to attempt to construct a preliminary understanding of the relationship between the use of politeness strategies and collaborative learning in the context of an innovative and emerging Internet technology, Second Life.

This chapter provides a summary of findings and discusses methodological limitations, politeness issues emerging in a virtual world, instructional implications for using virtual worlds in educational settings, and future research, as well as considering as a finale why politeness matters at all in learning.

### Summary of Findings

The politeness strategies frequently used in the focal team's (Team D's) online discourse when engaging in the intensive collaborative learning projects included five positive politeness strategies: using the first person plural pronouns to include the writer/speaker and reader/hearer in the speech acts (P12), noticing and attending to

reader's/hearer's wants or needs (P1), giving appreciation, cooperation, understanding, and sympathy as gifts to the reader/hearer (P15), intensifying interest in the writer's/speaker's won contribution to the conversation (P3), and using in-group identity markers to convey in-group membership (P4), and two negative politeness strategies: hedging (N2), and minimizing the imposition carried by the speech act itself (N4). Team D's use of positive politeness strategies showing affective ties, such as in-group membership, friendship, solidarity and cohesion, reflected their needs to get ready to work collaboratively as a team in a short period of time given taking the course. Meanwhile, their use of negative politeness strategies demonstrating social distance, circumspection, formality, and impersonality, reflected their concerns to moderate the force imposed by presupposing underlying solidarity too much (Morand & Ocker, 2003).

The findings of this study also suggested that politeness strategies could be delayed to redress the face threats posed by a previous message/utterance, and they did not necessarily only save reader's/hearer's faces, but also the writer's/speaker's faces in a natural conversation that interlocutors took turns to be writer/speaker and reader/hearer. Additionally, in a nature conversation involving more than two interlocutors, the findings of this study suggested the possibilities of one speech act saving one's face but threatening other's face, and the likelihood of one politeness move serving as different politeness strategies to different interlocutors.

Concerns about netiquette was found having impacts on Team D's use of politeness strategies in both ways of enhancing and hindering. Some concerns about netiquette would possibly increase the use of certain politeness strategies (e.g., using

P15—giving gifts to the reader/hearer, P1—noticing and attending to reader’s/hearer’s wants or needs, N2—hedging, and N4—minimizing the imposition, to redress face threats when doing constructive criticism, and using P1 to be responsive), and some concerns would be likely to decrease the use of certain expressions of some politeness strategies (e.g., avoid using web-acronyms for the sake of conveying meaning clearly in online written messages would reduce the possibility of expressing P4—using in-group identity markers to convey in-group membership, in the way of using dialect).

For the contextual factors of time (reflected by modules taken place throughout the semester), discourse functions, and modes of online communication (asynchronous written online discussion and synchronous oral online conversation), two basic levels of comparison were tested to see if there was significant difference in the use of politeness strategies across each factor: time (modules), discourse functions, and modes of online communication respectively. The first basic level of comparison examined the relationship between the factors and Team D’s use or non-use politeness strategies. The second basic level of comparison looked into the relationship between the factors and Team D’s use of positive and negative politeness strategies. The detailed level of comparisons between the factors and Team D’s use of a specific politeness strategy were discussed if applicable. Table 5.1 summarizes the results of chi-square tests in the two basic levels for the three contextual factors:

Table 5.1 Summary of Results of Statistics Tests

	Use and Non-use of Politeness Strategies	Use of Positive and Negative Politeness Strategies
Time (3 modules as semester went on)	Not significantly different across modules in synchronous mode Significantly different across modules in asynchronous mode	No difference was found via descriptive statics with line chart depicting the trend across modules.
Discourse Functions (16 discourse functions)	Significantly differed across discourse functions	Significantly differed across discourse functions
Modes of Online Communication (Asynchronous written online discussion vs. synchronous oral online conversation)	Significantly differed across modes	Significantly differed across modes

As to sense of community, the results from this study suggested that team members with low sense of community among the team perceived themselves having a tendency to use negative politeness strategies; whereas, team members with high sense of community self-reported a preference of using positive politeness strategies.

As a preliminary effort to explore the contribution of the use of politeness strategies to learning, the results of this study suggested that an effective collaborative learning environment may be facilitated by the use of politeness strategies that could help establish a learning situation welcoming constructive criticism but not at the expense of rapport, and improve the responsiveness among team members.

Figure 5.1 summarizes five overarching factors influencing the use of politeness strategies in an online collaborative learning context induced from Team D's case study. The Venn diagram denotes that the factors interrelate with each other. Norms/convention

referred to concerns of netiquette explored in the study, and general conversational convention. Tools/Communication medium means the affordance and constraints provided by the two modes of online communication (asynchronous written online discussion and synchronous oral online conversation) discussed in the study (e.g., expected response time, time span needed and allowed to prepare for a message/utterance, and the length of individual message/utterance), and the format/forms (e.g., oral repetition, colloquial filler, clearness of utterance, written message style, , possibility of simultaneous discussion, and conversation flow) and purposes of interchange influenced by the affordance and constraints of the tools. Topics/Content of discussion is reflected by discourse functions, the distribution and combination of the discourse functions, the diversity within a discourse function, and modules. Social distance can be inferred by sense of community, closeness, and solidarity in the reverse direction, that is, high level of sense of community implies a relatively short social distance among the interlocutors. In addition, power could be another interpersonal factor indicating the social distance to some extent, even though this study did not include this factor. Personal differences denotes each interlocutor's personal characteristics, such as gender, age, level of language fluency, speaking habits, level of computer skills, level of comfort of using the communication medium, cultural background, previous experience, and prior knowledge.

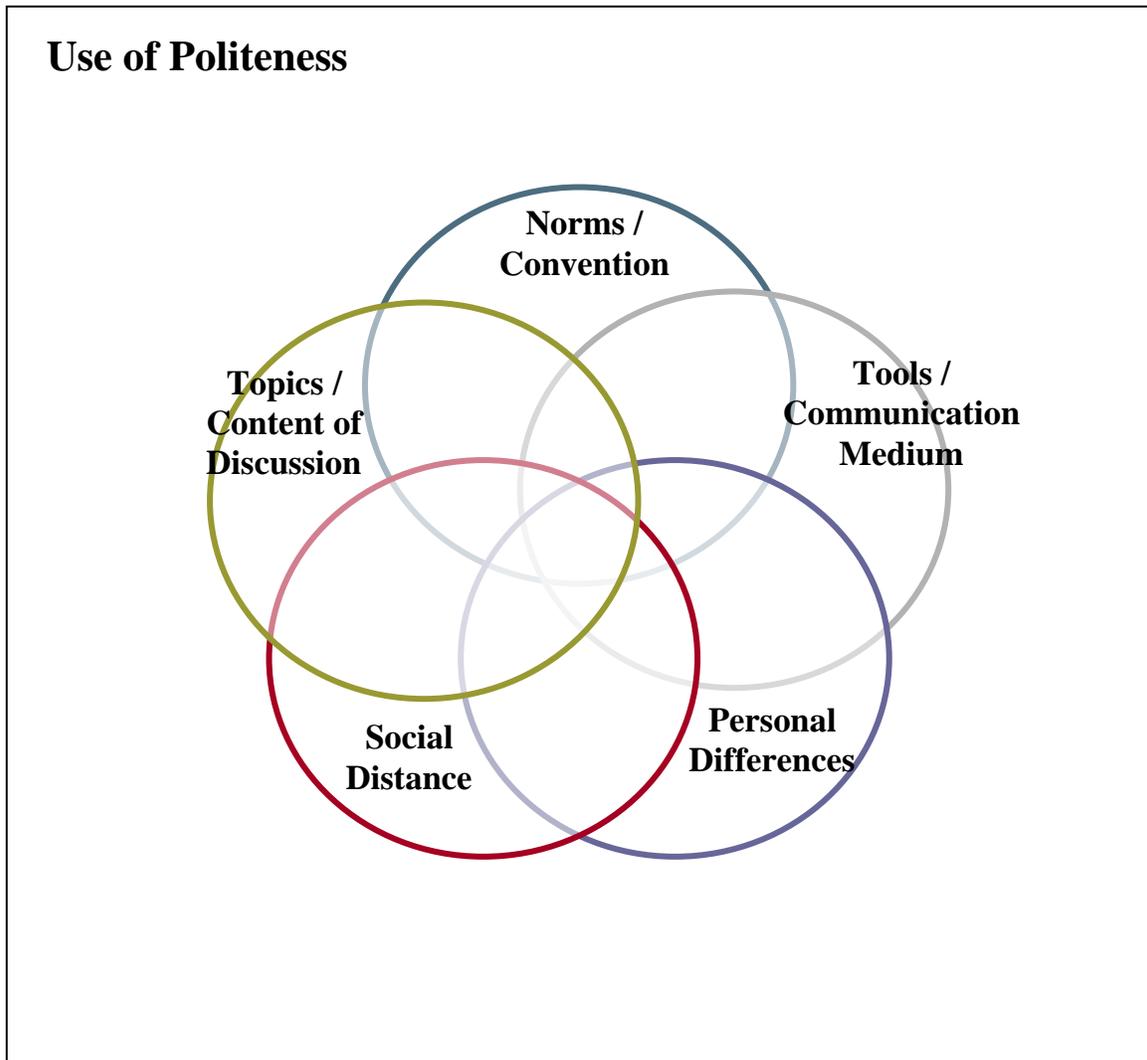


Figure 5.1 Contextual Factors Influencing the Use of Politeness Strategies

### Limitations

The methodological framework of this study was influenced by the tradition of interpretive constructivist research paradigm with the adoption of diverse data collection methods (collecting online written discourse, field observation, videotaping, audio-taping, transcribing, self-rating online surveys, and interviews), and analytical techniques

(discourse analysis, constant comparative method, chi-square test of significance, and descriptive statistics) to present a case study report with multiple data sources (online discussion, self-reflective blog entries, self-report portfolio, peer/self assessment, field notes, videotapes of Second Life voice chat sessions, audiotapes of interview sessions, and online survey responses). As a naturalistic study exploring a focal team's online discourse when the team members engaged in the collaborative learning projects required by one course, the lack of generalizability of findings from this study is one of the limitations in the aspects of small sample size, reporting results mainly from one group's data. Nevertheless, as a naturalistic researcher, I attempted to provide thick description about the context of this case study in diverse levels (e.g., course-level context described in Method chapter, and group-level, module-level, as well as individual-level context provided in Results chapter) hopefully to provide the readers sufficient information to decide whether the context of this study is applicable to other settings, to instead increase the transferability of the findings from this study.

Another limitation of this study is the discrepancy in availability and completeness of data sources. This limitation impacted the selection of the focal team, and the presentation and discussion of results from this study. The availability and completeness of videotaping from Second Life voice chat sessions, online surveys, and interviews for each group influenced the decision of choosing the focal team. The rationales for purposive sampling of focal team have been fully disclosed in the Method chapter. The lack of permission to access focal team's email exchange (the focal team's major asynchronous online communication channel) led to the difference in amount of

online discourse collected across modes of online communication, resulting in possible influences to the significant results of chi-square tests and even to the inappropriateness of presenting the results via statistical tests in some sort of comparison. This limitation has been disclosed in the Results chapter when applicable. Visual presentations of comparisons with adjustments considering this limitation have also been used to replace the statistical comparisons if needed.

An additional limitation is the failure to track the use of politeness strategies over time. Although data was collected from a course of semester-long online discourse, there was insufficient data to demonstrate the effect of time factor on the use of politeness strategies. It seemed that time factor would be interfered with other time-dependent factors and interwoven into such other contextual factors as modules, sense of community, and personal differences. This may suggest that time factor itself may not be suitable to be an individual factor to be examined in the relationship between itself and the use of politeness strategies. Instead, time should be a dimension to be taken into account when studying the relationship between the time-dependent factors and the use of politeness strategies.

The final limitation is relevant to the major analytical technique used in this study: discourse analysis. Analyzing the naturally occurring discourse has been controversial in terms of the feasibility of understanding the interlocutors' real intentions. Analyzing the locutionary speech acts (the message/utterance itself) involves the inferences of illocutionary speech acts (intention) to a certain degree. Even though the perlocutionary speech acts (subsequent message/utterance as reaction to the previous

speech acts) available in the context can be of help in enhancing the fidelity of the inferences, it still possible to have multiple viable interpretations to a certain phenomenon. Broadly speaking, every kind of study involves different levels of interfering. Every data collection method was at risk of losing fidelity to various degrees. Even a retrospective interview was not able to guarantee to catch interviewee's intention at that time when the discourse occurred to 100% accuracy. Besides, the feature that discourse analysis reveals the process of human social interaction, so as to learning process to a certain degree, makes it still contributive to the field of social science. Accordingly, being trained to be a naturalistic researcher, bearing this limitation in mind, I attempted to minimize the impact from this limitation by being objective as much as I could when coding data, being open to all possible interpretations taking all available context into consideration when analyzing data, and being fully disclosure of context information when reporting results. Also, though the inter-rater reliability was not applicable and not available in this study, the intra-rater reliability in terms of each coding scheme was reported in the Method chapter.

### Politeness Issues in a Virtual World (Second Life)

Though the major focus of this study in terms of online communication medium was not on virtual world, it turned out that Second Life became the major communicative tool for synchronous oral online discussion in this study. Considering the growing popularity and applications of virtual world in educational settings, this and the

subsequent sections are managed respectively to discuss the politeness-relevant issues in the virtual world (Second Life) emerging from the focal team's case study, and the instructional implications of using Second Life for educational purposes grounded on the experience of observing several learning activities taken place in Second Life.

The emergence of virtual worlds, such as Second Life, provides greater variety in expressing politeness strategies compared to pure-text based computer-mediated discussion because the virtual world provides a platform interweaving emotions, virtual physical aspect, and presence into online human interaction. Avatars in Second Life increase the sense of presence in appearance, outfit, voice, gesture, movement, and interaction with tangible objects and other avatars; thus, afford more types of contextualization cues. According to the discussion presented in the Results chapter, this feature of Second Life affords more diversity in expressing politeness strategies P1 (noticing and attending to hearer's wants or needs) and P15 (giving gifts to the hearer), and replaces the expression of politeness strategy P4 (using in-group identity markers to convey in-group membership) in the way of using emoticons in text chat with avatar gestures.

In addition, the prevalence of using Second Life brings up different needs for using politeness strategies. The following paragraphs summarizes five themes pertinent to politeness issues emerging from the focal team's interaction in Second Life and these findings will be presented in the annual meeting of American Educational Research Association in Denver in 2010 entitled "Being Polite in Second Life: Discourse Strategies When Learning Collaboratively in a Virtual World".

### Theme 1: “Got it” as a Politeness Move to be Responsive

In Second Life, students often used short utterances like “Got it” and “OK” to signal confirmation that they were following the previous speaker’s utterance. These short utterances were coded as the positive politeness move of noticing and attending to others’ wants or needs (P1). Because in Second Life, interlocutors cannot actually see each other, there is no clue as to whether hearers are understanding speakers. This was particularly an issue for these participants as it was their first time to experience Second Life, and they were inexpert in getting their avatars to gesture.

The following example demonstrates how the failure to provide such a signal can cause a face-threatening situation and require many subsequent face-saving moves to redress the threat. As a chat session began, while George, Bill and Yi-Jun waited for the arrival of other members, they engaged in small talk about Bill’s children.

*Bill: I have an older son. He is 22. And I have a daughter who is 15 now.*

*George: They keep you very busy.*

After George’s utterance, Bill did not respond to him. A few seconds later, George asked Bill another question but still received no response that acted to threaten George’s face. George made two attempts to save his face. First, he tried to attribute the situation to technological problems by checking with Yi-Jun if she could hear his voice. When she answered that she could, George made a second attempt providing another reason for Bill’s lack of response: “*Are you still there, Bill?*”

## Theme 2: Supplementing Others' Utterance

Like face-to-face conversation, one partner in Second Life voice chat can jump in to provide a phrase/word when the speaker seems unable to choose/remember a specific phrase/word to complete his/her utterance. Usually, this situation can occur with interruption that could be viewed as a face threat. However, such discourse supplement can be also interpreted as a politeness move, asserting or presupposing the speaker's knowledge of the hearer's wants (P9), especially when the interrupter does not take the floor.

## Theme 3: "Can you hear me?"—It is all about the Media

One frequent utterance type in Second Life voice chats were about the communication media itself. Participants frequently asked questions like "*Can you hear me?*" to make sure others could hear his/her voice. Poor sound quality can have a large influence on the conversation. Interestingly, such utterances about the media were often straightforward in tone with little politeness. It seems when other concerns outweigh face-saving, interlocutors tend to be clear and direct (Brown & Levison, 1987).

## Theme 4: Misidentifying Others

No matter in which type of communication, misidentifying others by calling them by the wrong name can be a face threat. When the instance of misidentification that George misidentified Yi-Jun as Katrina due to his unfamiliarity with Second Life occurred, the team members' reaction to this situation was simply to ignore it. According

to Brown and Levinson (1987), the decision to ignore a face threat situation is chosen when the danger to face is high and the necessity of being clear is low. It seems that the above mentioned situation fitted the conditions, but it still possible to see other politeness strategies were used to redress this kind of face threats.

#### Theme 5: “Where did Yi-Jun go to?” – Disappearance in Second Life

Online communication is rife with problems such as abrupt disappearances, and these could possibly be seen as rude to conversation partners unless one is familiar with all the ways that technological problems can interrupt a conversation. However, for those relatively new to Second Life, it may take some time to understand how the technology can cause characteristic problems. Politeness strategies can be used to soften the situations. For example, because of a break in internet access, Yi-Jun disappeared suddenly several times without informing Bill and George in a Second Life voice chat session. Thus, George used a joke, a politeness move (P8), to redress the situation, and when Yi-Jun came back, she used two politeness moves, apology (N6) and giving reasons (P13).

Even though these themes may not be limited to Second Life, the nature of combining the feature of both face-to-face oral conversation and traditional text-based online discussion generates a new type of communication mode. It seems that communicating via a new internet technology is just like being in a new culture. The interlocutors may take some time and effort to acculturate and to accustom to the new

conversational norm. This increases the necessity of conducting relevant research in this emerging communication mode. Therefore, the discussion of these themes attempts to contribute to the field by providing educational implications to the instructors or students who will teach or learn in the virtual world. Being aware of these potential face threat pitfalls in Second Life can help them to avoid or redress the face threat situations, be more comfortable in Second Life, and focus on their teaching/learning. As suggested by Yang et al. (2006), the concern of face threat can hinder individuals' learning process. A face threat occurring in collaborative learning situation can further damage the sense of community among group members leading to a poor collaboration.

#### Instructional Implication for Using Second Life in Educational Settings

Following the previous section, this section attempts to offer instructional suggestions to facilitate the learning process involving using Second Life to fulfill educational purposes. Recommendations focus on the practical aspects of using Second Life in three phases of a learning activity: pre-activity, during activity, and post-activity phases.

##### Pre-activity Phase:

The main purpose of the phase of pre-activity is to prepare for the activity. This phase consists of two stages serving different but prerequisite objectives: orientation stage and setting up equipment stage. The orientation stage should be designed to provide

learners with skills in the basic operations in Second Life, such as flying, walking, sitting down, standing up, talking via voice or typing, gesture, changing avatar's appearance and outfit, navigating in the virtual world with search and teleport functions. The following excerpt from a participant's feedback self-reflecting on the learning experience in a journalism training session held in Second Life highlights the importance of the orientation stage to smooth learners' learning curve of getting accustomed to Second Life and suggests how a steep learning curve may hinder learners' future learning in the context.

*Really for me it will be a challenge course, since it not only involves adequate knowledge about the specific topic, but for me it will be a double learning experience related to the specific use of Second Life for this purpose. The truth is I have no clear idea of how it will be, but at the same time this is what attracted me to the proposal. Finally, since I received the invitation I have been practicing in Second Life, although I still consider myself a beginner level and hope it does not affect my development in the course.*

The stage of setting up equipment aims at preparing a ready-to-go learning environment for each individual learner. Although every learner may have his/her own unique equipment settings, some general guidelines still need to be delivered to learners along with the orientation stage to foster learners' awareness of the importance of this preparation stage.

- (1) Checking computer system capacity to see if fitting with the system requirements recommended by Second Life official website

(<http://secondlife.com/support/system-requirements/?lang=en-US>). Note that

the information provided by Second Life is subject to change. Checking regularly or a check-in before the learning activity may be recommended.

- (2) The recommendation of Internet connection listed in Second Life official website is mainly concerned with Internet speed and bandwidth. For the concern of stability of Internet connection, particularly for voice chat, wired connection is preferable than wireless connection.
- (3) Updating Second Life software regularly. Even though no need to do this regularly, checking if there is the latest update available before the learning activity when still have enough spare time could avoid being late for attending the learning activity because of the last minute update.
- (4) Using headset rather than the system built-in microphone and speaker could avoid voice feedback, and testing the headset in Second Life before the learning activity starts. Voice chat device testing could be found under the Edit function menu; item Preferences, tab Voice Chat, and button Device Settings, as shown in Figure 5.2.

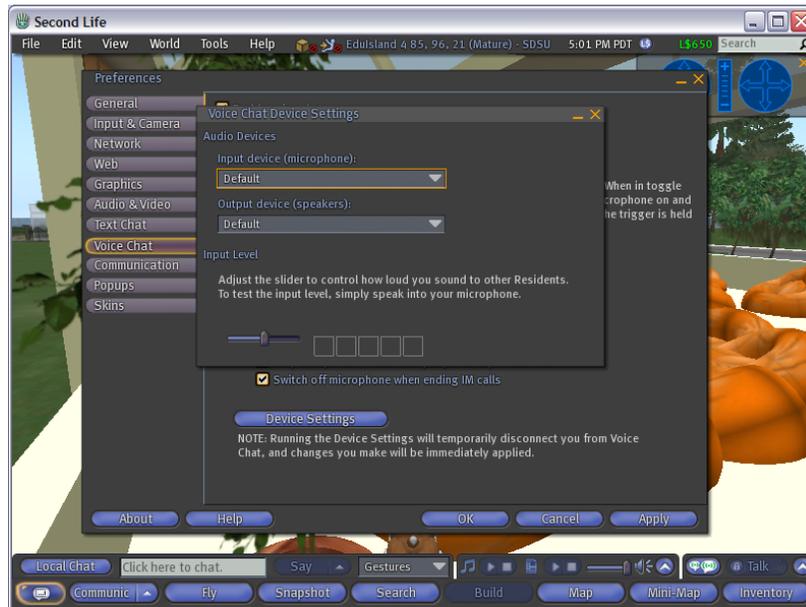


Figure 5.2 Second Life Voice Chat Device Testing

(5) Configuration. If needs to store the text chat log, relevant configuration can be found and changed in the tab Communication of the Preferences Box, as shown in Figure 5.3.

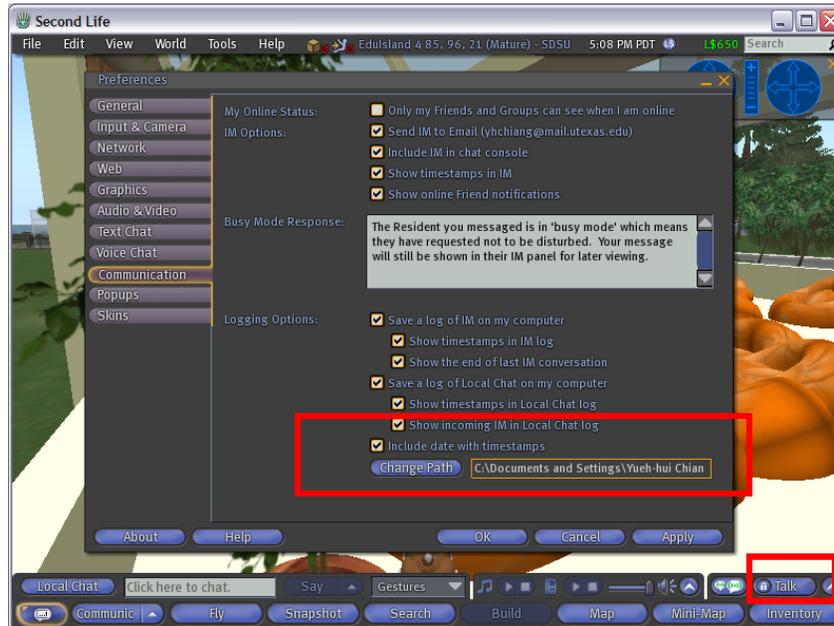


Figure 5.3 Configuring Path Saving Text Chat Log

(6) Getting familiar with push-to-talk mode to avoid voice feedback when one is not on the turn to talk but the microphone is still active, causing feedback of the voice coming out from the person's speaker. The push-to-talk mode by default is set in toggle mode. That is, pressing and releasing Talk button (See the right bottom corner in Figure 5.3) or push-to-talk trigger (by default, it is mouse middle key) could switch the microphone on and off. In addition, toggling off the talk button when not talking to the interlocutors in Second Life could avoid the embarrassing situation that one's irrelevant conversation with others (not participating in the learning activity) is transmitted to Second Life via the microphone.

The following excerpt from a participant's feedback self-reflecting on the learning experience in a journalism training session held in Second Life emphasizes the importance of setting up the equipments before the learning activity taken place.

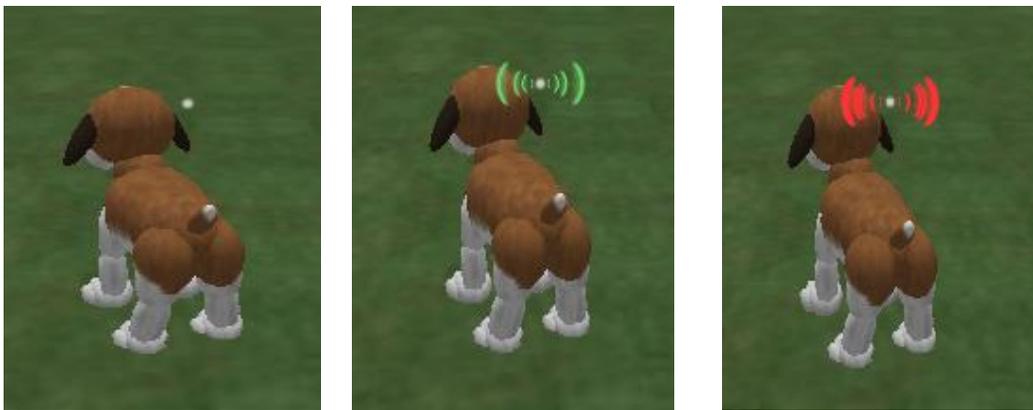
*In my personal case, I had to change my computer because it did not respond because of my laptop, and it could not perform the necessary interactions to complete tasks. Fortunately from my home I have the resources to enter Second Life, but in universities and newsrooms they do not have powerful equipment to use this tool.*

In sum, the importance of the preparation phase before the learning activity cannot be overemphasized because it serves to having more preparation beforehand, less distraction during the learning activity.

During Activity Phase:

During the learning activity, learners should pay close attention to the learning activity, and that is the reason why the pre-activity phase is so important. However, there still are two recommendations that need to be kept in mind when using voice chat, sparing little attention for avoiding bigger distraction.

- (1) Paying attention to the white circle above each avatar's head. This white circle indicates the avatar's voice (See Figure 5.4(a)). When one is talking and the volume is normal, there are green waves surrounding around the white circle (See Figure 5.4(b)). In the case of volume is too loud to be heard clearly, the white circle is surrounded with red waves, and this is when the avatar owner needs to adjust the microphone volume (See Figure 5.4(c)).



(a) voice on when not talking    (b) talking with normal volume    (c) talking with loud volume

Figure 5.4 Avatar Voice Volume Indicators in Different Modes

- (2) Paying attention to toggle off Talk button when not talking as mentioned before to avoid feedback and even embarrassing moments.

Post-activity Phase:

Learning would not only take place during the activity. Self-reflecting on the learning experience after activity usually enhances learning to a certain degree (Boud, Keogh & Walker, 1985; Lave and Wenger, 1991). In this sense, going to the location where set to save the text chat log on the local hard drive or using the screen-recording software to capture the video and audio of the voice chat session could provide scaffolding resource for learners to reflect on their interaction process if needs. In this case study, Bill expressed a need to review the videotapes recording Team D's online discussion in Second Life in his interview session. He said:

*People have to review their conversations because when you were doing a conversation, you remembered a lot you said, I said, he said...and there was a flow, but when you go back to listen to your conversation again, you realized that was the way I sounded, you really need to reflect on whether you were coming across a line because you didn't see it that way because when you were talking, you were just talking. Of course, you listened, but when you look at that from a different view, you were seeing a totally different person.*

This excerpt does not only stress the importance of reflecting on learning process/discourse taken place in a collaborative learning context, but also bring up the need for providing this kind of scaffolding resource to learners.

### Future Research

Though Figure 5.1 proposes a tentative overview of factors influencing the use of politeness in the online collaborative learning context, this study did not have the chance to thoroughly examine and comprehensively discuss all factors, partly due to the limitation and the context of this study. This section intends to recommend directions for

future research to enrich the literatures of studies about the use of politeness strategies in the computer-mediated learning environment.

According to literatures (Brown & Levinson, 1987; Morand & Ocker, 2003), power hierarchy in interpersonal relationship is another social factor that influences interlocutors' use of politeness strategies in a human conversation. Power may interrelate with social distance to a certain degree. In a learning situation, power difference could be reflected by teacher and student relationship. In this study, because of the way this course was designed, the instructor was not included in the analysis of students' online discourse. Researchers interested in studying the impact of power difference in the use of politeness strategies may consider examining a learning context potential for involving teacher discourse and student discourse to an equivalent degree. Additionally, though this course mainly involving students' discourse (they are relatively on the same position in terms of power relationship), there is a possibility that students may temporarily possess different level of power in the case of each team member takes turns assuming leader role for different modules. Although this case study was not applicable to this situation, researchers may study the impact of power difference given the role students temporarily taking on the change of their use of politeness strategies in other applicable learning context. Moreover, instead of studying power difference given by the roles assumed by participants, investigating the temporary power difference given by different level of knowledge for a certain domain might be another interesting angle to study people's use of politeness strategies. In this sense, the factor of power difference may interrelate more with topics/content of discussion than with social distance. Furthermore, expanding the

direction toward topics/content of discussion, conducting studies across disciplines may be another possibility to explore how the use of politeness strategies varies across discourse communities engaging in different disciplinary discourse.

Another overarching direction for further studies is to study the influence of personal differences on people's use of politeness strategies. The coverage of this direction may be relatively broad, including cultural background (e.g., gender, age, ethnicity, and languages), and historical background (living experience, educational background, work experience, prior knowledge, speaking habits, skill level of language used in the discussion, familiarity level of using the disciplinary discourse, skill level of communicative medium, and comfort level of using communication tools). Still, these factors reflecting personal differences are likely to interrelate with each other. In addition to studying the influence of these individual-level factors on people's use of politeness strategies, examining the impact of some group-level factors (e.g., group size and group composition) in applicable context (involving various groups) may be of help to understand group dynamics in their use of politeness strategies. In this sense, a larger sample size is required.

An additional direction for future research is related to tools/communication medium. Although there are two major modes of online communication (synchronous and asynchronous), the innovation of Internet technology integrates various sensory and affective elements in diverse level and combination (e.g., teleconferencing, and 2D/3D virtual world) into both synchronous and asynchronous types of online communication tools, comparing with traditional pure text-based mode of online interaction. Studying the

impact of affordance and constraint offered by these emerging online communication tools on people's use of politeness strategies may be worth continuing given the diversity of these new technologies and the prevalence of application of these new technologies to educational settings. Moreover, the popularity of Web 2.0 technology (e.g., blog and wiki) and the emergence of social networking (e.g., facebook, twitter, and plurk) nowadays speed the formation of various online learning communities and afford the possibility of developing multiple identities across communities. Studying people's use of politeness strategies in this emerging way of social interaction as well as the relationship of their use of politeness strategies to identities varying with communities may be another new direction for future studies. Also, as a researcher conducting in-world observation in virtual worlds (e.g. Second Life), the relationship between the selection of observers' avatars and the degree of intrusiveness or distraction that researchers impose on participants may be a new possible research direction.

Returning to learning that is the ultimate concern for educational researchers, inspired by the findings from this study with respect to the relationship of students' use of politeness strategies to their concerns about setting up a learning environment welcoming constructive criticism, I would like to propose a future direction to study students' use of politeness strategies when they engage in collaborative reasoning, that is, a form of discussion focusing on reasoned argumentation via various persuasive strategies as well as listening to each other, to foster learners' ability of independent and higher-level thinking through the course of judging the strength and weakness of each presented argument and then internalizing their inner schema for the discussed topics (Anderson et

al., 2001; Clark et al., 2003). In future research, it will be important to explore how students' use of politeness strategies plays a role in a learning context with collaborative reasoning in the aspect of associating with various persuasive strategies that may be reflected by different discourse functions and their combination.

### Conclusion

Politeness is a universal principle grounding human interaction with a variety of viable expressions and interpretations depending on context (Brown and Levinson, 1987). As an educational researcher, I am also interested in *why politeness matters in learning*:

Studying politeness in learning context contributes, in one way, to bring up the awareness of face-saving concerns, and in the other way, to help acculturate tolerance with diversity and further to cultivate empathy. In a learning context where learners interact with each other and themselves, one phenomenon (e.g., a speech act) could have multiple possible intentions and viable interpretations, and result to various ways of reaction that becomes another phenomenon with multiple intentions and interpretations, which creates a cycle evolving gradually a unique learning experience subject to individuals retrospectively reflecting as positive or negative learning to different degree. To avoid negative learning experience and foster positive learning atmosphere, particularly for some occasions at high risk of being considered impolite (e.g. constructive criticism), the consciousness of face works and tolerance with diversity becomes pivotal to be constructive in learning. Keeping tolerance with diversity in mind expands people's understanding and consideration, and further to possibly increase

empathy. Merely having nice intentions is not enough; sometimes, the use of politeness strategies as flowers to decorate conversation with various considerations does matter because it is all about humanity (i.e., learning is one type of human interaction); people have needs: the need to be respected, the need to be needed, the need to be free from imposition by others, the need to be liked, the need to be listened to...and so on, and Brown and Levinson's politeness theory grounded by Goffman's face work (1967) suggests ways to address these human needs.

Instructional technology is subject to innovation, and serves to facilitate, scaffold, and improve learning. Incorporating new technology into instructional settings creates new learning contexts to different extents. Politeness conventions are not rigid. In light of context-dependency of politeness, studying politeness in emergent learning contexts not only contributes to enriching the fundamental theory, but also in being able to help to prepare learners to engage in the new immersive learning environments with comfort in the ways of fostering awareness of other's and self's face, cultivating tolerance for differences, increasing the ability to handle face-threatening situations with empathy, and reducing frustration, to more effectively exploit the potential of the new immersive environments for learning.

## Appendix A Sense of Community Scale

Directions: Below, you will see a series of statements concerning the learning module you just finished. Read each statement carefully and check the boxes to the right of the statement that comes closest to indicate how you feel about your team in this module. There are no correct or incorrect responses. If you neither agree nor disagree with a statement or are uncertain, check the neutral (N) area. Do not spend too much time on any one statement, but give the response that seems to describe how you feel. Please respond to all items.

Items	Strongly agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly disagree (SD)
1. I feel that students in this team care about each other	(SA)	(A)	(N)	(D)	(SD)
2. I feel that I am encouraged to ask questions	(SA)	(A)	(N)	(D)	(SD)
3. I feel connected to others in this team	(SA)	(A)	(N)	(D)	(SD)
4. I feel that it is hard to get help when I have a question	(SA)	(A)	(N)	(D)	(SD)
5. I do not feel a spirit of community	(SA)	(A)	(N)	(D)	(SD)
6. I feel that I receive timely feedback	(SA)	(A)	(N)	(D)	(SD)
7. I feel that this team is like a family	(SA)	(A)	(N)	(D)	(SD)
8. I feel uneasy exposing gaps in my understanding	(SA)	(A)	(N)	(D)	(SD)
9. I feel isolated in this team	(SA)	(A)	(N)	(D)	(SD)
10. I feel reluctant to speak openly	(SA)	(A)	(N)	(D)	(SD)
11. I trust others in this team	(SA)	(A)	(N)	(D)	(SD)
12. I feel that this team results in only modest learning	(SA)	(A)	(N)	(D)	(SD)
13. I feel that I can rely on others in this team	(SA)	(A)	(N)	(D)	(SD)
14. I feel that other members do not help me learn	(SA)	(A)	(N)	(D)	(SD)
15. I feel that members of this team depend on me	(SA)	(A)	(N)	(D)	(SD)
16. I feel that I am given ample opportunities to learn	(SA)	(A)	(N)	(D)	(SD)
17. I feel uncertain about others in this team	(SA)	(A)	(N)	(D)	(SD)
18. I feel that my educational needs are not being met	(SA)	(A)	(N)	(D)	(SD)
19. I feel confident that others in this team will support me	(SA)	(A)	(N)	(D)	(SD)
20. I feel that this team does not promote a desire to learn	(SA)	(A)	(N)	(D)	(SD)

## Appendix B Technical Requirements

To take this online course, it is essential that you have access to a computer with the software, plugins and peripherals noted below. Based on past experience, students who do not have access to a personal computer and connectivity to the Internet in the home may have serious problems in their ability to meet the required daily participation in the courses.

### Hardware

#### PC

- \* Operating System: Windows XP (Service Pack 2)
  - o Windows 2000 (Service Pack 4)
- \* 800 MHz Pentium or equivalent processor or better
- \* Computer Memory: 256 Megabytes or better
- \* Sound Card
- \* Video/Graphics Card
  - o nVidia GeForce 2, GeForce 4mx or better
  - o ATI Radeon 8500, 9250 or better

#### Macintosh

- \* Operating System: Mac OS X 10.3.9 or better
- \* Computer Processor: 1GHz G4 or better
- \* Computer Memory: 512 Megabytes or better
- \* Sound Card
- \* Video/Graphics Card
  - o nVidia GeForce 2, GeForce 4mx or better
  - o ATI Radeon 8500, 9250 or better

#### Webcam and microphone

For communication via Skype (Click here to see the range of prices (microphones and webcams)).

### Connectivity

- \* Access to the Internet at those times of the day when you know you'll want to work (Cable or DSL is required for some activity to use Second Life)
- \* An email address
- \* Wireless Access
  - o Connecting you to the Internet and the Campus Network: Information Technology Services (ITS) provides members of The University of Texas at Austin

community with access to the Internet and university computing resources. The Public Network provides wireless and wired access to the Internet in public campus areas. Current students, faculty, staff, and official visitors can get access by logging in using their UT EID and password.

o Other Wireless Access Points near campus are also available:  
<http://www.austinwirelesscity.org/hotspot-list.php>

## **Software**

1. Netscape 7.0 (<http://channels.netscape.com/ns/browsers/download.jsp>) or Internet Explorer 5.0 (<http://www.microsoft.com/downloads/>) or higher

2. A current anti-virus program

3. Adobe Acrobat Reader is software to read some documents in this course which are provided as downloadable files. Test to see if you have it by going to the Portable Document Format (PDF) box in the chart below.

4. Microsoft Office. You will need to use Microsoft Word for the collaborative writing project. It has special features that will help you accomplish this task. If you do not have Microsoft Office, check with your University of Texas branch computer store for the special Microsoft Office package which includes Word, Excel, PowerPoint, and FrontPage.

5. TeachNet. This is the conferencing software that we will use for the course. You can get the software from the TeachNet Web site (<http://www.edb.utexas.edu/teachnet/>). The site also provides the information about how to install, access, and work with TeachNet. For more detailed information for installing TeachNet, please refer to Module 3.2 Web page.

6. If you are not sure whether your computer meets the requirement or not, you may also check if your computer will run second life by going to <http://www.secondlife.com> and join (membership is free). You can then download the software to determine whether you are able to run the software.

## Appendix C Peer and Self Assessment

Evaluate yourself and your team members based on a 5-point scale on the following items.

Evaluator:

Evaluatee:

For each item, select the score you believe best reflects that person's efforts and contributions.

If the person:

- \* Always demonstrates the quality, you would give a score of 5.
- \* Frequently demonstrates the quality, you would give a score of 4.
- \* Sometimes demonstrates the quality, you would give a score of 3.
- \* Seldom demonstrates the quality, you would give a score of 2.
- \* Never demonstrates the quality, you would give a score of 1.

1. Takes active role on initiating ideas or actions.	1	2	3	4	5
2. Is willing to take on task responsibilities.	1	2	3	4	5
3. Is willing to frequently share ideas and resources.	1	2	3	4	5
4. Accepts responsibilities for tasks determined by the group.	1	2	3	4	5
5. Helps promote team esprit de corps.	1	2	3	4	5
6. Respects differences of opinions and backgrounds, and is willing to negotiate and make compromises.	1	2	3	4	5
7. Provides leadership and support whenever necessary.	1	2	3	4	5
8. Acknowledges other members' good work and provides positive feedback.	1	2	3	4	5
9. Is willing to work with others for the purpose of group success.	1	2	3	4	5
10. Communicates online in friendly tone.	1	2	3	4	5
11. Keeps in close contact with the rest of the team so that everyone knows how things are going.	1	2	3	4	5
12. Produces high quality work.	1	2	3	4	5
13. Meets team's deadlines.	1	2	3	4	5
14. Sensitive to the needs and feelings of other members of the team.	1	2	3	4	5
15. Understand problems and responds with helpful comments.	1	2	3	4	5
16. Openly shares needs and feelings with team members.	1	2	3	4	5

Comments (Please provide your teammate with positive and constructive feedback.):

## Appendix D Interview Questions

### **Background: To start with easy facts and to confirm individual characteristics**

1. Age, Gender, Ethnic Background, Working experience, Language
2. Have you ever take any other on-line course before?
3. What kinds of on-line discussion tools have you used before?

### **Reminder of CSCL course: To remind student of CSCL experience**

4. How did you happen to come to the CSCL course?
5. What was your experience of the first Web Cast? What did you think and feel as it took place?

### **Participants' concerns about netiquette**

6. Are you a person who is sensitive to how people respond to your online messages or not?
7. Throughout the course of participating in the CSCL course, were there any experience when you saw a violation of rules of good netiquette in your team or other teams?

### **Participants' perceptions of their own and other peers' use of politeness moves**

8. Throughout the course of participating in the CSCL course, do you recall any instance where you saw or worried about your messages posing a threat to peers or your faces? How did you handle this situation?
9. Do you recall any message posted by peers that made you feel that your face was threatened? How did you handle this situation?
10. What factors did you take into consideration when you reacted to these situations?

### **Participants' perceptions of the development of sense of learning community**

11. Do you think your team has developed a sense of connectedness throughout the semester? Any example when you felt your team members connected with each other? Any example when you felt your team spirit was damaged?
12. Who is your closest team member in your team? Can you think of any reason leading to your closeness?
13. Who is your most unfamiliar team member in your team? Can you think of any reason leading to this unfamiliarity?
14. Do you think you learn from the CSCL course as an individual learner and as a team member? Any learning experience most impressive to you? Why?

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