THREE CHINESE STUDENTS' EXPERIENCES OF TAKING ON-LINE COURSES IN ONE AMERICAN UNIVERSITY

A Thesis

by

XINYUAN YANG

Submitted to the Office of Graduate Studies of Texas A&M University in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

August 2011

Major Subject: Curriculum and Instruction

Three Chinese Students' Experiences of Taking On-line Courses in One American University Copyright 2011 Xinyuan Yang

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Approved by:

Chair of Committee, Patricia J. Larke Committee Members, Bugrahan Yalvac

Shari Kendall

Head of Department, Dennie Smith

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ABSTRACT

Three Chinese Students' Experiences of

Taking On-line Courses in One American University. (August 2011)

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Chair of Advisory Committee: Dr. Patricia J. Larke

With wide adoption of on-line instruction as a new instruction format in higher education in the U.S. and the fast growing population of international students coming to pursue degrees in America, the exploration of international students' perceived needs and expectations towards this new learning experience becomes critical. Chinese students are the second largest group of international students in the U.S., yet, studies on their learning needs and challenges in on-line learning are limited. This case study aims at exploring the experiences of three Chinese graduate students, who major in education and have taken at least one on-line course in their programs. Data were collected through three in-depth individual interviews with the participants. Three research questions guided the study: 1) How do Chinese students feel about taking an on-line course as compared with traditional face-to-face lecture? 2) How confident do Chinese students feel about their language competency when they participate in the discussions of an online course? 3) What is Chinese students' understanding of the cultural issues as they participate in the discussions of an on-line course?

There were four themes generated from the cross-case analysis. The themes were:

a) preference of face-to-face courses over on-line courses; b) English language proficiency as a major challenge; c) enjoyment of cross-cultural interaction, and personal growth from the experience. Results revealed that: 1) Participants always have a preference for face-to-face format and regarded face-to-face interaction as an indispensible component; yet, since participants also welcome the adoption of on-line technology, they recommended a combination of two or more instruction methods such as an on-line method with face-to-face method or synchronous on-line chats with asynchronous discussion; 2) Limitation in English language proficiency is constantly a major challenge for participants as international students; 3) Participants enjoyed the cross-cultural communication with peers; and 4) Participants consolidated their knowledge base and developed the awareness of being a culturally responsive teacher.

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sharing of our feelings as international students. It is their voices that make this thesis significant and valuable.

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I would like to dedicate my heartfelt appreciation to my parents who have been constantly supporting and loving me selflessly, but ask for nothing in return. During the hard times when I was writing my thesis, they gave me the greatest extent of understanding and care, even though life in another continent is difficult to picture. They are always with me no matter where I am, even though time and space separate us.

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CHAPTER I

INTRODUCTION

Context of the study

The Internet technology has led to the development and adoption of a new form of instruction called on-line learning. Statistics showed that the number of college students enrolled in on-line courses up soared from 710,000 to 2,200,000 between 1998 and 2000 (Yildiz & Bichelmeyer, 2003). Parsad and Lewis (2008) reported that during the 2006-2007 academic year, 66% of degree-granting postsecondary institutions in the U.S. provided online, hybrid, or other types of distance education courses, which accounted for approximately 12.2 million enrollments.

Along with this change is an increase in the numbers of international students coming to pursue higher education degrees in America. Statistics from Open Doors (2009) indicated that there was an 8% increase of the enrollment of international students over the previous year, which amounts to 671,676 international students during the 2008-2009 academic year. Among these international students, China and India were reported as the greatest sources of international students. Following the Indian students, the Chinese students had a 21% increase over the previous academic year. With the increasing numbers of Asian students, especially Chinese students, it is important to research their perceptions of taking on-line courses.

With the emergence of new technology in education along with an increase in the

This thesis follows the style of *Educational Media International*.

number of international students, issues about the international students in on-line environments have led researchers to look at the on-line environments and their effect on the international students' learning experiences. However, many of these researchers look at international students as a whole or make generalizations about Asian students as one group, even though there are at least 31 different groups of Asian students. The country-specific or ethnic-specific studies on international students are limited, including those of Chinese students who make the majority of international students in the U.S. As instruction should meet the needs and learning styles of all students, more research is needed about international students who are from different cultural backgrounds. Such research should assist educators in the development and delivery of on-line courses to international students. Thus, this study centers specifically on graduate Chinese students' experiences of taking on-line education courses.

Statement of the problem

International students make up an increasing proportion of the total population of students in U.S. higher education; however, the research on their online learning needs with respect to different ethnic and cultural backgrounds is still limited. On-line learning for native speakers in America may be different from on-line learning for international speakers. These differences may be attributed to linguistic patterns and cultural beliefs, and research is needed to explore these differences. The studies about international students and on-line learning in particular, often examine single grouped Asian students. Usually there are few discussions about country-specific or ethnic-specific Asian groups. Asian students come from different countries and they bring different cultural beliefs,

perceptions and attitudes. China has the second largest number of international students in higher education institutions in America (Open Doors, 2009), and limited studies have focused on on-line learning and Chinese students.

Theoretical framework

This study adopts Moore and Kearsley's (2005) system model of distance learning. Moore and Kearsley (2005) proposed a system view of distance learning design. Moore and Kearsley maintained that distance education can be regarded as a system which comprises subsystems. These subsystems include sources, design, delivery, interaction and learning environment, and that each of these subsystems is a system within itself. It is believed that when looking at the subsystems separately, it is important to note their consecutiveness to the entire system and that if "anything happens in one part of the system has an effect on the other parts of the system.

The student's needs are a part of the sources in this broad picture of distance learning. In Moore and Kearsley (2005)'s system model, the initial component of distance learning is the sources which include students' needs, organizations, theory/history and philosophy. They contend that before distance program/course is designed and organized, it is essential to know what students feel about the knowledge they need to learn and take into account their needs in the development of the courses. In addition, students are regarded as a source of knowledge. Therefore, their perceptions and attitudes, which are largely influenced by their cultural backgrounds, produce impacts on what kind of knowledge they would bring or create for the course. Moore and Kearsley (2005) emphasized that a distance program of good quality requires full

integration of the component with the development and implementation of all the other components. Therefore, students' perceptions which reflect their needs must be included when considering course development.

Significance of the study

The primary significance of this study is to examine Chinese students' feelings and perceptions about taking on-line courses in universities in America. Looking at the Chinese students' perceived opportunities and challenges in an on-line learning environment may provide insights about the effectiveness of the on-line learning instruction.

Purpose of the study

This case study aims at exploring Chinese students' experiences of taking on-line courses with native English speaking students majoring in education. The essence of the online course experience is defined as participants' lived experiences and feelings and emotions as they participate in the online course activities.

Research question

The main research question of this study is: What are Chinese students' experiences of taking an online education course with native speaking students in the U.S.? More specifically, the sub-research questions that will help answer the main research question are:

- 1. How do Chinese students feel about taking an on-line course, as compared to a face-to-face lecture?
- 2. How confident do Chinese students feel about their language competency when they

participate in the discussions of an on-line course?

3. What is Chinese students' understanding of cultural issues as they participate in the discussions of an on-line course?

Definition of terms

Distance education: Instructional delivery that does not require students to be physically present in the same location as the instructor (Byrd and Lott, 2003).

International student: In the United States, international student is defined as "anyone who is enrolled at an institution of higher education in the United States who is not a U.S. citizen, an immigrant (permanent resident) or a refugee. These may include holders of F (student) visas, J (exchange visitor) visas, and M (vocational training) visas" (Open Doors, 2009). Accordingly, Chinese students in this paper refer to students who come from China mainland and are not U.S. citizens, immigrants or refugees.

On-line learning: On-line learning is a web-based learning environment in which the course is delivered using a component of the Internet, email, and course management systems such as WebCT and Blackboard (Byrd and Lott, 2003).

In this study the term of on-line learning as well as some synonyms will be used such as on-line course, web-based course, on-line instruction and so forth. The on-line course in this study specifically refers to the courses in which all the delivery of the course and course activities and assignments are conducted through the Internet without face-to-face meetings.

Web-based Instruction (WBI): "Web-based instruction (WBI) is a hypermediabased instructional program which utilizes the attributes and resources of the World Wide Web to create a meaningful learning environment where learning is fostered and supported" (Khan, 1997, p.6).

Organization of the chapters

This thesis consists of five chapters. Beginning with an overview of the context of the study, chapter I includes the statement of the research problem, research questions, the significance and the purpose of the research, as well as building a theoretical framework. Chapter II reflects previous literatures in three areas: 1) the major characteristics of on-line learning; 2) comparative studies on on-line learning and face-to-face classes, and 3) the international students in on-line learning. Chapter III deals with the research design, including the instrumentation, selection of the participants, and the process of data collection and analysis. Chapter IV describes the participants' experiences case-by-case, followed by a cross-case analysis on the themes generated from the responses. Conclusions are made in Chapter V in response to the research questions as well as implications for future study.

CHAPTER II

REVIEW OF LITERATURE

The review of literature addresses three areas. Beginning with an overall introduction of major features of on-line education, a comparative examination will then be made with traditional face-to-face lectures about the changes which on-line education has brought to students. The third area, which is the focus of this study, reflects previous studies on international students' opportunities and challenges in on-line courses.

Major characteristics of on-line instruction

With the accessibility of the Internet, the utilization of on-line teaching and learning has received wide attention from scholars to examine the benefits for students and instructors (Bartolic-Zlomilic & Bates, 1999; Khan, 1997; Khan, 1998; Mahoney, 2006; Tetiwat & Igbaria, 2000, as cited in Aggarwal, 2000, p.17). This study focuses on three fundamental characteristics which benefit students: flexibility and convenience, increased accessibility and diversity, and cross-cultural interaction. Each will be discussed as follows.

Flexibility and convenience

On-line courses provide participants with freedom about time and space (Little, Titarenko, & Bergelson, 2005). Khan (1998) has identified "distance independent," "device independent," and "time independent" (p.65) as key features of on-line learning. The instructors and the students are no longer confined to a specific place to take the class at a fixed time. Instead, as all the coursework and communication are conducted

through the Internet, except for synchronous activities required, the participants can read course materials, complete and upload the coursework at any time at home, at the office or other places. This enables the instructors and the students to manage their schedule with abundant flexibility.

Increased accessibility and diversity

Associated with more freedom in time and location to participate in on-line courses, students from all over the world are able to have growing access to the courses, as long as there is a computer with access to the Internet. Mahoney (2006) noted that on-line courses enabled students to use the time more conveniently and hence take more courses. In a broader sense, Tetiwat and Igbaria (2000) analyzed that on-line courses increased the opportunities of receiving education because the flexibility of on-line learning in time and location could meet the demands of more students who live in different time zones and on different continents. It also provides greater availability for people with different vocational backgrounds to gain equal access to a certain course (as cited in Aggarwal, 2000, p. 29). Similar views have been provided by Bartolic-Zlomilic and Bates (1999) that on-line learning has opened new markets for life-long learners, especially those who seek a balance between study, work and family. The convenience of on-line instruction provides opportunities for these adult learners to access expertise even when they cannot attend classes regularly in a fixed location.

In addition, the diversity of on-line learning lies in its various forms of resources and communication (Atan, Rahman, & Idrus, 2004). For example, textbooks are no longer the dominant material in the courses, and students can obtain course materials

through the Internet from various sources in the forms of graphics, electronic texts, audio and visual documents etc. For another, the Internet also provides people varied means of communication such as course websites, emails, on-line chats etc. Therefore, students could exchange information and thoughts with high efficiency.

Cross-cultural interaction

Since it is possible for geographically, vocationally, ethnically, and culturally diverse people to engage in the same course to communicate with each other, it is not surprising that growing cross-cultural communication could be achieved. Khan (1997) illustrated that through on-line instruction as a medium of instruction, the participants of on-line courses became representatives of their own culture and provide multiple views in the discussion. Such interaction would subsequently benefit student with enhanced ability of critical thinking. Just as Tetiwat and Igbaria (2000) claimed, students needed to process and evaluate the multiple views and information they gained through the Internet by critically examining them and eventually internalized what they learnt and construct knowledge of their own (as cited in Aggrawal, 2000, p.29). Bartolic-Zlomilic and Bates (1999) also commented that this is not merely an advantage of learning from each other but also an essential skill for life-long learning.

On-line learning and face-to-face lecture

Since the wide use of on-line instruction as a newly developed educational technology, the comparison of on-line learning and traditional face-to-face lectures has become inevitable. Although the analysis of the differences between the two instructional methods is not the focus of this research, it would be helpful to make a

comparative examination.

It has been recognized that the distance independent feature of on-line learning allows more "continuity" (Relan & Gillani, 1997, p. 43) in learning compared with face-to-face lectures. As the Internet extends the geographic boundaries of learning, people have access to learning resource regardless of the location, and thus, realize the value of an uninterrupted review of the material. Similarly, Yildiz and Bichelmeyer (2003) indicated that in the process of asynchronous discussion on-line, participants could review others' postings at any time at their own pace, and in turn post their responses until they are satisfied with the writing. In this way, no one would be interrupted during the discussion in their turn. As a result, everyone's participation is encouraged.

Moreover, studies also found that on-line learning promoted the shift of teaching and learning process from teacher-centered to student-centered model. Traditionally, teachers and textbooks are the main source of knowledge and teachers tend to dominate the classroom; on-line instruction, on the contrary, diversifies the teaching and learning resource, and everyone's contribution to the project could become a part of the learning content. Just as Yildiz and Bichelmeyer (2003) noted, in Web context students have more shared authority than in face-to-face classrooms. Meanwhile, students are more willing to participate in the discussion and collaborative work in on-line courses. Thus, the quantity and quality of interactions increased in on-line delivery (Hicks, Reid & George, 2001), and active participation would be more conductive to a student-centered environment.

In short, much research has confirmed the distinctiveness of on-line learning as

compared with traditional face-to-face. In spite of the observed limitation of this new educational technology, like its heavier labor for learners and highly text-based features (Mahoney, 2006), the benefits of on-line learning are still widely welcomed and utilized in broader fields.

International students in on-line courses

Along with the nationwide adoption of on-line instruction, the past decades also witnessed the soaring numbers of international students coming to study in America. According to Open Doors (2009), 671,616 international students were enrolled in universities and colleges in the U.S. during the 2008-2009 academic years, which constituted 3.7% of the total students in the U.S. higher education system. Furthermore, statistics from Open Doors show that new international students, which refer to those who came to the U.S. for the first time in fall 2008, increased by 16%. This was driven by the dramatic growth of undergraduate students from China. In fact, according to the Open Doors (2009), China has been the second largest sender of international students to the U.S. following India, In the 2008- 2009 academic year, international students from China was 98,510, an increase of 21%. Accordingly, the numbers of international students enrolled in on-line courses are growing year by year.

It has been widely acknowledged that appropriate context for learning, social and cultural, is crucial to academic success. Mahoney (2006), for instance, addressed the importance of creating an environment where students feel connected and integrated. Liu (2008) has noted that international students face various challenges in addition to fulfilling academic requirements such as language barriers, cultural shock, and

adaptation to new life and different educational systems. In technological dimension, Mcloughlin (1999) claimed that the design of Web-based instruction must be consistent with students' perceptions, values, leaning styles and expected outcomes which fit in a particular cultural context, especially as students' perceptions would affect their willingness to take on-line courses and the motivation to continue the coursework (Kashif, 2009; Picciano, 2002, Sheu, 2005). Similarly, Wang and Reeves (2007) also advocated that on-line learning, as a new instructional approach, should be responsive to the needs of students as well as the context to which they belong. In this sense, international students, who bring their distinct cultural backgrounds, should be provided with an on-line environment which is responsive to their learning needs.

However, despite the awareness of the necessity for culturally responsive on-line course design, it has also been noted that limited research has been conducted for cultural inclusivity in web-based environment and cross- cultural on-line courses (McLaughlin, 1999; Wang & Reeves, 2007). While abundant studies have explored the benefits or impacts of on-line learning as a newly developed approach on teachers and students from domestic culture, namely American culture, not enough is known about what this instructional model means to international students who bring diverse cultures to this context. It is entirely possible that what American students perceive as an opportunity or benefit in an on-line course is a challenge for international students due to cultural differences; yet students from various backgrounds may in the same on-line course experience in completely different ways.

Still, previous research has indentified certain influence of on-line instruction on

international students. English as Foreign Language (EFL) students in traditional face-to-face classroom tend to keep silent due to the anxiety and nervousness brought by the language barrier and unfamiliarity with the target culture. EFL students in an on-line environment tend to be involved more actively in course activities, in that on-line instruction gives them more space and freedom to express themselves (McLoughlin, 1999; Wang & Reeves, 2007; Yildiz & Bichelmeyer, 2003). There are no visual and auditory cues during on-line discussion, such as facial expression and pronunciation, from which one's identity can be recognized; students from other cultures no longer feel so much stress and anxiety to express themselves and are more likely to participate in the discussion. They could have equal opportunities for exchanging ideas with feedback provided, and thus, may gain a greater sense of being accepted and valued than in face-to-face classrooms.

However, just as noted above, an opportunity could bring challenges as well. While the highly text-based activity without non-linguistic cues in web-based courses encouraged international students' increased participation, such characteristic also added their difficulties of understanding others. Yildiz and Bichelmeyer (2003) maintained that lack of non-verbal cues such as gestures, facial expressions and intonation might result in misunderstandings between native and nonnative speakers as it created more language barriers. In addition, the learner-centered model in on-line learning may benefit students from western culture but challenge students of Asian culture where teachers tend to hold the authority to lead the class (Yildiz, 2003). Without understanding the situation that international students confront when taking web-based courses in America, it would be

hard to design culturally responsive on-line course which really addresses all the students' needs.

Asian students' experiences of on-line learning

Though on-line education has become a widely adopted instructional format, research-based studies on the multicultural aspects of on-line learning are very limited (Wang, 2004). Despite the fact that distance education is developing rapidly in Asian countries as well, this new model is not so well accepted as in the western countries, so on-line learning is still new to a great portion of the Asian students coming to the U.S. (Wang, 2006). Moreover, the cultural differences between the Asian and the western countries affect Asian students' attitudes and their learning behavior differs greatly from American students. In a comparative analysis of Asian and Western cultural values by Wang (2006), it has been revealed that the cultural value in East Asia is characterized by collectivism, seeking harmony, self-discipline and respect for the teacher as authority, whereas Western culture values individualism, directness, questioning of knowledge, and so forth. As a result, Asian students have developed a teacher-centered, passive and reticent learning style. In addition to cultural adjustment, Asian students also face other challenges such as language difficulties, familiarity of teaching and learning styles in western countries, and the level of technology proficiency. Wang (2006) recommended that instructors in a multicultural class must be very sensitive to the needs of different students and be open to cultural differences. It might be helpful for the students to relate new learning experience and knowledge from their own culture as well.

There are studies on the on-line learning experiences of Asian students which were conducted from the perspective of the students' perceptions. Tu (2001) indicated that not only the on-line environment but also the perceptions that students hold will influence their interaction in on-line courses as well (as cited in Wang, 2004, p.833). In Wang's (2004) research on Asian students' perceptions of taking synchronous on-line courses, three students from Korea, Singapore and Taiwan participated in a face-to-face interview about their reflections on taking a master's level on-line course. The study found that while the participants enjoyed the convenience of the on-line course, they were nervous about speaking out during the course because of the concern for making grammatical mistakes, and language was the biggest barrier for them. They tended to be more reserved than their American peers. The synchronous on-line course lacked informal interaction and hence lacked a sense of learning community to them. It was recommended that the instructor should incorporate some asynchronous techniques as well as face-to-face meetings so that the inter-group interactions could be enhanced.

Similar suggestions were made by an investigation by Thompson and Ku (2005) about Chinese students' attitudes towards on-line learning experiences. Seven Chinese graduate students participated in the interviews talking about their perceptions of taking asynchronous on-line courses using Blackboard as a medium. The threaded discussion archives were also collected as another source of data. The participants presented mixed feelings about their experiences: though they appreciate the easy resource sharing and easy record keeping, as well as more time provided for them to think and respond, they had the concerns about not getting immediate feedback and the lack of face-to-face

communication. Hence, suggestions were made for a combination of virtual leaning with face-to-face communication so that it could promote students' interaction in the learning process. It was also advocated that the instructors should always take cultural factors into consideration and give care for international students' needs in on-line learning.

Ku and Lohr (2003) conducted research specifically on Chinese students' attitudes toward their first on-line learning experiences. Both quantitative and qualitative data were collected. Five Chinese students filled out a survey with 21 open-ended questions at the end of the semester and participated in an interview at the beginning of the following semester.

CHAPTER III

METHODOLOGY

Introduction

This study used a qualitative research methodology, specifically a multiple case study approach (Creswell, 2007; Stake, 2005) to explore the experience of the participants through individual in-depth interviews. Creswell (2007) defines case study as "a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information, and reports a case description and case-based themes" (p.73). With this approach this study did not intend to generalize new theories of on-line learning, but instead aimed to look into the participants' descriptions of their experience and construct meaningful interpretation of their experiences. According to Creswell (2007), a case study could be an appropriate approach when there are clearly identifiable cases with boundaries and the researcher seeks to provide a comparison of several cases. In this study, each participant's experience of taking on-line courses has clear boundaries in time. The individual's experience as well as its context was studied as a case, and the three cases were interpreted together as a series of cases within a larger bounded system.

The overall research question of this study is: What are Chinese students' experiences of taking an online education course with native speaking students in the U.S.? More specifically, the research questions are:

- 1. How do Chinese students feel about taking an on-line course, as compared to a face-to-face lecture?
- 2. How confident do Chinese students feel about their language competency when they participate in the discussions of an on-line course?
- 3. What is Chinese students' understanding of the cultural issues as they participate in the discussions of an on-line course?

Pilot study

Having designed the initial interview questions, a pilot study was conducted to test the appropriateness of the questions in May 2010. The study involved an individual interview with a female Chinese student who is pursuing a master's degree in education in one southwestern university. The interview lasted for approximately 40 minutes, and based on the participants' reaction to each question as well as the whole flow of the conversation, the interview questions were modified. There were eight questions initially for the pilot study. However, since the participant's expectation and suggestions with the on-line instruction were also discussed a lot during the interview, two more interview questions were added in the formal interview asking the participants' expectation towards the on-line courses and their suggestions with future improvement of the courses.

Population/sample

This study used a convenience sampling approach (Creswell, 2007). After the initial contact with the prospective participants through email and telephone, three Chinese graduate students in the department, two female and one male student, were

selected to be the participants in this study. The participants were from China mainland and have taken at least one on-line course in the department. Their lengths of stay in the U.S vary from one year to four years, but none had taken on-line courses before coming to this university. The on-line courses they had taken were in the fields of either multicultural education or ESL, and included either synchronous on-line chats or asynchronous on-line discussions. In order to protect the participants' identities, specific course names were avoided during the interviews. Table 3.1 indicates the three participants' biographical information:

Table 3.1 Background information of the participants

	Gender	Length of Stay in the	TOEFL	GRE (Verbal)
		U.S.	Score/full score	Score/full score
Participant A	Male	1 year	106/120	650/800
Participant B	Female	4 years	650/677	560/800
Participant C	Female	4 years	100/120	"Average"

Note that two types of TOEFL score are displayed above. Participant A and C took Internet-based TOEFL (IBT) whose full score is 120, and participant B took Paper-based TOEFL (PBT) whose full score is 677.

Instrument

The instrument in this study is a self-designed interview protocol which included ten questions. The questions were initiated from the main research questions around the topics which this study intends to explore, such as the comparison with face-to-face lectures, language proficiency, cultural factors, and personal development. Initially there were eight questions, but after the pilot study the protocol was revised to ten questions with an open-ended question for the participants to express their recommendations and improvement of future on-line courses in the department. This question allowed the participants to talk about any other feelings about taking on line courses which were not discussed in previous questions. The ten interview questions were:

- 1. Where are you from? How long have you been in the U.S.? Share something about yourself.
- 2. What courses are you taking this semester?
- 3. Have you ever taken on-line courses before you came to TAMU?
- 4. How did you feel about taking the on-line courses as compared to a face-to-face lecture?
- 5. How confident did you feel about your language proficiency during the on-line discussions?
- 6. Do you think that students' cultural background affects their performance when taking an on-line course?
- 7. Describe how the content of the on-line course influences your personal views.
- 8. Describe how the content of the on-line course influences your professional views.
- 9. What is your expectation of taking the on-line course and do you think your expectation was fulfilled in that course?
- 10. Do you have any recommendations to improve the on-line courses in the department?

Data collection

Data were collected through in-depth individual interviews with the three participants. As Creswell (2007) suggested, though, a case study often draws on extensive sources of information for data collection such as observations, interviews, documents, and audiovisual materials, the source of data of this study was limited in variety due to the limitation in time and access to the multiple sources of information of the participants. Yet this study adopted individual interviews as a major approach and sought to get the participants' in-depth reflections about their experiences. All the participants agreed to do a face-to-face interview. The interviews were audio-recorded and took 40-45 minutes. In addition, small informal interviews with participants were also conducted to gain information about their basic background information such as demographics and education and work experience. This part was not recorded.

Data analysis

The data recordings were transcribed by the researcher. Two interviews were conducted in English, and the transcription reflected the original response of the participant without translation and interpretation. But for one participant who wanted to speak in his/her native language, the researcher respected the participant's will and recorded the response in Chinese and translated it when citing necessary responses in the paper. The transcript was reviewed by the participants to check for clarity and accuracy.

The subsequent process followed what Creswell (2007) calls a typical format of multiple-case study procedures. Based on the responses, a categorical aggregation process was adopted to obtain major themes generated from the participant's significant

statements, "hoping that issue-relevant meanings will emerge" (p.163). The study then provided detailed description of each case and themes, followed by a cross-case analysis in which the researcher looked for similarities and differences of the cases. Finally, a "naturalistic generalization" (Stake, 2005, p.454) was made to interpret the meaning of the cases.

CHAPTER IV

RESULTS AND FINDINGS

The participants described about their on-line learning experiences around five topics. These topics were: their on-line learning experiences as compared with face-to-face classes, English language proficiency, cultural influence, personal development after taking the on-line course, and suggestions with future improvement of on-line courses. Figure 4.1 illustrates the five topics which the participants discussed about.

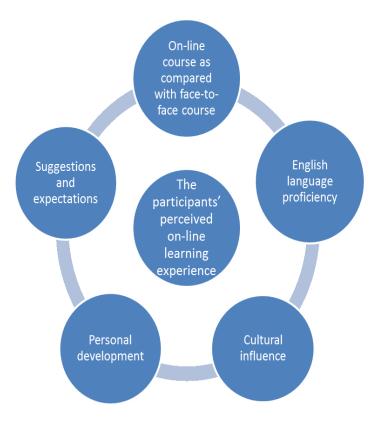


Fig 4.1 Five topics of the participants' on-line learning experiences

Case 1

Background

Participant A is a male student who is pursuing his master's degree in education. He comes from China Mainland and has been in the U.S. for one year by the time of the interview conducted. Before coming to America, he received a bachelor's degree in Chinese language education from a university in an urban city in China. His TOFEL score was 106 out of 120 and he got over 650 out of 800 in GRE verbal test. As a self-description of his personality, he viewed himself as a relatively independent person who prefers independent work to group work and usually does not communicate much with others.

The on-line course he has taken was on Multicultural education. During the first 6 to 8 weeks, the instructor posted weekly lectures online in the form of PowerPoint with audio recordings, and students were assigned to read related chapters and write a chapter review every week. Meanwhile, a series of synchronous on-line discussions were held by the instructor during these weeks, which served as a dominant method for the instructor and the students to discuss in this course. The discussions normally took one hour and all the students were required to participate. Students would enter a chatting room and were required to answer every question which the instructor posted as the topics of discussion for the week. After the chat, the chat records were stored and posted online so that students could go back and read them any time. After these first weeks, students were divided into pairs or groups to conduct projects during which they might have the chance to meet their partners. But according to participant A, the major method

for them to communicate, besides the on-line chats, were still emails. Therefore, the basic process of this course was that students did their readings, weekly assignments and final paper on their own except the group project, and they had on-line discussion about the topics of Multicultural Education during the first half of the semester. All the course works were uploaded to WebCT, where students could view the syllabus and the feedback from the instructor. The synchronous on-line chats were conducted through this system as well.

A comparison with face-to-face courses

Since it was the first time for participant A to take an on-line course, especially in his first semester, this type of course impressed him a lot by its huge differences from the traditional face-to-face classes which he was taking at the same time that semester. He described his overall feeling at the beginning of the on-line course as "was not used to that form very much," and felt more relaxed in face-to-face classes. This was mainly because he could not catch up with the on-line chats when he had to type everything he wanted to say, while in face-to-face classes he only needed to speak it out and reacted much faster. As a result, he was able to respond much faster in the face-to-face classroom and express his ideas more clearly than in synchronous on-line chats. He further explained that such delay of reaction in on-line chats was caused by the form of on-line learning itself.

It's true that I can't react very fast, but I don't think that was because of nervousness; rather, it may be the problem of this communication style itself.

Or we can say, this form itself brings hindrance of communication to

international students.

Participant A recalled that when he was taking face-to-face courses that semester, even in a classroom with almost equal number of students to the on-line course sitting together, he did not feel quite stressful during discussion, as long as he had enough time to react and follow the discussion, which he found difficult in the on-line course.

Such feeling was changed among the semester, when he adjusted himself to this type of on-line learning. By the time of the interview, participant A no longer emotionally rejected on-line courses because the class became more familiar to him, but found that the on-line course might be easier than in the form of face-to-face with the same course content. He felt more comfortable when taking the course in a private space, as he always preferred independent work. Nevertheless, he also emphasized that he still preferred to take face-to-face classes because he liked the discussion when facing each other.

In addition to the private space that on-line courses provided for the students, participant A summarized a few other advantages of the on-line courses. For instance, people who are afraid to speak in public do not need to complete the course activities in front of others, and the discussion online could save more time because there was only one hour's discussion at a time and it was more time efficient and "condensed" compared with traditional lectures. He felt that he learnt as much as in a face-to-face class during the one-hour discussion, but obviously they spent less time than in a face-to-face class, so on-line courses might be suitable, in his eyes, for those who have demand for time efficiency.

However, participant A was also impressed by the drawbacks of the on-line course. In his opinion, a common problem of on-line courses particularly for international students whose native language is not English is that the instructor and other students may ignore the fact that you are an international student. He made a comparison again. In face-to-face classes, international students' identity would be paid more attention and many instructors would cite examples from the international students' home countries, like many classes he had attended.

When there are students from non-English speaking countries, he (the instructor) knows that you have taken TOEFL, so he will take TOEFL as an example, and he would ask the case in your country about a certain issue.

Furthermore, more opportunities and space was provided for international students to express themselves in face-to-face classes. He used a word "tolerance."

I think 'tolerance' is a good word to describe. There was a student in my class whose English was not so good, even me as an international student can tell that, but everybody listened to him very carefully and gave him reponses. Such reaction in itself is a big encourage. For one thing, he was able to express himself; for another, the instructor encouraged self-expression and cared about the fact that he was an international student. But this could be more difficult in on-line course.

... they (students) listen to what you say and respond more actively, because they know you may have difficulty with the expression or you are from a different background, and they will help you to express more clearly. In brief, participant A felt more cared for by the instructor and peers in face-toface classes about the different identities and backgrounds international students bring to the classroom, a difference which does exist and needs to be cared, in his view. On the contrary, in the on-line chats, he had a feeling of depersonalization.

On the Internet, such auxiliary interaction disappeared. American students can express themselves at will, and sometimes they can't care about what your background is. The presupposition of the course is that you are the same as others and you have the ability to participate such type of discussion.

Hence, the participant's feeling was that on-line chats emphasized the participation of every member, but not necessarily paid enough attention to the students' differences, and the influences of those differences possibly bringing to the students as well as the interaction.

Language proficiency

Language difficulty was another primary challenge which participant A faced during on-line chats despite the fairly high percentile he got in English language proficiency tests before coming to the U.S. He reflected his English language problem from two aspects: basic language problem and the comprehension and the application of the terms related to his major.

The participant viewed his basic language proficiency problem as a "dual problem." For one thing, he had to translate his first language Chinese into English in his mind, whereas native speakers only needed to organize their thoughts and write it down during the on-line chats. For another, he encountered difficulty with typing English fast

as well, which is added to the difficulty with catching up with the discussion that he talked about when comparing on-line chats with face-to-face classes. When he tried to respond to a question, others might have posted a lot or even might have proceeded to the next question. If he wanted to post his opinions earlier, he would not have time to read what others said, and when he was typing his answers, he did not have the time to care about where the discussion had gone. Although this course required everybody to respond to every question, and every student had a chance to say his or her opinions anyway, in the participant's feeling he did not have enough interaction with others and the discussion was more like a process asking and answering questions. On the contrary, American students could express their viewpoints and interact with each other very well. Moreover, the participant was used to correcting typographical errors, so he would make sure every word he typed was right, but this was not necessarily the case for native speakers. "They probably don't care too much about typography." He reflected.

Lack of the knowledge base was another cause for the difficulty with communication for the participant at the time he took the on-line course. He reflected that when he had just come to this country and started the study, he did not know much about many terms and expressions frequently used in education, especially in the multicultural education area. When others mentioned some terms he didn't know, he had to look up their meanings first and then understand what others talked about. This problem was solved to a great extent after his one year's study, when he had taken more courses and did abundant readings. By the time of the interview, he had already accumulated more resources and background knowledge to organize his ideas, and he

felt that now he "had more to say." Thus, even though he had a strong desire to express his opinions, he found language barriers in the above two aspects of limitation at the beginning of the on-line course. Although this difficulty was alleviated, he also admitted that such problems would always exist but just a matter of extent over time.

Cultural influence

When asked if cultural differences produced any impact during the on-line chats, participant A agreed that culture did play a crucial role in the interaction, especially in education majors, which are highly cultural relevant areas. There was hindrance, but fresh ideas as well. He drew on three examples: first, multicultural education is a very common topic and major area of study in the U.S., but in his observation people in China seldom talked about it. Second, with respect to school administration, the after-school administration could be a hot topic in America and schools may provide tutoring, counseling or other services after school, but this is not necessary in China because most schools end late and student just go back home directly. Third, in American classrooms the teacher can talk with students one by one as there are usually no more than twenty students in a class, but this may not be realistic in the classrooms in China where there are always forty to fifty students (could be more) in a class. Nevertheless, the participant regarded all these cultural differences as a matter of recognition rather than understanding, which means as long as he knew these facts, there would be less influence on the communication; but if he did not know these differences, gaps might then exist during cross-cultural discussion. Regarding this cultural influence in on-line chats, he mentioned again about the lack of care about such cultural differences among the discussion members. Unlike in face-to-face classes, in which the instructor may ask international students to talk more about the situation in their home countries so that students can compare different education systems, cultural differences were seldom discussed in on-line chats.

Therefore, the major barrier for this participant from a culture perspective was lack of knowledge about different education systems, and as for Asian students' reticence, which has been drawing wide attention from scholars, he did not realize much about this problem, or in his word, "did not even have time to think about this problem".

Personal development

The participant honestly reflected that it might be hard to talk about any fundamental impact through the learning of the course as he had only taken limited number of on-line courses after all. However, he still found the most important influence on him, that is, to enrich his knowledge base and his ways of expression:

When I want to talk about a certain issue (in education), I know which aspects to address and how to use specific terms and expressions. I think this is the greatest help to me.

He also mentioned that the content of this course gave him inspiration for his academic research in the future. Yet as an international student, he also examined the difference of the applicable fields of the knowledge in America and in China. Some universal theories, such as caring theory and intercultural understanding and communication, may be applicable in both countries, but in most cases, the application of the knowledge requires an appropriate setting. For multicultural education, he thought

more studies were undergoing in America especially on ethnic studies.

When it comes to the content of this course as related to its form, that is, on-line course, the participant believed that the courses of education majors in the form of online course might pose more challenges to international students than other majors. He explained that for science majors, for example, many formula and theories are expressed by universally accepted symbols, and the barrier of communication could be minimized, so there is much less cultural influence when studying in these fields regardless of the students' backgrounds. The on-line instruction of these subjects could be even more clear and efficient. On the contrary, for education majors, when students from a variety of language and cultural backgrounds are sitting together and discussing culturally relevant topics, it does matter which form to use for the courses.

Suggestions

Based on the experience of taking an on-line course in education major, the participant proposed an idea about the form of on-line discussion: the combination of synchronous chats and asynchronous discussion in forums. In his opinion, synchronous chats is a good way for students to talk about background, updates or introducing each other, and asynchronous discussion is more suitable for in-depth discussion.

I think students will have more time to know what others are talking about compared with synchronous chats in which I may not have enough time to read others' postings. This form, on the other hand, enables me, especially as an international student, to have more time to read and understand others' opinions, and I can organize my language with more time to express it better.

Admittedly, discussion in forums hardly provides timely feedbacks, but the participants still believed that it would not affect the interaction among peers, as the instructor can require a minimum number of the postings in both forms of discussion. Yet in a forum they could have more in-depth discussion with more time for international students to think and comprehend.

Personally I will feel more comfortable. I don't need to post in a hurry. I can take my time to think more, to understand others, and then think about what to say with better expression.

In addition, he also came up with a possible problem with the on-line instruction: the instructor never knows who is doing the course work. In other words, students may ask anyone else to take their place to participate the discussion and do the assignments.

Summary

As a start of the study in the U.S., the on-line learning provided participant A with an entirely new experience with both advantages and challenges. The participant recognized the time efficiency and enough personal space which made him comfortable, yet he also encountered challenges in language proficiency and cultural understanding. In spite of the high scores of TOEFL and GRE, he still found difficulty with catching up with the discussion when he had to think, organize and type as fast as native speakers during the on-line chats. Such barriers, in his analysis, came from both the deficiency of his language skills as well as knowledge base, and the lack of attention from the instructor and peers to the needs of international students. Cultural differences did exist, but it was not as primary as language problems for him, as long as he came to know

more about other cultures. His knowledge and vocabulary were enriched after taking the course, but he also believed that the form of instruction is vital to education subjects. Taking into account the challenges he had in the on-line course, he suggested that the future course combine the on-line chats and forum discussion so that international students could have more time to think and propose their opinions and hence make indepth discussion possible.

Case 2

Background

Participant B is a female graduate student who is pursuing her Ph.D. degree in education. She has got a master's degree in English linguistics in a university in an urban city in China Mainland, and before she started her doctoral study in America, she has stayed in the U.S. for one year as an exchange student. Therefore, she had been in this country for four years in total by the time of the interview. Like most other international students, she took the TOEFL and GRE tests before she left for America, and got a score of 650 out of 677 for TOEFL, 560 out of 800 for GRE verbal, and 5.0 out of 6.0 for the Analytical Writing test. She described herself as a relatively extroverted person who likes collaborative work with others; yet, she does not like new things very much. So if there were options available she would prefer things with traditional styles.

She has taken three on-line courses in education, two courses on theories in education and one course on English as a Second Language (ESL). According to her description, the major processes of these three courses were pretty much the same, regardless of minor differences in some specific requirements. Thus, she summarized the

process of these on-line courses as follows: The instructor posted PowerPoint slides about each chapter and students were required to do the readings on their own. After that students were asked to participate on-line discussions in forums. The specific frequency of discussion and the number of topics might vary, but all the discussions had requirements for a minimum number of postings for the members. The assignments and the tests were submitted on-line as well.

A comparison with face-to-face classes

Participant B admitted that on-line courses had their distinct advantages over traditional face-to-face lectures. They were "more flexible in time and location", and it was because such flexibility that she took some on-line courses when her schedule had time conflict with other face-to-face courses. As all the discussions in her on-line courses were conducted asynchronously in forums, she also found that the response students made in on-line discussion had higher quality even though they could not get immediate feedback.

But the response that you do get from on-line course much more...I mean, it's monitored, it's well-thought, it's well-written, because you get more time for your peers and professors to respond, to read your message and to respond to that message.

Meanwhile, she also proposed several disadvantages of the on-line courses. First, if the instructor and students cannot meet with each other and only communicate online, students' motivation might be prohibited to raise questions or initiate a discussion. Second, from the instructor's perspective, on-line course may not be the best option for

every instructor depending on the teachers' preferred instruction style. For instance, some teachers may be good at talking with students but not at making slides and writing out their thoughts. She compared the instructors to actors:

If you have a script, you have to act it out, you know, for some professors to fully deliver the knowledge they have or to organize the class.

She also held an opinion that as a good teacher it is important to demonstrate his/her personality to students, which could be realized easily in face-to-face classrooms, with gestures, facial expressions, humor, pace of speaking and ways of interaction, but this would be much harder in an on-line setting.

Third, the participant had the concern about students' access to the Internet and prerequisite skills to use the technology. She thought that lots of students could not make full use of the technology in distance education, and if students were not equipped with enough skills to handle it, it might in turn hinder them to communicate effectively online in a comfortable way.

Besides, the participant also recognized the difference of the interaction between a face-to-face class and an on-line course. In the former setting, the interaction between the teacher and the students are mostly verbal, assisted by such non-linguistic cues as facial expressions and gestures. In the latter form, on the contrary, the communication is mainly through written language with little expressions and gestures. Moreover, the interaction in face-to-face classes were more active, as she examined, because students could jump in with questions any time during the lecture but such in-time communication was limited in an on-line course. Of course, she also noted that this kind

of distinction in the two forms of classes did not make a big difference to her, as she performed as a professional student and did not care much about facial expressions and gestures.

Even though she has identified clear advantages and weaknesses of on-line courses as compared with face-to-face courses, she believed that the effectiveness of either form depended on a variety of factors such as the types of the question discussed, the content of the course, and the instructors. For instance, she held that different types of questions should have appropriate forms of discussion respectively:

...for some open ended questions or thought provoking question, it's better if you have more time to respond to that question, and it's better for somebody else to follow your thoughts, to follow your responses, for those kind of discussions. But if it's just yes-or-no question, or if it's a question about your study, habit, or to introduce yourself, something like that, which needs a little bit of immediate interaction, immediate communication, that would be different.

In addition, she had different feelings about the interaction in class according to the content of the classes. In courses like statistics, in which abundant demonstration of the software use was indispensable, students might not learn so much in an on-line course as in a face-to-face course, but if that was a theoretical course, an on-line course would provide students with as much as a face-to-face course would, because they did not necessarily need to see the procedure of how to do something.

Lastly, the choice of the instructional method is also decided by the instructors'

preference. Compare an instructor who is a technology person with someone who is not so comfortable with using the latest technology, it would not be hard to imagine that the on-line courses delivered by the former instructor are more interactive and effective.

While she tried to make objective evaluation about the effectiveness of the two types of courses, she still expressed her clear preference to the traditional face-to-face classes over on-line classes. Even though she was comfortable with the on-line courses and had nothing she could not get used to, she still wanted to take all the courses face-to-face, in which there was less writing and more time with the peers. She had the desire to actually see the peers and hear the professor, and she did enjoy that kind of feeling of sitting in the classroom:

Because in graduate school you don't go to class all the time. You only go to class... for one course, you only go to the class once a week. If you're taking three courses you're going to class three times a week and you really need that time to go into a classroom and feel the feeling of being a student.

Due to this unique outcome she demanded from face-to-face courses, the participant maintained that on-line learning would complement face-to-face classes but would not replace the traditional instruction method. The face-to-face classes provide her with a sense of taking a class which on-line classes can hardly realize.

Language proficiency

Language was hardly a problem for the participant during on-line discussions, and therefore she did not talk very much about this issue. For one thing, she has been in the States for four years and she got quite accustomed to the classroom discussions. She

always felt comfortable with expressing herself whenever she had ideas. Further, the participant reflected that she was fairly comfortable with her written language which might be even better than speaking, so she did not usually feel stressed or scared when participating in an on-line discussion.

Meanwhile, she mentioned that whether a student was better at writing or speaking depended on how the student acquired the language. Those who learnt English from daily conversation could be a better speaker than a writer, and international students from many countries who mainly learnt academic English are perhaps better at reading and writing.

Cultural influence

The participant believed that culture did play a role in discussion, as students shared various ideas about pedagogy from different cultures and that became their unique contribution respectively to the class discussion. Yet, such cultural influence existed in both forms of instruction in her opinion, and she did not have clear idea if there were any particular effects which culture brought to on-line courses.

When talking about the performance of the students from diverse cultural backgrounds during on-line discussions, the participant had not observed very obvious differences among students, as she explained that in most discussions there was a requirement for minimum postings, so she could barely tell who was more active than others. Even if such difference existed, she did not agree that it was culturally related but could be attributed to students' various considerations such as time conflict, time allocation for each course, the preference to the topics and so forth.

Personal development

With respect to the influence of the content of the on-line courses on the participant's personal views and developments, she did not provide as much feedback as other questions because she could not think of many findings about this topic. Nevertheless, she implied that she learnt more from those courses and realized that communication could take place in many ways.

Suggestions

Having imagined if she became a teacher, the participant suggested a combination of face-to-face instruction and on-line instruction, that is, a hybrid course. Or she also liked all courses in face-to-face as a course designer if there was no time and location constraints, because she valued the importance of demonstration in face-to-face classrooms in ESL instruction, and students might be able to get access to the online sources by themselves anyway, not necessarily by means of on-line learning. Meanwhile, she appreciated the use of broadcast of lectures together with face-to-face lectures, so that the needs of the students who could not make it to the campus could be fulfilled as well.

As for the on-line courses in the department, she thought they were "pretty in good shape already." There have been e-learning tools which are convenient and fairly accessible to students, and most of the instructors in the department have developed the awareness about the student diversity and pay attention to the selection of textbooks from international perspectives instead of American perspective only, for instance. She also expected that there could be more pod cast or more visual aid when the instructors

introduce themselves to the students.

Summary

Having studied in American universities for four years and taken three on-line courses, the participant already adjusted herself to both the on-line learning and face-toface courses. Even though on-line learning was a new experience when she came to this university, she was OK with that form and found little language barriers or cultural influences particularly in the on-line discussion. Having recognized the strengths and the drawbacks of the on-line courses compared with traditional face-to-face lectures, she believed that there was no definite advantage of one form over the other; rather, the effectiveness of a certain model depends on a variety factors such as the content of the course, the types of question to be discussed and the instructor's preference. Nevertheless, she personally preferred face-to-face classes because the face-to-face interaction with the professor and peers was essential for her, and she valued the feeling of sitting in the real classroom and taking classes. The participant provided few ideas about the influence of the content of the courses to her personal development, but she put emphasis on the face-to-face demonstration and interaction as a prospective ESL teacher. While she was quite satisfied with the current on-line courses in the department, she expected more audio and visual aids to diversify the delivery methods of on-line courses in the future.

Case 3

Background

Participant C is a female graduate student who is pursuing her master's degree in

education. She has received one master's degree in Chinese language education in China, and has worked for a few years as a teacher in urban cities before coming to the States. By the time of the interview the participant had been in this country for four years, but she has worked for two years in urban areas before she started her master's study. Her GRE score, as she reflected, was average, but she got a score of over 100 out of 120 in the TOFEL test. She described herself as a "complicated" person, who is extroverted in class and introverted after class. However, she admitted that she likes to learn new things, especially confronting challenges.

The participant has taken both types of the on-line courses which participant A and B have taken respectively: synchronous on-line chats and asynchronous discussion in the forum. The former type was the same as what participant A has taken: during the first half semester, students were required to do the readings and review the on-line lectures when participating in weekly synchronous chats every week, and completed group projects and a final paper in the remaining of the semester. All the course materials, assignments and course activities were completed through webCT. The latter type was similar to what participant B has taken: students were assigned chapter readings before the forum discussion, and there were on-line discussion every week through webCT by posting discussion questions and responding to them. Group projects were assigned as well, but the communication among partners was mainly through email and telephone.

A comparison with face-to-face classes

One of the major strengths of the on-line course which came to the participant's

mind is the abundant time available for them to think during the discussion and the coursework. In traditional face-to-face classroom, students had to make responses immediately, but in the on-line course, on the contrary, the participant could make her best answer to the question with plenty of time to think before sharing with others, so she commented that the quality of the work could be raised sometimes.

I think the most important thing is just give us international students more time to look, to see what others said and you think deeply. That's good. This is why I like on-line course because if somebody already answered teacher's questions and I can look carefully at what the person already said. Yes, very good for my thinking.

Not only did the on-line course allow more time to think, but also consolidated the knowledge learnt during the class, as the participant commented. This was mainly because in the on-line chats every chat records was saved in webCT so that students were able to go back to reflect on their discussion any time. In this way, the participant could check and review others' opinions after class and found that this was helpful to learn and reflect the content of the classes.

However, the disadvantages of the on-line course, as compared with face-to-face lectures, were mostly related to the lack in the practice of listening and speaking skills in English, which was a dominant need emphasized by the participant throughout the interview. In her view, the on-line course helped her improve her writing skill, which was indeed a benefit, but she also felt that she, as an ESL speaker, was still in the stage of improving her English skills, and the on-line courses could not provide her enough

opportunities to practice her listening and oral English.

I think as an international student using English as a second language, I think we'd better practice English comprehensively, I mean, four skills. Your speaking, your listening, your writing, and...speaking, writing, listening, and...reading. Yes, all included. So not only reading and writing, I think. You need opportunity to practice your oral English.

During the interview the participant addressed repeatedly her need for improving English skills in the current stage. Therefore, despite that she admitted the benefits of taking on-line courses, though, she expressed her desire of taking face-to-face courses as a compliment to practice listening and speaking.

Another problem she found in the on-line course, especially during the on-line chats was that she might overlook some points which someone had already talked about earlier, because everyone was talking at the same time in the chatting room and the conversation just went too fast to catch up with. On the other hand, the participant liked the dynamic and active discussion in the face-to-face classroom where she could make friends with others, and the immediate questions and responses also stimulated her to think and give feedbacks in a timely way.

Language proficiency

A prompt feeling when talking about her English language proficiency during the on-line courses was that she was obviously not so native like in the discussion, and the on-line communication was somehow a time-consuming work for her. However, the classmates' tolerance and friendliness played a crucial role for alleviating her possible

stress caused by the language deficiency. As she was aware of and accepted the fact that she was a non-native speaker, she just did her best to express herself without feeling stressful so much because of the grammatical errors she might make.

...But you don't have to care about because in the introduction part everybody knows that you're not native speakers. They'll just show their generosity and sometimes they ignore my errors, I mean lexical errors, grammatical errors. But I try to make those errors less. But I think they won't just blame you for...so you don't have to put burden on yourself. You just be yourself and express yourself and try to behave...and do your best.

Hence, the participant did not have much pressure on her language deficiency but paid more attention on the reduction of her grammatical errors in discussion. She was neither unwilling to nor afraid of talking because of her language deficiency.

The "alienation" is a unique phenomenon which was described by the participant as related to language proficiency. In the summer, when most international students went back home and American students took the majority in class, the participant became the only international student in the on-line course. She admitted that she felt a little stressful at that time. Although her language deficiency was a constant problem, in regular semesters when there were usually other international students taking the same course together, she would not feel so different from others because she knew she was not the only one who had language barriers. However, when she became the only non-native speaker in an on-line course, the participant constantly had the awareness that she might be the only reference as a non-native speaker in others' eyes. Such awareness then

pushed her to perform better especially in group work, as she did not want her language problem to affect the whole group's outcome. Whereas she noted that this was not a stressful problem for her, there was no denying that she had a clear feeling of being different from others.

I mean, because I'm the nonnative speaker in my group, and other group they didn't have this...has the group member like me, so I don't want my writing to influence my group.

Though she did not view it as a big problem, the participant also admitted that if the same situation happened to her in both face-to-face and on-line courses, she could feel less pressure in on-line courses, because she only needed to utilize her reading skill, which was not graded actually, and the writing skills. Yet, in face-to-face classes, she had to care about every aspect of her performance as others would see and hear her performance.

Cultural influence

In the participant's observation, on-line discussion guaranteed more equal opportunities of communicating on-line for international students compared with face-to-face discussion, which consequently encouraged international students' participation in class discussion. In face-to-face classroom, some female students from Asia tended to act passively when answering questions as compared with American students who spoke more and were more active in class. It was true that everyone was given equal opportunity to discuss, but as the participant analyzed:

The teacher gives everybody the equal opportunity, but just sometimes

we don't have the language, the advantage. Sometimes if we use our own...our first language we can talk a lot, but when we use English language we have to think about it, and we have to ... we want to make sense. So sometimes we just make our comments short. Especially when you make some errors you're shy to keep talking... too shy to keep talking

As a result, those Asian students had to give up the opportunities in class. They were used to being listeners and were too shy to talk.

On the other hand, in on-line discussion the instructor usually required all students to post a minimum number or length of threads in the forum, and such discussion was the only way for them to interact with each other and be assessed by the teacher, so everyone had to participate and the participant found little imbalance of the participation among students from different cultural backgrounds. Moreover, the participant was surprised to find that some students who used to be quiet in face-to-face classroom talked much more in on-line discussion, which made them like "a different person". They might not be good at speaking but they were better at writing, so the on-line discussion provided more space for students to share opinions.

While cultural background may have affected international students especially Asian students' participation in class discussion, it also created advantages for them during the intercultural exchange of thoughts. The participant maintained that while most American students might share similar cultural backgrounds with each other, international students brought new thoughts to the classroom, which made American students curious about diverse cultures, so when the participant shared her experience

characterized by Chinese culture, she felt that her classmates really welcomed her opinions, a different voice from theirs; meanwhile, international students were also interested in American culture and were eager to know more about it. Hence, cultural difference of the students encouraged the communication among students.

In the process of this cross-cultural communication, however, the participant noted a key point that she had been paying attention to. Unlike face-to-face discussion, where people's attitude towards your opinions could be easily identified by observing and listening to them, in on-line discussion, when there was no clear cues to judge others' reaction to the comments you made, the participant tried to keep her comments objective in a neutral stand. She was aware that people from different cultures would hold their own mottos in thinking and behavior, so she tried not to offend anyone else when expressing her thoughts.

...when I bring my own culture I will think in their shoes, whether they'll accept it or not, whether it will offend anybody else. I'll just control it. I will not just make my comments very offensive because of the cultural difference.

Besides, the participant also found negative influence brought by cultural bias. She felt that biased ideas or prejudice about Asian cultures did exist, and she was not very comfortable with such opinions. Nevertheless, she understood that people who held such bias did not intend to offend anyone because those stereotypical opinions often came from media and other sources rather than their own experience. In fact, many of them had few opportunities to go out of the country and look at real Asian cultures. Thus, despite the fact that the participant did not feel comfortable with the bias against Asian

cultures, she showed her understanding of such stereotypes.

Personal development

The experience of taking on-line courses produced positive influences on the participant's knowledge base, technology, and personal growth. First of all, on-line learning helped to build solid foundation of the knowledge. As she reflected in comparison with the traditional face-to-face lectures, the on-line learning allowed more time for her as an ESL learner to think before production, and thus enabled her to have more space and freedom to process what she learnt. Thus, she found that the content she learnt in on-line courses was impressive which was why she liked on-line learning.

Secondly, as a new experience to the participant, the on-line learning introduced her new technology in education which made her learning very efficient. When students could not make it to the campus they had access to the classes on the Internet which enabled them to keep up with the progress, and students and the instructor could communicate conveniently on-line. She was impressed by this new medium of learning and hoped that she could use this technology in her courses as a teacher in the future.

Thirdly, the on-line learning of the content knowledge promoted the participant's personal growth as a prospective teacher as well. For one thing, her multicultural awareness was developed and she realized that multicultural education was such an important area especially in a diverse society like America. She learnt that the judgment of "a good teacher" not only depends on their expertise on subject knowledge and pedagogical skills but also on their multicultural awareness: whether the teacher can attend to students from ethnically and culturally diverse backgrounds. For another, she

also learnt to be a reflective teacher. The participant reexamined her preexisting opinions and found that she had been holding some biases, which should be ruled out, to issues she did not really understand. She believed that self-reflection should be conducted on a regular base to constantly examine her own views and appreciate different cultures.

We have no right just to criticize others because they grow up in such kind of environment and their culture make sense to them, and their learning is one of their cultural backgrounds. So as teachers we need to make their learning meaningful and relevant to their background. So culture difference shouldn't be a problem. As teachers we should just make students learn something, learn knowledge efficiently, not just thinking they're different from the mainstream.

Suggestions

There were two aspects which the participant hoped that the department could keep up. For one thing, the current on-line courses should be maintained as they were of great help to students to have more freedom to take courses based on personal schedules and preferences. The record of on-line discussion should also be kept so that students have the opportunity to review their discussion. For another, from a technical aspect, the technology used for the on-line courses, like webCT, should be remain relatively stable. So far she found little difficulties with mastering the technology to start the on-line learning, so she hoped that it would maintain easy access for students.

Additionally, the participant proposed more use of audio or visual aids for the instructors during on-line courses, so that students could hear or see their professor. The

only shortcoming as far as the participant saw in on-line courses was the lack of interaction among the participants, so she hoped to see more audio and visual aids to promote interaction. Besides, she also expressed her desire of combing face-to-face lectures and on-line learning sessions.

Summary

Overall the participant's on-line learning experience went beyond her expectation, as she evaluated. Originally she had a negative impression on on-line courses as boring and was concerned that she would learn little. Yet she actually learnt a lot, even more than a face-to-face course sometimes. She was able to think and learn more in-depth through on-line courses, but she had a strong demand for practicing her listening and oral English in face-to-face classes. While aware of her limitation in language proficiency, she did not feel much pressure on language performance but she did have clear awareness of being different from American students in teamwork. Culture different played positive role on her communication with others, and she learnt to respect such difference when expressing her ideas with as little offense as possible. As a prospective teacher, she realized the significance of being a caring and reflective teacher who appreciates diverse cultures. Therefore, she was quite satisfied with her on-line learning experience in spite of observable drawbacks of this type of course, and hoped that she could take hybrid courses which combine the strengths of both the face-to-face and on-line courses.

Cross-case analysis

Four common themes have been generated from the three individual cases based

on the research questions and the interview questions: preference of face-to-face courses over on-line courses, English language proficiency as a major challenge, enjoyment of cross-cultural interaction, and personal growth from the experience. Figure 4.2 displays the four themes generated from the participants' responses.

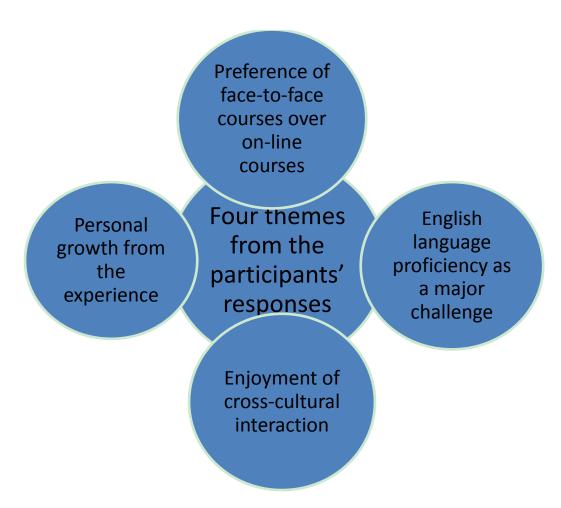


Fig 4.2 Four themes generated from the participants' responses

When cross-case analysis was made to examine the participants' responses to the

five topics, however, both commonalities and differences have been found. As a group of Chinese students who took on-line courses for the first time in an American university, they shared, partly though, common opinions on the four themes drawn from the study. Meanwhile, each of the participants also expressed their distinct concerns and impressions about their on-line learning experience. Thus, this section will discuss the four themes.

Preference of face-to-face courses over on-line courses

Preference of face-to-face format was identified among the three participants. Whereas the participants recognized strengths of taking on-line courses, such as sufficient time available for the students to think, abundant freedom and space provided by the courses, and the encouragement of active participation, they always preferred face-to-face classes to on-line courses, or they expect to include at least some proportion of face-to-face interaction in their courses. They are supportive for taking on-line courses as well, but they would prefer utilizing a combination of instruction media instead of a single method.

Two advantages of the on-line learning have been identified by all the three participants. First and foremost, the participants agreed that on-line discussion in forums promoted more in-depth thinking with well-organized and well-written responses as outcomes of higher quality. Participant A reported that in forum discussion he found it easy to think and comprehend what others said before organizing his ideas, rather than typing his own thoughts only to catch up with the conversation; participant B and C had a similar opinion that this type of on-line discussion gave more time to international

students to process the information and make responses.

Secondly, all the participants confirmed the freedom and more space provided by the on-line courses. As a person who preferred independent work, participant A appreciated the personal learning space during the on-line learning with adequate privacy which made him fairy comfortable. Participant B and C favored the flexibility and convenience of on-line courses in time management and location choice. Students were allowed to adjust their schedule and location to take the course based on personal convenience, which was one of the reasons why both the participants liked taking on-line courses. In short, this form of instruction enabled students to have more options to manage their study and life.

Besides, the positive stimulation of the on-line discussion to international students who used to be reticent in traditional face-to-face classes were acknowledged by participant A and C. They found that for those who tend to be afraid of speaking in public, on-line discussion might be a good choice because no one could see each other and each member only needed to write down their ideas and post them online instead of making a public speech. Just like participant C recalled, it was surprising to see some students who spoke little in face-to-face classes became very active in on-line forum discussion, which made them look like different persons.

On the contrary, when it comes to the disadvantages of on-line courses, every participant's response reflected their distinct concern from each other. Participant A preferred face-to-face courses because he felt that in on-line chats students were depersonalized and the needs of international students tended to be ignored during the

chats. He, as a new international student who experience this new type of course for the first time, experienced a lack of care about his difficulties in participating in on-line discussion, no matter the challenge of catching up with the typing or the familiarity of the topics of discussion. In face-to-face classroom, on the contrary, the instructor and the peers would pay attention to his identity as an international student and encouraged him to introduce examples from his home country so that he was able to get involved in the discussion better. Therefore, the disadvantage described by participant A reflected a need to be cared of new international students who struggle to make a start in a completely new setting.

Participant B preferred face-to-face as well, but her starting point of this preference is the authentic interaction with the instructor and the peers in classroom which made her have the feeling of "being a student." Indeed, such authenticity of communication is hard to achieve in an on-line learning setting, where communication is made virtually through the Internet. In fact, participant C had a concern about the lack of oral communication in on-line courses but her initiative was to practice her listening and oral English skills. Nevertheless, both of them agreed that face-to-face discussion tended to be more active and dynamic. It implied that no matter how much they welcome the convenience and freedom that on-line courses may provide, students always have the desire and need to talk with others actively in class.

In view of their feelings and concerns about on-line courses compared with faceto-face courses, with respect to the expectations or suggestions for the on-line courses in the future from an international student perspective, all the participants favored a combination of multiple ways of interaction and course delivery: either combination of asynchronous and synchronous on-line discussion, or combination of on-line learning and face-to-face lectures, and supplement of audio and visual aids would be preferable. Because the participants recognized the benefits and the drawbacks of both forms of instruction, they wanted a single form of interaction to be replaced by the combination of multiple means so that each way could complement each other.

English language proficiency as a major challenge

The reflection of their perceived English competency demonstrated that insufficient language skill has been constantly a big challenge for the participants regardless of their high percentile in standardized tests of English and the length of stay in the U.S. All the three participants have got high or outstanding scores in the TOEFL and/or GRE tests. Nevertheless, after they came to the U.S. and started graduate study, only participant B, who had been in the U.S. for four years, reported that she had been quite comfortable with the language use in class discussion, and thus she was okay with both forms of the instruction. Both participant A and C reported a need for improving language proficiency for the study, even though participant C had been stayed in the U.S. as long as participant B had. Their major problems with language proficiency varied, but both of them viewed their language competency as limited and as a constant challenge.

The reported language problems included: hard to keep up with the pace in class, difficulty with understanding content language, and the lack of opportunity for oral practice. As a new international student, participant A stated clear difficulties in on-line communication, which was partly due to the limited speed of typing English. While

native speakers were able to think and type the opinions quickly in the chatting room, participant A had to spend more time with typing his responses. It was often likely that when he finished typing his response, the discussion about that topic had already passed. As a result, he had no time to read and think about others' postings only to complete his own in time.

The difficulty with understanding the terminology in education served a hindrance as well. As participant A recalled, due to the unfamiliarity of some terms related to education, it was hard for him to understand the conversation, while those terms could be familiar to native speakers or even a common sense for others. Although he explained that as long as his vocabulary in education was enlarged, this problem could be solved to some extent, this language barrier prohibited effective interaction online with others as at the initial stage.

The lack of practice in oral English was a major concern for participant C, as she had strong desire of improving her listening and speaking skills in class. She admitted that on-line discussion helped to improve her writing skill, yet there was seldom a chance to practice her listening and speaking skills which she perceived as still limited. Unlike participant A who was stressful about the language barrier in on-line chats, participant C, on the other hand, was aware of her language deficiency as well, but did not express any psychological stress. She did not take language problems as hindrance of communication but rather accepted them and tried to correct them as much as possible.

Enjoyment of cross-cultural interaction

All the participants recognized that culture did play an indispensable role in on-

line discussion. Participant A and C especially viewed cultural differences among students as an opportunity to learn new ideas from each other, and they all enjoyed the communication with students from diverse cultural backgrounds. They felt that both American students and international students were holding strong interest in other cultures, and they as international students were always welcomed to introduce the experiences in the home country. Meanwhile, they also learnt a lot about the educational system in America which was not familiar before. The increased understanding of the education in a western cultural background accordingly promoted the communication between the participants and native speakers. Only participant A mentioned a barrier in cultural communication that at the beginning he found difficulties with understanding some of the topics due to the lack of knowledge about the background. Yet, he also explained that such barrier could be eliminated as long as he got to know more about the topics and background information. Therefore, overall, students claimed more positive effects than negative ones brought by cultural diversity in class.

Personal growth from the experience

The participants reflected that they had gained personal growth from the experiences of taking on-line courses, which involved mainly two aspects: the consolidation of knowledge base and the awareness of being a culturally responsive teacher in the future. Although participant B did not reflect much on her personal development after taking the on-line courses, she together with the other two participants acknowledged that they learnt a lot from the courses. Participant A and C both reflected that the courses helped them build solid knowledge base for future study or research. For

one thing, as participant A come to know more about the issues in the area of education, he got better ideas of what he might be interested for his future research; for another, as participant C addressed, the record of on-line chats enabled her to reflect the class discussion after class and helped to build solid foundation of knowledge. Meanwhile, the on-line courses they have taken helped them develop the awareness of being a culturally responsive teacher in the future. Participant C was especially impressed by the personal growth she gained after class. By learning those courses on multicultural education, she recalled, she learnt how important it would be to become a caring and reflective teacher in an ethnically and culturally diverse society. Such awareness will no doubt help her to be well-prepared as an effective teacher in the future.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

Review of the research questions

This study explored Chinese students' experiences of taking on-line courses in education from the perspective of their perceptions and feelings. Three graduate students from China Mainland majoring in education were interviewed in-depth as a set of cases to seek answers to the questions of this study. Their experiences of taking on-line courses were examined from mainly three aspects: on-line courses as compared to face-to-face courses, language proficiency in on-line discussion, and cultural influence in on-line courses. The overall research question of this study is: What are Chinese students' experiences of taking an online education course with native speaking students in the U.S.? More specifically, the research questions are:

- 1. How do Chinese students feel about taking an on-line course, as compared to a face-to-face lecture?
- 2. How confident do Chinese students feel about their language competency when they participate in the discussions of an on-line course?
- 3. What is Chinese students' understanding of the cultural issues as they participate in the discussions of an on-line course?

Conclusions

In view of the four themes emerging from the results, that is, preference of faceto-face courses over on-line courses, English language proficiency as a major challenge, enjoyment of cross-cultural interaction, and personal growth from the experience, the findings in this study were consistent with previous research in many ways (Ku & Lohr, 2003; Thompson & Ku, 2005; Wang, 2004; Wang, 2006; Xiong, 2009). First of all, having recognized the benefits brought by on-line courses, however, Chinese students still maintain a preference for face-to-face courses. They supported the adoption of online technology in course delivery, but they still expect face-to-face meetings to some extent in courses, if not all. Just as Ku and Luhr (2003) have found, the general attitude of Chinese students towards on-line courses were fairly positive and supportive, but they felt more comfortable with lecture-based learning than on-line learning which was still a new concept to them. It has been acknowledged that on-line courses provide abundant flexibility and convenience in time and location, so that students have more control over their schedule and choose a location whenever it is convenient or they feel comfortable to take the course. The flexibility in time also enables students, especially international students, to have enough time to think and make responses. Further, students who tend to keep silent in face-to-face classes can be more active in on-line discussion (Ku & Luhr, 2003; Thompson & Ku, 2005). This is partly because the instructor usually requires a minimum of postings in on-line discussion, which guarantees the participation of all students, and also because the increased time and freedom allows Chinese students to think and reflect before making a response so that they have more chances to participate. As a result, students reflected that they could learn from on-line courses as much as in face-to-face courses and sometimes on-line learning was even more impressive and easier to follow.

Another positive influence they have got from on-line courses was their personal growth as a result of these experiences, which relates the fourth theme in the previous chapter to the discussion here. Little was addressed about this idea in previous studies, but participants in this study reported that after taking these on-line courses, their knowledge base was consolidated as they had more time for in-depth thinking, and the on-line discussion records enabled them to go back to the discussion repeatedly after class so that they could review the content whenever necessary. In addition, they established awareness of being a caring and reflective teacher in culturally diverse settings in the future as well.

In spite of the benefits they get from on-line courses, Chinese student still hold a preference for face-to-face courses over on-line courses if they have a choice. Two major factors to influence their preference have been found in this study: psychological and linguistic needs. From a psychological perspective, face-to-face courses can provide more sense of learning community and involvement for Chinese students than on-line courses can. Wang (2004) found that one of the weaknesses of on-line courses was the lack of the sense of learning community and the informal interactions with classmates. Chinese students in an on-line course may have a feeling of being isolated and marginalized (Ku & Lohr, 2003; Wang, 2006). As was reflected by one of the participants, in an on-line discussion students tended to be depersonalized and students' backgrounds and different learning needs seemed to be neglected as long as the discussion tasks were fulfilled. When Chinese students cannot participate in the on-line discussions as actively as native speakers due to their language deficiency, or cannot

keep up with the conversation, they may feel being marginalized or isolated, but such feelings may not be found by the instructor or peers. On the other hand, teachers might pay more attention to students' identity and encourage them to participate in the discussion, and peers would show their interest in hearing different thoughts from another culture as well, which makes them feel cared about. Even for one participant who was comfortable with both instruction formats, she still took face-to-face classes as an essential part because she valued "the feeling of sitting in a classroom and listening to a professor talk". Therefore, face-to-face class provides students with a sense of getting involved which tends to be weakened in an on-line setting according to the findings in this study and in other research studies (Ku& Lohr, 2003; Wang, 2004; Wang, 2006).

The discussion of linguistic needs brings back the review of the second theme summarized in the previous chapter: limited English language proficiency as a major challenge in adapting the on-line learning environment. Despite the relatively high percentile they have got in the TOEFL and the GRE tests, Chinese students have constant needs and desire of practicing and improving their English in an academic setting. Though students may feel more comfortable with responding to the discussion in a written form as more time is provided for them to think and produce, they still feel that they have the necessity to practice their listening and oral English as they are aware of the language deficiency in these two areas, so they hope for more opportunities to practice and improve. Yet, such opportunity can be only found in face-to-face classes, which makes the face-to-face format indispensable for Chinese students' learning in an English-speaking setting. Even in on-line courses, especially in synchronous on-line

chats, according to one of the participant's self-report, the language barrier prohibits Chinese students from keeping up with the fast flow of the discussion. Xiong (2009) found that language difficulty and lack of typing ability made reading and composing responses difficult for Chinese students in on-line courses, and the slow response, limited length of messages, and lack of connection directly affected their participation in on-line discussions. Considering these difficulties in English proficiency, students found face-to-face classes necessary for their language needs.

In view of the Chinese students' self-reflection of learning needs and difficulties, they agreed that on-line courses cannot replace traditional face-to-face courses entirely. Rather, a combined instruction format is more welcome. For one thing, it is recommended that the instructor incorporate face-to-face meetings into on-line courses, so that students can know each other better and thus the in-class interaction can be promoted (Thompson & Ku, 2005; Wang, 2004). As students acknowledge the strengths of both learning formats, a combination of the on-line and face-to-face learning could be complementary to each other and help students benefit from both. For another, even within the on-line course, an integration of synchronous and asynchronous discussion is suggested. While synchronous chats provide students with timely feedback, asynchronous discussion enable students to think and respond with more sufficient time and catch up with the discussion (Wang, 2004). In this way students' concerns about not being able to follow the discussion could be alleviated. In brief, combination of multiple instruction formats, methods, and media is more preferable than utilization of a single form throughout the teaching and learning process.

As for language competency again, findings were also revealed which were distinct in this study. Whereas previous studies found that Asian students tended to be reticent during the on-line discussion and were nervous and afraid of making grammatical mistakes (Thompson &Ku, 2005; Wang, 2004; Wang, 2006), similar concerns were not found in this study. Instead, the participants in this study expressed their desire and willingness of participation during on-line discussion in spite of their limitation in English proficiency. Their performance was influenced more by language barrier rather than psychological stress, and they hope to seek actively opportunities of improving their language skills.

Cultural influence, in view of the reflections from this study, is not a single factor but the foundation of determining how students make sense of what they see and how they express themselves (Wang, 2006). Studies found that Chinese culture and educational values, such as collectivism, teacher as authority, hierarchy in classroom and students' conservativeness resulted in Chinese students' different understandings and expectations from American students in the teaching and learning process (Ku & Lohr, 2003; Wang, 2006; Xiong, 2009), which impacted their adaptation to the learning style in American universities. However, in this study the participants regarded such cultural differences, while being aware of, in a positive way that brings refreshment from other cultures and a better cross-culture understanding. They enjoyed hearing different thoughts from various backgrounds, and they were also happy to share their views and experiences which reflected their cultural values. Still, the learning preferences and expectations reported by the participants in this study explain to some extent the cultural

gap between the eastern and the western education which hinders Chinese students adjust themselves to a different learning environment.

In conclusion, in spite of the desire of participating actively in the on-line courses, Chinese students face challenges with English proficiency, cultural adaptation and familiarity of learning styles when taking on-line courses in American universities. Because of these challenges, Chinese students always want at least some proportion of face-to-face meetings, and they regard such face-to-face lecture as a must. As for the online format, while having acknowledged the benefits that this form brings to international students, they expect combination of multiple instruction media instead of a single method. They agreed that on-line courses were more flexible and convenient in time and location, provided more time to think and respond, promoted their personal growth, and they also enjoyed the cross-cultural interaction in class as well. Yet, considering the face-to-face meeting as an indispensible component to them, they would prefer combine all these instruction methods to complement with each other. Just as researchers constantly advocate, the instructors should maintain cultural sensitivity in the design and facilitation of the classes, address the needs of students from different cultural backgrounds and try to create a culturally responsive on-line environment for students from multicultural backgrounds (Thompson &Ku, 2005; Wang, 2006; Xiong, 2009).

Limitations of the study and implications for future research

First, this study investigated Chinese students in only one university. In order to yield more generalizable conclusion to this group, a larger scale of exploration, perhaps

in the form of questionnaires, is expected in the future.

Secondly, this study only covered the analysis of those who have taken the online courses, yet it would be also necessary to explore the perceptions of the Chinese students who opposed taking courses with an on-line format. The students' presumptions about on-line courses may help us look into the on-line learning experience from different angles and seek improvement to appeal to larger groups of students from diverse backgrounds.

Thirdly, future research could also look into other groups of Asian students and see if other Asian students share similar opinions on on-line learning or if they hold distinct points of view.

Fourth, in addition to the study on Asian students or international students, comparative studies on the perceptions and performance of international students and American students can also be conducted to examine the on-line learning in a culturally diverse setting as a whole.

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