

THE LIVED EXPERIENCE OF ASIAN INTERNATIONAL STUDENTS  
IN ONLINE LEARNING ENVIRONMENTS IN HIGHER EDUCATION

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THE LIVED EXPERIENCE OF ASIAN INTERNATIONAL STUDENTS  
IN ONLINE LEARNING ENVIRONMENTS IN HIGHER EDUCATION

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THE LIVED EXPERIENCE OF ASIAN INTERNATIONAL STUDENTS  
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ABSTRACT

Despite the large segment of Asian international students in higher education in the U.S. to date, there has not been adequate acknowledgement or exploration of the needs of Asian international students. The purpose of this study was to develop an inductive, comprehensive understanding of Asian international students' lived experience in online learning environments.

A descriptive phenomenological method was used to achieve the goal of this study: describing Asian international students' lived experience in online learning environments. Ten Asian international students from China, Taiwan, Indonesia, and Thailand described the experiences that stood out for them in online learning environments. Verbatim transcriptions of interviews were used as the primary source of data in this study. Phenomenological analysis revealed seven themes emerged.

*Language barrier* reflects how the participants' language barrier shaped their experience in online learning environments, how the language barrier affected their learning, and how they perceived their language barrier. *Relationships/interactions* reflects how participants perceived their relationships/interactions with teachers and/or classmates, and how their relationships/interactions with teachers and/or classmates

affected their learning. *Influence of cultural background* reflects how the participants' cultural background or early socialization in their home countries shaped their experience in the online learning environment and affected their learning. *Benefits from online learning environment* conveys how online learning environments were of advantage to the participants. *Downside of online learning environment* categorizes the disadvantages and frustration the participants perceived regarding the online learning environment. *Teachers in online learning environments* reflects how the participants perceived roles and qualities of teachers in online learning environments. *Suggestions* conveys the participants' suggestions to enhance the online learning environment based on their own experience.

## CHAPTER 1 – INTRODUCTION

### Overview

#### *Diversity and Higher Education*

The student bodies at the nation's colleges and universities have become increasingly heterogeneous since the mid-1970s. Minority students increased from 15 percent of all students in 1976 to 25 percent in 2000, and their proportion is expected to reach 40 percent in 2010 (U.S. Department of Education, 2000). Racial and ethnic composition is changing from a largely biracial society - consisting of a sizable White majority, a small Black minority, and less than one percent American Indian minority - into a multiracial and polyethnic society made up of different racial/ethnic groups of considerable size (Xue, 1998).

Reviews of educational research suggest that a wide variety of individual, institutional, and societal benefits are linked with diversity experiences. According to Gurin, Dey, Hurtado, and Gurin (2002), racial and ethnic diversity promotes a broad range of educational outcomes. Higher education is especially influential when its social milieu is different from students' home and community background and when it is diverse and complex enough to encourage intellectual experimentation and recognition of varied future possibilities.

“Diversity in academic institutions is essential to teaching students the human relations and analytic skills they need to thrive and lead in the work environments of the twenty-first century. These skills include the abilities to work well with colleagues and subordinates from diverse backgrounds; to view issues from multiple perspectives; and to anticipate and respond with sensitivity to the needs and cultural differences of highly diverse customers, colleagues, employees, and global business partners” (as cited in Gurin, Dey, Hurtado, & Gurin, 2002).

Classroom diversity, opportunities for interaction, and learning across diverse groups of students in the college environment now constitute important initiatives to enhance the education of all students. The success of these initiatives is facilitated by the presence of diverse students and a pedagogy that facilitates learning in a diverse environment. This provides the rationale to help instructors develop a pedagogy that can foster active thinking, intellectual engagement, and democratic participation among diverse students. Thus, more attention should be given to the types of experiences students have in their learning environments.

#### *Difference between Minority Immigrant Students and International Students*

Previous studies (Atkinson, 1983; Casas, 1985; Parham & Helm, 1981; Sodowsky & Plake, 1992; Sue & Zane, 1987; Wong-Rieger & Quintana, 1987) indicate that multicultural research needs to study within group differences to test the applicability of a cultural construct across a whole group. Previous research has suggested that acculturation options differ among minority people depending on their socio-cultural characteristics. For instance, a cross-cultural study of immigrants and sojourners showed that acculturation was a function of the participants' residence status in the U.S., with the sojourners being significantly different from their immigrant counterparts and from each other (Wong-Rieger & Quintana, 1987). Sodowsky and Plake (1992) also found significant differences between immigrants and international students with regard to how they acculturated. International students perceived prejudice significantly more acutely than did the permanent residents and visiting international scholars. The international students and scholars were significantly more affiliated with their nationality groups than were permanent U.S. residents. English language usage was significantly less among

international students and scholars, who most often used their mother tongue. Permanent residents, however, tended to speak mostly English. Sodowsky and Plake (1992) surmised that permanent residents most probably used the integration option of acculturation to White U.S. society, while international students tended to reject the option of acculturation.

Adjustment issues of international students may be overgeneralized to permanent U.S. residents and naturalized citizens who may come from the same country as the former. Unlike minority immigrant students who were born and grew up in the U.S., international students were socialized in another country, and their primary language is not English. Thus, it is likely the impact of cultural differences would be greater on international students than minority immigrant students. However, studies on cultural and linguistic difference and its impact on learning among international students are few (e.g., Lee & Sheared, 2002; Liang, 2004).

#### *International Students in Higher Education*

According to the Open Doors Report (2004), the number of international students attending colleges and universities in the U.S. in 2003-04 is 572,509. International student enrollment comprises over four percent of the total higher education population – nearly three percent of undergraduate students and 14 percent of graduate students. Although the visibility of international students within university communities has grown considerably in recent years, there has not been adequate acknowledgement or exploration of ways of adapting to the needs of a more diverse student population. Of all international students enrolled in colleges and universities in the U.S., Asian students comprise over half (57 percent) (Open Doors Report, 2004). Despite these numbers,

literature that addresses Asian students' learning is limited. This suggests researchers in international education need to pay attention to Asian students who were socialized in non-Western cultures and who typically face language barriers.

### *Online Learning in Higher Education*

The delivery of instruction via the Internet has steadily grown since the early 1980s. Colleges and universities offer online instruction for both credit and noncredit courses. The number of online courses is growing with 1,680 institutions offering 54,000 online courses during 2002 (Simonson, Smaldino, Albright, & Zvacek, 2003). Institutions are rushing to provide online courses, often without much thought as to how these courses are actually experienced by the students involved in them (Howland, 2000).

The Internet can provide flexible and easy access to a rich hypermedia learning environment. Ordinarily, instructors of online courses organize materials, assignments, and readings and then make them available through a course Website. Students are responsible for reading the material, completing assignments, and participating in online discussions and chats. Web-based courses enable a more student-centered approach to learning than do other traditional distance learning delivery systems like correspondence or satellite courses (Joseph, 1999). Navarro and Shoemaker (2000) studied the performance and perception of cyber learners to that of traditional learners. A group of 135 undergraduate students (89 traditional and 46 cyber learners) participated in the study. Results revealed that cyber learners learned as well as or better than traditional learners regardless of participant characteristics, such as gender, ethnicity, academic background, computer skills, and academic aptitude, and that they did so with a high degree of satisfaction. In a survey of 710 students in ten community colleges in



California, results indicated that electronic telecommunication improved the relationship between participants and the instructor, and students in online classes were more likely to be autonomous than students in face-to-face settings (Obler, Gabrielnr, and Slark, 2000). In contrast, studies by Burge, Howard, and Ironside (1991) and Jaradat (2004) suggested online courses produced a cold educational environment, little affective support, and a sense of isolation among students. Others (Gary, 2001; Hensley, 2003; Mende, 1997) argue that online courses are not appropriate for everyone, and special treatment should be provided for individual preferences.

In sum, most previous studies on online learning have compared learning outcomes or satisfaction in online courses with those in face-to-face settings (e.g. Bowman, 2003). The majority of these comparison studies have demonstrated that online courses have the potential to produce outcomes as good as or better than similar face-to-face courses but have provided little information how students actually experience the courses, or why some students who are unsuccessful or dissatisfied fail or leave a course. Information on experiences from the perspective of the student and the exploration of the underlying themes that describe those experiences is essential to the design of online environments that are responsive to student needs.

#### *International Students in Online Learning Environments*

Limited studies have been conducted to examine international students' learning experience in online learning environments. Most previous research has attempted to determine whether the differences that have been found in face-to-face classrooms carried over into online learning environments, and findings have been mixed. In a study by York (2003), international students far surpassed the performance of all other ethnic

groups in face-to-face classes. Failure frequency for international students was also the lowest of all the ethnic groups. This changed dramatically when the students moved to online courses. The failure rates climbed from 4.2 percent in face-to-face classes to 20 percent in online courses. The findings in this study suggest there may be factors within the face-to-face class that were different or not present in the online class. In addition, Kember (1989), Moore, Downing, and York (2002), Salaberry (2000), Tu (2001), and Waks (2001) parallel the literature that suggests international or non-Euro-American students may rely more heavily on visual cues in face-to-face classes to support their understanding of course content and class direction.

Some researchers argue that online learning environments can promote less inhibitive behavior and cause communication to be more democratic because of the ambiguous interpersonal context created by a lack of social presence and social contextual cues such as race and gender (Conceição, 2002; Lenert & Harris, 1994; Montes, Oran, & Willis, 2002). Other researchers (e.g., Joo, 1999; Schallert, Reed, & the D-Team, 2003-04; Yildiz & Bichelmeyer, 2003) claim that the Internet breaks down technological barriers to international exchange of information and communication but does not eliminate cultural obstacles and, in many cases, becomes an obstacle in itself. International students as a rule do not participate equally in the written online discussions and/or chats for many reasons. They do not feel fluent enough in the language to fully understand other students' postings; they cannot type in English fast enough to keep up with the conversation; they have various cultural expectations about writing only error-free prose; and they are extremely embarrassed by having their error-filled messages made public (Amador et al., 1999; Coward, 2003; Schallert et al., 2003-04). International

students with English as a second language face frustrations with text-based communication, multiple dialogues, and the rapid pace of communication. Furthermore, communicative misunderstandings are common among participants with limited language skills, especially in a text-only format (Gary, 2001).

Tu (2001) examined how Chinese students perceived computer-mediated communication (CMC) in online learning environments. Being unfamiliar with the online written form and coupled with language barriers reduced the Chinese students' desire to participate. Chinese students perceived CMC as a formal written discussion form. Students spent tremendous amounts of time gathering information, organizing their thoughts, then composing discussion messages, even when some discussion messages were supposed to be in a casual written form. This prolonged process resulted in less participation in class discussions, even though the quality of work was better.

The social relationship between instructors and students was critical to students' participation (Tu, 2001). The attitudes that instructors and teaching assistants communicated toward students affected class interactions. The Chinese students perceived instructors and teaching assistants who exhibited minimal concern as being warm, pleasant, and friendly. The personality and attitudes of classmates also affected participation in discussion as well as the psychological well being of Chinese students. Chinese students were more willing to respond to messages that demonstrated pleasantness and concern from their classmates. Messages containing personal topics and words of support created a convivial environment for social relationships with classmates and a greater motivation for participation in discussions. There was a distinct difference when one received a message from a friend or someone he or she knew. The Chinese

students were more likely to interact when the message was from someone who made them feel comfortable, particularly when it was necessary to disagree. When they disagreed with someone who was unfamiliar, they would avoid conflict by not responding. Face-saving had a significant impact on the Chinese students' interactions in the CMC environment. Chinese students were still very much concerned with face-saving in the online environment despite the absence of a face-to-face contact. CMC provided Chinese students with opportunities to manipulate their images and facilitate face-saving. The nature of asynchronous communications afforded these students the time necessary to create the image they wished to project. Synchronous CMC environments were more threatening because there was less time to design ideal images through better writing (Tu, 2001).

Previous studies indicate that international students experience problems in online learning environments in different ways, especially for Asian international students who have been socialized in non-Western cultures, have language barriers, and are accustomed to highly structured coursework and strong direction from teachers. The emphasis on self-directed learning within online learning environments in Western culture can be daunting. However, specific information regarding how Asian international students actually experience online courses and how the experience affects their learning is relatively absent in the literature.

#### Statement of the Problem

Despite the large segment of Asian international students in higher education in the U.S. to date, there has not been adequate acknowledgement or exploration of the needs of Asian international students. The large population of Asian international

students suggests online learning experiences from their perspective and the underlying themes that describe those experiences is essential to the literature and educators who wish to make instruction more responsive and effective for learners with diverse backgrounds.

This study seeks to develop a comprehensive understanding of Asian international students' lived experiences in online learning environments. This understanding is achieved through descriptions of their experiences in their own words. A descriptive phenomenological method is used to answer the primary research question: As an Asian international student, what is the nature of the experience of being in online learning environments?

#### Definition of Terms

##### *Online Learning Environment*

The term online learning environment refers to an Internet-based learning environment that is accessible to learners and instructors who are separated by time and physical distance. Many universities use course management systems such as Sakai, Blackboard or WebCT. Learners have 24-hour access to the server and can connect to receive messages from or post messages to other participants. Online learning assumes participation in instruction that is entirely online without face-to-face interaction.

##### *International Student*

International student refers to an individual attending an educational institution who is not a citizen of the U.S., permanent resident, or refugee, and who holds a student visa (F-1).

### *Asian International Student*

Asian international student refers to an international student who was born and raised in an Asian country. The country classification system that is used in this study is based on the U.S. Department of State's definitions of world regions and states (See Appendix 1). According to the U.S. Department of State's definitions of world regions and states, this list of Asian countries is comprised of countries in East Asia, South/Central Asia, and Southeast Asia.

### *Conducting a Descriptive Phenomenological Study*

A descriptive phenomenological method was used to achieve the goal of this study: describing Asian international students' lived experience in online learning environments. Scholars of descriptive phenomenological methodology have developed an assortment of procedural steps (Colaizzo, 1978; Giorgi, 1985; Moustakas, 1994; Porter, 1998; Spiegelberg, 1994). This study followed the procedure of the descriptive phenomenological method. Specifically, I (a) bracketed (Epoche: set aside) conventional knowledge and experience related to the phenomena of interest; (b) conducted semi-structured interviews designed to explore participants' experiences; (c) constructed a textural-structural description of the experience of each participant; (d) confirmed the validity of the textural-structural description of the experiences with the participants; and (e) integrated the previously bracketed material with the emergent structure of the phenomenon to guide a discussion of implications and to propose directions for future studies.

## *Terms in Phenomenology*

### *Phenomenon*

This is the central concept being examined by the phenomenologist. It is the concept experienced by subjects in a study (Creswell, 1998). The phenomenon may be an emotion such as loneliness, jealousy, or anger. It may be a relationship, a marriage, or a job. The phenomenon may be a program, an organization, or a culture (2002). In this study, the phenomenon is Asian international students' experience in online learning environments.

### *Phenomenological Study*

This type of study describes the meaning of experiences of a phenomenon (or topic or concept) for several individuals. The researcher reduces the experiences to a central meaning or the "essence" of the experience (Moustakas, 1994). A phenomenological study focuses on descriptions of *what* people experience and *how* it is that they explain what they experience (Patton, 2002).

### *Essence (or Essential, Invariant structure)*

Essences are the core meanings mutually understood through a phenomenon commonly experienced. According to Van Manen (1990: 10), "Phenomenological research is the study of essences." All individuals experience it; hence, it is invariant, and it is a reduction to the "essentials" of the experiences (Moustakas, 1994).

### *Lived Experiences*

This term emphasizes the importance of individual experiences of people as conscious human beings (Moustakas, 1994).

### *Epoche or Bracketing*

This is the first step in conducting phenomenological study. In this step the researcher sets all preconceived notions aside to best understand the experiences of participants in the study (Moustakas, 1994). Husserl developed this concept as a core process of phenomenological investigation and called “Epoche.” Epoche is a “Greek word meaning to refrain from judgment, to abstain from or stay away from the everyday, ordinary way of perceiving things” (Moustakas, 1994, pp.33). In the Epoche, every understandings, judgments, and knowledge are set aside, and phenomena are revisited freshly, naively, and in a wide-open sense (Moustakas, 1994).

### *Horizontalization*

In the second step, the researcher lists every significant statement relevant to the topic and gives it equal value (Moustakas, 1994).

### *Clusters of Meanings*

This is the third step in phenomenological data analysis. The researcher clusters the statements into themes or meaning units, removing overlapping and repetitive statements (Moustakas, 1994).

### *Textural Description*

From the first three steps in phenomenological data analysis, an individual textural description for each of the participants is constructed. This includes verbatim examples from the transcribed interviews (Moustakas, 1994). Textural descriptions present the nature and focus of the experience and provide clear images of *what* happen (Moustakas, 1994, p.133). According to Van Manen (1990), textural description is “a way that the effect of the text is at once a reflexive re-living and a reflective appropriation



of something meaningful; a notion by which a reader is powerfully animated in his or her own lived experience” (pp. 36).

### *Structural Description*

Each individual textural description is then reflected upon in order to construct an individual structural description, which provides a vivid account of the underlying dynamics of the experience, the themes and qualities that account for *how* feelings and thoughts connected with the phenomenon aroused and what conditions evoked the phenomenon (Moustakas, 1994, p.135).

### *Imaginative Variation or Structural Description*

Following the textural description, the researcher writes a “structural” description of an experience, addressing *how* the phenomenon was experienced. It involves seeking all possible meanings, seeking divergent perspectives, and varying the frames of reference about the phenomenon or using imaginative variation (Moustakas, 1994). Imaginative variation enables the researcher to discover structural themes from the individual textural descriptions.

## CHAPTER 2 – LITERATURE REVIEW

The first step in conducting a descriptive phenomenological study is bracketing (Epoche). “Bracketing (or Epoche)” is a process developed by Husserl that is used as a method by qualitative researchers to approach objectivity. It is a conscious process by which the researcher suspends or lays aside what is known about the phenomenon of interest, thus allowing the phenomenon to speak for itself rather than through beliefs about it (Giorgi, 1985; Omery & Mack, 1995). As a bracketing exercise, I review relevant literature and then complete a description of my own experience as an Asian international student in online learning environments. By explicitly examining preconceived ideas, I develop a conscious awareness of potential sources of bias that may unintentionally project onto the data. In doing so, I can minimize biases on data collection and analysis.

### Bracketing Prior Knowledge

I review a wide body of literature that encompasses four areas: adult education, Web-based instruction, cultural differences in learning, and international students in higher education.

### *Adult Education*

Because this study focuses on adult learners in higher education, I review adult education. Adult learning theory helps teachers understand learners and enable to design more meaningful learning environments.

### *Adult Learners*

The nature of adulthood assures adults are responsible for most aspects of their lives. As learners, they usually have a fairly well defined idea of what they are seeking and how they want to experience it (Brookfield, 1990). They come to learning as

volunteers and have the power to engage in or withdraw from the proceedings at any stage, depending on how they perceive the fulfillment of their expectations. If they choose to engage, they will do so with intention and enthusiasm. They will search some of the information in depth as they try to adapt what they are learning in with their goals (Tough, 1979).

In most cases adults will bring relevant life experiences to the learning situation. They will have a context to which they can apply new skills or knowledge, or they will encounter situations where they can imagine applying what they are learning. Their past experiences can be resources for both themselves and other students (Rogan, 1997).

Adults are self-directed (Brockett & Hiemstra, 1991; Long & Associates, 1990). They want to take responsibility for their own learning; they want to have a choice in proceeding learning experience and often have specific likes and dislikes.

#### *Principles of Effective Adult Education*

Previous research (Brookfield, 1990; Frey & Alman, 2003; Knowles, Holton, & Swanson, 1998) suggests the following principles that underlie effective adult education.

*Voluntary participation.* Adults are voluntary participants in the learning situation. This greatly affects how learning occurs. They are generally highly motivated and are dedicated to getting the most out of the situation possible. They will engage in tasks with enthusiasm, provided the tasks are seen as significant. Adult learners are more likely to engage participatory learning techniques such as discussion, role-playing, small-group work, and the analysis of personal experiences. The reverse side of the voluntary participation is that adults can easily withdraw.

*Mutual respect.* A second principle is that adult learning should be characterized by mutual respect among participants. Displaying disrespect to others, denigrating their contributions, or embarrassing them publicly is likely to make withdrawal certain. However, this does not mean that criticism and suggestion should be avoided in discussions. It does mean that the sense of self-worth of all participants must be considered. “One of the most daunting and difficult, but essential tasks of the facilitator is to set a climate for learning and to assist in the development of a group culture in which adults can feel free to challenge one another and can feel comfortable with being challenged” (Brookfield, 1990, pp. 13-14).

*Collaborative activity.* The teacher need not be the “expert” with all the answers and feel responsible for providing all the information and structure. The content and sequence of the learning situation can be open to negotiation by all participants. Leadership roles can be assumed by different persons at different times. This collaboration should be ongoing and involve a continual renegotiation of the activities and priorities of the shared educational experience.

*Praxis.* The fourth principle has been termed praxis. Freire (1970) contends that the purpose of education is not just learning for the sake of context-free information but also learning for personal liberation and action. Praxis may be defined as the alternating and continuous engagement by teachers and learners in exploration, action, and reflection, which is a process central to adult education.

*Logical counterpart.* The fifth principle is the logical counterpart to the previous one. Although Freire’s praxis concerns action and reflection on that action, critical reflection suggests an examination of the basis of one’s beliefs and the premises

underlying the learning that is taking place. Education should develop a critically aware frame of mind, not uncritically assimilate skills and bodies of knowledge.

*Self-directed and empowered learners.* Finally, adult education should develop self-directed and empowered learners. Self-directed means that learners assume control over all aspects of their education: what they learn, how they learn it, and how it is assessed (Brockett & Hiemstra, 1991; Long & Associates, 1990). It is not a set of techniques to be applied; instead, it is asset of perspectives and attitudes to be cultivated and embraced (Rogan, 1997).

#### *Web-Based Instruction*

Khan (1997) defined Web-Based Instruction (WBI) as “a hypermedia-based instructional program that utilizes the attributes and resources of the World Wide Web to create a meaningful learning environment where learning is fostered and supported.” Relan and Gillani (1997) defined WBI as “the application of a repertoire of cognitively oriented instructional strategies within a constructivist and collaborative learning environment, utilizing the attributes and resources of the World Wide Web.” Although the definitions are not identical, there is a common theme, which is that WBI takes advantage of the Internet and World Wide Web to deliver information.

WBI, which is an emerging field in education, is a large part of the rapid growth of the Internet. Reasons for the growth of WBI include: (a) promotes growth of distance education economically (reliable and inexpensive source) as compared to computer-based training, live broadcasts, videotapes, and so on (Relan and Gillani, 1997; Santi, 1997); (b) enables learners who prefer or are required to learn outside traditional classrooms to attend classes at their homes or offices (Bannan & Miheim, 1997); and (c) provides

delivery medium and content in one package, unlike other mediums, such as computer-based training, that require a separate delivery mechanism (McManus, 1996). Nichols (1995) predicted that the Web would become the most populated medium for the delivery of distance education type materials.

Despite the relative newness of WBI, researchers have sought to establish a theoretical foundation to guide research and practice. The four constructs that have received the most attention by researchers were: transactional distance, interaction, control, and social context (Hill, Wiley, Nelson, & Han, 2004).

#### *Transactional Distance*

Michael Moore first introduced his theory of transactional distance in 1972 (Moore & Kearsley, 1995). Moore's theory focused on the shifts in understanding and perception that were created by the separation of teachers and learners (Hill, Wiley, Nelson, & Han, 2004). Moore's theory has received recent attention in the research literature. Jung (2001) analyzed previous research related to teaching and learning processes of WBI in order to develop a theoretical framework of WBI using Moore's Transactional Theory as a foundation. The purpose of Jung's research was to provide a better understanding of the essential pedagogical components of WBI. Jung's proposed model extended Moore's theory and included the following four elements: infrastructure (content expandability, content adaptability, visual layout), dialogue (academic interaction, collaborative interaction, interpersonal interaction), learner collaborativity (learner collaboration) and learner autonomy ((Hill, Wiley, Nelson, & Han, 2004).

### *Interaction*

Four types of interaction have been described in the literature: learner-teacher, learner-learner, learner-content, and learner-interface (Hillman, Willis, & Gunawardena, 1994; Moore, 1989). Learner-teacher interaction is a key element that provides dialogue between the learner and the teacher. This form of interaction enables feedback as well as opportunities to motivate and support the learner. Learner-learner interaction encompasses the dialogue among and between students in an online course. This dialogue may include the exchange of information or ideas. Learner-content interaction is critical to the learning process, particularly at a distance. Articles, textbook chapters, and Web sites are all examples of the kinds of materials a learner may need to interact with to extend their understanding in an online course. Finally, learner-interface interaction relates to the learners' ability to use the communication medium facilitating the online course (Hill, Wiley, Nelson, & Han, 2004).

### *Control*

Control – in the forms of learner and system – is critical in the development of effective learning environments (Alessi & Trollip, 2001). Alessi and Trollip (2001) suggest that the proper availability and use of control is particularly important for learners when working on the Web.

In distance learning or WBI, the two concepts that have been linked with control are independence and learner control. Independence relates to the learners' impressions of how well they can function on their own. The notion of independence is directly tied to internal and external loci of control (Hayes, 2000). Students with internal locus of control have been found to have a higher completion rate than students with external locus of

control (Rotter, 1989). Assisting learners with adjusting their perceptions of control, especially from external to internal, can greatly facilitate increases in completion of Web-based learning experiences (Hill, Wiley, Nelson, & Han, 2004).

### *Social Context*

The social context in which a learning experience takes place is an important consideration whether the interaction is face-to-face or at a distance. Recent research has emphasized the important role that social and cultural attributes play in learning from and with the Internet (Hill, Wiley, Nelson, & Han, 2004). Previous research (Hill, 2002; Jelfs & Whitelock, 2000; Moller, 1998; Tu, 2001) has focused on the concept of social presence as it relates to social context. Social presence is the degree to which an individual feels or seen as real by colleagues working in the online context. When learners have a higher degree of social presence, they are more likely to feel connected to the group, which in turn typically leads to greater satisfaction and reduces the likelihood that the learner will leave the environment. They found that a sense of presence was important in their work in virtual environments.

### *Cultural Differences in Learning*

A review of literature suggests that cultural differences influence adult learning through several major processes. Here I describe the processes separately for the purposes for clarity, but in reality the processes overlap considerably.

### *Formal or Informal Socialization*

Learners' formal or informal socialization patterns affect their learning (Alfred, 2000, 2002; Guy, 1999a, 1999b; Hvitfeldt, 1986; Johnson-Bailey & Cervero, 1996). This is important because cultural values acquired by the socialization process clearly affects



learners' perceptions of themselves and their capabilities; their decisions to participate (Hayes & Flannery, 2000); their ways of perceiving reality, processing information, and relating to others (Hvitfeldt, 1986); their educational needs and goals (Guy, 1996b); learning practices (Treuhaf, 2000); role in learning environments (Cain, 2002); and their methods of solving problems (Terpstra & David, 1985).

*Cultural models of learning.* A cultural model generally refers to systems of cultural knowledge, values, beliefs, and behavior norms acquired by people belonging to a particular cultural group (Lee & Sheard, 2002). According to Quinn and Holland (1987), this term refers to the action taken and meaning making of the individual within a particular group setting. The significance of the cultural model to the field of adult education is that it can give us better understanding of how formal and informal socialization affect one's learning preference, interaction, motivation and expectations in an adult classroom setting.

For instance, Alfred (2000) employed the concept to help her gain insight as to how Caribbean immigrant women perceive the way in which their earliest socialization in school was instrumental in shaping their learning preferences and identities as adult learners in Western cultures. The women in her study preferred learning through written format and in isolation. Alfred (2002) suggests silence is encouraged in some Caribbean societies and classrooms, where students generally express themselves through written rather than oral discourse and critique is often viewed as inappropriate public confrontation and poses a threat to the power and authority of the teacher. Similarly, some students of Asian ancestry, or Asian students who have recently immigrated to the United States may have difficulty participating in open discussion (Treuhaf, 2000; Tu,

2001). To participate in such a discussion or free response is not a common activity among many of these students. In these learners' native cultural setting, learning activities are often didactic, and dialogue or discussion is a rarity. Students become accustomed to remaining silent, listening, taking notes, and memorizing information. Moreover, silence can be a sign of respect. Therefore students' silence or lack of participation in discussion should not be interpreted as lack of interest, preparation, or even ability to learn (Johnson-Bailey, 2001; Lee & Sheared, 2002). The instructor can provide alternative means of communicating, such as journals, one-page reaction papers or solicited responses from students who do not freely participate in classroom exchanges. Modeling behavior that emphasizes give-and-take in dialogue is another method of fostering a respectful classroom space (Johnson-Bailey, 2002).

Students from different cultures show inclinations toward different learning styles (Treuhart, 2000). According to Keefe (1979), "learning styles are characteristic cognitive, effective, and psychological behaviors that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment' (p. 4)." Based on Kolb's Learning-Style Inventory, Asians, Blacks, and Hispanics tend to identify themselves most often as assimilator (planner, theorist, analyst), while White choose converger (problem-solver, deducer, decision-maker) (Sauceda-Castillo, 2001). Auyeng and Sands(1996) found Australian students exhibit an accommodator learning style (learning best through concrete experience and active experimentation), while students from Hong Kong and Taiwan display an assimilator style (learning best through abstract conceptualization and reflective observation).

According to Conceição (2002), Asian and Hispanic students from a culture where group cooperation is emphasized, time is relative, thinking is holistic, affective expression is evident, the world views of other cultures are generally accepted, and interactions are socially oriented, tend to display a field-dependent cognitive learning style which is relational, holistic, and highly affective. A field-dependent cognitive learning style is characterized by a personality that presents characteristics of being socially dependent, eager to make a good impression, conforming, and sensitive to social surroundings. Conversely, field-independent thinking with limited affective factors is characteristic of the Euro-American cognitive learning style.

Although learning style differences do exist between and among multicultural subgroups in the United States, the research in learning styles suggests that there apparently are as many within-group differences as between-group differences (Dunn & Griggs, 1990).

Anderson and Adams (1992) and Belenky, Clinchy, Goldberger, and Tarule (1986) argue that White women and minorities prefer collaborative learning settings because this pedagogy matches their learning style. The basic argument is that both White women and minorities' learning styles emphasize connected knowing, cooperative problem solving, and socially based knowledge. On the other hand, White men prefer traditional pedagogy given their more analytical, individualistic, and competitive learning styles (Cabrera, Crissman, Bernal, Nora, Terenzini, & Pascarella, 2002). Research evidence has been mixed.

In a comprehensive review of programs for at-risk college students, Levine and Levine (1991) found minorities were remedied best in collaborative learning settings.

Treisman and Fullilove (1990) reported African American students enrolled in collaborative learning courses had higher GPAs and higher retention rates than their counterparts enrolled in traditional courses. On the other hand, Cabrera, Crissman, Bernal, Nora, Terenzini, and Pascarella (2002) and Tinto (1997) found collaborative learning was effective in college regardless of a student's race/ethnicity. Bennett and Walsh (1997) suggest comments that collaborative learning in a long term (one semester) was not effective. They suggest collaborative learning during a shorter period with fewer students.

*Cultural discontinuity and learning.* Cultural discontinuity suggests that a cultural gap or difference exists between learners' native culture and their current school culture. This often causes a student to feel marginalized, confused, and isolated. The feeling of marginality has been found to affect the development of student self-concept and academic performance and has been used to explain low academic performance and a high dropout rate among minority and immigrant students (for example, Erickson, 1987; McDermott, 1987). Recent studies (Treuhart, 2000; Wilson, 2001) show that one prominent emerging cultural discontinuity is first-language linguistic challenges among foreign-born adult learners.

Cummins (1986) and Delgado-Gaitan and Trueba (1991) found that the cultural difference or incongruence alone does not necessarily cause a harmful impact on students. The damage (such as lowered performance) is caused by how teachers and instructors view and deal with the cultural gap. For instance, Amstutz (1999) and Guy (1999a) have argued that the dominant culture has the power to define the behavioral norms, expectations, and values of the school culture; therefore, those with cultural

differences are usually interpreted as unfit, inferior, or “less than.” It is not a surprise to find minority and immigrant students who feel isolated and incompetent in certain school contexts.

*Cultural ecology and learning.* Cultural ecology (Ogbu, 1978, 1987) offers a contextual explanation for the variance in academic performance among minority and immigrant groups. The public tends to lump all immigrants into one group, but Ogbu categorizes minority and immigrant populations as being either “voluntary” or “involuntary.” A person is voluntary if she or he enters the United States by choice and involuntary if brought by force. For instance, African Americans and Mexican Americans are labeled involuntary because of forced relocation through slavery, colonization, and conquest. Voluntary members tend to believe that if they work hard, then they will obtain economic and social benefits within their society. Once they overcome their cultural and language differences, they assimilate quickly to the cultural norms. In contrast, involuntary groups have learned through history and experience with Euro-Americans that their academic efforts may not be equally rewarded. For this reason, they often learn to resist and develop ways of coping for survival and identity, exclusive of assimilation.

#### *Positionality and Allocation of Resources*

Race/ethnicity affects learning through allocating resources unequally within society. These resources can be economic, political, and socio-cultural, and they can be apportioned in society on the basis of combinations of race and other dynamics (i.e., class, gender, etc.). Access to resources has two main effects in educational settings. One effect is to shape the experiences that people bring to the setting and their perceptions of what actions they may undertake. In pursuing these strategies and actions people learn

different kinds of knowledge. Harding (1996) found that the types of experiences people have as a result of their social position strongly affect the way they can know the world and what they count as knowledge. In addition, she found that people have different resources for developing knowledge based on their position in hierarchies of power and this affects what they are able to know. The second effect is the more direct effect of access to resources in a given learning situation. Resta (1992) pointed out that minority students, who generally enter college with less background and experience with computers, do not have equal access to tools (personal computers) that help majority students achieve academically. Thus, the students remain “information-disadvantaged” throughout their college tenure. Badagliacco (1990) and Newman (1991) also concluded that ethnic background was associated with lower levels of access and achievement in the use of computer technologies in the schools.

### *Cognitive Ability*

Harman, McDaniel, & Whetzel (2003) found that ethnic differences occur in cognitive ability. The results show that on average Hispanics’ score are higher than African Americans’ scores but lower than Whites’ scores. Scores of Asian Americans and Whites have not shown large differences, but Asian Americans’ scores tend to be slightly higher. Several studies (Neisser et al., 1996; Roth, Bevier, Bebko, Switzer, & Tyler, 2001) suggest that the racial differences in cognitive ability, indicating African Americans tend to have lower scores than Whites in education settings. However, these studies have failed to account fully for the sources of these differences. Group score differences are an interesting phenomenon, but it should be noted that differences within a group are more numerous and varied than differences across a group (Stalling, 1960).

### *Curriculum*

Race/ethnicity affects adult learning through curricular materials and the tools (Hansman, 2001) that are used in teaching/learning interactions. The ways curricular materials are biased by race have been widely explored (Anyon, 1981; Apple, 1988; Quigley and Holsinger, 1993; Tisdell, 1993). Race/ethnicity must be considered in an active way because participants negotiate the meanings of curricular materials rather than receiving them passively.

### *Dynamics within Learning Environments*

Race/ethnicity affects adult learning through the way it influences the dynamics within educational settings. Cain (1998, 2002) and Tisdell (1993) found that race affected the dynamics of classroom interaction. The results showed that race had an effect on the way the groups in the classroom operated, whose voice was heard, and how decisions were made. In Johnson-Bailey and Cervero's (1998) study, White male students experienced a high degree of comfort when they were free to talk without being checked and when they were called on to serve as group leaders. In environments where power issues were not regulated by the instructor, the White males were permitted to claim their culturally ascribed power roles of leadership. Conversely, disenfranchised learners were direct in expressing how uncomfortable they were in a classroom setting where power dynamics were not controlled by the teacher. However, they reported a significant level of comfort when they were allowed voice and felt that the instructor valued their opinions. For example, in this same study, Black learners felt that they were allowed to thrive when the teacher monitored who talked in class and ensured that there was ample communication space for all students.

Guy (1999a) argues that the sharing of power between teachers and students is of vital importance in a culturally diverse classroom. He suggests that teachers should attend to classroom processes that maximize learning participation and power sharing. Similarly, Johnson-Bailey (2002) recommends that instructors observe the setting to monitor not only who speaks but also who interacts with whom and who takes a leadership role in small group work as part of effective teaching. This is an important way of analyzing the power dynamics in the classroom. Often an instructor needs to negotiate classroom conversations and debates, as well as regulate student networks and small group activities, to ensure that these exchanges contribute to a democratic classroom environment. Such monitoring is essential because what happens between and among students affects the quality of teaching as well as the caliber of the learning.

In sum, the review of literature suggests that race/ethnicity affects individuals (through socialization, positionality and allocation of resources, and cognitive ability) and context (through curriculum and interactions of learners with each other), and the individual factors and context factors are interconnected (Conceição, 2002).

### *International Students*

#### *International Students in the U.S.*

According to the Open Doors Report (2004), the number of international students attending colleges and universities in the U.S. in 2003-2004 is 572,509. The number of international students decreased by 2.4 percent from the previous academic year. This decline follows major changes in foreign student visa policies in the U.S. after the 9/11 national terrorist attacks. Before 2003-2004, the number of international students enrolled in U.S. higher education institutions had increased continuously for more than 50 years,



though only a nominal increase (0.6 percent) occurred in 2002-2003. In addition, the 2003-2004 decline occurred only at the undergraduate level: the number of undergraduate international students in the U.S. decreased by five percent, while the number of graduate international students actually increased by 2.5 percent over the previous year. International student enrollment comprises over four percent of the total higher education population – nearly three percent of undergraduate students and 14 percent of graduate students. The distribution of international students across institutions in 2003-2004 is uneven with 46 percent enrolled in doctoral/research universities, 14 percent in master's colleges and universities, and 12 percent in associate's institutions or community colleges. The following ten countries provide the most international students to the U.S. in 2003-2004: India (79,736), followed by China (61,765), Korea (52,484), Japan (40,835), Canada (27,017), Taiwan (26,178), Mexico (13,329), Turkey (11,398), Thailand (8,937), and Indonesia (8,880).

A review of the literature reveals three primary reasons for the increase in international student enrollment (Barger, 2004). First, many international students rate the U.S. as their preferred study destination. This is due to a variety of factors, including the availability of science and technology-based programs, the wide range of educational opportunities, and the high academic standards and overall capacity of the U.S. educational system. Second, a growing number of U.S. institutions are making international education a priority, increasing efforts to recruit international students. Third, U.S. policy encourages the State Department and the Department of Education to work with state governments, colleges, and universities to attract qualified post-secondary students from overseas.

Previous research indicates that the U.S. benefits economically, politically, and academically from educating international students (Barger, 2004). Open Doors 2004 reports that in 2003-2004, international students contributed almost \$13 billion to the U.S. economy in money spent on tuition, living expenses, and related costs. Nearly 72 percent of all international students' funding comes from personal and family sources or other sources outside of the U.S. Department of Commerce data describe U.S. higher education as the country's fifth largest service sector export. From a political standpoint, educating the future leaders of foreign countries helps spread U.S. political values and influence, creating goodwill towards the U.S. throughout the world (NAFSA: Association of International Educators, 2003). Academically, international graduate students have become a key component of teaching and research in higher education, particularly in the scientific fields (Khafagi, 1990; Kotkin, 1993; Potts, 1998; Ward, 2001). Furthermore, international student enrollment in under-enrolled courses and programs often enables such courses and programs to be offered (Khafagi, 1990; NAFSA: Association of International Educators, 2003). Generally speaking, the U.S. public supports educating international students. Indeed, the American Council on Education's National Survey showed that 86 percent believed that international students enriched domestic student learning (Hayward & Siaya, 2001). In Barger's study (2004), domestic students believed that international students enhance the intellectual atmosphere on campus. In the same study, the majority of domestic students (76 percent) believed that intercultural experiences with international students were important to their personal and professional development.

While the visibility of international students within university communities has grown considerably in recent years, there has not always been adequate acknowledgement or exploration of ways of adapting to the needs of a more diverse student population. Of all international students enrolled in colleges and universities in the U.S., Asian students comprise over half (57 percent), followed by students from Europe (13 percent), Latin America (12 percent), Africa (7 percent), the Middle East (6 percent), North America, and Oceania (5 percent) (Open Doors Report, 2004). Despite the large segment of higher education in the U.S., literature that addresses Asian students' learning has been scarce. Therefore, researchers in international education should devote their attention to Asian students, who were socialized in non-Western cultures and often have language barriers.

#### *International Students' Language Barriers*

*In face-to-face learning environments.* Competence in the English language has been considered as one of the most critical elements for the academic success of international students. A number of studies (e.g., Abadzi, 1984; Abel, 2002; Barratt & Huba, 1994; Burgess & Gris, 1984; Guinane, 2004; James & Watts, 1992; Lee, 2002; Liang, 2004; Selvadurai, 1991-92) have shown the results supporting this assumption. Research studies also indicate that proficiency in the English language skill directly affects other areas of adaptation such as social/cultural, personal/psychological, and environmental adaptation (Barratt & Huba, 1994; Haydon, 2003).

The biggest obstacles to the academic success of international students are problems with English (Ballard, 1987; Scheyvens, Wild, & Overton, 2003; Selvadurai, 1991-92). Even though most international students are able to pass a standardized

proficiency examination in English, they have difficulties functioning in their academic settings (Selvadurai, 1991-92). International students have difficulties in understanding lectures, expressing their ideas, and writing reports, and these problems have been mostly attributed to a lack of proficiency in English (Nicholson, 2001; Selvadurai, 1991-92). Writing is the most difficult area for international students. In addition to the challenge of writing in grammatically correct English, students often have difficulties expressing their ideas through writing and speech, and they do not have complexity or depth to their thoughts (Briguglio, 2000). Students often have problems reading texts in English; they find it time-consuming and difficult to understand (Nicholson, 2001). They also have problems reading teachers' handwriting in papers and on the blackboard in class. Because international students may have trouble listening to and understanding fast-paced, extended lectures, they also have difficulty taking notes in class (Briguglio, 2000; Parker, 1999).

English is the most problematic area for Asian international students (Nicholson, 2001). Students from China, Japan, Korea, and other Asian countries have more difficulty speaking and understanding English than do their European counterparts. Unfamiliarity with idioms and college slang as well as the fear of being misunderstood can hinder communication between Asian international students and American professors and classmates (Ye, 2005). In a study by Sato (1982), Asian international students took significantly fewer speaking turns than other participants.

*In online learning environments.* Most previous studies indicate that computer-mediated discussion (CMC) in online learning environments does not always carry out predictions that its more egalitarian environment offers international students

conversational facility by masking language issues of dysfluencies, pronunciation, and accent, or by reducing communication apprehension often felt by international students with limited English proficiency (Schaller, Reed, & the D-Team, 2003-04). In a study by Schaller et al (2003-04), the international students did not participate equally in the written discussion for many reasons: they did not feel fluent enough in the language to understand fully other students' posting; they could not type in English fast enough to keep up with the conversation; and they had various cultural expectations about writing only error-free sentences. Synchronous conversation put a particularly heavy burden on quickness of grasping ideas, formulating a response, finding words to express one's response, and typing in a foreign alphabet. In a study by Jaradat (2004), Jordanian students faced frustrations with text-based communication, multiple dialogues, and the rapid pace. Furthermore, communicative misunderstandings were common in a text-only format. These problems with language negatively influenced their participation in an online learning environment. Tu's study (2001) also showed that being unfamiliar with the online written form and their own language barriers reduced the Chinese students' desire to participate. Chinese students perceived CMC as a formal written discussion form. Students spent tremendous amounts of time gathering information, organizing their thoughts, composing the discussion messages, and editing and revising them, even when some discussion messages were supposed to be in a casual written form. This prolonged process resulted in less participation in class discussions.

A study by Yildez and Bichelmeyer (2003) showed inconsistent results from most of research studies. The results showed that online courses provided international students with more opportunity to speak out and participate in the discussions than in

face-to-face classrooms. The characteristics of online courses gave international students an opportunity to express their opinions and speak out without the constraints of pronunciation, listening comprehension, producing accurate sentences on the spot, turn-taking procedures, and the risk of getting in the way of the class discussion that are present in face-to-face classrooms. However, while CMC eliminated difficulties experienced in speaking and listening in a foreign language, it came along with difficulties of reading and writing.

Overall, the previous research studies indicate that although there are some potential benefits of CMC on international students' participation, it does not provide a perfectly equal atmosphere. Language barriers still impose difficulties with reading comprehension and writing on international students in online learning environments.

#### *International Student-Instructor Relationship*

Previous research indicates that the quality and degree of faculty-student interaction in American universities troubles international students (Craig, 1981; Edward & Tonkin, 1990; Haydon, 2003). These findings reflect that most international students are accustomed to listening to instructors rather than speaking in class. Often the more collegial atmosphere maintained in the classroom in the college system in the U.S. may seem informal and less structured to international students, thus impeding their learning process.

Western faculty-student relationships are based on expectations of mutual honesty and respect. Teachers within Western educational systems tend to act more as informal advisers who require students to critically engage with their learning material and to express their own perspectives and conclusions (Barker, 1990; Chan & Drover, 1997).

Many international students arrive with a respect for authority far surpassing that of their American peers and are dependent on their instructors. In the Asian education system, the teacher is the final authority (Abel, 2002) and seen as a bearer of absolute truths and therefore should not be questioned (Haydon, 2003). The teacher in Asian culture directs students and provides them with all the information they require in order to master a subject. In return, absolute deference to the authority of the teacher is required on the part of students (Elsey & Kinnel, 1990). This can lead international students to have very high expectations of their teachers and demand more direction than domestic students (Barker, 1990; Samuelowicz, 1987). It is common for these students to feel that their teacher or lecturer is being too indirect in advising them what course of action to follow (Huxur, Mansfield, Nnazor, Schuetze, & Segausa, 1996, p.9). As Channel (1990, p. 68) asserts, the tendency for many international students to see the teacher as an all-knowing expert frequently leads to disappointment when they discover that their teacher is unwilling or unable to provide more than general advice. This different interpretation of the role of a teacher can have a detrimental effect on the relationship between teacher and student, leaving the teacher feeling stressed and pushed for time and the student feeling unsupported (Elsey, 1990, p.59; Lewins, 1990, p.89). International students seem to have problems working in different ways with their instructors, but many adaptation problems of international students with their instructors and how these problems affect their learning are relatively unknown in the literature.

#### *International Students' Learning Style/Preference*

Related other research indicates that Western cultures place a much greater emphasis on debate and critical thinking than Asian cultures, which are characterized by

a large power distance between teacher and pupil and a reliance on memorizing and reproducing course material (Chalmers & Volet, 1997; Harris, 1997). Asian students have difficulty participating in open discussions (Treuhart, 2000; Tu, 2001). To participate in such a discussion or free response is not a common activity among many of these students. In these learners' native cultural setting, learning activities are often didactic, and dialogue or discussion is a rarity. In that setting, the student becomes accustomed to remaining silent, listening, taking notes, and memorizing information. Moreover, silence can be a sign of respect (Johnson-Bailey, 2002; Lee & Sheared, 2002). Adaptation to a more independent learning culture is often particularly difficult for Asian international students (Samuelowicz, 1987). Thus, for students used to highly structured coursework and strong direction from supervisors and lecturers, the emphasis on self-directed learning within Western programs can be daunting (Channel, 1990). Although learning style differences do exist between and among multicultural subgroups in the U.S., the research regarding learning styles also suggests that there apparently are as many within-group differences as between-group differences (Dunn & Griggs, 1990; Vita, 2001).

A relatively modest body of research has been conducted on the classification and identification of learning styles, but research evidence has been mixed. Moreover, very few studies (e.g., Garland, 2002; Wang, 2004) have been devoted to learning style/preferences in online learning environments. Mostly these studies determined and compared the learning styles between face-to-face classes and online classes. For example, Garland (2002) investigated differences between the learning styles, as determined by the Kolb Learning Style Inventory, of students in courses taught face-to-face and students in matched online courses. The group learning style for the online



student was assimilating, while the learning style for face-to-face students as a group was diverging. There was no statistically significant correlation between the Kolb learning modes and student engagement as determined by Blackboard statistics for these online students. Wang (2004) examined and compared the learning styles, achievement, and course completion between face-to-face classes and online classes. The results from the study indicated that there was no significant difference in academic achievement among the four Kolb styles and between two formats (face-to-face format versus online format). No significant interactions were found in posttest scores between the learning styles and the instructional formats. No empirical study has examined international students' learning styles/preference in online learning environments.

#### Bracketing My Personal Experience

I came from South Korea to pursue a systematic study of educational technology in an advanced educational environment in the U.S. I enrolled in the Intensive English Program at the University of Missouri-Columbia (UMC) for the first year and then enrolled in the Educational Specialist (Ed.S.) program in the School of Information Science and Learning Technologies (SISLT) at UMC. Currently I am enrolled in the Ph.D. program in the SISLT at UMC.

During my Educational specialist program, I took seven online courses out of the courses required for the program. I had never taken online courses in South Korea; in fact, I never heard about these. I was curious and mainly apprehensive about online courses. All of the courses for my first semester were offered online and were technology-oriented such as "Introduction to Web Development" and "Telecommunication via the Internet." I felt computer illiterate. That was why I wanted

to study. I barely used e-mail back then, and the course titles themselves sounded intimidating to me. I was terrified by the idea of learning “technology” through the Internet. I felt, how could I learn “technology” through the Internet? I felt I needed my teacher right next to me to show how to do it. But I had no choice.

Since all my courses for the first semester were online courses, I did not need to go to campus. In addition, I did not have teachers and classmates. I stayed at my apartment all the time to study and had little social interaction. I felt lonely and isolated in a total new environment. I kept asking myself, “Why I am here all the way from my home? I do not meet and I do not even see my teachers and classmates.” Particularly I was frustrated when I encountered technical problems during my assignments. I felt it would have been much easier if someone had showed me how to troubleshoot. Reading directions and books did not help because I did not have any background and/or prior experience with computers. Even though my teachers said we could ask questions at any time, it was difficult for me to describe my problems and/or questions in English because of my limited English proficiency. I just hoped to see and meet my teachers in person and ask my questions. If I could not explain my problems, at least I could show my problems to them.

My experience suggested that in online learning environments there were both advantages and disadvantages regarding English proficiency. Because my reading comprehension and written English was better than my listening comprehension and spoken English, I was more comfortable in an online learning environment. I did not have to worry about my broken, accented spoken English or about missing something because I did not understand what my instructor or classmates said. In an online learning

environment, I could read course materials and course discussions over and over again until I completely understood. However, this advantage became a disadvantage, because I did not have sufficient opportunities to speak and listen to spoken English. Also, writing was very time-consuming and became a burden in taking online courses. Even for a very informal writing, it took a while to write because I wanted my writing to look neat, so I always wrote and checked grammar and spelling in Microsoft Word and then pasted my writing into my course sites. If I spoke broken English in face-to-face, it was transient. However, once I posted a message with grammatical and spelling errors in online courses, it remained for the rest of the semester. Whenever I saw my messages with errors, it made me feel embarrassed and even feel less competent than American students. I was always very conscious about my writing because I did not want to look bad and less competent. I could not see and hear other students, so judged or imagined only through their writing whether they were smart, competent, or nice. Thus I assumed people would judge me only through my writing, and I had to worry about my writing even for a very casual, informal posting in online learning environments.

As I finished my educational specialist program and coursework for my Ph.D. program, I took a dozen online courses and became increasingly comfortable in an online environment. I tend to be highly motivated, self-directed, and self-disciplined, so I appreciated and took advantage of the flexibility of online courses without the risk of putting my work aside and being overwhelmed at the last minute. I liked the way I could control and manage my work schedule.

I do not have any preference in course format. I see that both online courses and face-to-face have advantages and disadvantages. I do not feel online courses are less

effective than face-to-face courses. However, I tend to feel less connected to my teachers and classmates in online learning environments. I am a relation-oriented person and value good relationships with my teachers. In fact, my relationships with my teachers affect my learning by motivating me to study harder. I tend to study harder when I have a closer relationship with my teachers because I want to impress them with my progress as a token of my respect for them. It does not mean I do not work hard in online learning environment, but I need to keep self-motivated and push myself to work harder. In general I have negative feelings about social relationships in online learning environments.

The empirical literature and my personal experiences reviewed in this chapter will be set aside until the later stages of data analysis. The goals are (a) to attain objectivity by consciously identifying biases and assumptions and (b) to be ready for me as a researcher and interviewer in this study to see the phenomena under study in an unfettered way, not by knowledge from my academic study and not by prejudice based on unreflected everyday experience.

## CHAPTER 3 – METHOD

This chapter consists of two parts. In the first part, I examine the philosophical assumptions of phenomenology and present the rationale for using the phenomenological method in the present study. In the second part, I describe the specific process of data collection and analysis guided by the phenomenological method.

### Assumptions and Rationales

#### *Philosophical Assumptions of Phenomenology*

Phenomenology refers to both a philosophy and a research method. The principle philosophers were Husserl (1859-1938), who is regarded as the founder of the phenomenological movement, Heidegger (1889-1976), Sartre (1905-1980), and Merleau-Ponty (1905-1971). The development of phenomenology as a philosophy emerged as a protest against reductionism and is aimed to achieve a deeper and broader understanding of phenomena that can be obtained from empirical research. Giorgi (1985) mentioned that the scientific method of investigation - which focuses on observation, labeling, hypothesizing, and testing - is designed to deal with the phenomena of nature, not for dealing with experienced phenomena.

The goal of phenomenology is to study how human phenomena are experienced in consciousness, in cognitive and perceptual acts, as well as how they may be valued or appreciated. Fundamentally, phenomenology is the study of lived experience that intends to explore the meanings of experience (Van Manen, 1997). Phenomenological researchers are interested in meaning in human life and experience. A phenomenological study is aimed to understanding a participant's experience of living in real life situations, not experimental situations. Phenomenology does not examine external behaviors but

attempts to understand lived experience in real situations. Phenomenologists contend that there are multiple realities and truths constructed by individuals within the social context of their lives. Therefore, there is no objective reality or single version of truth, only the reality and truth as constructed by the individual's experience (Munhall and Boyd, 1993).

As a qualitative research method, phenomenology is an inductive descriptive approach to the world as a person experiences it or has lived it. The goal of phenomenology is to accurately describe a phenomenon as it is experienced and exists in the consciousness of the individual, with the understanding that each person's social reality is unique and valid, within his or her own perception of a situation (Munhall and Boyd, 1993). Phenomenology is suggested when a researcher seeks to fully describe an experience as it is lived by a study's participant (Burns and Grove, 2001). Research participants are asked to describe their world of experience, and the words participants use in describing their experiences become the data of the study.

#### *Choosing Phenomenological Inquiry among the Different Qualitative Traditions*

This study seeks to gain deeper understanding of the lived experiences of Asian international students in online learning environments from their perspectives. A phenomenological model was employed because it provided the logical framework that would best support the purpose of this study. The focus of phenomenology is on understanding the essence of experiences about a phenomenon, such as being in an online learning environment as an Asian student. To contrast, a biography focuses on the life of an individual, not on a phenomenon. While researchers in a biography study *a single individual*, researchers in a phenomenological study talk with *several individuals* about a phenomenon (Creswell, 1998).

Researchers in the grounded theory have a different objective -- to generate or discover a theory, an abstract analytical schema of a phenomenon, while the phenomenological inquiry focuses on the meaning of people's experience toward a phenomenon. According to Creswell (1998), "The centerpiece of grounded theory research is the development or generation of a theory closely related to the context of the phenomenon being studied (p.56).

While researchers in a phenomenology seek to understand the meaning of experiences of the *individual (not a group)*, researchers in ethnography examine the *group's* observable patterns of behavior, customs, and ways of life. According to Wolcott (1994), "The ethnographer's task is the recording of human behavior in cultural terms" (p.116).

A case study is chosen for an in-depth study of a single case or multiple cases with clear boundaries (Creswell, 1998). In a case study, researchers gather extensive material from multiple sources of information. Yin (1989) recommended six types of information: documents, archival records, interviews, direct observations, participant observations, and physical artifacts. In a case study it is important for researchers to have contextual material available to describe the setting for the case and need a wide array of information about the case to provide an in-depth picture of it. But in a phenomenological study, researchers collect data through primarily interviewing (Creswell, 1998). In a phenomenological study, it is important for researchers to capture and describe how people experience some phenomenon – how they perceive it, describe it, feel about it, judge it, remember it, make sense of it, and talk about it with others. To gather such data, researchers must undertake in-depth interviews with people who have *directly*

experienced the phenomenon of interest; that is, they have “lived experience” as opposed to secondhand experience (Patton, 2002, p. 104). In this study, it is crucial to have information on Asian international students’ experience *from their perspective* and *in their own words*. Thus, documents, archival records, and physical artifacts, which are required in a case study, seemed less suitable for this study.

Considering and comparing the central purpose or focus, data collection method, and the form of results among the different qualitative traditions, I believe a phenomenological method is the most suitable for this study.

### *Descriptive versus Interpretive Phenomenology*

There are two schools of thoughts on phenomenology: descriptive phenomenology and interpretive phenomenology. Descriptive phenomenology in the Husserlian tradition aims to capture the essence of participants’ experience through structuring phenomena. In descriptive phenomenology, participants are considered the experts, and the researcher is an instrument who describes, compares, distinguishes, and infers information provided by participants and then constructs the information into a structured description.

However, interpretive or hermeneutic phenomenologists take the liberty to interpret the unspoken, unconscious, and hidden meaning they perceive to exist in the phenomenon under investigation, rather than simply provide a full description of the data (Cohen & Omery, 1994). This approach permits researchers to make inferences about informants’ experiences beyond that which is conveyed.

I selected a descriptive phenomenological inquiry approach because the unique viewpoint of Asian international students regarding their experience in online learning



environments is of primary importance in this study. Husserlian descriptive phenomenological inquiry is therefore deemed a logical fit for this study. Consistent with the purpose of this study, the central goal of a descriptive phenomenological inquiry is to describe the experience of participants (Porter, 1999). Descriptive phenomenological inquiry is used to describe and clarify “the essential structure” of the experience through participants’ reflection of the experience (Porter, 1999). The other phenomenological approach, interpretive or hermeneutic phenomenological inquiry, is deemed less suitable because it is interpretive and seeks to uncover hidden meanings.

### The Process of Data Collection and Analysis

#### *Sampling*

I employed snowball, purposeful, and criterion sampling techniques in this study. The snowball, purposeful, and criterion sampling methods are believed to be particularly suited to phenomenological inquiry (Kleiman, 2004). It is suggested that a sample of six to a maximum of ten is optimal (Creswell, 1998; Giorgi, 2003; Spiegeberg, 1994). Using the snowball technique, I added participants until ten qualified participants were recruited. I employed purposeful sampling to ensure that participants were able to share personal knowledge of the phenomenon. I also used criterion sampling. For a phenomenological inquiry, it is important that participants share certain demographic characteristics because the study goal is to describe the common features of an experience. Homogeneity of the participants allows for a richer description of the target population’s lived experiences than an eclectic sample could provide (Porter, 1999). I identified several key characteristics that participants must have in common to participate in this study. Generally, the inclusion criteria are: (a) participant is an international

student from Asian country<sup>1</sup>, (b) participant's native and/or official language is not English<sup>2</sup>, (c) participant finished his or her undergraduate program in his or her home country, (d) participant is pursuing a graduate program in the area of information science and learning technologies, and (e) participant is enrolled in online course(s) offered by School of Information Science and Learning Technologies in the winter 2006 semester, and (f) The winter 2006 semester is a participant's second semester or later in the U.S.

### *Participant Recruitment*

I initiated to recruit participants through the Digital Media Zone. The Digital Media Zone is part of the School of Information Science and Learning Technologies at the University of Missouri-Columbia and offers 16 online courses. The Digital Media Zone is a support environment for students enrolled in digital media and Web development courses taught online. These online courses are available to undergraduate and graduate students and anyone who would like to extend their knowledge of digital media and Web development. I posted a recruitment advertisement to the classes through their class sites by permission from instructors of the Digital Media Zone courses. The recruitment advertisement included the purpose of the study, the inclusion criteria, basic information about what was expected of participants, the amount of compensation, and contact information (see Appendix 3). Only two potential participants volunteered within two weeks after the first recruitment advertisement was posted. The follow-up recruitment advertisement was posted, and a total of seven potential participants volunteered through the Digital Media Zone courses.

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<sup>1</sup> To determine if a student meets this criterion, the U.S. Department of State's definitions of world regions and states is used (see Appendix 1).

<sup>2</sup> To determine if a student meets this criterion, the Directory of Languages created by The State Education Department in the University of the State of New York is used (see Appendix 2). Based on this directory, students from Hong Kong, India, Philippines, and Singapore are not included.

In the recruiting process, one change in the inclusion criteria was made: (d) participant is pursuing a graduate program in the area of education. Original criterion was “participant is pursuing a graduate program in the area of information science and learning technologies.” The School of Information Science and Learning Technologies (SISLT) is part of the College of Education at the University of Missouri-Columbia. Some students in the area of education take courses offered by the SISLT. Four graduate students in the area of English education, special education, educational psychology, and curriculum & instruction were taking online courses offered by the SISLT as their minor or support area at the time of recruiting. I decided that their lived experiences in online learning environments were appropriate for the study, so they were included as qualified volunteers. The researcher added six more potential participants until ten qualified participants were recruited using the snowball sampling. Personal contact was made with volunteers through e-mail to further explain the purpose of the study and to determine whether they were eligible for the study. Of the total 13 volunteers, three persons were not qualified through the initial screening process. The reasons for ineligibility were as follows: (a) one was an undergraduate student in the area of Art and Science, (b) one was granted citizenship of the U.S. and no longer an international student, and (c) one finished his undergraduate program in the U.S.

### *Participants*

Ten qualified participants were recruited and consisted of five from China, three from Taiwan, one from Indonesia, and one from Thailand. Six participants were pursuing Ph.D. programs and four participants were pursuing master’s programs in the area of education. Among ten participants, only one participant was male. Four female

participants were married, and two of them had children. The length of staying in the U.S. ranged from one year to six years. Total number of online courses participants had taken by the time of recruiting ranged from one to more than ten. A brief description of the background information for each participant is presented in Table 1.

Table 1. Description of Participants' Background Information

Name <sup>3</sup>	Nationality	Gender	Marital Status	Rank Major	Source of Highest Degree	Length of Staying in the U.S.	Total Number of Online Courses	Online Course (Winter 2006)
Arti	Indonesia	Female	Married with Children	Ph.D. <i>SISLT</i> <sup>4</sup>	M.A. U.S.	6 years	More than 10	1
Lian	China	Female	Married	Ph.D. <i>English Education</i>	M.A. U.S.	3 years	3	1
Jiao	China	Female	Single	Ph.D. <i>SISLT</i>	M.A. Norway	1 year	4	2
Shu	China	Female	Single	Master <i>Special Education</i>	B.A. China	1½ years	1	1
Xiu	China	Female	Married	Ph.D. <i>SISLT</i>	M.A. U.S.	4 years	More than 10	3
Zhi	China	Female	Single	Ph.D. <i>Educational Psychology</i>	M.A. U.S.	1 year	2	1
Hui	Taiwan	Female	Married With Children	Ph.D. <i>Curriculum &amp; Instruction</i>	M.A. U.S.	1 year	2	1
Mali	Thailand	Female	Single	Master <i>SISLT</i>	B.A. Thailand	2 years	More than 10	3
Juan	Taiwan	Female	Single	Master <i>SISLT</i>	B.A. Taiwan	2 years	More than 10	2
Wen	Taiwan	Male	Single	Master <i>SISLT</i>	B.A. Taiwan	1½ years	6	2

<sup>3</sup> Each participant has been assigned a pseudonym.

<sup>4</sup> School of Information Science and Learning Technologies

### *Procedure of Data Collection*

Typically in phenomenological investigation the data is collected through long interviews. In this study participants were interviewed twice over the winter 2006 semester. Each interview took approximately 45-60 minutes and was digitally recorded to make sure that participants' perspectives were captured accurately. The interviews took place in a departmental conference room or office room on the university campus at the earliest mutually available time. The interview involved an informal, interactive process and utilized open-ended comments and questions. A general interview protocol listing main questions and issues that should be covered was used during interviews (See Appendix 4). Although I developed a series of questions aimed at evoking a comprehensive account of the participant's experience of the phenomenon, these were varied, altered, or not used at all when the participant shared the full story of his or her experience. I conducted all the interviews and then transcribed all interviews within a few days of each interview.

#### *First Interview*

*Consent.* When I met each participant for the first interview, I began by providing details about the study and explaining what was expected of participants and their right to withdraw from this study. Each participant was given two copies of the written consent form (see Appendix 5). I had sent an electronic copy of the consent form as an attachment file via e-mail so that they could read it and ask me any questions prior to the interview. All participants who reached this point agreed to participate and signed the consent form. I kept one signed copy of the consent form for my records and allowed each participant to keep one for his or her records.

*Building rapport.* The balancing act was central to develop appropriate rapport with the participants. Because the participants and I had so much shared background, I was able to get along with each participant. But I had to constantly ensure that the rapport between the participants and me was appropriate. Too much rapport with the participants could transform the interviewing relationship into a “we” relationship in which the question of whose experience was being related and whose meaning was being made is significantly confounded. Hyman, Cobb, Fledman, Hart, and Stember (1954) claimed that too much rapport could lead to distortion of what the participants reconstructed in the interview. Seidman (1998) recommended erring on the side of formality rather than familiarity at the beginning of an interviewing relationship. When I met each participant, I asked if the participant minded being called by his or her first name. To do so, I was able to avoid presuming familiarity. Two participants wanted to be called by their last names. To express respect for the participants, I showed common courtesies among Asian cultures such as nodding to each person, holding a door, not sitting until the person is seated, and introducing myself again with my full name. These are small steps but believed to be central to the interview process (Seidman, 1998). I was cautious about sharing my own experience during the interviews because although such sharing might help to building rapport, it could also affect and even distort what the participant might have said.

*Interview.* According to Moustakas (1994), broad questions facilitate obtaining rich, vital, substantive descriptions of the participant’s experience of the phenomenon. Thus I asked one “grand tour” question for each participant. The grand tour question covered the participant’s story about learning through an online course as an Asian

international student. The first round of interviews was primarily focused on gaining an overview of the participant's experiences. When I presented the grand tour question, "I am interested in learning about your experience in an online learning environment as an international student from Asian country. Please describe, in general, what this is like?" most participants said, "It is too broad. Give me a specific question." I tried to avoid leading questions because they might influence the direction the response would take. Colaizzi (1978) stated that it is important for the researcher not to lead the participants in the direction in which he or she expects the interview to go. Instead, I tried to allow the participant to take any direction he or she wanted to explore in his or her experience. So I said to the participants, "Just tell me the first thing that comes to your mind." As the participants provided a description of their story about their online learning experience, I often asked them to "tell me more" about something they said, asking them what they did when a particular event occurred and asking them to describe what something meant or how a particular experience affected them. In doing so, I encouraged participants to continue thinking deeper by focusing on the experiences they were describing (Moustakas, 1994; Polkinghorne, 1989). Probing questions were also used to elucidate additional details of various statements.

### *Second Interview*

The second round of interviews was intended to concentrate on the concrete details of the experiences. These interviews were unique for each participant based on the salient issues that arose in the first interview. I also clarified inexplicit descriptions of the experiences shared during the first interview. Sometimes participants used vague words in describing their experience. For example, one participant said, "I like a

structured course.” I did not know what he meant by the term “structured.” In the second interview, I asked him, “What did you mean by a structured course?” In responding to my request for clarification participants’ use of a word, they went more deeply into experiences. At the same time, I understood better what they said. I also asked if there anything else they wanted to tell me. Every participant said: “I cannot think of anything else now.”

### *Data Analysis*

The recorded interviews were transcribed into rich text format files using Microsoft Word and then loaded into the qualitative research software program NVivo 2.0 to organize and code the transcripts. All identifying information was deleted to ensure confidentiality. In most transcripts there were problems with expressions in English and grammatical errors, but all interviews were transcribed just as the research participants spoke.

I followed Moustakas’ (1994) phenomenological data analysis steps.

#### *1. Horizontalizing Data*

I found statements in the interviews about how individuals experienced the topic, listed these significant statements (*horizontalizing data*), and granted each statement equal worth. Selected portions of the verbatim transcription, representing horizontalization are listed in Appendix 6.

#### *2. Clustering Meanings*

From the horizontalized statements, I delimited 29 invariant horizons or meaning units, removing overlapping and repetitive statements. Then I related and clustered them into seven main categories or core themes (See Appendix 7).



### *3. Describing the Textures of the Experience*

I constructed a description of the “textures” (textural description) of the experience --*what* was experienced – including verbatim examples (See Appendix 8).

### *4. Describing the Structures of the Experience/Imaginative Variation*

Following the textural description, I constructed a description of “*how*” the phenomenon was experienced by individuals in the study, seeking all possible meanings and divergent perspectives, and varying the frames of reference about the phenomenon or using imaginative variation (Moustakas, 1994) (See Appendix 9).

### *5. Constructing a Textural-Structural Description*

I constructed a textural-structural description of the experience of each participant (See Appendix 10).

### *6. Validating Data*

I sent the individual textural-structural description of the experience to each participant. I requested each participant to carefully check the united description of the experience to see if the general structural descriptions provided an accurate portrait of his or her experience and invited suggestions on how to revise the textural-structural description to more accurately represent his or her lived experiences. During this process, no substantially new information was obtained that changed or affected the textural-structural descriptions.

### *7. Synthesizing Textural and Structural Meanings and Essences*

From the individual textural-structural descriptions, I constructed a composite textural-structural description of the meanings and essences of the experience, integrating

all individual textual-structural descriptions into a universal description of the experience representing the group as a whole.

### *Validity of the Study*

In qualitative research, validity describes research that is “plausible, credible, trustworthy and defensible” (Johnson, 1997, p.282). To establish validity for this study, credibility and confirmability among four criteria suggested by Lincoln and Guba (1985) were adapted: credibility, dependability, confirmability and transferability. Credibility is concerned with the truthfulness of the accuracy of description of a phenomenon. Dependability refers to the stability and track-ability of changes in the data over time. Confirmability is concerned with the objectivity of the data. Transferability/Applicability pertains to the extent to which a study’s findings pertain to other settings or with other participants. Given the nature of qualitative study, credibility and confirmability are deemed suitable criterion to determine methodological rigor of the study.

To enhance the study’s credibility, member checking was employed. The depiction of a participant’s experience of reality must be credibly represented. Thus I sent individual textual-structural description of the experience to each participant to review the descriptions for accuracy and clarity. Each participant was also asked if the themes and sub-themes were true to their experiences. During this process, no substantial change was made in either description or theme. This process enhanced an accurate expression of the participants’ perceptions and projected meanings.

To enhance confirmability of the study, bracketing exercise was employed. Prior to the interview process, I made a conscious effort to identify my personal worldview and

any biases regarding the phenomenon. During the data collection and analysis process, I attempted to maintain a conscious alertness to attain objectivity of the study.

## CHAPTER 4 – RESULTS

The purpose of this study was to develop a deeper understanding of Asian international students' lived experience in online learning environments. Ten Asian international students, who came from China, Indonesia, Taiwan, and Thailand, were interviewed and asked to describe their experience in online learning environments. Each interview was conducted and transcribed by the researcher. Transcripts were analyzed by the researcher using the phenomenological method. Consistent with the Mostakas' (1994) model, individual textural descriptions of participant responses as well as individual structural descriptions of the meanings of each participant's experiences were created in order to depict what each encountered.

Each participant's individual experience as an Asian international student in online learning environments was unique; however, seven commonalities emerged within the group, and these themes were interrelated. The interrelated emergent themes were: (a) language barrier, (b) relationships/interaction, (c) influence of cultural background, (d) benefits from online learning environment, (e) downside of online learning environment, (f) teachers, and (g) suggestions.

The first theme, *language barrier*, reflected how the participants' language barrier shaped their experience in online learning environments, how their language barrier affected their learning, and how they perceived their language barrier. The second theme, *relationships/interaction*, reflected how the participants perceived their relationships/interaction with teachers and/or classmates, and how their relationship/interaction with teachers and/or classmates affected their learning. The third theme, *influence of cultural background*, reflected how the participants' cultural

background or early socialization in their home countries shaped their experience in the online learning environment and affected their learning. The fourth theme, *benefits from online learning environment*, conveyed how online learning environments were of advantage to the participants. The fifth theme, *downside of online learning environment*, conveyed disadvantages and frustration the participants perceived regarding the online learning environment. The sixth theme, *teachers in online learning environments*, reflected how the participants perceived roles and qualities of teachers in online learning environments. The seventh theme, *suggestions*, conveyed the participants' suggestions to enhance the online learning environment based on their own experience.

In this chapter, quotations from the transcripts are used to illustrate the themes and sub-themes that emerged from the transcripts. In the presentation of themes, an overview of themes is described followed by more in-depth descriptions of the themes. All quotes are direct from the verbatim transcripts, single-spaced, and indented within the text. Quotations from different participants are separated by a space. When only a portion of a sentence was used, this portion is introduced or closed with ellipsis points. All identifying information of participants was deleted or changed to ensure confidentiality. Grammatical errors were found in most transcripts, and the participants' speech is presented as it was spoken.

#### Theme One: Language Barrier

The first theme, *language barrier*, reflected how the participants' language barrier shaped their experience in online learning environments, how their language barrier affected their learning, and how they perceived their language barrier.

The online learning environment did not require speaking and listening skills, but the participants encountered difficulties in reading and writing. Jiao described how her language barrier shaped her experience in an online exam.

(Jiao) When I have online exam, I find it challenging. For example when I am asked to explain some terminologies in my own words, it is hard for me to read all the questions and write my answer in my own words in a limited time. It might not be hard for American students to read all the questions and write their answer, but I am a slow reader, and it is hard for me to explain in my own words. I also have time problem. So I find the kind of online exam challenging. Especially writing and explain some concepts in our words is hard for international students in a limited time. So I am afraid of online exam.

### *Reading*

Arti and Xiu described difficulties in reading papers and course materials.

(Arti) American students only read papers one time, but we international students need to read papers two or three times to understand the content of the paper.

(Xiu) It is really hard for me to read papers that my instructor assigned for courses. I have to read it two or three times to understand the whole paper.

### *Writing*

Many participants found writing more difficult and challenging than reading. They described how they wrote and how writing was very time-consuming. They also described concern about grammatical errors and not being able to express their ideas.

(Wen) Reading is okay for me, but writing is a problem. I have to spend much more time on writing. I have to think about what I write. Sometimes I write in the Microsoft Word to check spelling and then copy and paste my writing/assignment on the discussion boards.

(Arti) When we write something, we need to write and revise again and again. Even when we are asked to post very casual messages and want to reply to others, I research the topics online and write it in Microsoft Word and check if there are any grammatical errors in my writing. And then I copy the writing in Microsoft Word and paste it in my discussion board.

But American students just write their messages in the discussion boards. It is very time-consuming for even casual postings.

(Hui) In case of casual discussions, for them (American students), writing is so natural. But for us it is like doing study, doing some homework. I also try not to make any spelling and/or grammatical mistakes. It took me much longer than they do to finish a piece of writing...My English was not good enough, so I could not express myself well enough.

(Lian) Even though it was a very short paragraph, it took me at least an hour or even a couple of hours...I don't want to make any mistakes in spellings and grammars.

(Zhi) In general, online courses require more writing. When I write, I spend more time on reading examples of writing. For American students, they maybe don't need writing examples and just write what they think. As an international student, I need to read a lot of writing examples from online and also read examples that teachers provided. I also talk to experts, teachers and my group mates, and revise my writing several times. So I spend more time on writing in online courses (than face-to-face).

(Mali) Sometimes there are some grammatical errors in my writing, and I wonder if my instructor would understand my writing.

(Xiu) Sometimes I don't know how to express my meaning in English. Sometimes even though I have a great idea and I don't know how to explain it. Sometimes I said something, but that was not what I wanted to say and just had to go with it.

### *Accepting My Language Barrier*

Hui and Lian described how they perceived their language barrier. They did not see the language barrier as a problem but rather accepted it as natural for international students.

(Hui) Regarding language barrier, I don't see it as a problem. I am a foreigner, so what? It is natural for me not to speak as well as native speaker. Sometimes when I cannot express myself I am discouraged. But this is just at that moment. I just try to let it go. I am 41 years old and I think my age really helps me a lot.

(Lian) Since I am a foreigner, I must spend more time on reading and writing. But I don't think it is challenge. I just take that as it is. I get much

pressure from colleagues' postings because sometimes I cannot do as well as other American students do in writing. But that is fine with me.

### Theme Two: Relationships/Interaction

The second theme, *relationships & interaction*, reflected how the participants perceived their relationships/interaction with teachers and/or classmates, and how their relationship/interaction with teachers and/or classmates affected their learning.

#### *Relationship with Classmates*

Most participants described a lack of relationship with classmates and felt they did not know them very well.

(Zhi) In a face-to-face classroom, we know each other and can become real friends. But in online courses, we just respond to others and never feel connected between peoples' image and what they write. In the beginning of semester, we had self-introduction session. We were asked to create our home page including pictures, etc. I read their educational backgrounds, interests, etc. I still don't know of them.

(Jiao) Because I am taking online courses, I cannot contact all of them. It is hard for me to get to know people online.

(Shu) Although my instructor asks us to introduce ourselves to each other and share our photos in the beginning of semester, I forget who is who. I don't know whom I am talking to.

(Arti). In face-to-face class we meet at least once a week, so I know exactly what they are, what they look like, and what they tend to be. But in online I only see somebody from what they write. I don't know the people.

(Hui) In online courses, even though I do meet classmates twice or three times, even four times a week because we have to post, but I don't know the people. I know so little about them. We did provide our introduction, but it is like reading a story, not like meeting someone. Sometimes some students make me feel we are strangers to each other, because we did not mention anything other than course topic and/or assignments. It is just like reading newspapers and stories. That's it. There is no chance for me to get to know the authors. We can never become good friend to people in online. Probably for young people, not for older generation. I just cannot imagine...



(Wen) In online courses, I cannot associate a name with a person and there is no personality, background, and it is difficult for me to know a specific person. There is distance between classmates.

(Juan) In online courses, there is a wall between students. Class is just like business. We don't have any relationship.

### *Relationship with Teachers*

Participants described relationship with teachers as more important than relationship with classmates because it had a greater impact on their learning and their interest. For the same reason, participants felt more frustrated when they did not have satisfying relationships or interactions with teachers.

(Lian) Regarding relationship with my classmates, sometimes they may ignore me. But I know it is up to them. The purpose for me to take the course is to learn. I can get direct response from the instructor. If my classmates did not respond to me or acted like I did not exist there, that is fine.

(Wen) I think interaction with instructors is more important than interactions with classmates. Instructors more focus on topics and they write more precisely. They provide guidance and feedback whether I am doing right or not.

(Xiu) If I would choose face-to-face classes, one big reason would be that I want to make connections with my professors. In online courses, it is not easy to make connections with instructors. In online courses instructors have so many students and don't remember their students. One time I asked one of my online instructors to write a recommendation letter for me, and he asked me if I had taken his classes. I said I just finished his class, and the instructor did not know me at all. That's not a good thing; it is a bad thing... I think developing a relationship with professors is very important for Asian students, but it is hard to develop a relationship with professors in online courses.

Juan, Xiu, and Shu described how their relationships with teachers affected their learning.

(Juan) I am not very satisfied with my relationship with my professors. And I think my unsatisfactory relationship with my professors has influence on my learning. If I have a very close relationship with my professors, I would like to learn more and work harder because he or she can give me some feedback. Unfortunately I don't have that kind of

relationship in online learning environments. And it is hard to obtain supports from instructors. Sometimes I feel frustrated with interactions with them.

(Xiu) For Asian students, it is important to be confirmed by instructors. In a classroom, I can observe what my instructors feel about my work. It is very interactive with instructors in a classroom. As Asian students, we always want to confirm that I am doing right. I think if I get more confirmations, I would be more motivated... When I know my instructor reads my message, so the quality of my postings would be better. I need to make my postings more meaningful. For other classes, I know my instructor would not read my postings, so I just meet the requirements. So relationship with my instructor makes difference.

(Shu) If I have more direct and closer relationship with my instructor, I would like to learn more from him or her.

### *Feeling Connected and Supported*

While the majority of participants felt less connected with their teachers and classmates, Lian and Mali described how they were comfortable with their relationships with others and felt connected with people in online learning environments.

(Lian) I did not think I was isolated in online learning environment. I did not know classmates in person. I did not know who was who. If I run into a classmate on campus, I may not know who was who. I did not mind it. But we still meet each other weekly online and got to know their ideas and process for this course. I think that is important, and I still feel we are connected somehow. And I feel comfortable with that environment. I cannot see my teacher, but I know good people are around me even though I cannot touch that and I cannot find that. But I know they would just stay with me. They will give me some ideas and I can also share my source with them.

(Mali) I don't miss the relationships with my instructors and classmates that I would have in face-to-face classes because I have to participate in discussion boards and am required to post my idea and answer questions. For my online classes, most of them help each other. When I post a question, I get responses from my classmates beside of instructors. We have discussion boards and answer to each other, I still feel connected with my online instructors and classmates. Some students like to have friends, see each other, and talk to each other in person. For other students

like me, it does not matter as long as instructors and classmates communicate with me and help me when I post questions. Some students need to see teachers, but it does not matter to me.

### Theme Three: Influence of Cultural Background

The third theme, *influence of cultural background*, reflected how the participants' cultural background or early socialization in their home countries shaped their experience in online learning environment and affected their learning. The participants' cultural background influenced their communication, working for group projects, and learning process.

#### *Influence on Communication*

Some participants described how their cultural background influenced their online communication, especially asking questions, replying to others, and arguing and disagreeing with others.

Some participants described how they felt about asking questions online and talked about their difficulties and hesitancy to ask questions online.

(Zhi) Sometimes I am afraid to ask questions because I feel my question is stupid.

(Lian) I would be embarrassed to share my questions with my classmates in the Blackboard because my questions could be very easy for other students. So I prefer e-mail for questions. I think e-mail is more personal and private.

(Shu) I always ask myself several times if the question is necessary before sending my instructor e-mail. But if I am taking a face-to-face class, I will just talk to my instructor, "I have a question."

Mali described how her cultural background made it difficult for her to ask questions online.

(Mali) In my country (Thailand), we use e-mail between friends, but we don't use e-mail to communicate with authorities such as government and

teachers. So I always wondered if it would be ok for me to e-mail my teacher to ask questions, or I should try to meet him or her in person to ask questions...I e-mail my professor directly instead of posting it online discussion boards because I did not want to look stupid by posting my question in public, so no one knows about it only between my professor and me... But I don't think I feel that way if I were in my home country. I would not hesitate to ask questions and wonder if my questions are stupid or not...In general, asking questions is tough for me. I don't want to be a barrier for the class. I don't want to slow down my class. I am always conscious of that. I am not sure if it is because of Asian culture. I see American students asking their questions and speaking out. They do not seem hesitate to ask questions. I think that is because of my cultural background. For Asian, group is more important than individual.

Some participants described how their cultural background influenced whom they chose to reply to or argue with in discussion boards. While Hui stated that she was more comfortable with replying to other international students, Zhi stated that she would rather reply to American students.

(Hui) If I have choice, I would respond to other international students than to American students. If I respond to native speakers, it will make me feel I am on the pressure because they will judge how well I write. But if I am responding to other international students, I would feel more comfortable because I know that we might have the same problem, the language barrier and have the same background and heritage. So I felt relaxed to post.

(Zhi) Frankly speaking sometimes I don't like to reply to international students. It does not mean we are not friends or I have no empathy for them. When I get messages from American classmates, they are more direct and easy to understand because they have wrote in their native language. Secondly, it makes me realize, "Oh this is not what I did not think about." they provide me with new points. From my experience, I prefer to reply to American classmates. For me it is easier to reply to them. It is easy job. I think American classmates' postings are high quality. They give me metaphor, examples, and strategies. It is very new to me and I like to make some comments about it.

Zhi also stated that she would rather choose to disagree with American students when she had to and described how cultural background related to her choice.

(Zhi) If I have a choice, I would rather disagree with American students instead of international students, especially Asian students. If you disagree

with Asians, I don't think most of people are open enough to accept your opinion even though they are still calm and say, "Thank you for your opinion." But I don't think in their inner heart they accept your opinion. For Americans they grow up in a society where people accept different opinions exist. They can have different opinions and nobody force them to have a certain opinion. So I think Americans are more generous in accepting others' opinion, especially in academic fields. I think they understand we are from Asian countries and we may have different understanding or misconception. So they are more open. It does not necessarily mean they accept our opinions though. For Asians, if I disagree with my friends. I don't think they are happy about that. My friends might be mad at me. They might say, "Why do you say something mean to me?" They would take it as a personal attack. We cannot separate academic disagreement from personal attack. They would think if you disagree with me, you don't like me and attack my personality or my value. They don't realize that I disagree with their ideas or paper, not themselves.

#### *Influence on Group Project*

Some participants described how their cultural background influenced their preference of group composition and their roles for their group projects.

(Hui) If possible, I would like to have both some international students and some American students for my group. In that case, I can make sure our writing is good.

(Zhi) I would rather have international classmates as a group member. International students are on campus. I prefer to meet group members in person than e-mail or telephone. For this semester we were allowed to choose group mates, so I contacted a guy who was in the same building as me. He is from Taiwan, and we can speak in Chinese. He is very diligent, knowledgeable, and intelligent. ...But my feeling is that if I could, I would rather have another American group member as well. As international students we still have problem; we don't know what the teacher wants; we are not sure what we are supposed to do. So I would find another American students because they might help us with writing, even though sometime they are not so responsible for their job.

(Xiu) From my experience, Asian students are not competent as a group leader. As an Asian student it is hard for me to say I want to be the leader. I think it is because of culture. We usually like to be helpful, not as a leader. I think it is because of language. We worry about what others think about our language. We are good assistants, but don't volunteer to be a leader. We want native speakers to be a leader. I always like to have native

speakers as a team member. Since we are here in America, it is always nice to work with American students. We can learn something new from their cultural perspectives. So I would like to work with American students. I know Asian students work hard, but they have language problem. So they are not as competent as American students even though some American students don't like to work hard.

### *Influence on Learning Process*

Some participants described how their cultural background influenced their learning process. Lian and Shu described how cultural recognition from others affected their learning process.

(Lian) I just found that others are interested in me, probably because I came from China. They are interested in my country and Chinese people. One of my classmates asked me some questions about China, our country. I was so excited because I thought somebody noticed me. I think that made me feel good. And this kind of feeling, good feeling affects my learning. It will promote my motivation to study hard.

(Shu) I would appreciate if my teacher asks me about my cultural background. I was very very happy when I was asked about education in China. I am very very happy to tell them educational situations in my country, China. I would like to know about others, but I also like others to know about us, our country, no matter what is good or bad. I just want other people to acknowledge my country and me.

Shu also stated sometimes her cultural background hindered her in accepting new knowledge in America.

(Shu) I have teaching experiences in my country, China. So I already have some ideas about certain things. That is my barrier for me to meet new things. Every time there are conflicts and comparisons in my mind.

### Theme Four: Benefits from Online Learning Environment

The fourth theme, *benefits from online learning environment*, conveyed how online learning environments were of advantage to the participants. The advantages included flexibility, asynchronicity, unboundedness, text-based communication, and chance to look at others' work.

### *Flexibility*

Most participants described flexibility as the most prominent beneficial feature of online learning environments and the main reason for their preference of online courses over face-to-face courses. They liked the way they could control time, place, and pace in their learning.

(Juan) If I have all face-to-face courses, I cannot control time. For online courses, I can control my time and I can learn what I want in any places.

(Lian) I plan my study schedule in my own pace. I can arrange everything by myself. And then I think I missed something or I need to know more about something, I can spend more time on that.

(Hui) I like online course more than face-to-face course because it gives me more freedom. I can work at any time and whenever I have the mood for study. I usually get online at midnight, but that is impossible if I take a face-to-face class. That accessibility is what I really enjoy.

(Mali) I prefer online format because I can manage all of my time. I don't have to walk to the building and study only for one hour and go back to my house. I can study at my place and can study as long as I want. I can stop studying if I don't want to. Again, I like online courses because it gives more time to do things in my own

(Xiu) I don't need to go to class and can arrange my timeline.

(Zhi) One good thing about online class is I can arrange my time and control my time. For example, I have a face-to-face class at 5:00 today (Wednesday). I need to arrange my time and had to start to study at least yesterday or last weekend. I needed to prepare for the reading materials, assignments, and homework. I spent the whole day today to prepare for the class. But for the online course, nobody requires me to do work on a certain day. I can do it on Wednesdays, Thursdays, or Fridays.

(Jiao) In terms of flexibility I prefer online courses.

The participants who had family especially appreciated the flexibility of online learning environments because they could meet both their desire to pursue advanced degree and their family needs.

(Arti) Since I have kids, I still can work on my classes and take care of my kids at the same time. Online courses would be of benefit to mothers who want to stay home to take care of family and pursue higher education at the same time. The other day while I was working, my kids were playing around me and one of my kids was on my lap. I thought it was wonderful that I could work and take care of my family at the same time. If I have to go to class, it is impossible.

(Hui) As a mom, I have two kids with me. I still keep taking more online courses because it works well and fits my schedule. Because of my life style, I need online classes; I have two kids to take care of and most of face-to-face classes are evening classes. If I take too many evening classes, I cannot take care of my family. But online courses give me more freedom and flexibility. When I register my courses, I deliberately look for online courses and choose one that looks very interesting to me. I like online courses because it meets my need for my family.

While most participants described flexibility as a benefit from online learning environment, Wen described his frustration due to the flexibility of online learning environments.

(Wen) I know other students like flexibility of online learning environments, but I don't like it. That's why I am struggling with online courses. Because of my cultural background, I was so used to structured classes and I like very structured instructions and timelines. Overall I prefer face-to-face courses. The reason is that face-to-face courses are scheduled. When I go to a "real" classroom, the time and place is scheduled. I can schedule my study time according to the class hours. I can study and preview class materials before the class, and then I go to the class, and then review them after the class. It gives me more structure.

#### *Asynchronicity*

Some participants described how the nature of asynchronous online learning environment was of advantage to them. Xiu and Mali stated that asynchronous online learning environments gave them more chance to participate in discussions than face-to-face classroom.

(Xiu) I cannot express my ideas very well in one minute in face-to-face class and will choose not to say anything. But in online courses, I might start posting something when I have really good idea, which I may not talk



in face-to-face. So I might more participate in online courses than in face-to-face.

(Mali) I think I am more active in online classes because there are many students in face-to-face classes, and it is really hard to show up what I want to say and speak up what I want to ask. But in online classes, it gives you more chances and/or opportunities to read and write something and re-write it. In face-to-face classes when I am asked, I know the answer, but it is hard to answer in English. But in online courses, I can post whatever I want and how long it takes does not matter. Posting a message is time-consuming because I have to search, type, and rewrite it. But I feel this gives me better opportunity to learn than in face-to-face classes. If I sit in a class, I don't have any chance to answer because I am shy. That is why I like online courses. At least I can participate in online classes.

Jia and Arti stated that they could contribute to quality discussions because they had more time to think.

(Jiao) I can read others' postings and try to find others' false points and then write what I think about that. In this case it is easier in online courses because I have more time.

(Arti) In face-to-face classes, when I am asked a question, I need to answer right away. I don't have extra time to think. So probably the quality of my answers to questions and/or posting would be better because online learning environment gives me more time to think.

Some participants stated that they felt more comfortable, less anxious, or more confident in online learning environment because they had more chance to participate in discussions and more time to think and write for their discussions.

(Hui) In online learning environments, I can take my time. I can reflect what I am interested in, what I said, and what I wrote in online classes. Online classes just give me more time to think about my ideas, thoughts, and responses, so they don't have much pressure, even though it takes time. However, in face-to-face classes, my reaction has to be very quick and prompt. Everybody sees what it is like. So I am not a native speaker, so I sometimes make grammatical and pronounce errors and then people will see it. So there is more pressure in a face-to-face class.

(Juan) I am more comfortable with speaking out my own ideas or point of views in online courses.

(Xiu) In face-to-face classrooms, I am more anxious about what others will say about what I said. I feel more anxiety in face-to-face classrooms. I am more comfortable in online learning environment because of the fact I can be more talkative.

(Jiao) Because of language barrier and psychologically I feel intimidate face-to-face. Even though there are no right or wrong points, sometimes I am not confident and I feel I am wrong and lower when I argue with American students. But in online courses I can read American's posting very carefully and can make a point out of the posting. So I feel less intimidating and more confident.

### *Unboundedness*

Lian and Mali described how the nature of unboundedness of online learning environments was of advantage to them. They felt more supported, and their teachers were more responsive.

(Lian) In a face-to-face class, sometimes instructors give us lecture based on their own schedule. When there is something that I don't quite understand, I don't get a lot of chance to ask in the class. In terms of that, there is advantage in online classes. When I don't understand, I just ask my question though e-mail any time. There is no limitation in online classes.

(Mali) For face-to-face classes, teachers work, I mean, teach only three hours for a three-credit course. But for online courses, instructors work all day. From my experience, most online course teachers always have responded to my questions. They are very responsive. If I have a question, I usually e-mail them instead of posting it on discussion boards. I would get pretty quick responses from my online teachers. If I send e-mail, I would get response by afternoon or evening. Or If I send e-mail at night, I would get responses by the next day.

### *Text-Based Communication*

Some participants described how text-based communication in online learning environments helped them to understand course materials and discussions better and participate more in class.

(Lian) I think I just took advantage of online course just because of reading. I think reading is much easier than listening for me at this time. So, that is the best advantage of online course. I think online learning is better for me because I can understand better... This course involved a lot of theories about psychology. I was not familiar with those terms and I would not know what they were talking about in face-to-face class. But in online courses, people wrote about it and I could read it and then I would know what that meant. That's why I think this is a good way for me. Online course helped me to be better prepared for the course... I participated more in the discussion and get to know more about others' idea. Because reading others' posting is much easier for me than listening to others' talking.

(Juan) I think online courses have a benefit for Asian students because Asian students spend a lot of time on reading. We can get more information from the Internet, and we can read it.

(Xiu) In face-to-face class, sometimes instructors are very fast and I don't think I can type down the ideas very well. But in online courses, what instructor says is written. That helps me... Even though writing is very time-consuming and sometimes I don't know what words I should use, I am still more comfortable with writing than oral components.

#### *Chance to Look at Others' Work*

Some participants described how looking at others' work helped their learning. They stated that they could learn from others' work, were motivated to study hard by comparing others' work, and could have a sense of expectations from teachers.

(Lian) A good thing about online course is I get to chance to look through others' assignments. I learn a lot from others. For example when I took Web development course, I can take a look at others' web site and check the sources and codes for their Web sites. I learned a lot from looking at others' work. I can compare my work with others. So I can be motivated by others' work.

(Zhi) Sometimes comparing with others, especially diligent and competent one is not a bad thing. It motivates me to make an effort and push myself to work harder.

(Xiu) In online courses I kind of know how other students learn through what they post and what they submit for assignments. Seeing other students' work motivates me to learn and allows me to know how things are going on, which is beneficial to my learning... In order to understand

the course content, it is helpful to see what others have done and said...In online courses, I can take a look at others' work. Sometimes I don't know what instructor's expectations are. Looking at others' work give me idea of my instructor's expectations...It is important for me to see others' work.

#### Theme Five: Downside of Online Learning Environment

The fifth theme, *downside of online learning environment*, conveyed disadvantages the participants perceived in online learning environments. These disadvantages included frustration in online discussion boards, frustration with text-only format, self-directed learning, time-consuming and demanding, and not suitable for some course contents.

##### *Frustration with Discussion Boards*

Participants described how they got frustrated in the discussion board, one of the major components of online learning environments. Shu described how she was more frustrated in online discussions than face-to-face discussions.

(Shu) At my first semester I took two face-to-face classes, and there were group discussion sessions in the classes. We were divided into several groups. When it was my turn to talk about my idea in the group, other group members occupied my time and they did not let me talk, so I was very angry at that time. After that incident, I thought it is my right to talk. No matter they understand me or not, I need to talk and I need to tell them my idea. So I push them to listen to me. But it is worse when I take online course, because I cannot push other people to listen to me.

Major frustrations in online discussion boards related to (a) unfamiliar discussion topics, (b) fewer responses, (c) pressure for well written and long messages, (d) requirements to talk and reply, and (e) overwhelming, but not worthwhile or useful messages.

##### *Unfamiliar Discussion Topics*

Some participants described their frustration with unfamiliar discussion topics, especially topics related to American culture or experiences in American society.

(Hui) American students have so many things to talk about. Compared to them, I did not have many things to talk about, and that made me a little bit pressured. My teaching experience is quite different from their experiences. Usually we apply our learning to our teaching experience. Teaching in Taiwan is so different from teaching here. So my teaching experiences might not get them interested, and that made me intimidated a little bit. If I keep talking how I taught in Taiwan, they may feel bored. That discouraged me writing too much. So I was a little bit disappointed and not satisfied...Sometimes when they mention about some program and/or tasks, I have no idea what that is.

(Jiao) I felt uncomfortable with online discussions because many American students talked about politics, I mean, American politics. I did not know about America well and how could I know about American democracy? Oh my gosh! It was tough and I felt lost.

(Wen) Sometimes I don't know how to respond because I don't have that kind of experience of what they are talking about.

(Xiu) American Ph.D. students have broad experiences because most of them are from their fields. They have working experiences in America, which we, Asian students, don't have. When they talk about their working experience or their fields, I have no idea about that and I cannot contribute my input even though I really like to contribute...Actually that was a big problem for this semester. For two of my online courses, I was not totally familiar with the topics we were discussing. If we discuss some topics from our textbook, I can read and be prepared. But when we talk about some other fields, there is no way I can prepare or follow. I feel I have no connection, which makes me feel bad. It hurts my feelings. I feel isolated from others.

Zhi described how discussing unfamiliar topics could be more frustrating in online discussions than face-to-face discussions.

(Zhi) My challenge is in a context. For example, when classmates talk about certain issues in America. I may hear about it but I don't know the details. American students knew about it because it has been a hot issue in newspapers, television, politics, and debates for last 12 years. But I have not been here for last 12 years and how can I know the topic? When students in my class talk about something related to TV program, I don't understand it. This kind of thing is more challenging in online discussions. In a classroom, I can ask classmates next to me in private what they are talking about, but in online it is difficult for me to do that. When they are in good discussions, how can I interrupt them by asking what you mean? I don't think people would respond to that kind of question.

### *Fewer Responses*

Some participants described how they got frustrated when they had fewer responses from others.

(Jiao) Sometimes I get frustrated when I don't get as many responses from students and instructor as other American students get.

(Shu) Few people responded to my comments. That's why I was so frustrated. My writing has less "decoration" and I just put my ideas. There are some mistakes in my writing that I don't realize. But American students think there are so many mistakes in my writing and they are confused about what I am talking about and what I am trying to express. So few people respond to my comments. It is terrible.

(Zhi) Sometimes I feel like even though I spend a lot of time on writing and posting online, I don't get a lot of feedback from classmates. But other American students always have a lot of responses. For my messages, I am not sure because there is something wrong with my understanding or my writing is not easy to understand or some other reasons. It bothers me.

### *Pressure for Well Written and Long Messages*

Some participants described how they got pressure that they needed to post well-written or long messages in online discussion boards.

(Hui) When I am writing, my words, sentences, and writing will represent me. So written language is very important in online discussions...I was the only one whose native language was not English. I can see all of them wrote very well, and it really gave me some pressure about that.

(Xiu) Usually I get pressure because native speakers can write very long postings, but I cannot write that long postings in English. That gives me pressure.

(Lian) I get much pressure from colleagues' postings because sometimes I cannot do as well as other American students do in writing.

### *Requirements to Talk and Reply*

Some participants described their frustration related to requirements to talk and reply to others in online discussion boards.

(Shu) Some people are very reluctant to respond, but they have to. It is required for us to respond to at least two or three people's postings. Once in a while, I feel very uncomfortable in online discussions. I have no right to keep silent. Sometimes I want to keep silent and do not want to talk. If you are taking a face-to-face class, your teacher gives you a topic and asks you to discuss it, you can say I just want to listen to others because I have no idea. You can say so. You have a right not to talk. But once you take an online course, you have no choice. The only choice is to respond to at least two or three people. Sometimes I really don't want to say anything about a certain topic because I have no idea about it. But you have no right to keep silent. You have to talk and you have to respond. That will make you very very uncomfortable.

(Wen) Most online courses require us to respond to at least three messages. In the beginning of my program, I tried to participate in the discussion boards, but after several semesters I don't participate in the discussions because I don't have motivation to do that. I don't think I am very active in online courses. Even though I don't post message frequently, my messages are good quality. I don't think it is important how many messages I post; instead I think the quality of messages is more important. Sometimes I feel frustrated with requirements for the minimum number of participation.

(Jiao) Sometimes I get frustrated when I don't know how to provide my idea. But I cannot say I don't have anything to say because teachers tell us to respond at least one or two "valuable or meaningful" postings...I also get frustrated when I have to write or reply something even though I have no more to say.

### *Overwhelming, but Not Useful Messages*

Some participants described their frustration related to the overwhelming number of postings, which they had to read and reply to. Sometimes they found them not very useful or informative.

(Jiao) I usually log in online courses later days of a week and have a lot of postings. I have to check all the postings and it is a lot of job.

(Hui) There are a lot of discussions going on. But they are not so related to our reading assignment. Sometimes there is not too much content there, not very substantial meaning carried there. They just talk about their teaching experience and then I have to respond to them. Everyone tries to respond as often as possible. I did not check our discussion boards for a couple of days and I had 35 new messages when I checked this morning.

Then I have to respond to everyone because they did that. If I don't do that, I look I am not as diligent as they are. So I had to do it and it took me two hours to respond to all the messages. It is really a burden. I get tired of this because I have to respond all the time...I would rather read my course materials and do my assignment than respond to all postings. That's one thing I don't like about online courses.

(Juan) I am not sure. Online courses use discussion boards a lot, but I think most of contributions to discussions by students are not very useful. They really don't talk about class contents. They just say, "I really like your idea." Or "You do this very well"...

(Shu) Sometimes reading others' responses is not worth it.

(Wen) I have to read through the messages and it is very time-consuming. Some of the messages are not worth it to read. So it is quite difficult for me to deal with discussions. I don't feel I learn from discussions, sometimes I just ignore it and more focus on assignments.

(Xiu) For my classes there are about 25 students, and they post more than 150 postings per week. Especially when I am in a big class, there are so many postings and some of them are not very informative and substantial. Just meaningless...

### *Frustration with Text-Only Format*

Participants described how they got frustrated in their online learning environments relying on exclusively text-only format. Arti and Jia described difficulties in understanding written course materials and/or communication without any visual cues.

(Arti) Even though the content is exactly the same, hearing and seeing someone is easier for me than reading the materials because of gestures and body languages. In face-to-face class, professors can use blackboard and other materials to explain something, but in online learning environments, contents are delivered by only words. So I need to read and read again to get understanding of material.

(Jiao) I try to read my e-mails thoroughly, but sometimes I am careless and very important information can be missed.

Some participants described difficulties related to asking questions in text-based communication without any visual cues.



Arti) The problem of online courses is when I have some questions. If I were in a classroom and I did not understand something, my instructor may notice that I have questions by my facial expressions. I could get additional explanations or answers for my questions (if any) right away.

(Lian) In online class, when I have a question, it is hard for me to explain to the instructor what I want to know. That is a barrier in online course that I have. I think in face-to-face class, probably my instructor would know my problem more easily. In face-to-face, instructor would notice my facial expression and know if I have a question or problem.

(Mali) As an international student, the biggest challenge of taking online classes is that when I have a question I have to write it down. If I see my professor, I can tell what is going on and explain my problem better than through computer. Instead of talking to computer, talking to my professor would be much better. Not only the problem can be solved, but also my feeling would be much better.

### *Self-Directed Learning*

Participants described difficulties in online learning environments, emphasizing self-directed learning. They also described how their cultural background related to these difficulties.

Some participants described difficulties in motivating themselves in their self-directed online learning environments.

(Jiao) Sometimes I need somebody pushing me to study, and I like face-to-face courses.

(Mali) In online courses, I don't have to come to class, I don't see my teacher/professor, and I don't have any stimulation. So I have to encourage myself to complete assignments. That is hard.

(Wen) Actually I don't like online courses because I need to motivate myself, or I will fail. I think this kind of class format may be suitable for some students, not for international students. There should be some modification to accommodate some students who cannot schedule their time themselves or cannot motivate themselves...The most important part is motivation. It is hard for me to keep motivating myself in online learning environments.

(Xiu) I think Asian students are more motivated by instructors, or outside person, not myself. When I just started my study here in America, I tried to motivate myself. But now I feel I just do the minimum requirements. It is hard for me to constantly motivate myself in online learning environments.

### *Time-Consuming and Demanding*

Participants perceived taking online course(s) as a burden because they were time-consuming and demanding. They stated that online courses required more input than face-to-face courses, and thus they were more time-consuming.

(Xiu) Actually I just talked to my friend that I really get tired of the online courses. Online courses require more input than face-to-face courses. I don't like the fact that it takes too much time. For online courses, there are so many things to do. For one course, I sometimes have four due dates in a week. On Tuesday do what, on Thursday do what, on Friday do what, and on Sunday do what. It takes too much time and I don't like that.

(Arti) Of course, online courses are more time-consuming. In online classes we have a lot of reading assignments and we need to write something that we have to post to the discussion board. However, for face-to-face class we only meet once a week for three hours and need to read only one chapter.

(Shu) I have such a feeling that it is a burden to take online courses. It takes me more time to take online courses. I need to read so many peoples' comments online and respond to them at the same time. I also have reading assignments I need to finish and write my comments for each topic. If I have any questions, I need to write my questions. It doesn't save my time to take a class online even though I don't have to go to class. Actually I put a lot of time on the online class. People who never have experiences with online courses think taking online courses save my time because I don't need to "attend" classes. But taking online courses takes more time than face-to-face courses...

### *Not Suitable for Some Course Contents*

Some participants described frustration with their online learning environments because they thought the course contents could not be taught best in online learning environments.

(Arti) There are some courses that can be offered in online. But there are some courses that need to be in face-to-face. Programming languages like Perl and databases would be the example. It would be easier for me to see and listen to instructor teaching us in classroom.

(Wen) For programming courses, that is procedural knowledge. So I am not sure that courses are suitable for online classes. I think they should be face-to-face class. Sometimes I don't know how to solve problems and I feel disappointed. In online courses, we cannot see other students' progress. In online courses we cannot see the procedure; we just see the result. We cannot see the sequence of the programming.

(Shu) I remember saying I did not like online courses in my first interview. Now I still don't like it. Maybe this negative feeling is related to the course content. I think this course should be carried out in a face-to-face format. I think my instructor has done everything to offer many good opportunities for us to know about the course contents. I am not against online courses; I just think some course works in an online learning environment; other courses like my course don't work. I am not dissatisfied with online courses; because of the nature of my course topic, online format does not provide what we need. My course is about tools, not a theory. I have to practice the tool in a real setting, and online learning environment cannot provide it.

#### Theme Six: Teachers in Online Learning Environments

The sixth theme, *teachers in online learning environments*, reflects how the participants perceived roles and qualities of teachers in online learning environments. Lian described how teachers in online learning environments are more important than those in face-to-face courses.

(Lian) I think teachers in online learning environment are more important than those in face-to-face course. Even though we cannot see our instructor in person, emotionally I more rely on my instructor in online learning environment.

Participants described the most important qualities of online teachers were (a) being attentive to students, (b) actively involving and being responsive, and (c) being specific or clear in communication.

### *Being Attentive to Students*

Most participants described affective elements as the most important quality of online teachers. They described a teacher who tried to understand international students' circumstances and needs and was willing to accommodate international students as an ideal one. They stated teachers in online learning environments needed to be caring and patient, encourage students, and provide an inclusive and safe learning environment. Shu, Wen, and Zhi described the importance of caring as a quality of online teachers and how their teachers accommodated international students' circumstances.

(Shu) Especially in online learning environment, caring for students is very important. As a teacher, you need to care about students. It is very important to make students have a feeling of a group.

(Wen) I think international students maybe need more care from instructors to know about their situation, difficulty in online courses, their motivation, and their problems.

(Zhi) I want my teachers to have concern about students regarding what difficulties we have. They maybe e-mail international students privately (not in public), asking, "Do you have any questions, any difficulties? If so, let me know and I will help you." "If you don't understand and/or don't know how to start, we can make an appointment and I will help you out." They could provide support and make their students feel they have access to their teachers whenever they need.

(Lian) The instructor got to know I was a foreigner. I was the only foreigner...I did not think I did a good job on quizzes all the time. I thought at most I would get a B, but at that semester I got an A. I believe that instructor considered my situation as a foreigner to study here and from the whole process she got to know I studied very hard.

Arti and Lian described patience as a quality of online teachers.

(Arti) They need to be patient to take extra time to explain well and clearly for international students if needed.

(Lian) I just want my instructors to be more patient especially for foreigners in terms of their language skills and apprehension of the

language. We have some problems and may have hard time in answering questions and explaining...I think patience is very very important.

Hui and Xiu stated that encouraging students would be one of quality of online teachers.

(Hui) If I were a teacher in online, I would be always nice to my students saying encouraging words. We don't have to discourage students and just encourage students and let them talk. Unless students post something really meaningless or irrelevant to the topic, I would say, "you did good job." Or "I really agree with you" and I would discuss with what my students had posted. I will be just that way, very encouraging.

(Xiu) I always like my instructor to encourage me and have a more positive attitude. Like they can say nice thing first and suggest something, "You did it well, but you need to improve this and that...."

Xiu and Zhi describe how teachers could provide inclusive and safe learning environments for international students.

(Xiu) For example my instructor could say, "We have international students, let's hear what they think or what is going on their countries. I think it will be good to hear different perspectives or experiences from us." But they get away from that. That was a big problem for this semester. For two of my online courses, I was not totally familiar with the topics we were discussing. When we talk about some other fields that international students are not familiar, I wish my instructor give us explanation or remind other students to use plain language for international students. Sometimes I feel I have no connection, which makes me feel bad. It hurts my feelings. I feel isolated from others.

(Zhi) Sometimes students would feel, I am afraid to ask because my question is stupid. I remember my advisor said that no question is stupid. I will encourage students ask any questions. If you have a question, it means you are thinking, doing your homework, and reading your materials. If you don't have any questions, that is not a good thing. If you don't ask, nobody knows if you have questions. This kind of effort would be more important in online learning environment because I cannot observe students' faces, visual expressions, and/or body language to tell if they have any questions and/or problems. So I will make sure if students would feel safe enough to ask any questions.

### *Actively Involving and Being Responsive*

Participants described that they would like involving and responsive teachers in online learning environments. Shu and Xiu described how the level of involvement in class activity and discussion of their teachers influenced their involvement in class and their motivation to participate in class activity.

(Shu) I just want my teacher to make more announcements online. Not only once a week. If teachers make an announcement per week, I will feel I only need to open my course web site once a week. I feel I don't need to open the course site to see what's new. If teachers make an announcement to post new task, I don't think that is a real interaction. I would like to see some encouraging words in announcements. And teachers appear online three-four times a week instead of just once a week, I would be more active in opening the class web site to see if there is something new. If teachers appear online once a week, students will be less active in participating in online classes.

(Xiu) When instructors are leading discussion groups, it is very necessary for instructor to be involved to get everyone involved in discussions. I can see that when instructors are more involved in discussion, students are more involved in discussions. Especially for some online courses where discussion is the primary task, instructors need to be more involved in discussion boards. I think when instructors are involved in discussions, it would be the motivation for students to do discussions.

Arti and Lian stated that they would like teachers who were responsive to their questions.

(Arti) I want my instructor to log in everyday to see if there is any urgent question to be answered. I don't like to wait for a few days when I have a question. I want them to be responsive to our questions either in the discussion board and e-mail.

(Lian) Instructors should take care of any questions we ask. I just want them to respond to my questions even though that is very short one. I just want to know my teacher's response to my questions.

### *Being Specific or Clear in Communication*

Participants described being specific and clear in communication as a necessary quality of online teachers. They described the importance of specific and clear

explanation about requirements for class, class directions, due dates for assignments, and expectations of teachers in online learning environments that exclusively rely on text-based communication.

(Hui) They have to be very specific about what are the requirements for the course. They have to be very specific about their lectures, instructions, what they expect us to do, and setting the steps very clearly for us so that we can just follow the steps. He or she only needs to be very specific about instructions, expectations, procedure, etc. Because they are not talking to you, it is all there for us to read it...I think quality of teacher in online is quite different. They need to be very specific.

(Arti) In online courses, everything needs to be explained in words, so instructor should make sure their writing is clear for students, especially international students to understand.

(Zhi) In online courses, teachers should explain more explicitly.

(Wen) When materials are modified, they need to be checked to see if the dates are correct. For example, the due date for an assignment was 9<sup>th</sup> of November for a spring semester. Sometimes due dates of the same assignments across the course materials are different. That confused me and I lost the credibility of the course materials.

#### Theme Seven: Suggestions

The seventh theme, *suggestions*, conveyed the participants' suggestions to enhance online learning environments based on their own experience, mainly a frustrated one. The suggestions included a mixed format - combining online and face-to-face, providing orientation or guidelines, using more multimedia, offering office hours, providing summary and key points, and providing print-friendly course documents.

##### *Mixed Format - Combining Online and Face-to-Face*

Participants mentioned a possibility of face-to-face meeting(s) to help them to socialize with each other and receive feedback from teachers or classmates in person.

(Arti) I would like to see some combination of face-to-face meeting and online courses. I would like to have face-to-face meeting once or twice a

semester, or even once a month. If they cannot come, they also use video-conferencing. It will help socializing of online students and instructors. I think we can mix benefit of face-to-face classes and online classes. Sometimes meeting online is totally different from meeting in person.

(Jiao) Combining online communication and face-to-face communication would be better.

(Juan) I thought about mixed format, like half of online and half of face-to-face. A class can be online, but we have a whole class meeting once or twice a semester so that we can share our experience, or ask questions to directly teachers or other students in person. I think that will help.

(Shu) I strongly suggest that we meet in person once or twice a semester even though we are taking an online course and we don't need to meet.

(Wen) I like a mixed format; I mean we can meet three or four times during a semester to get to know professors and classmates each other and to see our progress. If three or four times of meeting is not feasible, even one time meeting is still better than no face-to-face meeting. If we only meet once during a semester, I would like to have the meeting in the middle of semester. Because we might have some experiences and expectations by then and we can propose our opinions and discuss it.

### *Providing Orientation or Guidelines*

Participants described what kind of orientation or guidelines would be helpful for them to prepare and adjust to the new learning environments. Mali and Jiao mentioned some kind of orientation to teach students about course management systems, such as Blackboard or WebCT. Jiao also mentioned some kind of orientation explaining how online courses work.

(Mali) I was nervous when I first used the Blackboard. In my country online class was so new. So I was not sure how I used the Blackboard. I was not sure which button I should use to delete, change, or add something in the Blackboard. I used the Blackboard for the first semester and then used the WebCT for the second semester. Those application programs were different. So it will be good to provide guidelines for each online application program (e.g., guideline for the Blackboard, the WebCT, and Sakai). I could not find some materials that my instructor was talking about. I did not know which folder I should open, where I go in the WebCT or Sakai. Sometimes I use "help" section to get familiar



with application programs, but it really does not help me. If there is some guideline for new online students, it might be helpful. Providing the guideline before school starts, like one week before, would be great. The user guide can be made online and instructors can send e-mail with the link of quick guide to students before class starts so that students can learn about their online course application and practice it and then get ready for the semester.

(Jiao) I expected some kind of orientation, preparation, or instruction that tells student what you should do. I mean a face-to-face course that shows you how to use the Blackboard. I thought there should be some kind of orientation, and actually I was waiting for the orientation at home and there was no information. But one day I went to the library and saw the Blackboard. I just tried the Blackboard and it required my paw print and password for login. And I found the class already started. People already had discussed there. So everything was pretty new for me. I came back and told my friend, "Oh my gosh! The classes started and I did not know that!" Actually they sent me some e-mail and asked us to access the Web site, but I did not pay attention to that and I missed some process. A couple of weeks later they asked me to submit assignments and I did not know what are the forms. I think if they provide international students with an orientation of online courses before classes start, it would be better and helpful. I would know how online courses work and also make me prepared.

Wei mentioned some kind of orientation, teaching learning strategies in online learning environments.

(Wen) From my experience, online learning is totally different from face-to-face learning. I have taken about six online courses and this is my third semester. I am currently taking two online courses this semester. But I still have not figured out the strategies in online learning environments. I hope instructors provide some kind of lesson, teaching students strategies in online learning before classes start. There is not such a lesson, and we have to figure out by ourselves. I have not figured out yet and I am so frustrated.

Hui and Wen mentioned guidelines for online discussions.

(Hui) If my instructor gives some instructions in how to discuss, (e.g., Quality of discussions is more appreciated than quantity of discussions, We don't have to reply to every single posting. etc), it would be helpful.

(Wen) I hope instructors would guide the direction of the discussions. I really want to see my instructor giving us guide and directions for the discussions.

### *Using More Multimedia*

Juan and Wen mentioned a possibility of using more multimedia for their online learning environments and how a multimedia online learning environment would enhance their learning.

(Juan) Because we learn educational technology, I think we have to use a lot of technologies in our learning environments. We can use video or audio to improve course contents and to help students understand more of the course contents. But I don't really see this kind of multimedia usage in our courses, and most of my online courses just use text format. If I were an instructor, I would use more multimedia to attract students. I remember one of my classmates used online radio. I think that was very attractive and I wanted to learn more about that.

(Wen) I would like to see more multimedia for our learning environments. For example, I like to see my instructor providing us with a "call-in" program so that students can call in and a professional person can answer our questions. I would like to see that kind of activity during the project. One student can call in and other students can listen to their conversation online. That will be meaningful. Another possibility would be that instructors provide audio so that students can listen to the introduction of each week. It will be helpful. We need more stimulation to enhance our learning. Students can remember audio better than reading.

### *Offering Office Hours*

Mali and Xiu mentioned a possibility of offering office hours during which students could meet their teachers in person or have instant interactions online.

(Mali) I wish there is some office hours so that I can meet my professors in person. It would be a lot better than communicating through e-mail. For office hours, we could walk in the professor's office, call him or her, or chat/e-mail him or her.

(Xiu) I might like to have more instant interaction with instructors sometimes, not all the times. I would like to see some office hours and instructors will be there online. I know I would get quick response when I

have any questions. When I have questions, I don't want to wait for the answers for two or three days.

### *Providing Summary and Key Points*

Xiu mentioned a possibility of providing summary and key points of course contents and discussions.

(Xiu) I wish my professors gave us summary. In face-to-face, instructors tend to give us summary of the contents at the end of class. But in online courses, instructors give us materials and answer our questions, and that is all. I would more expect my instructors to summarize the contents, key points that we need to know. Especially in discussion boards where there are so many different directions and/or opinion, I would like to know what is wrong/right or what would be the key points.

### *Providing Print-Friendly Course Documents*

Wen described how inconsistent format for course documents hindered his learning process and suggested teachers provide print-friendly course documents and use one PDF including all documents for each week or session.

(Wen) Course documents are in Word format, PDF format, or HTML format. I cannot read course documents on the computer screen and need to print them out. Sometime I have hard time to print because of the different formats. Sometimes I re-format the course documents by copying and pasting in the Word and it is very time-consuming. If I just print the course documents as they are, it would be 12 pages, but it will be just 5 pages if I re-format them. I hope instructors provide us with a print friendly version of course documents...I would like PDF file for all reading materials for each week. If there are five articles, I have to download five times and it is time- consuming. Also, when there are many articles, I maybe miss some of articles. I would like to see one file for one week. In that case I don't have to worry about if I miss something and I can be more focused on contents.

## CHAPTER 5 – DISCUSSION

The purpose of this study was to obtain a description of Asian international students' lived experience in online learning environments. Ten Asian international students from China, Taiwan, Indonesia, and Thailand described the experiences that stood out for them in online learning environments. The verbatim transcriptions of interviews were used as the primary source of data in this study. Phenomenological analysis revealed seven main themes: (a) language barrier, (b) relationships/interaction, (c) influence of cultural background, (d) benefits from online learning environment, (e) downside of online learning environment, (f) teachers, and (g) suggestions.

This chapter contains a discussion of the results of this study and consists of four parts. In the first part, the emergent structure of the phenomenon is integrated with the previously bracketed material. In the second part, differences in experiences among participants are compared. In the third part, interrelated themes are summarized and integrated. In the fourth part, implications for practice, contributions, reflections on methodology and limitations, and suggestions for future research are discussed.

### Integration of the Bracketed Literature with the Experienced Phenomenon

In this part, the structural description of the experience is summarized and integrated with existing literature. Specifically, language barrier, relationships/interaction, influence of cultural background, benefits from online learning environment, downside of online learning environment, teachers in online learning environment, suggestions are presented, discussing how the present study confirms the existing literature.

### *Language Barrier*

Consistent with previous studies (Abadzi, 1984; Abel, 2002; Barratt & Huba, 1994; Burgess & Gris, 1984; Guinane, 2004; James & Watts, 1992; Lee, 2002; Liang, 2004; Selvadurai, 1991-92), participants encountered language barriers in reading and writing. They had to read two or three times to understand course materials, were concerned about grammatical errors in their writing, and experienced frustration when they were not able to express their ideas. Participants found writing more difficult and time-consuming, which is consistent with the findings of Briguglio (2000), Nicholson (2002), and Tu (2001). In the Briguglio study (2000), writing was the most difficult area for international students. In addition to the challenge of writing in grammatically correct English, students often had difficulties expressing their ideas through writing, and they did not have complexity or depth to their thoughts. In Nicholson study (2000), international students found writing time-consuming. Tu (2001) also found that Chinese students spent tremendous amounts of time gathering information, organizing their thoughts, and then composing the discussion messages, even when some discussion messages were supposed to be in a casual written form. However, inconsistent with Tu's study (2001) showing that a prolonged writing process resulted in less participation in class discussion, participants' language barrier did not necessarily hinder participation in class. Instead, participants spent more time on reading and writing to overcome their language barrier and had their own writing strategies. The findings of the present study support empirical studies by Cummins (1986) and Delgado-Gaitan and Trueba (1991) indicating that cultural differences, such language difference alone, do not necessarily negatively affect students.

### *Relationships/Interaction*

Participants felt less connected to their classmates in online learning environments even though they interacted with each other by introductions through their Web homepages, reading classmates' postings, and responding to them on a regular basis. Most participants felt they did not have any relationships with classmates, and thus they did not know them very well. The findings are consistent with studies by Burge, Howard, and Ironside (1991) and Jaradata (2004) showing that there was a cold educational environment, little affective support, and a sense of isolation among students.

Participants were more sensitive to relationships with teachers than those with classmates because relationships with teachers had a greater impact on their learning and their own interest. For Asian international participants, close relationships with teachers, or feedback or confirmation from teachers motivated them to study harder. Thus participants were apt to feel frustrated when they did not have satisfying relationships or interaction with teachers. These findings support previous studies (Conceição, 2002; Tu, 2001); Walther, 1992, 1995, 1996; Walther & Burgoon, 1992) that social interaction is a significant factor in improving students' participation and effectiveness of learning.

### *Influence of Cultural Background*

Participants' cultural background or early socialization influenced their online communication, working for group projects, and learning process. These findings are consistent with previous literature that learners' formal or informal socialization patterns affect their learning (Alfred, 2000, 2002; Guy, 1999a, 1999b; Hvitfeldt, 1986; Johnson-Bailey & Cervero, 1996).

Specifically, participants were hesitant to share or post their questions in class; rather, they directly asked teachers in private through e-mail because they were afraid to look stupid by posting “easy” or “stupid” questions in public. This finding is consistent with previous studies that Chinese students were still very much concerned with face saving in the online environment despite the absence of a face-to-face contact. (Tu, 2001) They were extremely embarrassed by having their error-filled messages made public (Amador et al., 1999; Coward, 2003; Schallert et al., 2003-04). Participants were also hesitant to ask questions in class because they did not want to slow down their whole class. The findings also support the previous literature (Lee & Sheared, 2002; Quinn & Holland, 1987) that learners’ cultural values and beliefs affect their learning. Asian culture is characterized by collectivism that stresses the importance of a group rather than the importance of individuals. Participants’ hesitancy to ask questions in class can be partly explained with their collectivist culture.

Participants’ cultural background influenced whom they chose to reply to or argue with in discussion boards. Specifically, some participants tended to reply to other international students because they knew other international students might have the same language problem and cultural background, so they felt more comfortable. The findings are consistent with Tu’s study (2001) that Chinese students were more likely to interact when the message was from someone who made them feel comfortable. However, other participants tended to reply to American students because American students’ postings were easier to understand for their better writing or had new, different perspectives. They also tended to reply to American students when they had to argue or disagree because they thought American students were open to accept others’ different

opinions, and Asian students tended to view academic disagreement as a personal attack. This finding can be related to the cultural model that socialization affects how people make meaning and take action within a particular setting (Quinn and Holland, 1987).

Participants' cultural background influenced their preference of group composition and their roles for the group projects. Although participants would like to have native speakers as team members for better writing, they tended to prefer working with other international students because they felt more comfortable and effective as they worked on their group project. This finding parallels previous research indicating that uniformity of group linked to constructive group maintenance behavior including demonstrating friendliness, being agreeable, and more involvement in the task (Savicki, Kelly, & Lingenfelter, 1996a, 1996b; Savicki, Kelley, & Oesterreich, 1998). Some participants were not comfortable with the role of leader, even though they were willing to work hard and be helpful for their group projects. The findings of this study support previous studies that learners' socialization patterns affect their role in learning environments (Cain, 2002).

Participants perceived cultural recognition from others as a motivation for them to study hard. The findings can be related to the previous studies that learners' cultural background influenced their ways of perceiving reality (Hvitfeldt, 1986) and motivation (Quinn & Holland, 1987) in a classroom setting

#### *Benefits from Online Learning Environment*

The advantages of online learning environments to the participants included flexibility, asynchronicity, unboundedness, text-based communication, and chances to look at others' work. Participants perceived flexibility as the most prominent beneficial



feature of online learning environments. Supporting the premises of Web-based instruction (Bannan & Miheim, 1997), learners had easy access to their learning environment, and the online learning environment enabled learners who preferred or were required to learn outside traditional classrooms to attend classes from their homes or offices.

The nature of asynchronous online learning environments afforded participants more chance to participate and more time for better writing and quality discussion. Thus online learning environments created more comfortable and less intimidating learning environments. The findings are partially consistent with Tu's study (2001) that asynchronous computer mediated communication afforded the students time for better writing and thus created a less threatening learning environment. However, it did not necessarily lead them to more participate in class in Tu's study (2001).

Text-based communication in online learning environments enabled participants to understand course materials better and to participate more in class because reading and writing was easier for them than listening and speaking. In a study by Nicholson (2001), students from China, Japan, Korea, and other Asian countries had more difficulty speaking than did their European counterparts. Unfamiliarity with idioms and college slang can hinder communication between Asian international students and American professors and classmates (Ye, 2005). In a study by Sato (1982), Asian international students took significantly fewer speaking turns than other participants. However, Asian international students did not need to worry about speaking and listening in online learning environments. Text-based communication in online learning environments enabled Asian international students to read unfamiliar expressions and/or idioms, to look

for them in the dictionary, and to understand them. Text-based communication also afforded Asian international students opportunity to express their ideas through writing and to participate more in class. Even though writing was time-consuming and still difficult for Asian international students, they were more comfortable with writing than speaking.

The findings are consistent with the results from a study by Yildez and Bichelmeyer (2003) showing that online courses provided international students with more opportunity to speak out and participate in the discussions than in face-to-classrooms. The characteristics of online courses gave international students an opportunity to express their opinions and speak out without the constraints of pronunciation, listening comprehension, producing accurate sentences on the spot, turn-taking procedures, and the risk of getting in the way of the class discussion that are present in face-to-face classrooms. The findings do not support studies by Jaradat (22) and Tu (2001). In a study by Jaradat (2004), Jordanian students faced frustrations with text-based communication, multiple dialogues, and the rapid pace. These problems with language negatively influenced their participation in an online learning environment. Tu's study (2001) also showed that being unfamiliar with the online written form and their own language barriers reduced Chinese students' desire to participate. Overall, participants took advantage of text-based communication in online learning environments, even though they still experienced language barriers, especially difficulties in writing.

### *Downside of Online Learning Environment*

The downside of online learning environments that the participants perceived related to frustration with discussion boards, frustration with text-only format, self-directed learning, time-consuming and demanding, and unfitness for some course contents. Participants experienced frustration with the discussion board format that was one of the major components of online learning environments. Major frustration in online discussion boards derived from unfamiliar discussion topics, especially American culture-related topics (e.g., American history, politics, issues, or TV shows). Participants felt isolated and hurt because they could not contribute to the discussions even though they were willing to do so. Moreover, when they were required to participate in the discussion, their frustration was intensified because they did not have anything to say or did not know how to provide their ideas due to lack of knowledge or experience. Because of requirements for posting and replying to others, overwhelming numbers of postings and responses were generated, and some of the messages were not informative and/or meaningful. Thus participants felt that online discussions were not worth their time when compared with their time and effort spent on online discussions.

Some participants faced difficulties in understanding written course materials without any visual or audio cues. For instance, some felt that they could have understood course materials better if they could hear teachers and see teachers' gestures or body language. Some participants encountered difficulties when they had questions or problems. For example, some reflected that their teachers might notice if they had a question or problem by their facial expression in a face-to-face class, but they had to write their questions and describe their problem in writing in the online learning

environment, which is not very easy for them. York (2003) noted that international students performed better in face-to-face learning environments than online learning environments because international or non-Euro-American students may rely more heavily on visual cues in face-to-face classes to support their understanding of course content and class direction.

Participants encountered difficulties in online learning environments that emphasize self-directed learning. . They especially had difficulties in motivating themselves without teachers pushing them to study. This is consistent with previous studies indicating that international students had problems in online learning environments. Because they were accustomed to strong direction from teachers, the emphasis on self-directed learning within online learning environments could be daunting (Conceição, 2002; Jaradat, 2004).

#### *Teachers in Online Learning Environment*

Participants described desirable qualities of online teachers as being attentive to students, actively involving and being responsive, and being specific or clear in communication. Most participants perceived affective elements as the most important quality of online teachers. Participants described an ideal teacher as one trying to understand international students' circumstances and needs and one who is willing to accommodate international students. They would like to have teachers who are caring, patient, and encouraging, and who provide inclusive and safe learning environments for international students. Previous studies support how these qualities of teachers are crucial for international students. Cummins (1986) and Delgado-Gaitan and Trueba (1991) found that the cultural difference or incongruence alone did not necessarily cause a harmful

impact on students. The damage, such as lowered performance, was caused by how teachers viewed and dealt with the cultural gap. For instance, Amstutz (1999) and Guy (1999a) have argued that the dominant culture has the power to define the behavioral norms, expectations, and values of the school culture; therefore, if teachers interpret cultural differences of Asian international students as unfit, inferior, or “less than,” Asian international students would feel isolated and incompetent, and thus they would be dissatisfied and fail in their learning environments.

### *Suggestions*

Participants provided several suggestions to improve online learning environments from their experiences in online learning environments. Participants would like to have one or two face-to-face meeting(s) to help them to socialize with each other and receive feedback from teachers or classmates in person, even though online learning assumes participation in instruction that is entirely online, without face-to-face interaction. Basically instruction could be delivered online with face-to-face meetings offered as an option.

Participants would also like to see orientations or guidelines for course management systems (e.g., Blackboard, WebCT) and a description of how online courses and online discussions work. It is important not to make assumptions about students’ technological capability. Therefore, course orientations need to be scheduled in the beginning of the semester or before each semester starts. This process would help learners reduce barriers to effective learning and be better prepared for online courses. First-time users of online learning environments should be given the opportunity to build confidence and competence with the online learning process and supporting technologies.

Guidelines for discussion also should be provided. Asian international students are not accustomed to these discussions. Students may not know how to constructively participate in an online discussion. Students must be taught such things as “netiquette,” how to write effective e-mail, and how to compose a response, and they must be made aware of the teacher’s expectations early in the process.

Participants would like to see more multimedia in their online learning environment. Their online learning environment exclusively relied on text-only format. Adding visual and audio components would promote participants’ understanding of course materials and interaction between students and teachers. Participants also suggested offering office hours, providing summary and key points for each chapter or session, and providing print-friendly course documents.

#### Differences in Experiences among Participants

In a phenomenological study, each individual’s unique experience is valid and respected. There were commonalities of experiences among participants within the main themes, but there were also unique experiences or different perceptions. In this section, differences in experiences among participants are compared.

While the majority of participants felt less connected with their teachers and classmates, Lian and Mali felt comfortable with their relationships with others and felt connected with people in online learning environments.

Most participants reflected flexibility as the most prominent beneficial feature of online learning environments and the main reason for their preference for online courses over face-to-face courses. They liked the way they could control time, place, and pace in

their learning. However Wen experienced frustration due to this same flexibility in online learning environments.

(Wen) I know other students like flexibility of online learning environments, but I don't like it. That's why I am struggling with online courses. Because of my cultural background, I was so used to structured classes, and I like very structured instructions and timelines. Overall I prefer face-to-face courses. The reason is that face-to-face courses are scheduled. When I go to a "real" classroom, the time and place is scheduled. I can schedule my study time according to the class hours. I can study and preview class materials before the class, and then I go to the class, and then review them after the class. It gives me more structure.

Online learning environments relied mainly on text-based communication. Some participants perceived text-based communication as an advantage of online learning environments because they could understand written course materials and discussions better and could participate more in class through writing. They were more competent with reading and writing than listening and speaking. Other participants perceived the text-only format in the online learning environment as a downside because of lack of visual cues or audio components that help them interact with teachers and understand written materials better. Overall, participants tended to perceive text-based communication in online learning environments as favorable to international students.

(Lian) In online class, when I have a question, it is hard for me to explain to the instructor what I want to know. That is a barrier in online course that I have. I think in face-to-face class, probably my instructor would know my problem more easily. Sometimes, not all the times, explaining my problems is hard for me in online course. In face-to-face, instructor would notice my facial expression and know if I have a question or problem. But I still think online course is a good way to go with international students like me.

In comparison of experiences among the different nationalities, marital status, rank (Ph.D or master's), length of staying in the U.S. (1½ to 6 years), total

number of online courses that he or she had taken (one to more than ten), only differences that appeared related to marital status. The participants who were married with children especially appreciated flexibility of online learning environments because they could meet both their desire to pursue advanced degrees and their family needs. No other differences were found for nationalities, rank, length of staying in the U.S., and total number of online courses that he or she had taken.

### Integration of Interrelated Themes

In this part, interrelated themes are summarized and integrated. Participants' language barriers shaped their experiences in an online learning environment in different ways. Online learning environments did not require speaking and listening skills, but the participants encountered difficulties in reading and writing. Participants had to read papers and course materials two or three times to understand. Some participants faced difficulties in understanding written course materials without any visual or audio cues, which are lacking in an online learning environment. They felt they could have understood course materials better if they could hear teachers and see teachers' gestures or body language. Some participants perceived the text-only format in an online learning environment as a downside of online courses. Participants encountered extra difficulties when they had questions or problems in an online learning environment. In an online learning environment, they had to form questions and describe their problems in writing, which was not easy for Asian international students. Some reflected that a teacher would have noticed if they had a question or problem by their facial expressions in a face-to-face class.



Participants found writing more difficult and challenging than reading. To post a message or reply to others, they wrote and revised their messages again and again. They checked grammatical errors in their writing using Microsoft Word. When discussion topics were not familiar because of their different cultural backgrounds, they had to research even for messages or replies which were supposed to be informal and casual. Because of this prolonged process, participants found writing time-consuming. However, this prolonged process did not necessarily result in a negative impact on their learning. Participants perceived asynchronous online learning environments as beneficial for them because asynchronicity afforded participants more chance to participate and more time for better writing and quality discussion. Even though they were concerned about grammatical errors and not being able to express their ideas, they still felt writing was simpler than speaking. Text-based communication in online learning environments afforded them opportunity to express their ideas through writing and to participate more in online discussions. Even though some participants faced difficulties in understanding written materials without any visual and/or audio cues, text-based communication in online learning environments enabled Asian international students to read unfamiliar expressions and/or ideas, to look for context about them in the dictionary, and to understand them. Thus participants perceived text-based communication in online learning environment was favorable and less threatening for them.

Participants' language barriers also influenced their preference of group composition and their roles within their group projects. Because participants did not feel confident in their writing, they would rather have a native speaker as a team member for their group projects to ensure quality writing for papers or assignments. Some

participants did not feel competent enough to be group leaders because of language barriers. Overall, participants perceived a language barrier; however they did not see this language barrier as a problem but rather accepted it as natural for international students.

### Summary

In this part, implications for practice based on the results from this study, major contributions of this study, reflections on methodology and limitations, and suggestions for future research are discussed.

### *Implications for Practice*

The information from this study offers several considerations for practice.

#### *For Teachers: Curricular and Instructional Innovations*

One consideration is to provide multicultural training or information regarding Asian cultures to teachers who will be working with Asian international students. The results of this study showed that the most important quality of online teachers for Asian international students was being attentive to students. In order for teachers of Asian international students to be attentive to their students, it is important for them to recognize Asian international students' cultural backgrounds and their learning needs. This recognition will help teachers not only understand their international students' circumstances and needs but also develop their curricular and instructional methods that are beneficial to their students from different cultural backgrounds. According to McLoughlin (2001), conceptualizing an inclusive curriculum is the first step toward designing appropriate online learning activities for all students. An inclusive curriculum is one which (a) values the culture, background, and experience of all students, (b) is

inclusive of culture and differences related to ethnicity, language and socio-economic background, and (c) is responsive to the knowledge base of students.

Regarding online discussion boards, online teachers need to choose topics where all students including Asian international students can participate without feeling isolation and frustration. When American culture-related topics are inevitably discussed, additional explanation and/or supplementary resources can be provided for international students. And online teachers need to develop evaluation tools that prevent students from posting meaningless messages simply to meet minimum requirements. Online teachers need to monitor or facilitate online discussion boards so that students do not feel they are “required” to talk and reply and at the same time they feel “safe” enough to ask any questions and post their own ideas and/or opinion.

Expanded multimedia use in online learning environments could also aid Asian international students. For example, a short video containing the instructor’s welcoming message and/or introducing the course in the beginning of the semester could help student get familiar with their online teachers. Most participants felt they did not know their teachers and felt that they were not connected to their teachers simply because they did not see them despite interactions through online communication. It was important for Asian international students to “see” people to get to know them. Thus, this video material may help Asian international students to have satisfying relationships or interactions with their online teachers, which affects their learning. Another example would be adding audio files of some course materials. Some students may understand or remember audio material better than written material, which can compensate for the

weakness of the existing online learning environments that heavily rely on text-only format.

An additional consideration is to provide course orientation. Teacher(s) of each course may employ different instructional systems and different expectations for their students. Therefore, course orientation timeslots can be scheduled in the beginning of the semester. The course orientation can provide students with greetings, a synopsis of the course, clear communication regarding the teacher's expectations for students, and study strategies for the particular course. This will be especially helpful because students need to be taught how to constructively participate in an online discussion and to be aware of a teacher's expectations early in the process. This process will help students reduce barriers to effective learning, establish social relationships, and have the opportunity to build confidence with the online learning process.

The last consideration is to provide a non-course specific discussion board. Students are encouraged to share information about their non-academic lives, for example, offering mutual support in terms of how they motivate themselves to keep up with their online coursework, and how to manage their time and sharing successful strategies to their online class. Most participants stated that it was hard for them to keep motivated in online learning environments; some participants were frustrated because they did not know how to take online courses. Thus this kind of off-task discussion board would provide Asian international students with moral support and study strategies in online learning environments.

### *For Institutions: Facilitate Student Social Integration*

Organizing social support systems for Asian international students is recommended. It is important for international students to have support from especially teachers while they are struggling to achieve their goals; however, international students who take online courses feel that they do not have such supporting figures because they do not physically interact with their teachers. This contributed to their feelings of isolation and discouragement. Therefore, providing international students who take online courses with a mentoring program will be helpful. A mentoring group composed of department faculty where students are enrolled and international faculty who can serve as role models can provide international students who take online courses with academic advising, caring, and support.

Offering ongoing English tutoring, especially academic writing tutoring program is also recommended. It will help international students reduce their language barrier and thus build confidence in their learning environments. In addition, workshops or seminars that teach international students American culture may be helpful. An orientation designed for online students to teach how an online course is different from face-to-face course and how to take an online course should be considered.

### *Contributions*

The present study offers several important contributions. First, this study fills the gap in existing studies of international students. Previous studies have compared international students' learning outcome between online learning environments and a face-to-face learning environment and have provided little information regarding how international students actually experience online courses and why some students are

unsuccessful, or dissatisfied. The detailed description of participants in this study provided a greater understanding of international students' experiences in online learning environments. Second, this study provides readers a secondhand experience of being exposed to online learning environments as Asian international students. The themes in this study emerged from the real life experiences of the participants. The descriptions were presented in the words of the participants and thus represented their thoughts, feelings, and behaviors related to their lives in online learning environments. Readers of this study may feel participants' frustrations or anxiety, have a feeling of being connected with Asian international students, and begin to understand their experience. Third, this study provides insights into student suggestions for creating an online learning environment that is more beneficial and inclusive for these students. Finally, this study provides voices for Asian international students in online learning environments that were previously unheard.

#### *Reflections on Methodology and Limitations*

I believe the use of phenomenology as a method allowing in-depth interviews with the participants is one of the strengths of this study. Through the in-depth interviews with participants, I was able to best capture how the participants experienced their online learning environments as Asian international students. Even though there were a few instances where the participants could not elaborate detailed descriptions of their experience because of limited English proficiency, none of them expressed discomfort and/or hesitancy to share their experiences. They were willing to share as much as they could and felt they described pretty much what they could think of at the end of each interview. I believe that having participants describe their experiences was relevant form

of data collection method for this study to understand how the participants experience their online learning environment because it allowed me to understand what stood out first, how they perceived it, felt about it, remembered it, made sense of it, and talked about it. The direct face-to-face interview meetings with participants were crucial because they allowed me get some sense of participants' experiences conveyed through facial expressions, gestures, tones, and silences. I also conducted and transcribed all interviews, which allowed more complete immersion into the content of the participant stories.

What was crucial in carrying out this research was the emphasis on the subjective perspective, and this phenomenological approach offered a description of subjective experience from each participant's unique viewpoint. However, every phenomenon is multi-layered and consists of multiple realities (Munhall and Boyd, 1993). Thus this phenomenon under study is open to continual discovery. Additional investigation of Asian international students' experience of online learning environments would reveal additional aspects and understandings of this phenomenon.

The fact that I, the researcher, am an Asian international student was regarded as an asset in this study. Because I had much shared background and experiences with the participants, it was easy for me to build rapport with them. The participants seemed comfortable with sharing their experiences with me because they knew I would understand these experiences and how they felt about them, even when they had difficulty elaborating detailed descriptions because of limited English proficiency. In fact, I was able to understand what they were trying to describe in certain situations even though they were not articulated very well. While this was an asset, it may have been a

limitation at the same time. Because their experiences related to mine, their description of experiences may have been understood and reconstructed as I had experienced, not as they had experienced. A study in which a researcher who did not share background and experience with the participants and conducted interviews and analyzed data on this topic might yield different data and results.

A limitation related to this phenomenological study would be my inexperience as a researcher in qualitative studies. The ability to analyze and search for deeper meaning may have been compromised by a novice researcher. In addition, this phenomenological study was limited to the lived experiences of ten participants. The findings in this study cannot be generalized for all Asian international students. Additionally, this study is limited because it did not represent all Asian countries; only four countries (China, Taiwan, Indonesia, and Thailand) were represented, and the number of participants among the four countries was disproportionate in the study.

#### *Suggestions for Future Research*

Findings from this study invite further research. First, the findings did not reveal difference in experiences by participants' nationality. I believe that it was partly because of the disproportionate sample size, which contained only four countries (China, Taiwan, Indonesia, and Thailand). Comparing differences in experiences among different Asian countries with proportionate sampling size is suggested to understand within-group differences among Asian international students.

Secondly, Wen who was the only male participant in this study, provided several salient experiences, but uniqueness among them could not be seen as gender difference because of the disproportionate sampling (one male and nine females) in this study.



Comparing experiences between genders is suggested for future research to understand how gender affects Asian international students' online learning experiences.

Additionally, the degree to which gender role and expectations in male-dominated Asian culture affects Asian international students' online learning can be examined.

The results of this study did not show difference in experiences by participants' length of staying in the U.S. (1½ to 6 years). However, it is assumed that Asian international students have different online learning experiences over time as they become more accustomed to English, American culture, the American educational setting, and the online learning environment. Longitudinal studies to capture changes in Asian international students' experiences in online learning environments are thus suggested.

The participants of this study were all from the education area. Asian international students from different disciplines could have different experiences in an online learning environment. Thus comparing experience among different discipline is suggested for future research.

Comparing experience between Asian international students and non-Asian international students is also suggested for future research to understand what comprises the unique experience of Asian international students and what can be said to be the universal experience of all students in an online learning environment.

Finally, it is assumed that Asian international students have language barriers and cultural differences in both the online learning environment and the face-to-face learning environment. Examining the uniqueness of the Asian international students' experience

in an online learning environment and in non-online learning environments is suggested for future studies.

## APPENDIX

## APPENDIX 1 - PLACE OF ORIGIN CODES

### BY PLACE OF ORIGIN WITHIN WORLD REGION

1000	AFRICA	1360	Western Sahara
1100	East Africa	1400	Southern Africa
1115	Burundi	1410	Botswana
1120	Comoros	1420	Lesotho
1105	Djibouti	1430	Namibia
1195	Eritrea	1440	South Africa
1125	Ethiopia	1450	Swaziland
1130	Kenya	1500	West Africa
1135	Madagascar	1510	Benin
1140	Malawi	1585	Burkina Faso
1145	Mauritius	1505	Cape Verde
1150	Mozambique	1535	Cote d'Ivoire
1155	Reunion	1515	Gambia
1165	Rwanda	1520	Ghana
1170	Seychelles	1525	Guinea
1175	Somalia	1530	Guinea-Bissau
1180	Tanzania	1540	Liberia
1185	Uganda	1545	Mali
1190	Zambia	1550	Mauritania
1160	Zimbabwe	1555	Niger
1200	Central Africa	1560	Nigeria
1210	Angola	1565	St. Helena
1220	Cameroon	1570	Senegal
1230	Central African Republic	1575	Sierra Leone
1240	Chad	1580	Togo
1250	Congo		
1260	Equatorial Guinea	2000	ASIA
1270	Gabon	2100	East Asia
1280	Sao Tome & Principe	2110	China
1290	Congo/Zaire	2120	Taiwan
1300	North Africa	2130	Hong Kong, China
1310	Algeria	2140	Japan
1320	Canary Islands	2150	Korea, Democratic People's Republic of
1330	Egypt		
1340	Libya	2160	Korea, Republic of
1350	Morocco	2170	Macao, China
1370	Sudan	2180	Mongolia
1380	Tunisia		

2200	South/Central Asia	3183	Estonia
2205	Afghanistan	3188	Georgia
2210	Bangladesh	3150	Hungary
2215	Bhutan	3184	Latvia
2220	India	3185	Lithuania
2260	Kazakhstan	3194	Macedonia
2265	Kyrgyzstan	3187	Moldova
2225	Maldives, Republic of	3160	Poland
2230	Nepal	3170	Romania
2235	Pakistan	3186	Russia
2245	Sri Lanka	3132	Slovakia
2270	Tajikistan	3192	Slovenia
2250	Turkmenistan	3182	Ukraine
2255	Uzbekistan	3180	U.S.S.R., Former
2300	Southeast Asia	3190	Yugoslavia, Former
2305	Brunei	3200	Western Europe
2320	Cambodia	3203	Andorra
2315	Indonesia	3206	Austria
2325	Laos	3210	Belgium
2330	Malaysia	3213	Denmark
2310	Myanmar	3220	Finland
2335	Philippines	3223	France
2345	Singapore	3226	Germany
2350	Thailand	3233	Gibraltar
2360	Vietnam	3236	Greece
2370	East Timor	3243	Iceland
		3246	Ireland
3000	EUROPE	3250	Italy
3100	Eastern Europe	3253	Liechtenstein
3110	Albania	3256	Luxembourg
3189	Armenia	3260	Malta
3174	Azerbaijan	3263	Monaco
3181	Belarus	3266	Netherlands
3193	Bosnia & Herzegovina	3270	Norway
3120	Bulgaria	3273	Portugal
3191	Croatia	3276	San Marino
3131	Czech Republic	3280	Spain
3130	Czechoslovakia, Former	3283	Sweden

3286	Switzerland	4290	Panama
3290	United Kingdom	4300	South America
3240	Vatican City	4305	Argentina
4000	LATIN AMERICA	4310	Bolivia
4100	Caribbean	4315	Brazil
4103	Aruba	4320	Chile
4105	Bahamas	4325	Columbia
4110	Barbados	4330	Ecuador
4115	Cayman Islands	4335	Falkland Islands
4120	Cuba	4340	French Guiana
4125	Dominican Republic	4345	Guyana
4130	Guadeloupe	4350	Paraguay
4135	Haiti	4355	Peru
4140	Jamaica	4360	Suriname
4150	Leeward Islands	4365	Uruguay
4155	Anguillar	4370	Venezuela
4151	Antigua	2400	MIDDLE EAST
4152	British Virgin Islands	2405	Bahrain
4153	Montserrat	2410	Cyprus
4154	St. Kitts-Nevis	2415	Iran
4160	Martinique	2420	Iraq
4170	Netherlands Antilles	2425	Israel
4180	Trinidad & Tobago	2430	Jordan
4185	Turks & Caicos Isles	2435	Kuwait
4190	Windward Islands	2440	Lebanon
4191	Dominica	2445	Oman
4192	Grenada	2443	Palestinian Authority
4193	St. Lucia	2450	Qatar
4194	St. Vincent	2455	Saudi Arabia
4200	Central America/Mexico	2460	Syria
4210	Belize	2465	Turkey
4230	Costa Rica	2470	United Arab Emirates
4240	El Salvador	2485	Yemen
4250	Guatemala	5000	NORTH AMERICA
4260	Honduras	5110	Bermuda
4270	Mexico	5120	Canada
4280	Nicaragua		

6000	OCEANIA
6100	Australia/New Zealand
6110	Australia
6120	New Zealand
6200	Pacific Ocean Island Areas
6210	Cook Islands
6215	Fiji
6220	French Polynesia
6225	Kiribati
6227	Marshall Islands
6260	Micronesia, Federated States of
6230	Nauru
6235	New Caledonia
6250	Niue
6255	Norfolk Island
6263	Palau
6240	Papua New Guinea
6205	Solomon Islands
6270	Tonga
6271	Tuvalu
6245	Vanuatu
6275	Wallis & Futuna Isles
6280	Western Samoa
7000	ANTARCTICA

## APPENDIX 2 - DIRECTORY OF LANGUAGES

Source: The University of the State of New York  
THE STATE EDUCATION DEPARTMENT  
Office of Bilingual Education  
Albany, New York 12234

<http://www.emsc.nysed.gov/ciai/biling/pub/languages.html>

COUNTRY	LANGUAGE (S)
Afghanistan	Dari (called Farsi in Iran) and Pashto (aka Pushto) are the official languages. There are also about one million speakers of Uzbek, one-half million speakers of Turkmen (aka Turkoman), and about one-half million speakers of Brahui
Albania	Albanian
Algeria	Arabic, Among Berber languages, Kabyle is predominant.
Argentina	Spanish, Pampa
Armenia	Armenian
Austria	German
Azerbaijan	Azeri
Bahrain	Arabic
Bangladesh	Bengali is predominant, Brahui is spoken by a small minority.
Belgium	Flemish and French are the official languages
Belorussia	Belorussian, Russian
Belize	Garifuna
Bhutan	Jonkha is the official language. Nepali is also spoken.
Bolivia	The official language is Spanish, which is spoken by less than 40 percent of the population. The predominant Indian languages are Quechua, Aymara, and Saramo (aka



	Itonama; spoken by less than 19 percent of the population).
Bosnia	Serbo-Croatian
Brazil	Portuguese
Brunei	Visayak
Bulgaria	Bulgarian
Burkina Faso	French is the official language. Mossi (aka More) is the predominant native language. Gurma, Fulani, Dejula, and Tuareg are also spoken.
Burma (now known as the Union of Myanmar)	Burmese is the official language. Two predominant languages are Karen and Shan. Hmong is spoken by a small minority.
Burundi	Rundi and French are the official languages. Swahili (aka Kiswahili) serves as a commercial language.
Cambodia (now known as Kampuchea)	Khmer (aka Camboge) is the official language. Hmong and French are also spoken. Cham is the predominant tribal language.
Cameroon	French and English are the official languages. There are over 100 native languages, of which Fulani, Hausa, and Shua Arabic are included. Sari is spoken, not written, by a small minority.
Canada	English and French are the official languages. Algonquin is the language of the Algonquian Indians of North America.
Chile	Spanish. Araucanian is the predominant Indian language spoken.
Chad	Arabic, Shua Arabic
China	Standard Chinese (Mandarin) is spoken by 70 percent of the population. Other dialects include: Wu, Min, Cantonese, and Kejia.
Colombia	Spanish, Palenque (aka Palenquero)
Costa Rica	Spanish

Croatia	Serbo-Croatian
Cuba	Spanish
Cyprus	Greek, Turkish
Czech Republic	Czech
Dahomey	French is the official language. Fon is the predominant native language. Hausa and Yoruba are also spoken.
Denmark	Danish
Dominican Republic	Spanish
Ecuador	Spanish. Quechua is the predominant Indian language.
Egypt	Arabic, Sudanese Arabic (not intelligible to speakers of modern Arabic)
El Salvador	Spanish
Estonia	Estonian
Ethiopia	Amharic (aka Ethiopian) is the official language. Other predominant languages include Galla, Sidamo, Somali, Tigrinya, Tigre, and Sudanese Arabic (not intelligible to speakers of modern Arabic).
Finland	Finnish
France	French is the official language, Proven Hial, Breton, Basque, and Catal are spoken regionally.
Gambia	English is the official language. Fulani and Malinke are also spoken.
Georgia	Georgian, Ossetian
Germany, Federal Republic of (including former German Democratic Republic)	German is the official language. Yiddish is spoken in the Jewish communities.
Ghana	English is the official language. Other predominant languages include Ewe, Ga, Adangme, Gurma, Dagomba (aka Daobane) Hausa and Akan of which Twi and Fante

	(aka Fanti) are the major dialects.
Greece	Greek
Guam	Chamor
Guatemala	Spanish. Fifty percent of the population speak different Mayan languages, of which Quiche is predominant.
Guinea	French is the official language. Fulani and Malinke are also spoken.
Guinea-Bissau	Portuguese is the official language, Fulani, Balante, and Malinke are also spoken.
Guyana	English is predominant. Arawak is spoken by a small minority.
Haiti	French and Haitian Creole are the official languages.
Honduras	Spanish, Garifuna
Hong Kong	English is the official language. Chinese (Cantonese) is spoken by the majority.
Hungary	Hungarian
Iceland	Icelandic
India	India is the most linguistically varied country in the world, with hundreds of languages spoken. Hindi is the predominant language. Along with English, it is official. Other predominant languages are: ,Assamese, Kashmiri, Rajasthani, ,Bengali, Malayalam, Sanskrit, ,Bhili, Marathi, Sindhi, ,Bihari, Nepali, Tami, ,Gujarati, Oriya, Telugu, ,Kanarese, Punjabi, Urdu, Kafiri, Shina, and Khowan are spoken by Dards ,in India. One of the 15 constitutionally recognized ,languages.aka Kannada aka Panjabi
Indonesia	Bahasa Indonesian is the official language. Other languages include: Balinese, Javanese, Malay, Sundanese.
Iran	Farsi (called Dari in Afghanistan) is the official language. Azerbaijani, Baluchi, Baharlu (dialect of Azerbaijani spoken by 17.2 percent of the population) are also spoken. Kurdish is spoken by the Kurds. There are 10,000 speakers of Brahui.

Iraq	Arabic is the official language. Kurdish is also spoken by the Kurds.
Ireland	English is the official language, as well as Irish Gaelic.
Israel	Hebrew and Arabic are the official languages. Yiddish is spoken by 5 percent of the population.
Italy	Italian
Jamaica	English is the official language. Western Caribbean Creole English (dialects: Jamaican Creole English, Jamaican Patwa, Bongo Talk, and Quashie Talk).
Japan	Japanese
Jordan	Arabic
Kampuchea (aka Cambodia)	Khmer (aka Camboge) is the official language. French and Hmong are also spoken. Cham is the predominant tribal language.
Kazakhstan	Kazakh, Russian
Kenya	Swahili (aka Kiswahili) is the official language. Other predominant languages include Kikuyu, Kamba, Kamba, Luo, Galla, and Somali.
Korea, North & South	Korean
Kuwait	Arabic
Laos	Lao, Hmong
Latvia	Latvian
Lebanon	Arabic
Lesotho	Sotho-Southern (spoken by 85 percent of the population), Zulu (spoken by 15 percent of the population)
Liberia	English is the official language. Kpelle is the most widely spoken native language. Grebo is also spoken.
Libya	Arabic
Lithuania	Lithuanian

Luxembourg	French
Macedonia	Macedonian
Malagasy Republic	Malagasy and French are the official languages.
Malaysia	Malay. Tamil is also spoken.
Malawi	English is the official language. Afrikaans and Zulu are also spoken.
Mali	French is the official language. Bambara and Fulani are the most predominant native languages.
Malta	Maltese
Mauritania	French is the official language. Fulani is also spoken.
Mexico	Spanish. Among the various Indian languages, Nahuatl is predominant.
Moldova	Romanian, Russian
Morocco	Arabic. Among Berber languages, Shluh and Tamazight are predominant.
Nepal	Nepali
Netherlands	Dutch
Netherlands Antilles	Dutch is the official language, but Papiamentu is widely spoken in the southern islands of Curacao, Aruba, and Bonaire.
New Guinea	English
Nicaragua	Spanish, Garifuna
Niger	French is the official language. Hausa and Fulani are predominant native languages. Shua Arabic is spoken by a small minority.
Nigeria	English is the official language. The most predominant native language is Hausa. Yoruba, Ibo, Kanuri, Yonba, Fulani, and Shua Arabic are also spoken.
Norway	Norwegian

Oman	Arabic is the official language. South Arabic, a term used to denote various related dialects, is also spoken.
Pakistan	Urdu is the official language. Kashmiri, Shina, Punjabi (aka Panjabi), Sindhi, Pashto (aka Pushto), Baluchi, and Brahui are also spoken.
Panama	Spanish
Paraguay	Spanish and Guaran are the official languages.
People's Democratic	Arabic is the official language,
Republic of Yemen	South Arabic, a term used to denote various related dialects, is also spoken.
Peru	Spanish. Quechua is the predominant Indian language. Aymara is also spoken.
Philippines	Pilipino (aka Tagalog) and English are the official languages. Among the 82 dialects spoken, Ilocano is predominant. Cebuan is also spoken.
Poland	Polish is the official language. Yiddish is spoken by a small minority.
Portugal	Portuguese
Puerto Rico	Spanish is the official language.
Qatar	Arabic
Romania	Romanian is the official language. Yiddish is spoken by a small minority.
Russia	Russian
Rwanda	Rwanda and French are the official languages. Swahili (aka Kiswahili) is also spoken.
Samoa	Samoan
Saudi Arabia	Arabic is the official language. South Arabic, a term used to denote various related dialects, is also spoken.
Scotland	English is the official language. Scottish Gaelic is spoken by 2 percent of the population.

Senegal	French is the official language. Wolof, Fulani, and Malinke are the predominant native language
Serbia	Serbo-Croatian
Sikkim	Nepali
Singapore	Malay is the national language. Chinese, an official language, along with Tamil and English, is spoken by about 75 percent of the population.
Slovakia	Slovak
Slovenia	Slovenian
Somalia	Somali
South Africa	Afrikaans and English are the official languages. Sotho-Northern, Sotho-Southern, and Zulu are spoken in South Africa.
Spain	Spanish is the official language, as well as Catal, Galician, and Basque.
Sri Lanka	Sinhalese is the official language. Tamil is also spoken.
Sudan	Arabic, Sudanese Arabic (spoken by over 11 million people; not intelligible to speakers of modern Arabic)
Swaziland	Swazi and English are the official languages. Zulu is spoken by 2.3 percent of the population.
Sweden	Swedish
Switzerland	French, German, Italian, and Romansch are the four official languages.
Syria	Arabic is the official language. Kurdish is spoken by the Kurds.
Taiwan	Chinese (Mandarin dialect) is the official language, but native Taiwanese speak the Fukienese (aka Amoy) dialect.
Tajikistan	Tajik
Tanzania	Swahili (aka Kiswahili) and English are the official languages. Over 100 tribal languages are spoken, of which

	Sukama is predominant.
Thailand	Thai. Chinese, Malay and Hmong are also spoken.
Tibet Autonomous Region of China	Tibetan
Togo	French is the official language. Ewe is the predominant native language followed by Kabre, Gurma, and Hausa.
Tunisia	Arabic
Turkey	Turkish. Kurdish is spoken by the Kurds.
Turkmenistan	Turkmen
Uganda	Swahili (aka Kiswahili)
Ukraine	Ukrainian
United Arab Emirates	Arabic
United States	New York State Native American languages include Seneca, Mohawk, Oneida, Algonquin and Navajo. (These languages are listed because they were reported by school districts. In addition, Native American languages indigenous to and still spoken in New York State are Cayuga, Onondaga, and Tuscarora.)
Uruguay	Spanish
Uzbekistan	Uzbek
Venezuela	Spanish
Vietnam	Vietnamese is the official language. Hmong is also spoken.
Zaire	French is the official language. Predominant native languages are Swahili (aka Kiswahili) and Luba.
Zambia	English is the official language. Bemba is the predominant native language, followed by Tonga and Nyanja (aka Chinyanja).
Zimbabwe	English is the official language. Afrikaans, Shona, and Ndebele are also spoken.



## Asian International Students

*Are you an international student from Asia?*

- Are you an international student from an Asian country?
- Are you enrolled in online course(s)?
- Are you pursuing a graduate program in the SISLT  
(School of Information Science and Learning Technologies)
- Is this semester your second semester or later in the U.S?

If you answered “yes” to these 4 questions then you may qualify to participate in a study to better understand Asian international students’ experiences in online learning environments. \*

Volunteers will each be privately interviewed on two occasions over the winter 2006 semester, and will receive \$30 compensation for each interview. To volunteer, contact Mee-Aeng Ko via e-mail at [mak0ea@mizzou.edu](mailto:mak0ea@mizzou.edu).

*\* Additional screening questions will be asked.*

## APPENDIX 4 - INTERVIEW PROTOCOL

### *Introduction*

- Permission to audio-tape: May I record our interview to listen to it again later?
- There is no right or wrong answer; I want to understand your experiences.
- You can stop participating at any time if you feel uncomfortable.
- As you are talking, I will listen and probe when necessary. I may be quiet, please keep talking.
- Would you mind if I jot down a few notes while you talk?
- Please stop me and clarify any question if needed.

1. I am interested in learning about your experiences in an online learning environment as an international student from Asian country. Please describe, in general, what this is like?

### Probes

- *[If interviewee thinks this is too broad]*

Just tell me the first thing that comes to your mind

2. Is there anything you experience that is unique related to you taking an online course as an international student?

### Probes

- Any experience related to
  - Participation in an online learning environment
  - Learning preference
  - Learning strategies
  - Social relationship between the instructor and/or peer students
  - Challenges

3. What feelings were generated by the experience?
4. What did you do when that incident occurred?
5. What the experience meant to you?
6. How did the experience affect you? What changes do you associate with the experience?

Probes

- Any changes related to
  - Your participations in online learning environment
    - Describe how they changed.
    - Describe what helps or hinder your participation.
  - Your learning preference
    - Describe how they changed.
  - Your learning strategies
    - Describe how they changed
  - Your social relationships between the instructor and peer students
    - Describe how they changed.
    - Describe in what ways they affect your learning.
  - Your challenges
    - Describe how the challenge(s) affect you and/or your learning

*Closing*

- Is there anything else you think I should know or you want to tell me?

## APPENDIX 5 - CONSENT FORM

### Information and Consent form for Participants in Interview

#### *The Lived Experience of Asian International Students in Online Learning Environments in Higher Education*

We are seeking 10 Asian international student volunteers to participate in interviews about their lived experiences in online learning environments. **The purpose of the research** is to gain deeper understanding of the lived experiences of Asian international students in online learning environments.

The **interviews** will take place in a private conference room on MU campus at a convenient time and you will be interviewed twice over this winter 2006 semester. Each interview will take approximately 45-60 minutes. The questions will focus on your lived experiences in online learning environments as an international student from Asia. Primary researcher will conduct the interviews, tape record the responses, and summarize the responses along with responses from all others who are interviewed. Those who are interviewed will receive small token of appreciation and \$30 for each interview. When the primary research finishes summarizing general descriptions of your experiences, you will be asked to check if the descriptions are accurate and may be invited to revise the descriptions to more accurately represent your lived experiences. You can choose not to answer and/or response questions if you do not want to. And you can stop the interview at any time if you are uncomfortable with it.

We feel there are **no risks to you by participating in the interviews**. Your identity and response would be kept **confidential**. Your name would not be used when reporting the findings from this research. All interview results will be assigned a pseudonym. Original tapes and transcripts prior to assignment of the pseudonym will be retained in a locked file cabinet in the research workspace of the primary researcher.

At anytime you can ask questions about the research by contacting Mee-Aeng Ko or Dr. Gail Fitzgerald.

The contact information is the following:

*Mee-Aeng Ko* (The primary researcher)

Doctoral Student in School of Information Science and Learning Technologies,  
University of Missouri-Columbia

[Mak0ea@mizzou.edu](mailto:Mak0ea@mizzou.edu) (314-862-0309)

*Gail Fitzgerald, Ph.D.* Professor in School of Information Science and Learning Technologies, University of Missouri-Columbia

[FitzgeraldG@missouri.edu](mailto:FitzgeraldG@missouri.edu) (573-882-0566)

If you have any questions about Human Subject Research, you can contact the University of Missouri-Columbia Campus Institutional Review Board (IRB) at 573-882-9585.

## Consent for Interview

You will receive a copy of this consent form to keep.

In signing this form, I state that:

- I have read about the information describing this study and my participation in the research.

\_\_\_\_\_  
Initials

- I understand that I can withdraw my consent for the research components of this study at any time without any penalty in the course.

\_\_\_\_\_  
Initials

- I understand that all personal identifiable information will be kept confidential and pseudonyms will be used in summarizing my interviews.

\_\_\_\_\_  
Initials

- I agree to participate in the research components of this study as described above in voluntary consent.

\_\_\_\_\_  
Initials

\_\_\_\_\_  
Signature of the student

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of the researcher

\_\_\_\_\_  
Date

## APPENDIX 6 - SAMPLE OF HORIZONTALIZATION

The following horizontal statements are excerpted from the fifth participant, Xiu's interviews in which she described her experience in online learning environments as an Asian international student. Each statement in horizontalizing has equal value and contributes to an understanding of the nature and meaning of being online learning environments as an Asian international student.

1. "Overall I prefer face-to-face class just because I am on campus. The thing is that some online courses are too abstract and I don't think I learn very well."

2. "It is kind of good because I have more interaction with my instructor in online courses. Considering my situation, I am not very talkative and my English is not very well, so I avoid speaking in face-to-face classroom and just listening to others. But in online, it is more comfortable for me to speak up."

3. "I am more talkative in online."

4. "Sometimes I just think nobody will see my postings."

5. "In face-to-face classrooms, I am more anxious about what others will say about what I said. I feel more anxiety in face-to-face classrooms."

6. "Even though I am more comfortable in online learning environment because of the fact I can be more talkative, I don't like the fact that it takes too much time. For online courses, there are so many things to do. For one course, I sometimes have 4 due dates in a week. On Tuesday do what, on Thursday do what, on Friday do what, and on Sunday do what. It takes too much time and I don't like that. I like to have one due date for a week."

7. "If I have time, I always log in to see if who has posted and what instructor has posted. I log in everyday or at least every two days to see what is going on. But I usually participate in the discussions on later of the weeks so I will read my material and others' postings."

8. "Honestly I read only 50 percent of others' postings. For my classes there are about 25 students and they post more than 150 postings per week. I just pick one, such as a posting with my instructor's reply. But I read all my instructor's postings. Especially when I am in a big class, there are so many postings and some of them are not very informative and substantial. Just meaningless."

9. "Online courses are still new to me, so I don't know I learn better in online than in face-to-face. If every condition were neutral I would take face-to-face classes."

10. "One big problem here is that international students have little connection to instructors than American students would have. American students seemed friendlier with their instructors. International students, especially from Asia respect elders and respect our professors greatly. If I would choose face-to-face classes, one big reason would be that I want to make connections with my professors. In online courses, it is not easy to make connections with instructors. In online courses instructors have so many students and don't remember their students. One time I asked one of my online instructors to write a recommendation letter for me and he or she asked me if I had taken his or her classes. I said I just finished his or her class and the instructor did not know me at all. That's not a good thing; it is a bad thing."

11. "I don't think I have better relationships with my classmates in online than those in face-to-face. I feel we really don't have interactions. We may have peer review or reply to others' posting. That might be it. So we really don't have deep interaction with other students and with instruction also. We don't talk about other things and just talk about content of course."

12. "I know one of my instructors in this semester reads everything, acknowledges everyone, and replies to every message. So I know my instructor reads my message, so the quality of my postings would be better. I need to make my postings more meaningful. For other classes, I know my instructor would not read my postings, so I just meet the requirements. So that (relationship with instructor) makes difference. But basically I don't care about relationships with my instructor. I just do whatever I need to do. Heumm...actually I care about the relationship with my instructor. I have mixed feelings about that."

13. "I always like my instructor to encourage me and have a more positive attitude. For example, they can say nice thing first and suggest something, "You did it well, but you need to improve this and that...."

14. "I can see when instructors are more involved in discussion, students are more involved in discussions. I think when instructors are involved in the discussions; it would be the motivation for me to do discussions."

15. "I always like my instructor to give me feedback. I would like to know what my instructor says. Did I do wrong? Did I do good?... I want to have feedback and sometimes I don't have it."

16. "I started my first online classes, I was not comfortable with my writing in English. I took a look at others' postings first to see what they said and then reply to them asking questions and telling them I liked their postings and something was wrong.... But now I do on my own without reading others' first and write my own answers."

17. "Sometimes I don't know how to express my meaning in English. Sometimes even though I have a great idea and I don't know how to explain it. Sometimes I said something, but that was not what I wanted to say and just had to go with it."

18. "Usually I get pressure because native speakers can write very long postings, but I cannot write that long postings in English. That gives me pressure."

19. "However I now feel comfortable with my postings because I see other Asian international students do the same way I do."

20. "I know that my instructors would understand my situation and hopefully have lower expectation for me than for native speakers."

21. "When I see long postings I think I need to make my write longer."

22. "It is really hard for me to read papers that my instructor assigned for courses. I have to read it 2 or 3 times to understand the whole paper. I search key concepts on Google and get some ideas of the key concepts. Actually I would read more from Google than papers that my instructor assigned for a certain topic. Usually the materials from Google would be much better to help me understand."

23. "To me, course format (face-to-face vs. online) does not matter in terms of my performance."

24. "In face-to-face class, I don't know how other students learn. Some students are very talkative in classroom, but I don't know how the students are doing by their talks in classroom. I cannot judge their performance because there is no way for me to see their work. But in online courses I kind of know how other students learn through what they post and what they submit for assignments. Seeing other students' work motivates me to learn and allows me to know how things are going on, which is beneficial to my learning."

25. "In face-to-face class sometimes students say a joke to me and actually I don't understand it and what's funny. I don't like it. But in online, when people write a joke I kind of know what that means and I can guess. It is much easier for me to understand in online. Jokes give me a hard time to understand and I don't like it in face-to-face class."

26. "I don't think online learning environment more motivates me to learn, but it helps me to learn. I am more motivated by instructors and other students than by online features/tools. Especially how they participate motivates me to learn. I just want to meet the average; if they work more than the average, I would work more."

27. "I would say I more participate in online courses than in face-to-face because online courses require you to talk. If they do not require that, my participation level would be the same in face-to-face and online. The course requirement is the primary reason for me to more participate in discussions in online than in face-to-face."



28. "I also would more participate in online because I can write. My English is not very good, so I cannot express my ideas very well in one minute in face-to-face class and will choose not to say anything. But in online courses, I might start posting something when I have really good idea, which I may not talk in face-to-face. So I might more participate in online courses than in face-to-face."

29. "In online courses, I can take a look at others' work. Sometimes I don't know what instructor's expectations are. Looking at others' work gives me idea of my instructor's expectations."

30. "I don't think I have challenges in online courses. Face-to-face classes will be much more challenging than online course. In China, we can write well, but we cannot speak very well because we don't have oral courses at all. When I first came here, I kind of understood what they said, but I could not speak. Even though writing is very time consuming and sometimes I don't know what words I should use, I am still more comfortable with writing than oral components."

31. "In face-to-face class, sometimes instructors are very fast and I don't think I can type down the ideas very well. But in online courses, what instructor says is written and the instructor would be more organized to explain something. They will help me much better to understand concepts of the course."

32. "I would like to see some office hours and instructors will be there in online. I know I would get quick response when I have any questions. When I have questions, I don't want to wait for the answers for 2 or 3 days."

33. "I would like my instructors to summarize the contents, key points that we need to know. Especially in discussion boards where there are so many different directions and/or opinion, I would like to know what is wrong/right or what would be the key points."

34. "Actually I just talked to my friend that I really get tired of the online courses. Online courses require more input than face-to-face courses."

35. "I think Asian students are more motivated by instructors, or outside person, not myself. When I just started my study here in America, I tried to motivate myself. But now I feel I just do the minimum requirements. It is hard for me to constantly motivate myself in online learning environment."

36. "I think time management is a big issue of the online courses. I see a lot of students who have same issue that I have."

37. "I have taken many online courses and my experience is very limited. I think if I took more face-to-face classes, I would feel I had more experiences."

38. "It is important for me to see others' work. I would like to see what others have done. If I have time, I go through all the work and discussions. But I just look though

what my group members have done and said. But in order to understand the course content, it is still helpful to see what others have done and said.”

39. “From my experience, Asian students are not competent as a group leader. As an Asian student it is hard to say I want to be the leader. I think it is because of culture. I usually like to be helpful, not as a leader. I think it is because of language. I worry about what others think about my language. I am a good assistant, but don’t volunteer to be a leader. I want native speakers to be a leader.”

40. “I always like to have native speakers as a team member. Since we are here in America, it is always nice to work with American students. We can learn something new from their cultural perspectives. We have so many Asian students in our department, they are good but they have limited experiences. So I would like to work with American students. I know Asian students work hard, but they have language problem.”

41. “In our department Asian Ph.D students tend to have narrow experiences while American Ph.D. students have broad experiences because most of them are from their fields. They have working experiences here that we, Asian students, don’t have. When they talk about their working experience or their fields, I have no idea about that and I cannot contribute my input even though I really like to contribute. I hope instructors can create an environment or context where Asian students can also contribute/participate. For example my instructor could say, we have international students, let’s hear what they think or what is going on their countries. I think it will be good to hear different perspectives or experiences from us. But they get away from that. I think instructor’s role is important to lead discussions.”

42. “For two of my online courses, I was not totally familiar with the topics we were discussing. If we discuss some topics from our textbook, I can read and be prepared. But when we talk about some other fields, I just follow the discussions and am not passionate. It does not mean I don’t understand, but I don’t have a feeling that keeps me awake. I think instructors can play a role to keep me awake. If we are discussing some fields that international students are not familiar, instructors give us explanation or remind other students to use plain language for international students. Sometimes I feel I have no connection, which makes me feel bad. It hurts my feelings. I feel isolated from others.”

43. “For Asian students, it is important to be confirmed by instructors or others. For online courses most of online teacher don’t provide feedback. They don’t provide feedback. In a classroom, I can observe what my instructors feel about my work. It is very interactive with instructors in a classroom. As Asian students, we always want to confirm that I am doing right. I think if I get more confirmations, I would be more motivated.”

44. “For one assignment I got a very low grade. It was unreasonably low. I thought I met all the requirements. I e-mailed my instructor about it. The instructor said that my document was blank. That’s why I got a low grade. I thought it was because of the different computer system. My instructor had a Mac and I used a PC for my assignment.

Why would I send a blank document? It must have been something wrong. I wish my instructor e-mailed me and asked about it. I wish my instructor could be more kind about it. Sometimes I feel my instructors don't care about students. I think they just do their work. I think it would be different if it were a face-to-face class."

45. "As an international student, I want connections with my professor and want to be close to my professors, but I feel I have no connection with my professors. It is hard to develop a relationship with professors in online courses, but I think developing a relationship with professors is very important for Asian students."

## APPENDIX 7 - INVARIANT HORIZONS AND THEMES

From the horizontalized statements of ten participants, I derived 29 invariant horizons or meaning units by removing overlapping and repetitive statements. Then I related and clustered them into 7 main themes, as follows.

- I. Language Barrier
  - A. Reading
  - B. Writing
  - C. Accepting my language barrier
- II. Relationship & Interaction
  - A. Relationship with classmates
  - B. Relationship with teachers
  - C. Feel connected and supported
- III. Influence of Cultural background
  - A. Influence on communication
  - B. Influence on group project & collaborative work
  - C. Influence on learning process
- IV. Benefits from Online Learning Environments
  - A. Flexible
  - B. Asynchronous
  - C. Unbounded
  - D. Text-based communication
  - E. Looking at others' work
- V. Downside of Online Learning Environments
  - A. Frustration with discussion boards
  - B. Frustration with text-only format
  - C. Self-directed learning
  - D. Time consuming and demanding
  - E. Not suitable for some course contents
- VI. Teachers in Online Learning Environments
  - A. Be attentive to students
  - B. Actively involve and be responsive
  - C. Be specific and clear

## VII. Suggestions

- A. Mixed format combining online and face-to-face
- B. Providing orientation or guidelines
- C. Using more multi-media
- D. Offering office hours
- E. Providing summary and key points
- F. Providing print friendly course documents

## APPENDIX 8 – DESCRIPTION OF THE TEXTURES OF EXPERIENCE

### Sample: Textural Description of Hui's Experience

Based on the themes and delimited horizons, I developed an individual textural description of the experience of each participant. The following selection presents the nature of the experience in an online learning environment as an Asian international student, as described by Hui. This excerpt captured what happened in her online learning environment, including the situation and conditions, and provided image of her thoughts, feelings, and struggles as an Asian international student.

#### I. Language Barrier

Hui encountered language barrier. Especially she found writing difficult and time consuming.

“In case of casual discussions, for them (American students), writing is so natural. But for us it is like doing study, doing some homework. I also try not to make any spelling and/or grammatical mistakes. It took me much longer than they do to finish a piece of writing...My English was not good enough, so I could not express myself well enough...I feel bad because my English is not that good and I don't have much to say during discussions. But actually I have the same problem in face-to-face classes. I usually didn't talk as much as other classmates did. The environment is where I can see (feel safe), so I feel more comfortable about it in face-to-face class. Even though I didn't talk that much, I know that my advisor would read my written work and know I really study hard. So it is ok.”

However, Hui did not see the language barrier as a problem but rather accepted it as natural for international students.

“Regarding language barrier, I don't see it as a problem. I am a foreigner, so what? It is natural for me not to speak as well as native speaker. Sometimes when I cannot express myself I am discouraged. But this is just at that moment. I just try to let it go. I am 41 years old and I think my age really helps me a lot.”

## II Relationship & Interaction

Hui felt that she did not know her teacher and classmates very well.

“In online courses, even though I do meet classmates twice or three times, even four times a week because we have to post, but I don’t know the people. I know so little about them. We did provide our introduction, but it is like reading a story, not like meeting someone. Sometimes some students make me feel we are strangers to each other, because we did not mention anything other than course topic and/or assignments. It is just like reading newspapers and stories. That’s it. There is no chance for me to get to know the authors. We can never become good friend to people in online. Probably for young people, not for older generation. I just cannot imagine...”

## III. Influence of Cultural Background

In the online discussions, Hui tended to reply to other international students because she felt more comfortable.

“If I have choice, I would respond to other international students than to American students. If I respond to native speakers, it will make me feel I am on the pressure because they will judge how well I write. But if I am responding to other international students, I would feel more comfortable because I know that we might have the same problem, the language barrier and have the same background and heritage. So I felt relaxed to post.”

Hui would like to work her group projects in a mixed group consisting of international students and American students.

“If possible, I would like to have both some international students and some American students for my group. In that case, I can make sure our writing is good.”

## IV. Benefits from Online Learning Environments

Hui enjoyed and appreciated flexibility and accessibility of online learning environments.

“I like online course more than face-to-face course because it gives me more freedom. I can work at any time and whenever I have the mood for

study. I usually get online at midnight, but that is impossible if I take a face-to-face class. That accessibility is what I really enjoy...As a mom, I have two kids with me. I still keep taking more online courses because it works well and fits my schedule. Because of my life style, I need online classes; I have two kids to take care of and most of face-to-face classes are evening classes. If I take too many evening classes, I cannot take care of my family. But online courses give me more freedom and flexibility. When I register my courses, I deliberately look for online courses and choose one that looks very interesting to me. I like online courses because it meets my need for my family.”

Hui also appreciated asynchronous feature of online learning environments because she was allowed for more time to think and write for their discussions.

“In online learning environments, I can take my time. I can reflect what I am interested in, what I said, and what I wrote in online classes. Online classes just give me more time to think about my ideas, thoughts, and responses, so they don’t have much pressure, even though it takes time. However, in face-to-face classes, my reaction has to be very quick and prompt. Everybody sees what it is like. So I am not a native speaker, so I sometimes make grammatical and pronounce errors and then people will see it. So there is more pressure in a face-to-face class.”

#### V. Downside of Online Learning Environments

Hui was frustrated with unfamiliar discussion topics, especially topics related to American culture or experiences in American society.

“American students have so many things to talk about. Compared to them, I did not have many things to talk about, and that made me a little bit pressured. My teaching experience is quite different from their experiences. Usually we apply our learning to our teaching experience. Teaching in Taiwan is so different from teaching here. So my teaching experiences might not get them interested, and that made me intimidated a little bit. If I keep talking how I taught in Taiwan, they may feel bored. That discouraged me writing too much. So I was a little bit disappointed and not satisfied...Sometimes when they mention about some program and/or tasks, I have no idea what that is.”

Hui had pressure that she needed to post well written messages in online discussion boards.



“When I am writing, my words, sentences, and writing will represent me. So written language is very important in online discussions...I was the only one whose native language was not English. I can see all of them wrote very well, and it really gave me some pressure about that.”

Hui was frustration with the overwhelming number of postings, which they had to read and reply to. Sometimes they found them not very useful or informative.

“There are a lot of discussions going on. But they are not so related to our reading assignment. Sometimes there is not too much content there, not very substantial meaning carried there. They just talk about their teaching experience and then I have to respond to them. Everyone tries to respond as often as possible. I did not check our discussion boards for a couple of days and I had 35 new messages when I checked this morning. Then I have to respond to everyone because they did that. If I don’t do that, I look I am not as diligent as they are. So I had to do it and it took me two hours to respond to all the messages. It is really a burden. I get tired of this because I have to respond all the time...I would rather read my course materials and do my assignment than respond to all postings. That’s one thing I don’t like about online courses.”

## VI. Teachers in Online Learning Environments

Hui stated that encouraging students would be one of qualities of online teachers.

“If I were a teacher in online, I would be always nice to my students saying encouraging words. We don’t have to discourage students and just encourage students and let them talk. Unless students post something really meaningless or irrelevant to the topic, I would say, "you did good job." Or “I really agree with you” and I would discuss with what my students had posted. I will be just that way, very encouraging.”

Hui mentioned being specific in communication as a necessary quality of online teachers.

“They have to be very specific about what are the requirements for the course. They have to be very specific about their lectures, instructions, what they expect us to do, and setting the steps very clearly for us so that we can just follow the steps. He or she only needs to be very specific about instructions, expectations, procedure, etc. Because they are not talking to you, it is all there for us to read it...I think quality of teacher in online is quite different. They need to be very specific.”

## VII. Suggestions

Hui suggested guidelines for online discussions.

“If my instructor gives some instructions in how to discuss, (e.g., Quality of discussions is more appreciated than quantity of discussions, We don’t have to reply to every single posting. etc.), it would be helpful”

## APPENDIX 9 – DESCRIPTION OF THE STRUCTURES OF EXPERIENCE

### Sample: Structural Description of Hui's Experience

Following the textural description, I constructed individual structural description of Hui's experience. The individual structural description provided an account of the underlying dynamics of the experience.

The structures that permeated Hui's experience were expressed in her frustration that resulted from language barrier, lack of relationship with people, different cultural background, and online discussion boards and satisfaction that came from flexible, accessible, and asynchronous feature of online learning environments.

Hui's main frustration had to do with language barriers. She found writing difficult and time-consuming, and concerned about her English, especially not being able to express herself very well. And this concern and frustration intensified because she could not see people and thus felt more uncomfortable in online learning environments than face-to-face settings. However Hui did not see the language barrier as a problem but accepted it as natural for international students.

Hui felt that she did not know her teacher and classmates very well, so she was not very satisfied with her relationship with them. However, lack of relationship with them did not necessarily affect her learning.

Hui tended to reply to other international students because she thought they might understand her language barrier. She was conscious of American students who might judge her by her imperfect English, especially writing. Because she concerned about her

writing, she would like to work with American students for group projects so she could have well-written group assignments.

In the online discussion boards, Hui felt discouraged when the class discussed topics related to American culture or experiences because she did not have many things to share with her classmates. When she talked about her experiences in Taiwan, she worried if other students felt bored or less interested in her experiences, which made her intimidated in the online discussion boards. She also had pressure for well-written and long messages because she was the only non-native speaker and she thought writing would represent her in online discussion boards. She was frustrated with overwhelming number of postings, which she had to read them and reply to the because of requirements for discussion participation.

Satisfaction with her online learning environment had a lot to do with flexibility, accessibility, and asynchronousness of online learning environments. She liked the way she could control her time and pace in her learning. She especially appreciated the flexibility of online learning environments because it allowed her both to pursue her doctoral degree and to take care of her two children. She thought online learning environments had a beneficial feature to her (and other international students) because asynchronous online learning environments allowed her for more time to think, reflect, and write.

## APPENDIX 10 – TEXTURAL-STRUCTURAL DESCRIPTION

### Sample: Textural- Structural Description of Hui's Experience

Hui's frustration in her online learning environment was related to language barriers, lack of relationship with people (teacher and classmates), different cultural background, and online discussion boards.

#### I. Language Barrier

Hui found writing difficult and time-consuming, and concerned about her English, especially not being able to express herself very well. And this concern and frustration intensified because she could not see people and thus felt more uncomfortable in online learning environments than face-to-face settings.

“In case of casual discussions, for them (American students), writing is so natural. But for us it is like doing study, doing some homework. I also try not to make any spelling and/or grammatical mistakes. It took me much longer than they do to finish a piece of writing...My English was not good enough, so I could not express myself well enough...I feel bad because my English is not that good and I don't have much to say during discussions. But actually I have the same problem in face-to-face classes. I usually didn't talk as much as other classmates did. The environment is where I can see (feel safe), so I feel more comfortable about it in face-to-face class. Even though I didn't talk that much, I know that my advisor would read my written work and know I really study hard. So it is ok.”

However, Hui did not see the language barrier as a problem but rather accepted it as natural for international students.

“Regarding language barrier, I don't see it as a problem. I am a foreigner, so what? It is natural for me not to speak as well as native speaker. Sometimes when I cannot express myself I am discouraged. But this is just at that moment. I just try to let it go. I am 41 years old and I think my age really helps me a lot.”

## II. Relationship & Interaction

Hui felt that she did not know her teacher and classmates very well, so she was not very satisfied with her relationship with them. However, lack of relationship with them did not necessarily affect her learning.

“In online courses, even though I do meet classmates twice or three times, even four times a week because we have to post, but I don’t know the people. I know so little about them. We did provide our introduction, but it is like reading a story, not like meeting someone. Sometimes some students make me feel we are strangers to each other, because we did not mention anything other than course topic and/or assignments. It is just like reading newspapers and stories. That’s it. There is no chance for me to get to know the authors. We can never become good friend to people in online. Probably for young people, not for older generation. I just cannot imagine...”

## III. Influence of Cultural Background

Hui tended to reply to other international students because she thought they might understand her language barrier. She was conscious of American students who might judge her by her imperfect English, especially writing.

“If I have choice, I would respond to other international students than to American students. If I respond to native speakers, it will make me feel I am on the pressure because they will judge how well I write. But if I am responding to other international students, I would feel more comfortable because I know that we might have the same problem, the language barrier and have the same background and heritage. So I felt relaxed to post.”

Because she concerned about her writing, she would like to work with American students for group projects so she could have well-written group assignments.

“If possible, I would like to have both some international students and some American students for my group. In that case, I can make sure our writing is good.”

#### IV. Benefits from Online Learning Environments

Satisfaction with her online learning environment had a lot to do with flexibility, accessibility, and asynchronousness of online learning environments. Hui liked the way she could control her time and pace in her learning. She especially appreciated the flexibility of online learning environments because it allowed her both to pursue her doctoral degree and to take care of her two children.

“I like online course more than face-to-face course because it gives me more freedom. I can work at any time and whenever I have the mood for study. I usually get online at midnight, but that is impossible if I take a face-to-face class. That accessibility is what I really enjoy...As a mom, I have two kids with me. I still keep taking more online courses because it works well and fits my schedule. Because of my life style, I need online classes; I have two kids to take care of and most of face-to-face classes are evening classes. If I take too many evening classes, I cannot take care of my family. But online courses give me more freedom and flexibility. When I register my courses, I deliberately look for online courses and choose one that looks very interesting to me. I like online courses because it meets my need for my family.”

Hui thought online learning environments had a beneficial feature to her (and other international students) because asynchronous online learning environments allowed her for more time to think, reflect, and write.

“In online learning environments, I can take my time. I can reflect what I am interested in, what I said, and what I wrote in online classes. Online classes just give me more time to think about my ideas, thoughts, and responses, so they don't have much pressure, even though it takes time. However, in face-to-face classes, my reaction has to be very quick and prompt. Everybody sees what it is like. So I am not a native speaker, so I sometimes make grammatical and pronounce errors and then people will see it. So there is more pressure in a face-to-face class.”

#### V. Downside of Online Learning Environments

In general, Hui was frustrated with the online discussion boards. Hui felt discouraged when the class discussed topics related to American culture or experiences

because she did not have many things to share with her classmates. When she talked about her experiences in Taiwan, she worried if other students felt bored or less interested in her experiences, which made her intimidated in the online discussion boards.

“American students have so many things to talk about. Compared to them, I did not have many things to talk about, and that made me a little bit pressured. My teaching experience is quite different from their experiences. Usually we apply our learning to our teaching experience. Teaching in Taiwan is so different from teaching here. So my teaching experiences might not get them interested, and that made me intimidated a little bit. If I keep talking how I taught in Taiwan, they may feel bored. That discouraged me writing too much. So I was a little bit disappointed and not satisfied...Sometimes when they mention about some program and/or tasks, I have no idea what that is.”

Hui also had pressure for well-written and long messages because she was the only non-native speaker and she thought her writing would represent herself in the online discussion boards.

“When I am writing, my words, sentences, and writing will represent me. So written language is very important in online discussions...I was the only one whose native language was not English. I can see all of them wrote very well, and it really gave me some pressure about that.”

Hui was frustrated with overwhelming number of postings, which she had to read them and reply to the because of requirements for discussion participation.

“There are a lot of discussions going on. But they are not so related to our reading assignment. Sometimes there is not too much content there, not very substantial meaning carried there. They just talk about their teaching experience and then I have to respond to them. Everyone tries to respond as often as possible. I did not check our discussion boards for a couple of days and I had 35 new messages when I checked this morning. Then I have to respond to everyone because they did that. If I don’t do that, I look I am not as diligent as they are. So I had to do it and it took me two hours to respond to all the messages. It is really a burden. I get tired of this because I have to respond all the time...I would rather read my course materials and do my assignment than respond to all postings. That’s one thing I don’t like about online courses.”



## VI. Teachers in Online Learning Environments

Hui thought encouraging students would be one of qualities of online teachers.

“If I were a teacher in online, I would be always nice to my students saying encouraging words. We don’t have to discourage students and just encourage students and let them talk. Unless students post something really meaningless or irrelevant to the topic, I would say, "you did good job.” Or “I really agree with you” and I would discuss with what my students had posted. I will be just that way, very encouraging.”

Hui also mentioned being specific in communication as a necessary quality of online teachers.

“They have to be very specific about what are the requirements for the course. They have to be very specific about their lectures, instructions, what they expect us to do, and setting the steps very clearly for us so that we can just follow the steps. He or she only needs to be very specific about instructions, expectations, procedure, etc. Because they are not talking to you, it is all there for us to read it...I think quality of teacher in online is quite different. They need to be very specific.”

## VII. Suggestions

Hui suggested guidelines for online discussions based on her frustrated experiences in the online discussion boards

“If my instructor gives some instructions in how to discuss, (e.g., Quality of discussions is more appreciated than quantity of discussions, We don’t have to reply to every single posting. etc.), it would be helpful”

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