AN ABSTRACT OF THE DISSERTATION OF

Li-mei Grace Lin for the degree of Doctor of Philosophy in Education presented on June 17, 2011.
Title: Integrating Web2Quest Technologies into Multicultural Education Courses in Taiwan: A Potential for Globalization

Abstract approved:

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Chris L. Ward

The purpose of this study was to investigate three research questions: (1) What are the attitudes and beliefs of the pre-service teachers and teacher educators regarding multicultural education, and how do the teacher educators prepare the pre-service teachers to meet the needs of diverse K-12 students in Taiwan? (2) To what extent is there integration of Web 2.0 technologies in their multicultural education courses in the three teacher education programs in Taiwan? and (3) What are the perceptions of the teacher educators and the pre-service teachers regarding the opportunities and challenges of using Web2Quests to facilitate multicultural education?

Based on the framework of social constructivism, the study employed both qualitative and quantitative techniques to answer the three research questions. The three

universities were selected for data collection because of their strong, well-defined undergraduate and graduate teacher education programs. The research design included administering the Teacher Multicultural Attitude Survey and a Web2Quest Questionnaire, conducting focus group discussions with pre-service teachers and one-on-one interviews with teacher educators, analyzing the researcher's field notes, and reviewing the pre-service teachers' final Web2Quest projects.

The findings of the study indicated that the majority of the pre-service teacher and teacher educator participants had positive attitudes toward multicultural education and the implementation of Web2Quest technologies into multicultural education courses. The teacher educators stated the belief that Web2Quest technologies could connect the pre-service teachers to a global audience to broaden their worldviews. Participants suggested that professional development is needed to help teachers design effective Web2Quests. This professional development may have a significant impact when preparing teachers and, ultimately, students to be productive global citizens.

Integrating Web2Quest Technologies into Multicultural Education Courses in Taiwan:
A Potential for Globalization

by
Li-mei Grace Lin

A DISSERTATION

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APPROVED:

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Dean of the Graduate School

I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

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Li-mei Grace Lin, Author

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To my family, who has patiently endured, sacrificed, and encouraged me in so many ways over the past three years, thank you. I could not have done this without my husband,

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DEDICATION

I would like to dedicate this dissertation to my parents, who are in heaven, for all

the support they gave me to have the best possible education. Their generosity and

unconditional love shaped the person that I am today.

Chapter One: Introduction

The demographics in Taiwan are changing so that there are increasing numbers of

students from diverse backgrounds. According to the Ministry of Interior (2011) in

Taiwan, there is increased diversity of socioeconomic status, culture, religion, language,

and educational attainment in Taiwan due to intercultural marriages. In addition to the

students who are Taiwanese, Hakka, Mainlanders, and from the Taiwanese aboriginal

tribes, there are now students whose mothers married Taiwanese men, but who are

originally from mainland China, Vietnam, Thailand, the Philippines, Indonesia,

Cambodia and other countries. Consequently, there is an increase in diversity of cultural,

religious, and linguistic influences that has had a significant impact on K-12 education in

Taiwan.

Statement of the Problem

Several problems that led to the starting point of this study: (1) the demographics

in Taiwan are changing so that there are increasing numbers of students from diverse

backgrounds, (2) the educational resources are not distributed evenly, and (3) there is a

lack of multicultural education in teacher education programs in Taiwan.

Purpose of the Research

The goal of the study was to understand the attitudes and beliefs of the pre-service

teachers and teacher educators regarding multicultural education and the current status of

multicultural education in Taiwan, and to critically examine the opportunities and

challenges of integrating Web2Quest technologies into multicultural education courses in

three universities in Taiwan. The results of this study, therefore, will help teachers to

understand the opportunities and challenges that may occur if Web2Quest technologies

are integrated within multicultural education courses in teacher education. In this section,

a history of Taiwan will be discussed, followed by the development of multicultural

education in Taiwan, intercultural marriages, teacher education, the current status of

multicultural education in Taiwan, research questions, theoretical background,

significance of study, my biases and perspectives, my view of technology, and overview

of the thesis.

History of Taiwan

Taiwan is located across the Taiwan Strait off the coast of continental China.

Historically, Taiwan has been an island of immigrants who migrated mainly from the

southeastern region of China. Statistics from the Ministry of Education (MOE) (2011) in

Taiwan indicated that there are about 23 million people in Taiwan: the population of Han

Chinese ethnicity (Southern Min 73%; Hakka 12%; and Mainlanders 11%) is about 96%.

The remaining 4% of the population are Taiwanese aborigines and the new immigrants.

The following historical information in this section was published by the National

Institution for Compilation and Translation under the MOE (2011). In the 15th century,

Taiwan's earliest inhabitants were simply known as aborigines. From the Sui dynasty

(589-618) until the Ming dynasty (1368-1644), the Chinese name for Taiwan was Hsiao

Liuchiu. For centuries, Taiwan has been familiar to the West as Formosa, a name derived

from the 16th century Portuguese sailors who were so impressed by the beautiful scenery

that they named it "Ilha Formosa!" (Beautiful Island). The Dutch invaded Taiwan in

1624 and remained as colonists for 37 years. The Spanish invaded and occupied the

northern region of Taiwan in 1626, but they were driven out by the Dutch 16 years later

in 1642. The Ming Dynasty officials finally defeated the Dutch in 1661 and used Taiwan

as their base in the fight to overthrow the Chin dynasty and restore the Ming dynasty.

However, the Chin dynasty eventually won, making Taiwan a county of Fujian province.

For the next 200 years, there were numerous immigrants from the Fujian province; these

people are still in the majority in Taiwan.

In 1895, Taiwan was taken over by Japan as a result of the Treaty of Shimonoseki after the Chin Dynasty was defeated in the Sino-Japanese War. During the Japanese domination from 1895 to 1945, Japanese authorities tried to assimilate the Taiwanese into the Japanese culture. For this purpose, policies of complete Japanization were derived; one of these policies was to make Taiwanese people acquire the Japanese language. Moreover, hundreds of thousands of Japanese came to Taiwan during the occupation period to work for the colonial government or to do business. Consequently, Japanese has been used by people who are over 65 in Taiwan, and bilingualism became a common social phenomenon.

The Chin Dynasty collapsed in 1911, following a nationwide revolution led by Dr. Sun Yat Sen, who became the first president of the Republic of China. A period of civil war ensued and unity was eventually restored when the Kuomintang (KMT) took power. General Chiang Kai Sheik served as the president of the Republic of China for 38 years. In 1949, the Communists gained control of the Chinese from the KMT and established the People's Republic of China. General Chiang Kai Sheik and his nationalist party (KMT), about half a million people, moved to Taiwan and governed it with his leading party for 50 years.

When World War II came to an end, Taiwan was returned to China and the KMT

government assumed dominance according to the Declaration of Cairo 1943 and Potsdam

1945. Shortly after, the use of Japanese was prohibited. According to Cooper (2000), the

population of Taiwan is comprised of four cultural and ethnic groups. Each group has its

own dialect and cultural perspectives. The original residents, the aborigines, are

considered to be of Malay-Polynesian descent. There are two groups of early Chinese

immigrants or Taiwanese: the Fukien Taiwanese who came from the Fujian province of

China, and the Hakka Taiwanese who came from southern China, the Canton province.

The fourth group is composed of Chinese from various parts of China who came to

Taiwan after World War II, mostly in 1949. Even though Taiwan has been a multi-ethnic

and multi-lingual society, Mandarin has been the official language, promoted by the

government and encouraged to be used in daily communication.

Losing in the civil war against the communists on the homeland and retreating to

Taiwan, the KMT government realized that to strike back to recover the mainland would

not be easy and would take time; therefore, the KMT government decided that Taiwan

needed to be constructed as a solitary nation to oppose the Chinese communists. Thus,

martial law was put into effect from 1949-1987. During that period, political and national

affairs were exclusively under the control of the KMT government. Therefore,

prestigious positions in the government were occupied almost only by Mainlanders, and

few Taiwanese people could get involved in the center of political power. The different

political and cultural beliefs of Mainlanders, Taiwanese of early Chinese descendents,

and aboriginal Taiwanese led to cultural and political tensions among these groups,

especially during the presidential, national, and local elections. As Huang (2001) noted,

in order to reduce these tensions, a mainland-born president in the 1960s and 1970s was

matched with a Taiwan-born vice-president as a way to symbolize the balance of power

between the Mainlanders and the Taiwanese.

The social and economic changes, particularly social pluralism, and the increased

standards of living resulting from the development of Taiwan in the 1970s and 1980s also

speeded up the pace of political transformation. Due to rapid economic development, the

number of well-educated and middle-class increased, as well. They became a powerful

force in the process of political democracy and liberation. The new middle-class also

provided the political opposition with financial support. They even gathered in public

rallies and sat in the streets to force the government to make changes to meet the rights

and needs of different ethnic groups in Taiwan.

The economic success in the 1980s has made Taiwan one of the "Four Dragons" of East Asia, along with Hong Kong, Singapore and South Korea. In Taiwan, growing affluence and social diversity have been accompanied by recent reforms in the political realm, which have made Taiwan a truly democratic society. According to Huang (2001), the origin of multicultural education in Taiwan was initiated by arguments about relationships between ethnicity, language, and national identity among the KMT, aboriginal groups, local groups, legislators, provincial and national representatives, and the opposition party. Conflicts between legislators, representatives, and the government officials on language issues in the Legislative Yuan and the National Assembly during the transition periods also presented confusion on issues of official language, dialects, and group identity. The governmental officials assumed that the Taiwanese, Hakka, or aboriginal dialects were not the official language, and they did not allow speaking those dialects in public institutions. Some legislators and representatives, on the other hand, thought that Southern Min and Hakka were the mother tongues of the majority in Taiwan and, therefore, should be allowed to be used in public.

The Development of Multicultural Education in Taiwan

Theoretically, as Huang (2001) pointed out, the development of multicultural

education in Taiwan from the late 1940s to the present can be divided into three different

periods: the pre-development (1949-1985), the transition (1986-1989), and the after-

transition (1990-present). In the pre-development period, China-centered politics, Han

dominant culture, and Mandarin-only policies were promoted. During the transition

period, together with powers from economic development, growing democratization,

ethnic revitalization, and local group movements, diverse voices from different ethnic,

gender, and linguistic groups were allowed to speak up and have their voices be heard.

After the transition period, the improvements made by the multicultural education issues

of language, ethnicity, and gender have gradually become evident in the media,

governmental policies, and educational materials. For example, social studies textbooks

published during 1989 to 1995 have deleted the content about the idolization of President

Chiang Kai-Shiek and the false depiction of the communist Chinese government.

According to Su (1998), the texts are composed of numerous units introducing Taiwanese

cultural, economic, and social changes, as well as growth. The ideological themes shift

from cultural uniformity to cultural, ethnic, and religious diversity, but the central theme

of the textbook is national unity, though with distinctive ethnic differences. The

government was pushed to make some changes on the issues of multicultural education;

unfortunately, the reaction of the government toward those changes has been passive.

Huang further argued that whether the initiation and the developments of multicultural

education in Taiwan are a fashion from western society or a political compensation to its

ethnic minorities, its implementation needs to be contextualized in Taiwan's geopolitical

and sociocultural settings. It is not a short-term movement of fashion or political

compensation, but rather it is a long-term contribution and commitment.

Due to the language policy over the past 55 years, most people in Taiwan can

communicate with each other in Mandarin; whereas, many young people do not possess a

very good command of their mother tongues, if it is not Mandarin. The situation is much

worse with Taiwanese aborigines; quite a few of their languages are disappearing. With

the exclusion of martial law in 1987, the aboriginal people in Taiwan began to realize the

importance of preserving their cultures and languages. Huang (2004) stated that Atayal,

one of theTaiwanese aboriginal languages, began to be taught officially in the Wulia

Primary and Secondary Schools in 1990. Huang proposed a formal college training

program for aboriginal language teachers, an alternative form of bilingual education for

aboriginal students in rural and urban areas, and minority language learning during pre-

school years to preserve and promote the aboriginal languages and cultures. Further,

Huang (2004) suggested that the Maori experience in New Zealand is a successful

example which deserves the attention of the educators in Taiwan. The Maori people

implemented a native language immersion program in order for their preschoolers to be

immersed in the language and to learn in a home-like environment. Similarly, the

learning of the native languages in Taiwan should not be confined to just first graders in

elementary schools; it should begin in kindergarten and preschools, as well. The elderly

in the tribal communities should be encouraged to help youngsters learn their native

languages and cultures and provide an appropriate language-learning environment. By

doing so, the aboriginal languages and cultures in Taiwan can be preserved and further

developed through the efforts of the government, educators, and the aborigines so that

Taiwan will become a true multilingual and multicultural society in which all ethnic

groups will appreciate each other's culture and live harmoniously in global communities.

Intercultural Marriages

According to the Ministry of Interior (MOI) (2011) in Taiwan, there is an

increased diversity of socioeconomic status, culture, religion, language, and educational

attainment in Taiwan due to intercultural marriages. Hsai (2006) reported that since a

decade ago, there are more than 20,000 international marriages each year, for example,

the total number of new women immigrants in 1988 was 22,905 or 15.7% of the total

new marriages that same year. After 2000, the percentage of these women rose rapidly to

24.8%; that is to say, there is one international marriage among every 4 newly married

couples. By the end of February 2006, the total number of new women immigrants was

333,650. Consequently, there is an increase in diversity of cultural, religious, and

linguistic influences that has had a significant impact on K-12 education in Taiwan.

Most of the foreign females who have married Taiwanese men are through the

wedding agencies. The new women immigrants are always viewed as outsiders or only in

the country because they are more willing to have babies than many young Taiwanese

women. Even if their futures may be with high risk, these women are willing to be far

away from their home countries in order to make money to help their families of origin.

These international marriages, often in turn, reinforce the international division of labor

and reverse capitalism's strength as confirmed by Hsai (2000):

> "commodified international marriages" manifest the international division
> of labor within interpersonal relationships, localizing the international
> division of labor as an unequal relation between people. (p.6)

Educators in Taiwan should pay much attention to the adaptation of women immigrants to their new country and the education of their children. According to the Ministry of Education (2011) in Taiwan, the total number of new immigrant children is more than 1.5 million. To ensure human rights and improve the living conditions for these disadvantaged families, the Ministry of the Interior (2011) has developed programs to help new immigrant families fit into their new environment. Most local governments have started to offer Mandarin classes and have built activity centers for the new immigrants to help them adjust to their new lives in Taiwan. Unfortunately, many women immigrants have work schedules that preclude them from taking advantage of this opportunity. Most of the immigrant families are economically disadvantaged and have long working hours, including weekends, to support their families. In addition, the children often are educationally disadvantaged because the parents do not have the time or capability to assist them with their education. According to Tan, Liu, and Yu (2010), students from wealthier families often have more opportunities so that they have higher achievement levels while students from lower socioeconomic families have fewer opportunities and have lower achievement levels.

Taiwanese multicultural education key leaders such as Tan et al. (2010) stated that there will be many college students from the immigrant families 10 years from now; therefore, there will be a great impact on the curriculum in teacher education programs. They advocated that more educational resources should be distributed to poor school districts to support those who need help the most. Regarding educational inequity, Gorski (2007), a U.S. multicultural educator, argued that the "achievement gap" was not as important as the "opportunity gap" (p.16). Likewise, Nieto (2003) posed four questions about perception that can delineate areas of inequity: (1) Who is taking Calculus? (2) Which classes meet in the basement? (3) Who is teaching the children? (4) How much are the children worth? For example, Calculus refers to more advanced classes at the secondary level; whereas, "the basement" is a reference to English Language Development (ELD) classes. A basement is the lower level of a house which suggests that ELD is a lower class. The assumption is that ELD students are not as bright as students who speak the dominant language. The phenomenon is similar to Mandarin as a second language classes in Taiwan. Generally, teachers with less experience teach in poor (inner city) school districts. It assumes that students who go to prestigious schools are worth more than students who do not go to prestigious schools.

In the current education system in Taiwan, Tan et al. (2010) noted that educational resources are not distributed evenly. The public schools are usually considered to be better than the private ones because there is more funding from the government so that those schools can recruit more qualified teachers and have better facilities; the majority of students in the public schools are from wealthier families. It is evident that students from wealthier families can afford to buy more textbooks, hire private tutors, attend better schools and, therefore, receive a better education. Tan et al. also argued that with increasing diversity among students in schools in Taiwan, these financial and social class inequities will become more pronounced unless educators transform the educational system and offer equal opportunities to all students.

Teacher Education in Taiwan

For the last 50 years, Taiwan has pursued teacher quality through a continuous upgrading of the single-purpose normal institutions, or teachers' colleges, in a highly regulated monopoly system. Teacher quality for those years was primarily focused on one single factor; that is, the academic ability of teacher candidates. In the process, governmental intervention played a controlling role of preparing quality teachers to meet the expanding system due to population growth. Fwu and Wang (2002) argued that

transmission of uniform ideology in the process of teacher training made the majority of

teacher trainees conformists lacking reflective and critical thinking about their pedagogy.

After they entered the teaching profession, over-protection of their job and lack of

challenges made the immobility worse. Some of those had found they were not fitted to

teaching or became disinterested in it and often adopted the attitude of submitting to their

destiny as a teacher without a real passion for teaching. On the other hand, college

graduates from non-normal universities expressed a strong passion to get access to the

teaching profession. Their discontent with the monopoly normal system created a strong

force to call for an opening up of the system. Many teachers argued that prohibiting those

who have strong motivation and competency to be good teachers from entering the

teaching profession was unfair and a great loss to the society.

In Taiwan, the major educational reform in 1994 brought forth a new era in

teacher education programs. Fwu and Wang (2002) reported that the pursuit of teacher

quality from then on has been through diversification, deregulation, and competition.

Teacher quality is no longer limited to the single indicator of academic ability; other

factors such as personalities, motivation, multicultural competency, and commitment are

also taken into account. In addition, the sources and backgrounds of teachers have been

diversified through deregulation of and competition between the various teacher

education institutions. As a result, the monopoly of the normal universities has been

broken.

Current Status of Multicultural Education in Taiwan

According to Tan et al. (2010), the multicultural education issues in Taiwan are

somewhat different from the U.S. context. For example, issues on aboriginal education,

gender, and local culture have been addressed for the past 15 years. Due to the change in

the demographics of Taiwan, the education of new immigrant children and the

relationships among different ethnicities have been recognized for about 10 years since

the number of immigrant children are now more than Taiwanese aboriginal students.

Unfortunately, multicultural education in Taiwan is still in the theoretical stage. For

example, women have not been treated on an equal level to men in Taiwan, the aboriginal

people have lower socioeconomic status, prejudices toward different ethnic groups

appear in the media, and the relationships among various groups are unstable. To make

things even worse, politicians tend to provoke the controversies among groups during

elections. All of these above factors impede the development of multicultural education

in Taiwan. Tan et al. reported that the amount of research and grant writing on

multicultural education related issues in the past 15 years in Taiwan is as follows:

Taiwanese aboriginal education 32%, gender education 24%, multicultural education

22%, local culture education 15%, and the education of immigrant children 7%.

Tan et al. (2010) argued that teacher education programs often espouse a

rhetorical commitment to the ideals of multicultural education as evident in most mission

statements. However, a closer look at pre-service teacher education curricula and

commitment to recruiting and retaining both minority students and faculty tends to

contradict their policies.

Research Questions

The goal of the study was to understand the attitudes and beliefs of the pre-

service teachers and teacher educators regarding multicultural education and the

current status of multicultural education in Taiwan, and to critically examine the

opportunities and challenges of integrating Web2Quest technologies into

multicultural education courses in three universities in Taiwan. The results of this

study, therefore, will help teachers to understand the opportunities and challenges

that may occur if Web2Quest technologies are implemented within multicultural

education courses in teacher education. In order to achieve the aforementioned

goal, the research proposes the following three research questions:

1. What are the attitudes and beliefs of the pre-service teachers and teacher educators

    regarding multicultural education, and how do the teacher educators prepare the pre-

    service teachers to meet the needs of diverse K-12 students in Taiwan?

2. To what extent is there integration of Web 2.0 technologies in their multicultural

    education courses in the three teacher education programs in Taiwan?

3. What are the perceptions of the teacher educators and the pre-service teachers

    regarding the opportunities and challenges of using Web2Quests to facilitate

    multicultural education?

Theoretical Background

Social constructivism constitutes the overarching theoretical framework for the

research and the WebQuest model serves as an implementation tool for constructivist

learning. This study uses the four approaches to multicultural education by Banks and

Banks (1996) and the five approaches to multicultural education by Sleeter and Grant

(2003) that illustrate the various conceptions of multiculturalism. The study also utilizes

McLaren's (1995) classification of multiculturalism: conservative, liberal, and critical

multiculturalism. McLaren argued against a conservative and liberal conception of

multiculturalism and presented a compelling case for implementing critical

multiculturalism in education programs. The categorization of curriculum integration by

Banks and Banks (1996) and Gorski's (2001) multicultural curriculum reform were

presented to illustrate the various approaches to curriculum found in teacher education

courses. In addition, the study was enlightened by the work of Dodge (1995) and March

(2003) in their creation of WebQuests. The social constructivist theory as defined by

Vygotsky (1989) and culturally responsive teaching (Gay, 2000) were also employed in

my research study through the integration of Web2Quest into three multicultural

education core courses in three teacher education programs in Taiwan. Finally, this study

used the four broad clusters of multiculturalism by Bennett (2007) to help elucidate

efforts to rethink and reform teacher education programs. Further background regarding

the theoretical framework will be detailed in Chapter 2.

Social constructivism.

Social constructivism is closely associated with the developmental theory of

Vygotsky (1989). According to Vygotsky, social constructivism emphasizes the

importance of culture and context in understanding what occurs in society and

constructing knowledge based on that understanding. The theory of social constructivism

is based on specific assumptions about reality, knowledge, and learning. To understand

and apply models of instruction that are rooted in the perspectives of social

constructivists, it is important to acknowledge the premises that underline social

constructivism. Vygotsky described social constructivism as human development that

originates out of social and cultural interactions. Individuals create meaning through their

interactions with each other and with the environment in which they live. Social

constructivists view learning as a social process. Vygotsky argued that social

constructivism does not take place only within an individual, nor is it a passive

development of behaviors that are shaped by external forces. Meaningful learning occurs

when individuals are engaged in social activities. For Vygotsky, in a constructivist

learning environment students acquire knowledge by constructing bridges from former

knowledge to new ways of knowing. Vygotsky indicated that intersubjectivity not only

provides the grounds for communication but also supports the understanding of new

information and activities among the group members. His primary concern was with how

teachers could help students develop the higher order concepts that they would not have

access to in their daily lives. His theory was about the differentiation of knowledge, and

he also relied on a binary distinction—between two kinds of concepts—the theoretical (or

scientific) and the everyday. For Vygotsky, the task of the curriculum—and schooling,

more generally, was to provide students with access to theoretical concepts in all their

different forms—from history and literature to the sciences and mathematics.

Furthermore, he saw that access to higher order concepts was not a simple one-way

process of transmission but a complex pedagogic process in which the learner's everyday

concepts are extended and transformed by theoretical concepts.

WebQuest model.

Wang and Gearhart (2006) stated that the most advances in education in recent

years involve the widespread use of computers into K-12 schools, colleges, and

universities. Of particular interest are the internet and the well-known World Wide Web

(WWW), which is radically redefining how we obtain information and the way we teach

and learn. Lim, Plucker, and Nowak (2001) noted that there has been a concerted effort

among educators to create a successful online learning environment through a learning-

by-design approach which involves a systematic design of learning activities. Zheng,

Perez, Williamson, and Flygare (2008) wrote that parallel with the above effort is the

introduction of the WebQuest model into web-based learning in K-16 settings. Zheng,

Stucky, McAlack, Menchana, and Stoddart (2005) explained that taking a structured,

design-based approach, the model is primarily used for inquiry-oriented learning in which

learners interact with resources on the internet, develop interpersonal and collaborative

skills, and engage in higher-level thinking.

According to Dodge (2001) a WebQuest is an inquiry-oriented lesson format in

which most or all of the information that learners work with comes from the web. A

WebQuest can be thought of as a microworld, where students explore an issue in a

learning environment that is both cooperative and contextual. Through an in-depth

examination of web-based resources, students gather and synthesize information in

collaboration with their peers to solve a problem. As a group, students who undertake a

WebQuest interact and work together; each group member carries out a specific and

meaningful role. WebQuest roles could include, for example, a sociologist, an educator,

economist, and environmentalist. Each role enables students to carry out their research

from a particular perspective. Group members pool their research findings on an issue

and put together their responses to a complex, open-ended problem, and propose a

reflective and critical solution. The WebQuest "Search for China" (Appendix A) created

by Dodge (1995) was demonstrated as an example in the three multicultural education

courses in the three universities in the study. To fully take advantage of Web 2.0

technology, teachers can create Web2Quests by using Web 2.0 tools such as Skype,

videoconferencing, wikis, Ning, Jing and Moodle. The upgraded WebQuest which fully

takes advantage of Web 2.0 technology has been named Web2Quest in this study.

Significance of the Study

The goal of the study was to understand the attitudes and beliefs of the pre-service

teachers and teacher educators regarding multicultural education and the current status of

multicultural education in Taiwan, and to critically examine the opportunities and

challenges of integrating Web2Quest technologies into multicultural education courses in

three universities in Taiwan. The results of this study, therefore, will help teachers to

understand the opportunities and challenges that may occur if Web2Quest technologies

are implemented within multicultural education courses in teacher education. The study

examined three multicultural courses that added Web2Quest technologies to extend

student/student, student/professor, student/expert dialogue to complement traditional

multicultural education courses which impede those goals due to time constraints and

isolation.

My Biases and Perspectives

Being Chinese, Confucius has had a profound influence on my philosophy of education. The central idea of Confucius' philosophy is REN, "compassion" or "loving others," i.e., humanity. For Confucius, such concern for others was demonstrated through the practice of forms of the Golden Rule: "What you do not wish for yourself, do not do to others; since you yourself desire standing, then help others achieve it, since you yourself desire success then help others attain it" (as cited in Waley, 1938, p.13). For Dewey (1938), the goal of education should be to help individuals develop to their fullest potential. The ideas of Confucius and Dewey parallel my belief that all learners deserve the best possible education.

My parents also have had a great influence on my journey of exploring humanity and social justice. They always emphasized the importance of sharing. For example, when relatives, friends, or members of the community were unemployed or were in need, my parents would lend a helping hand. They used to say "Giving is better than receiving. If we can give, we are more fortunate than others." My family owned a grocery store and my parents gave food and daily necessities whether the neighbors could pay or not. For example, during every meal time, my family hosted at least 60 people (family members

and 20 neighbors who did not have food to put on the tables). My parents always said,

"There are only an extra bowl and a pair of chopsticks." Their philosophy of caring,

sharing and compassion has shaped who I am today. I try my best to do the same.

The goals of education of which I strive to achieve are (1) to create the best

possible learning experiences for each person; this is true social justice; (2) to encourage

self-discovery by educating the whole person including spiritual, physical, and emotional

aspects; (3) to foster creativity; (4) to build a learning community which recognizes

cultural diversity and each individual's humanity. I believe that such an education

cultivates people who will also share love, caring, compassion, empathy and hope with

people around them. In addition, education should also encourage students to appreciate

beauty and wonder. Most importantly, education should cultivate people who are able to

serve the world through the use of their gifts.

To meet these goals of education, the curriculum should be changed and designed

by professionals, students, and parents. It should emphasize big concepts, beginning with

the whole and expanding to include the parts. Learning should be interactive, building on

what the student already knows, not based on repetition. Assessment should include

student work, observations, and individual class participation, as well as tests. The

process is as important as the product. The curriculum should be integrated with students'

lives to promote meaningful learning. It should teach values such as honesty,

responsibility, and self-discipline, while being student-centered. Above all, teachers

should teach students HOW to learn and provide equal opportunities to help them

maximize their full potential. As a Chinese proverb says, "Fish for me and I eat today;

teach me to fish and I eat forever."

Every child can learn in the appropriate environment. Each individual has

enormous potential for thinking and learning; students need to have learning experiences

that are relevant to their lives. For example, non-performing students should not be

labeled failures by teachers and classmates. Teachers should try to help those students

find different paths that demonstrate their talents and their potential.

This student-centered concept is clearly expressed by Gibson (2000) when she

stated that, "In our multicultural society, culturally responsive teaching reflects

democracy at its highest level. It means doing whatever it takes to ensure that every child

is achieving and ever moving toward realizing her or his potential." According to Freire

(1970), educators should focus on creating equity and changing systems of oppression

within public schools and society. I firmly believe that attention to social issues

incorporates a broad range in teaching which should include attention to fairness and equity with regard to gender, race, class, disability, and sexual orientation.

Each person is unique and has his or her own talents and learning styles. Some students learn more from an active, hands-on curriculum that allows them to explore and create. Others learn more from reading or listening. As a result, teachers need to keep in mind that students do not all learn the same way and at the same pace. To me, children are like rosebuds; they do not all bloom at the same time, but the last bloom is just as pretty as the first. I always try to allow students time to learn, grow, and bloom.

Additionally, I believe there are three perspectives in each person: the person other people think one is; the person one thinks she/ he is, and the person one really is. Tu, Blocher, and Roberts (2008) shared a similar idea as they stated that " 'I' is a synthesis produced by thinking from self. Through creating multiple 'Is,' we re-create our selves constantly in a continuous process of self-overcoming and self-improving from moment to moment" (p. 267). The process of unlearning and learning will over time lead students to construct their own meanings of knowledge.

According to Waley (1938), Confucius advocated that true knowledge is self-knowledge and knowing who one is. Education is an opening of the mind. The

educational view of Confucius nourishes the personality and character and is concerned

with the moral and spiritual quality of life. Teaching methods used by Confucius were

very informal and tailored to the individual. Good education should start with one's self,

so I believe that educators need to help students get to know themselves, find their niche,

and encourage them to choose a path they will enjoy for a lifetime.

As I look over my life, the most important role models for me have been teachers,

including my parents; they have had a profound effect on my teaching philosophy. Who

am I? How can I make a difference in the world? These are the two questions I often ask

myself. I think I am a happy seed sower and enthusiastic about learning and teaching. I

believe that teaching is the best way to help students learn to love themselves and others.

We can be happier as well as healthier if we are willing to serve people with our gifts.

My View on Technology

As teachers in the 21st Century, we cannot escape the technology revolution that is

changing the interactions of our students and their learning. Taiwan is a small island and

the Taiwanese people cannot stand alone in the world. The majority of the Taiwanese

students are consuming social media whether we teach with them or not; thus, I believe

that it makes sense for teachers to put forth critical thinking regarding the implementation

of Web 2.0 technologies into multicultural education courses in teacher education

programs in Taiwan. However, teachers have to guide students to incorporate

technological tools wisely to connect people on a global scale in meaningful ways.

Overview of the Thesis

This study encompasses five chapters. The first chapter outlines the historical,

social, economic, and political contexts leading to the statement of the problem and is

followed by the purpose of the study, the research questions, significance of the study,

and my biases and perspectives. The second chapter is the review of literature relevant to

the study and an explanation of how the literature has informed the study. The third

chapter highlights the methodology and design of the study. Findings and analysis of the

data are described in the fourth chapter. The final chapter includes discussion of findings,

implications for practice, recommendations for future research and conclusion. To avoid

ambiguity, a glossary of terminology is included in Appendix B.

The findings of the research might help shed light on future multicultural

education reform through Web2Quest technologies. As mentioned earlier, Internet-based

constructivist learning tools such as Web2Quests have been widely promoted despite

insufficient evidence of their practicality and effectiveness in the context of multicultural

education. Without systematic study, educators are left to wonder whether or not those

technological tools are locally feasible in this context, or on which instructional aspect of

the tools future studies should focus. I believe that the results of this study will provide

future guidance for both research and instructional practices that involve multicultural

education and the use of Web 2.0 resources.

The next chapter describes an overview of multicultural education, followed by

technology and multicultural education, overview of WebQuest model, and how my

study on multicultural education and Web2Quest technologies bridge the gap?

Chapter Two: Review of Related Literature

The purpose of the study was to understand the attitudes and beliefs of the pre-service teachers and teacher educators regarding multicultural education and the current status of multicultural education in Taiwan, and to critically examine the opportunities and challenges of integrating Web2Quest technologies into multicultural education courses in three universities in Taiwan. The review of the literature used for this research study was to present the knowledge base and context upon which my study was built. Within this chapter, I have provided an overview of scholarly study of multicultural education and the possibilities for the implementation of Web2Quest technologies into multicultural curriculum to recognize the contributions of writers and research studies from the past.

This study uses the four approaches to multicultural education by Banks and Banks (1996) and the five approaches to multicultural education by Sleeter and Grant (2003) that illustrate the various conceptions of multiculturalism. The study also utilizes McLaren's (1995) classification of multiculturalism: conservative, liberal, and critical multiculturalism. McLaren argued against a conservative and liberal conception of multiculturalism and presented a compelling case for implementing critical

multiculturalism in education programs. The categorization of curriculum integration by

Banks and Banks (1996) and Gorski's (2001) multicultural curriculum reform were

presented to illustrate the various approaches to curriculum found in teacher education

courses. In addition, the study was enlightened by the work of Dodge (1995) and March

(2003) in their creation of WebQuests. The social constructivist theory as defined by

Vygotsky (1989) and culturally responsive teaching (Gay, 2000) were also employed in

my research study through the implementation of Web2Quest into three multicultural

education core courses in three teacher education programs in Taiwan. Finally, this study

used the four broad clusters of multiculturalism by Bennett (2007) to help elucidate

efforts to rethink and reform teacher education programs.

Overview of Multicultural Education

Definition of multicultural education.

The development of multicultural education involves a complex, thoughtful,

deliberate, and challenging process. Key multicultural education leaders in the United

States have formulated various definitions of multicultural education. Banks and Banks

(2001) stated that multicultural education is an idea, a reform movement, and a process.

As an idea, all students, regardless of the groups to which they belong, such as gender,

ethnicity, race, culture, language, social class, religion, or exceptionality, should

experience educational equality in the schools. As a reform movement, schools must be

transformed so that students from diverse groups will have an equal chance to experience

school success. As a continuing process, the idealized goals such as educational equality

and elimination of all forms of discrimination can never be fully achieved in a human

society. Ladson-Billings and Brown (2008) referred to multicultural education as

culturally responsive pedagogy which empowers students intellectually, socially,

emotionally, and politically. Gorski (2001) viewed multicultural education as a

progressive approach for transforming education.

Key principles of multicultural education.

The definition of multicultural education may vary, but the five key principles

delineated by Gorski (2007) are agreed upon across the literature. First, multicultural

education is a political movement that attempts to secure social justice for individuals and

communities, regardless of race, ethnicity, gender, home language, sexual orientation,

disability, religion, socioeconomic status, or any other individual or group identity.

Second, multicultural education is a political movement which recognizes that while

some individual classroom practices are consistent with multicultural education

philosophies, social justice is an institutional matter, and as such, can be secured only

through comprehensive reform. Third, multicultural education insists that comprehensive

reform can be achieved only through a critical analysis of systems of power and

privilege. Fourth, the underlying goal of multicultural education is to provide all student

with opportunities to achieve their fullest potential. Fifth, multicultural education is good

education for all. Ultimately, Gorski advocated that multicultural education works toward

change in the larger society.

Key goals and characteristics of multicultural education.

Banks and Banks (2007) delineated four key goals of multicultural education: (1)

to help individuals gain greater self-understanding by viewing themselves from the

perspectives of other cultures, (2) to provide all students with the skills, attitudes and

knowledge needed to function within their ethnic culture, within mainstream culture, and

within and across other ethnic cultures, (3) to reduce the pain and discrimination that

members of ethnic and racial groups experience because of their unique racial, physical,

and cultural characteristics, and (4) to help students to master essential reading, writing

and math skills. Although the goals of multicultural education advocated by Banks and

Banks were based on an American context, I believe these goals can be applied in Taiwan

as well to create an equitable learning environment for all.

There are many considerations for integrating multicultural education throughout

the teacher education program. Gorski (2001) proposed the following key characteristics

of a multicultural curriculum: (1) Delivery: teachers must acknowledge and address

varied learning styles while challenging dynamics of power and privilege in the

classroom; (2) Content: content must be complete and accurate, acknowledging the

contributions and perspectives of all groups; (3) Teaching and learning materials:

resources must be diverse and critically examined for bias with varied instructional

materials; (4) Perspective: content must be presented from a variety of perspectives and

angles in order to be accurate and complete; (5) Critical inclusivity: students must be

engaged in the teaching and learning process in order to facilitate experiences in which

students learn from each other's experiences and perspectives; (6) Social and civic

responsibility: if teachers hope to prepare students to be active participants in an

equitable democracy, students must be educated about social justice issues, and teachers

must model a sense of civic responsibility within the curriculum; and (7) Assessment:

curriculum must be constantly assessed for completeness, accuracy, and bias.

Dimensions of multicultural education.

Banks and Banks (2007) presented the following five ultimate dimensions of

multicultural education that teachers can incorporate in their classrooms: (1) content

integration, (2) the knowledge construction process, (3) prejudice reduction, (4) an

equitable pedagogy, and (5) an empowering school culture and social structure. Content

integration deals with the extent to which teachers use examples and content from a

variety of cultures and groups to illustrate key concepts, principles, generalizations, and

theories in their subject area or discipline. The knowledge construction process relates to

the extent to which teachers help students understand, investigate, and determine how the

implicit cultural assumptions, frames of reference, perspectives, and biases within a

discipline influence the ways in which knowledge is constructed within the discipline.

Prejudice reduction focuses on the characteristics of students' racial attitudes and how

they can be modified by teaching methods and materials. An equitable pedagogy exists

when teachers modify their teaching in ways that will facilitate the academic achievement

of students from diverse racial, cultural, and social class groups. This includes using a

variety of teaching styles that are consistent with the wide range of learning styles within

various cultural and ethnic groups. The concept of an empowering school culture and

social structure is to describe the process of restructuring the culture and organization of

the school so that all students regardless of the groups to which they belong, such as

gender, ethnicity, race, culture, language, social class, religion, sexual orientation, or

political ideology will experience educational equity and cultural empowerment.

Approaches to multicultural curriculum reform.

Banks and Banks (2007) suggested four approaches to multicultural curriculum

reform. First, the contributions approach reflects the least amount of involvement in

multicultural education approaches. This is incorporated by selecting books and activities

that celebrate holidays, heroes, and special events from various cultures. For example,

celebrating Dr. Martin Luther King's birthday in January is a common practice that falls

into this category. In this approach, culturally diverse books and issues are not specified

as part of the curriculum. Second, the additive approach is when content, concepts,

themes, and perspectives are added to the curriculum without changing its basic structure.

This involves incorporating literature by and about people from diverse cultures into the

mainstream curriculum without changing the curriculum. For example, examining the

perspective of a Native American about Thanksgiving would be added to the traditional

view of Thanksgiving. However, this approach does not necessarily transform thinking.

Third, the transformation approach changes the structure of the curriculum and

encourages students to view concepts, issues, themes, and problems from several ethnic

perspectives and points of view. For example, a unit on Thanksgiving would become an

entire unit exploring cultural conflict. This type of instruction involves critical thinking

and a consideration of diversity as a basic premise. Fourth, the social action approach

combines the transformation approach with activities to strive for social change. Students

are not only instructed to understand and question social issues, but to also do something

important about those issues. For example, after participating in a unit about recent

immigrants to North America, students may write letters to state and national

representatives, and newspaper editors to express their opinion about new policies.

Similarly, Taiwanese students may write letters to mayors, and newspaper editors to

express their opinions about new policies regarding to the recent immigrants in Taiwan.

Gorski (2007) argued a number of shifts of consciousness to carry out

multicultural education. One shift of consciousness would involve teachers being willing

to think critically about multicultural education, curriculum, and the goals of education.

Another new shift in thinking would be demonstrated by teachers when acknowledging

that multicultural education is about creating an equitable learning environment for all

students, so they must be against all inequity. A third shift of consciousness would be evident when teachers showed awareness of inequities as systemic and not just individual acts. A fourth shift of consciousness would be characterized when teachers would transcend the idea of multicultural education as "learning about *other* cultures" and "celebrating diversity." Finally, Gorski advocated that teachers must understand multicultural education as a comprehensive approach, not additional activities or slight shifts in an otherwise monoculture curriculum.

Preparing teachers to teach for diversity will contribute toward creating an equitable learning environment. For example, the media has a great impact on peoples' ideas of those who are from other cultures. Many people believe inaccurately that what they see in newspapers, TV programs, and in movies is a true representation of other cultures. To avoid prejudices and stereotypes of others, teachers should address the media biases in their classrooms so that students can reduce prejudices and misconceptions about people from cultures different from their own. While these concepts are widely utilized in American contexts, I believe that they can also be applied in Taiwanese contexts.

Approaches to multicultural education.

Sleeter and Grant (2003) described five approaches to multicultural education

reform that should be considered and understood thoroughly before implementing them

into multicultural education curriculum reform: teaching the exceptional and culturally

different, human relations, single-group studies, multicultural education, and

multicultural social education

Teaching the exceptional and culturally different. As Sleeter and Grant (2003)

proposed, "the goals of teaching the exceptional and culturally different are to equip

students with the cognitive skills, concepts, information, language, and values

traditionally required by U.S. society, and eventually to enable them to hold a job and

function within society's institutions and culture" (p.67). Teachers using this approach

often begin by determining the achievement levels of students, comparing their

achievement to grade-level norms, and then working diligently to help those who are

behind to catch up.

A good deal of research documents learning strengths of students of diverse

sociocultural groups, suggesting that if teachers learn to identify and build on their

strengths, students will learn more effectively than if a teacher assumes the child cannot

learn very well. For example, based on a study of high-performing Hispanic schools, Scribner (2001) found that these schools share four characteristics: (1) The schools authentically involved families and communities; (2) The schools were organized around collaborative governance and leadership that was clearly focused on student success; (3) Culturally responsive pedagogy/teaching was widely used; teachers believed children were capable of high levels of achievement and viewed their cultural background as a valuable resource on which to build; and (4) The schools used advocacy-oriented assessment, which was used to support high achievement by giving information that could improve instruction and guide intervention on a day-to-day basis. Language sensitivity was part of this process. Teachers who understand how to build on the culture and language of students will read the classroom behavior of such children more accurately and adjust their instructional processes accordingly without lowering their expectations for learning.

Nieto (2010) suggested that starting where the students are and using instructional techniques and content familiar to them are important. For example, one teacher who used this approach helped two African American students who had moved from a large urban area to a much smaller college town to catch up on their writing skills by having

them write letters to the friends they had left behind in the city. A second teacher grouped

the girls in her ninth-grade class who were having problems in algebra, allowing them to

work together, support one another, and not be intimidated by the boys in the class who

had received the kind of socialization that produces good math students. A third teacher

of two students with learning disabilities provided them with materials written at their

reading level that covered concepts comparable to those being read by the rest of the

class. In summary, the heart of this approach is building bridges for students to help them

acquire the cognitive skills and knowledge expected of the so-called average white

middle-class students. This approach accepts that there is a body of knowledge all

students should learn, but proposes that teachers should teach that knowledge using

whatever works for the students. The examples I mentioned in the above paragraph were

used in American contexts; however, they can also be tailored and applied in Taiwan.

Human relations. If teachers believe that a major purpose of the school is to help

students learn to live together harmoniously in a world that is becoming smaller and

smaller, and if they believe in greater social equality, teachers can help students learn to

respect one another regardless of race, class, gender, or disability. This approach

engenders positive feelings among all students, promotes group identity and pride for

minority students, reduces stereotypes, and works to reduce prejudice and biases. For

example, a teacher regularly brings to his classroom guest speakers who represent the

diversity in society to show all students that they can also be successful.

The curriculum for the human relations approach addresses individual differences

and similarities. It includes contributions of the groups of which the students are

members and provides accurate information about various ethnicities, disabilities, and

social-class or gender groups about whom the students hold stereotypes. Instructional

processes include a good deal of cooperation among individuals. Advocates of this

approach suggest that it should be comprehensive, integrated into several subject areas,

and school wide. For example, a school attempting to promote gender equality is working

at cross-purpose if lessons in language arts teach students to recognize gender

stereotypes, while in the science class girls are not expected to perform as well as boys

and thus are not pushed to do so. These contradictory practices simply reaffirm gender

stereotypes.

Single-group studies. Sleeter and Grant (2003) stated that "the single-group

studies approach seeks to raise the social status of the target group by helping young

people examine how the group has been oppressed historically and what its capabilities

and achievements have been" (p. 69). This approach also examines the current social

status of the group and actions taken historically as well as currently to further the

interests of the group. Advocates of single-group studies hope that students will develop

more respect for the group and also the knowledge and commitment to work to improve

the group's status in society.

The single-group studies curriculum would include units or courses about the

history and culture of a group (e.g., African American history and disability studies). The

curriculum would teach how the group has been victimized and has struggled to gain

respect as well as about current social issues facing the group.

In summary, Sleeter and Grant (2003) noted that the single-group studies

approach is aimed toward social change. It challenges the knowledge normally taught in

schools, arguing that much of what is currently taught reinforces control by wealthy

White men over everyone else. This approach offers an in-depth study of oppressed

groups for the purpose of empowering group members, encouraging them towards a

sense of pride and group consciousness, and helping members of dominant groups

understand the perspectives of others.

*Multicultural education***.** Multicultural education has become the most popular term used by educators to describe education for pluralism. The goals of this approach are to reduce prejudice and discrimination against oppressed groups, to work toward equal opportunity and social justice for all groups, and to affect an equitable distribution of power among members of the different cultural groups.

Various practices and processes in the school are reconstructed so that the school models equality and pluralism. For example, teachers of literature might select literature written by members of different groups. This would not only teach students that groups other than whites have produced literature; it would also enrich the concept of literature by enabling students to experience different literature forms that are common to all writing.

In the multicultural education approach, instruction starts by assuming that students are capable of learning complex material and performing at a high level of skill. Each student has a personal, unique learning style that teachers discover and build on when teaching. The teacher draws on and uses the knowledge about the world that students bring to school. The multicultural education approach advocates total school reform to make the school reflect diversity. It also advocates giving equal attention to a

variety of cultural groups regardless of whether specific groups are represented in the

school's student population.

   Multicultural social education. Multicultural social education deals with

oppression and social structural inequity based on race, social class, gender, and

disability. The purpose of this approach is to prepare future citizens to take action to

change society in order to better serve the interests of all groups of people, especially

those who are of color, poor, female, or have disabilities. This approach is rooted in

social reconstructivism, which seeks to reconstruct society toward greater equity

regardless of one's race, class, gender, and disability. This approach also questions ethnic

and power relations embedded in the new global economy.

   According to Sleeter and Grant (2003), the multicultural social education

approach extends the multicultural education approach. However, there are four practices

unique to multicultural social education. First, democracy needs to be actively practiced

in the schools. For students to understand democracy, they must live it. They must

practice politics: to debate issues, pursue social action, and recognize the use of power. In

the classroom, this means that students will be given the opportunities to direct a good

deal of their learning and learn to be responsible for that direction. Freire (1970) argued

this will produce individuals "who recognize themselves reflectively for action rather

than men and women who are organized for passivity" (p. 82). Second, students learn

how to analyze institutional inequality within their own life circumstances. Freire (1973)

distinguished among magical consciousness, naïve consciousness and critical

consciousness. As he proposed it, magical consciousness is the lowest level of

consciousness. People with magical consciousness accept their lives as they are and do

not question the injustices done to their lives. Naïve consciousness is a level above the

magical consciousness. People with this consciousness become aware and gain insights

into their own problems. However, they fail to make connections to the outside world.

Problems are seen as accidents and individuals are deceived in their perceptions. Critical

consciousness, also known as critical transitivity, is the highest level of consciousness.

According to Freire, people with critical consciousness view problems as structural

problems. Critical consciousness also enables interpretation of problems and, therefore,

must involve analysis and be integrated with reality. To achieve this level of

consciousness, learners must replace passivity with action, and work as well as struggle

collectively not individually.

The third practice unique to multicultural social education is that students learn to engage in social action. Parker (2003) explained that teaching for democracy should mean preparing young people for enlightened political engagement: " the action or participatory domain of citizenship," such as voting, contacting officials, deliberating , and engaging in boycotts, based on enlightenment, or the "knowledge, norms, values, and principles that shape this engagement" (p.33). In other words, all human beings should practice democracy.

The fourth unique practice is that bridges are built across various oppressed groups (e.g., people who are poor, people of color, White women, and immigrants), so they can work together to advance their common interests. Working together can energize and strengthen struggles against oppression. However, getting groups to work together is difficult because members often believe that they would have to place some of their goals second to those of other groups. Further, racial groups find themselves divided along gender and class lines to the extent that middle-class males of all colors fail to take seriously the concerns of women and of lower-class members of their own groups. Childs (1994) described transcommunal organizations, such as the African American/Korean

alliance in Los Angeles, which bring different groups together to identify and work on

common concerns.

Conceptions of multicultural education.

Multicultural scholars often associate three ideological positions within the

discourse of multiculturalism: (1) conservative multiculturalism, (2) liberal

multiculturalism, and (3) critical multiculturalism. McLaren (1995) argued that

conservative multiculturalism is an assimilation's model of cultural diversity in which

white is posited as an "invisible norm by which other ethnicities are judged hence

reinforcing the hegemony of whiteness" (p.49). Conservative multiculturalism tends to

marginalize and dismiss the different experiences of minorities or students of color and

avoid a power analysis of institutional forms of racism. McLaren suggested several

reasons why conservative multiculturalism must be rejected. First, it refuses to treat

whiteness as a form of ethnicity, thus elevating whiteness as a paragon for judging other

ethnicities. Second, conservative multiculturalists use the term diversity to cover up an

assimilationist ideology. They view ethnic groups as add-ons to the dominant Euro-

centric culture. Third, conservative multiculturalists support a monolingual policy in

which English is the only official U.S. language. Fourth, in McLaren's words,

conservative multiculturalists posit standards of achievement for all youth "who are

premised on the cultural capital of the Anglo middle class" (p. 38). Fifth, conservative

multiculturalists fail to interrogate the high status knowledge which is viewed as the most

valued in the white, middle-class U.S., such as the knowledge embedded in the U.S.

educational system. The goal of conservative multiculturalists is to assimilate students to

an unjust social-order by arguing that every member of every ethnic group can reap the

economic benefits of neocolonialist ideologies and corresponding social and economic

practices. McLaren argued that "the prerequisite to joining the club is to become

denuded, deracinated, and culturally stripped" (p.38). Similarly, Jenks, Lee and Kanpol

(2002) noted that conservative multiculturalists often recognize cultural, racial, and social

differences in the context of their "contributions" to American society (p. 92).

Sleeter and Grant (2003) provided *culturally different* for the conservative

approach to multiculturalism. This approach perceives those that are different from the

mainstream, middle-class culture as different or deficient. Therefore, it is the

responsibility of the school to equip these students with the necessary basic skills

required to remediate deficiencies or build bridges between the student and the school.

Essentially, schooling has a compensatory function to correct the deficiencies of the

deviant students so that they can catch up to the mainstream.

According to Banks and Banks (1996), liberal multiculturalism addresses the need for diversity, cultural pluralism, acceptance and celebration of differences. Perry (2002) noted that liberal multiculturalism "tends to exoticize others in a nativistic retreat that locates difference in a primeval past of cultural authenticity" (p. 196). This type of multiculturalism, often referred to as cultural tourism, is evident in many social work texts, such as the one by Fong and Furuto (2001) with each chapter describing strategies of working with a particular ethnic minority group. Nowhere in the text is there any discussion of whiteness, leaving it the unmarked norm against which other racial and ethnic groups are compared. Perry wrote that liberal multiculturalism, while well intended, reifies US people of color into "tightly bound fictive identities that reproduce notions of inherent, durable, and unbridgeable differences between people" (p. 197). While there have been significant contributions made by liberal multiculturalism, honoring differences in these inequities may reproduce stereotyping.

How can multicultural education for educators historicize racism and critically engage with a more nuanced and complex analysis of culture, one that links diversity of education with social justice and includes a power analysis? A transformative/critical multiculturalism would take as its premise that as Horton (1990) stated, "We all speak

from a particular place, out of a particular history, out of particular experiences, without

being contained by that position" (p.447). In other words, differences exist not only

among various cultures but also within the same culture; however, there are some

similarities, not just differences. This ties to one of the goals of multicultural education:

respect and accept people from different cultures as human beings.

The human relations approach advocated by Sleeter and Grant (2003) fits into the

liberal multiculturalism conception. This approach focuses on promoting unity and

tolerance in a pluralistic or multifaceted society. The purpose is to promote positive

feelings among students and reduce stereotyping. The human relations approach also

emphasizes promoting minority and majority group relations. The issue of power

distribution or institutional discrimination is not addressed, thus implicitly accepting the

status quo and not attempting to change it. This approach naively assumes that

discrimination, oppression, and racism will simply disappear if people just get along with

one another. Jenks, et al. (2002) also pointed out that liberal multiculturalists did not

provide sufficient consideration to power constructs, control issues, and official

knowledge, which stand in the way of achieving equality and excellence by denying

political power. However, Sleeter and Grant indicated that the liberal approach included a

limited analysis of why inequities exist and simplistic conceptions of culture and identity.

Similar to the multicultural social education approach advocated by Sleeter and

Grant (2003), McLaren (1995) advocated a critical multiculturalism by arguing that

"multiculturalism without a transformative political agenda can just be another form of

accommodation to the larger social order" (p. 42). Moreover, according to Perry (2002),

critical multiculturalism includes the following features: (1) recognizes the socio-

historical construct of race, and its intersections with class, gender, nation, sexuality and

capitalism; (2) creates pedagogical conditions in which students interrogate conditions of

"otherness;" (3) challenges the idea of education as an political, trans-historical practice

removed from the power struggles of history; and (4) makes visible the historical and

social construction of whiteness. Hence, critical multiculturalism is more inclusive of

mainstream students and possibly may have the most profound impact on them.

Mainstream students are encouraged to critically reflect and deconstruct what being

majority means to them. Perry further explained this type of critical reflection would help

mainstream students and minority students move productively through times when they

encounter different interpretive frameworks and that hinder cross-cultural understanding,

such as when African-American students need to express pain and anger about slavery, but white youth will not listen because they cannot see how the past matters. Perry argued that it would also offer white students a means of moving past immobilizing feelings of guilt or denial and towards "reformulating their identities in ways that challenge dominant interests, cross boundaries, and help develop a range of personal connections and political coalitions" (p. 197). According to Perry, it is imperative that education programs adopt critical multiculturalism (which includes a critical analysis of whiteness) as a core curriculum if educators are to destabilize the legacy of racism, along with sexism, classism, ableism, heterosexism, and nationalism.

Jenks, et al. (2002) defined the critical multiculturalist as one who believes that issues of equity and excellence cannot be effectively addressed without posing difficult but essential questions. For example, under what conditions and by whom are concepts of equality and excellence constructed? How can equality and excellence be achieved in a society in which historically the dominant cultures determined their meaning? For them, knowledge is not value-free but shaped culturally, historically, ethnically, and linguistically. In Giroux's (1988) words, knowledge "never speaks for itself, but rather is constantly mediated through the ideological and cultural experiences that students

bring to the classroom" (p.100). Therefore, the histories and narratives of subordinate groups must be a part of the school curriculum if equity and excellence are to be served to all students. Curriculum must be transformative, and teacher educators must engage a democratic dialogue with each other to develop programs that promote critical reflection and inclusionary knowledge.

The multicultural social education approach proposed by Sleeter and Grant (2003) challenges teachers as well as students to become social reformers and commit to reconstruction of society through redistribution of power and resources. The multicultural social education approach encourages teachers and students to analyze oppression with the purpose of taking action to bring about social justice. Unlike the liberal human relations approach, the social reconstructivism approach focuses on how people can change structures. In order to realize the primary goal of multicultural education, community action projects and active learning are encouraged.

Muffoletto and Horton (2007) advocated that educators need to identify issues and visions, leading to new relationships centering on democratic practices, equity, and social construction of knowledge and justice. Gallagher (1998) argued that one of the goals of multicultural education is to teach students to have a "flexible, not narrow" view

of the world around them (p. 24). Tan et al. (2010) suggested that educators need to

prepare students to have multicultural competency in order to meet the challenges of

being global citizens.

My interest in the integration of Web2Quest technologies within core

multicultural education courses in teacher education programs is based on my belief that

the transformation approach to multicultural education is needed. Because of the

changing demographics, the lack of multicultural education resources in teacher

education programs and the uneven distribution of educational resources, I believe that

changes are necessary in the structure of the curriculum in order to prepare pre-service

teachers to view concepts, issues, themes, and problems from various ethnic perspectives.

Consequently, the social action approach (Banks & Banks, 2007) to multicultural

education informed my analysis of the data.

Technology and Multicultural Education

Windschitl (2002) noted that the Internet is believed to have changed the ways in

which people learn and acquire information. Through the Internet, learners now have

access to a wide range of knowledge and ideas which place almost unlimited information

at their disposal. Keys and Bryan (2001) claimed that based on the constructivist

principle, learning should be an active, socially interactive process. Knowledge is viewed

as something learners must construct and is not independent of the learners. With this

view of knowledge and learning, teachers are no longer seen as gurus that transmit

knowledge to students but as guides who facilitate the process of students' construction

of knowledge. According to Keys and Bryan, much of the knowledge about constructivist

practice and technologies comes from the perspective of students, while little has been

provided about teacher's experiences, challenges, and dilemmas. They suggested that

researchers must look through the lens of teachers in their local context and observe their

use of tools so that the results of the studies will be used to develop better practice and

support for the teachers.

As Marshall (2001) reported, multicultural education and technology have

emerged as key issues in teaching and teacher education. Teachers at all levels seek ways

to integrate the two to reach more people and facilitate authentic and meaningful learning

experiences across cultures. Marshall suggested that teachers can implement the five

critical dimensions of multicultural education proposed by Banks and Banks (2001)--

content integration, knowledge construction, prejudice reduction, equity pedagogy, and

empowering school culture and social structure-- through technology. First, the goal of

content integration is to expand the curriculum by integrating contributions of diverse

cultures into traditional disciplines of study. Second, Cummins and Sayers (1997) wrote

that teacher educators are being called upon to use technology to promote and reinforce

knowledge. Third, prejudice reduction is about eliminating all forms of bigotry. Gorski

(2001) noted that technology provides educators and students wide access to a cross-

cultural professional learning community. Similarly, Anderson (as cited in Marshall,

2001) indicated that teacher education students are using distance learning technology,

multimedia, and e-mail to engage in cross-cultural and diverse regional interactions with

other prospective teachers. Throughout the world, many schools are making extensive

use of technology to provide access to higher education for the large population who

historically has been excluded from such opportunities. Fifth, the ultimate purpose of

multicultural education is to change the taken-for-granted policies and practices of

schools in order to empower school culture and social structure. Marshall stated that

throughout the U.S., access to university courses and degree programs is being made

available to students by expanded distance education through technology. In the end, a

critical and comprehensive approach to multicultural education can provide an important

framework for rethinking school reform.

Vavrus (2002) reminded educators that as technologies continue to be integrated into classroom instruction and increasingly favored for research over print resources, instructional technology as a field must take the lead in developing materials and methods that embrace a multicultural education approach to teaching. Otherwise, teachers will continue to promote an institutionalized form of racism by failing to disrupt the dominance of mainstream topics, methods, and resources by continuing to marginalize topics and methods which address race, racism, and minority groups. In order for the integration of multicultural education and technology to happen, scholars within the field of instructional technology must sustain a discussion related to multicultural education that includes the construction of race, gender and class within instructional technology rather than relying on those outside the field to make the connections for teachers.

Gorski (2001) suggested that online resources provide critical information regarding cultural groups that help to enhance knowledge and awareness of diverse groups and also increase communication among members of these groups. Gorski noted that a growing trend during the past decade has been the use of the Internet as a teaching and training tool for teacher educators. For example, Gerstein (2000) conducted a case study with San Franciscan and Taiwanese fourth graders which examined the use of

videoconferencing to create a collaborative cultural exchange with two groups of students

from different cultural and geographic backgrounds. Results from this case study

revealed that students involved in this type of videoconference exchange found the

cultural exchange more engaging than traditional learning tools. Similarly, Kitsantas and

Talleyrand (2005) conducted a case study to examine how online resources could

promote harmonious relationships between teachers and students of a boarding school

and its distant partner school. Those teachers and students participated in collaborative

activities and shared multimedia files via interactive videoconferences. Findings from

this study revealed that participating teachers developed empowering multicultural

relationships with one another while their students developed multicultural

understanding, positive self-concept, and meaningful applications of technology.

Merryfield (2001), using a content analysis approach, discussed the advantages

and disadvantages of a campus-based graduate course in Web-based multicultural

education. Her analysis revealed that pre-service teachers enrolled in the online course

were more enthusiastic and willing to share and discuss difficult multicultural education

issues than pre-service teachers enrolled in a traditional class setting. Merryfield

suggested that use of an online multicultural course led to more equitable discussions and

interaction among students of different cultural and religious backgrounds. Merryfield

argued that based on the review of existing literature, online resources can offer pre-

service teachers an opportunity to enhance their multicultural competencies through

exposure to teaching strategies that allow for more in-depth culturally sensitive

interactions among diverse groups, create less threatening learning environments for

multicultural discourse, and most importantly, expand one's cultural knowledge base and

retention of information.

Overview of WebQuest Model

A WebQuest has been defined by Dodge (1995) as an inquiry-oriented activity in

which some or all of the information that learners interact with comes from resources on

the internet. Research indicates that WebQuests can promote learners' critical thinking,

knowledge application, interpersonal and collaborative skills, and higher-level thinking

(Dodge, 1995; Schmitt, & Matthias, 2008). March (2003) reconceptualized and

elaborately defined the WebQuest as a scaffolding learning structure that uses links to

essential resources on the Web and an authentic task to motivate students' investigation

of a central, open-ended question, development of individual expertise, and participation

in a final group process that attempts to transform newly acquired information into a

more sophisticated understanding. Recent studies (March, 2003; Judson, 2006) indicated

that multicultural education in the curriculum of teacher education, including Web 2.0

technologies such as Skype, videoconferencing, wikis, blogs, Ning, Jing and Moodle can

enhance learning environments for collaboration and social interaction in which learners

construct knowledge on their own by engaging in meaningful activities.

Dodge (1995) stated that the WebQuest instructional design is based on

constructivist principles and is sometimes referred to as inquiry-based learning. The

constructivist approach emphasizes the role of students as primary agents of learning.

Learners engaged in WebQuests will find, analyze, classify, synthesize, and evaluate

information from sources on the Internet, and integrate new concepts into established

knowledge structures. Different WebQuests have been used to help students explore

issues and make informed decisions regarding the experiences and challenges faced by

diverse classrooms. With the aid of the Internet, teachers can use a more constructivist

approach to enhance students' learning in a larger context.

Theoretical underpinnings for WebQuest model.

The following underlying constructs of WebQuest as an effective instructional

tool were examined and identified based on earlier research by Dodge (1995, 1997,

2001), Zheng et al. (2008).

(1) Constructivist problem solving: The construct of higher-level thinking plays a unique

role in the design and development of WebQuests. VanFossen (2004) stated that

constructivism operates on the concepts of examining things from multiple lenses,

proposing solutions with varied approaches, and analyzing and synthesizing

information.

(2) Social interaction: Dodge (2001) identified the theoretical connection between

WebQuests and cooperative learning theory. Dodge pointed out that both WebQuests

and cooperative learning theory emphasize the construct of social skills to support

learning activities relating to positive interdependence, individual accountability, and

interpersonal skills.

(3) Scaffolded learning: The construct of scaffolded learning entails the concepts of

facilitating higher-level thinking and organizing new learning through making the

connection between previous learning and current goals, and enabling goal attainment

using a structured approach (Dodge, 1995, 2001; VanFossen, 2004). Dodge (2001)

also pointed out that the role of scaffolding is for students to "transform what they

read into some new form" (p.58). This facilitates what Mezirow (2000) called

transformative learning.

The researcher proposes that these findings have significant practical implications

for instructional designers and teachers who would like to use WebQuest to engage

learners in social collaboration. Additionally, the researcher suggests that the practice of

social collaboration should go beyond WebQuests' traditional conceptual framework to

include skills from other educational professionals who may contribute different

perspectives to help teachers design and develop WebQuests by implementing the new

elements of Web2.0 technologies into WebQuests, which will be described in the

following section.

Steps and instructional strategies for WebQuest model.

According to Dodge (1995), a WebQuest usually includes six steps. The

"introduction" part sets the stage and provides some background information which

draws the learner in and leads to the "task." The task should be doable and interesting.

The "information sources" provides useful related links to save the learner's time on

surfing the numerous websites. Information sources might include web documents,

experts available via e-mail or real-time conferencing, searchable databases on the net,

and books and other documents physically available in the learner's setting. The

"process" guides the learner step-by-step to complete the task by using needed resources.

The process should be broken out into clearly described steps. The "evaluation" is usually

constructed in the form of rubrics focused on both the process and the product of learning

in relation to a particular project. The "conclusion" part brings closure to the quest,

reminds the learners about what they have learned, and perhaps encourages them to

extend the experience into other domains.

Dodge (2001) proposed the possibilities of using Web 2.0 trends like blogs and

wikis in the WebQuest model. More dynamic and user-focused WebQuests can be

created easily by teachers with the help of Web 2.0 tools such as wikis and blogs.

WebQuest provides teachers with an instructional framework to create meaningful online

learning activities. For example, social linkage and human networks are critical in Web

2.0 learning environments. According to the Pew Internet and American Life Project

(2007), more than 55% of all American teenagers between the ages of 12-17 use online

social network sites such as Facebook. In Taiwan, a recent report from the Ministry of

Education (2011) stated that 85% of students ages 13-24 use a blog, wiki, or Facebook to

keep in touch with friends, publish online journals, or complete their assignments.

According to Kurt (2009), while the Internet has changed significantly, the WebQuest

technique has changed little over the past 10 years. To fully take advantage of Web 2.0

technology, teachers can create Web2Quests by using Web 2.0 tools such as wikis, blogs,

multimedia sharing, podcasting, and social networking. The upgraded WebQuest which

fully takes advantage of Web 2.0 technology has been named Web2Quest in this study.

Kurt (2009) further examined and discussed possible applications of new Web

trends on the instructional strategies of Web2Quests as identified below:

(1) Use of blogs in Web2Quests: A blog is a web-based application that allows the

authors to publish content that may be accessed via the Internet browser without

needing much technical knowledge. Moreover, blogs increase collaboration and

higher-level thinking through their feedback systems. For example, a blog can be

used to create interactive and effective Web2Quests easier and faster than designing

Web2Quests using the traditional method. Furthermore, learners can publish

questions they come across at any point while completing Web2Quest tasks, and

other group members or teachers can respond; this is similar to Blackboard discussion

or E-learning used on many college campuses in the US and Taiwan. In addition,

students may keep blog journals during their Web2Quest activities. Luehinann (2008)

shared a similar idea as he suggested that blogs can enhance reflection as well as

analytical, critical, and creative thinking by encouraging students to engage with

others who have viewpoints different from their own.

(2) Use of Wikis in Web2Quests: A wiki is a webpage with content that anybody can add

to, edit, or delete. Wikis provide unique collaborative opportunities; groups can

collaboratively work on the content of a site using a standard web browser. Kurt

(2009) advocated that learners and teachers in groups can collaboratively create

Web2Quests using wikis on the Internet to manage and organize information, share

resources, make decisions, and discuss work during the Web2Quest activities. Also,

teachers can monitor students' activities because wikis have a revision history feature.

This means whenever there is a change, wiki saves the before and after versions.

Therefore, teachers can see the progress the students are making. In summary, wikis

can be used as an alternative to a school or class website, to which a broader

interested audience can contribute ideas and comments; or teaching staff within the

same program may scaffold collaborative projects.

(3) Help from RSS feeds: Really Simple Syndication (RSS) is used for sharing web

content in the sense that a site's contents can easily be syndicated as an RSS feed to

whoever wants it. Many blog and wiki tools have the RSS feed feature built in to

syndicate content and therefore increase the effectiveness of Web2Quests. Kurt

(2009) suggested that RSS can be implemented in several ways: (a) teachers can

create automatically updating Web2Quests with the help of RSS, (b) teachers can

monitor Web2Quest activities via RSS feeds, and (c) students can keep up with their

peers' actions (p.37). With the help of RSS, teachers and students can keep abreast

with the latest information on specific subjects such as multicultural education and

technology in order to save a lot of time surfing different websites.

Implications of multicultural curriculum reform through WebQuests.

Web2Quest technology offers students and teachers the opportunity to transform

curricula and encourage students to develop higher-level thinking skills. Educators can

best promote this development by modeling critical thinking skills through Web2Quest

scaffolding learning activities. Encouraging students to recognize their values, feelings,

privileges, and biases can facilitate the development of self-awareness.

Dodge (1995) wrote that any technology in education needs to have the power to

guide learners to go beyond the information given. Web2Quest does that by connecting

people from different cultures via wikis, blogs, Skype and videoconferences. Using

Web2Quests can help build a solid foundation that prepares students for the future.

According to Wenger (2002), learning communities are groups of people who acquire

new knowledge through cooperation and collaboration. Wenger proposed that learning is

most transformative when the process of learning involves active participation in a

community within which one feels a sense of belonging. Webb and Mastergeorge (2003)

further explained that it is critical for members to negotiate a role within the community

and view themselves as contributors if they are to feel and sustain this sense of belonging.

With the aid of the Web2Quest scaffolding activities, teachers can use a more

constructivist approach to increase a community of learning in a larger context. A

successful and sustaining learning community encourages ongoing interaction if

members in the community develop a sense of belonging, respect and trust. In the

following section, the theoretical underpinnings for the WebQuest model further

elaborate on implications of multicultural curriculum reform through Web2Quests.

How Can My Study on Multicultural Education and Web2Quests Bridge the Gap?

Brown (2004) stated that using technology to continue discussion beyond the

classroom, investigate current multicultural research, discuss current issues, and share

information can assist teachers in broadening their horizons and understanding of self and

others within larger historical and social contexts. Bird and Rosaen (2005) suggested that

technology should be used as a tool for learning to teach, rather than content to be

learned. Thus, pre-service teachers should learn to use technology in context. Through

WebQuest projects, students can have the opportunity to learn to use the internet-based

technology while exploring issues in critical multicultural education. Using the Internet

for dialogues, teachers and students can learn the knowledge, skills, and positive attitudes

when working with people from different backgrounds. For example, videoconferences,

blogs, and Skype are like modern versions of pen pals which can be great assets to instill

learners' intercultural competencies. Teachers can implement multicultural education and

technology into teacher education courses to provide experiences for prospective teachers

to examine their privileged statuses and foster critical perspectives.

I propose the following features of Web2Quests that make them particularly well

suited for promoting multicultural education. First, Web2Quests provide an authentic

scenario to engage students in active learning while integrating several learning outcomes

within a single assignment; students can be encouraged to respect diverse talents and

ways of learning. Second, Web2Quests require that students use higher-level thinking

skills to look at the world from different perspectives. Third, the Web2Quest template

provides a ready framework for constructing assignments and developing meaningful

learning activities to engage students in examining multicultural issues. Finally,

Web2Quest scaffolding activities could help teachers and students address the multiple

and complex challenges in multicultural learning environments. I believed that the

overarching goal of the integration of Web2Quests into multicultural education was to

equip students with the basic knowledge and skills necessary for using technology to

promote social interaction and, ultimately, empowerment by connecting students as well

as teachers across cultural boundaries.

In summary, Web2Quests can provide four major functions to promote

multicultural education. First, Web2Quests can act as a tool for multicultural education

scaffolding activities which include technology tools, peer interactions, and online

communities. Second, Web2Quests can serve as a tool to increase higher-level thinking.

Third, Web2Quests can help both teachers and students reduce their prejudice and biases

toward people from cultures other than their own. Fourth, Web2Quests can promote

collaboration so that participants may work together to maximize their own and each

others' learning. I believe that Web2Quests may help to meet some of the challenges

which are caused by the increasing numbers of students from diverse backgrounds, the

inequitable educational resources, and the lack of multicultural education in teacher

education programs in Taiwan.

Many teacher educators in Taiwan such as Tan et al. (2010) who teach

multicultural education courses cite the works of multicultural key leaders from the U.S.

or other countries include: Nieto, Freire, McLaren, Banks and Banks, Sleeter and Grant,

and Gay. The approaches advocated by Banks and Banks, and Sleeter and Grant are

widely employed in the Taiwanese context. However, I believe that the current status of

multicultural education in Taiwan is somewhat different from the U.S. context. I suggest

that teacher educators need to examine if the multicultural theories and teaching

pedagogies advocated by the U. S. educators fit into the Taiwanese context. Learning

lessons of multicultural education practice from the U. S. context might help educators in

Taiwan create suitable frameworks, theories, and teaching pedagogies which could meet

the needs of diverse students in Taiwan. Teacher educators could take what fits into the

Taiwanese context and tailor it in order to work best for the Taiwanese educational

system at all levels from preschool to higher education.

The next chapter describes the mixed methods for this study, followed by research

questions, theoretical framework, research design, data sources, data collection

procedures, data analysis and interpretation, researcher's role, and trustworthiness of the

data.

Chapter Three: Methodology

Mixed Methods: Qualitative and Quantitative

This research study incorporated both qualitative and quantitative data. One of the goals of using mixed methods was to draw from the strengths of both while minimizing their respective weaknesses. Qualitative analysis provided the context that quantitative research lacks, and a quantitative analysis broadened the implications of the purely qualitative study. Additionally, the use of multiple data sources informed the research study, provided insight, and strengthened the findings. Creswell (2009) suggested that a sequential study with a qualitative follow-up phase builds on and helps to explain the initial quantitative phase. The aim of this two-phase, sequential mixed methods study was to understand the attitudes and beliefs of the pre-service teachers and teacher educators regarding multicultural education and the current status of multicultural education in Taiwan, and to critically examine the opportunities and challenges of integrating Web2Quest technologies into multicultural education courses in three universities in Taiwan.

In the first phase, I used quantitative research questions to address the pre-service teachers' attitudes and beliefs toward multicultural education. After students completed

the Web2Quest projects, the Web2Quest questionnaire with 20 Likert Scale items was administered. Information from the first phase was explored further in a second qualitative phase. In the second phase, qualitative data sources included: open-ended questions on Web2Quest questionnaire, focus group discussions with the pre-service teachers, one-on-one interviews with the teacher educators who taught multicultural education courses, the researcher's field notes, and Web2Quest final projects from the pre-service teachers.

Pros and Cons of Qualitative Research

Patton (2002) stated that qualitative research is an unconstrained approach to studying phenomena. Although a number of standard approaches to collecting and interpreting qualitative data exist, qualitative research relies heavily upon the researcher. The researcher determines the type of data gathered and the methods to be used for analysis of that data. Patton also noted that qualitative data is typically rich in detail and context; interpretations are tied directly to the data source, and research validity and reliability are based upon the logic of the study interpretations. Qualitative studies, therefore, provide a window into a contextual setting and a logical picture of events within the setting. However, the attention to detail central to qualitative analysis typically

means that study conclusions will only relate to a very narrow range of circumstances.

Furthermore, the training and beliefs of the qualitative researcher may shape the research

structure and findings. As a result, Ary, Jacobs, Razavieh, and Sorensen (2006) stated

that qualitative findings may not provide any correlation between cause and effect on a

broad scale.

Pros and Cons of Quantitative Research

Patton (2002) noted that the tools and techniques used for gathering and analyzing

data in quantitative research are well established and the validity and reliability of a study

typically depend upon the researcher's adherence to pre-existing methodologies. Creswell

(2009) wrote that a wide range of available statistical methods allows researchers to

develop explanatory models that can account for the phenomena occurring in similar

settings. Creswell said that these models, which allow for the development of theories of

cause and effect, can have significant predictive power in classroom settings. In addition,

Ary et al. (2006) indicated that because data analysis is governed by statistics, the

personal beliefs of the researcher will have only minimal impact on study findings.

However, this modeling approach can result in an artificial categorization of phenomena

that has little correlation to the real world. Patton believed that the context in which data

was originally collected may be lost beneath the layers of statistical analysis inherent to

quantitative research.

Purpose of the Study

The purpose of this study was to understand the attitudes and beliefs of the pre-

service teachers and teacher educators regarding multicultural education and the current

status of multicultural education in Taiwan, and to critically examine the opportunities

and challenges of integrating Web2Quest technologies into multicultural education

courses in three universities in Taiwan. Using mixed methods, I sought to define,

describe, and interpret categorical themes within the practice of multicultural learning

and teaching.

Research Questions

1. What are the attitudes and beliefs of the pre-service teachers and teacher

   educators regarding multicultural education, and how do the teacher educators

   prepare the pre-service teachers to meet the needs of diverse K-12 students in

   Taiwan?

2. To what extent is there integration of Web 2.0 technologies in the multicultural

   education courses in the three teacher education programs in Taiwan?

3. What are the perceptions of the teacher educators and the pre-service teachers

regarding the use of Web2Quests to facilitate multicultural education?

Theoretical Framework: Social Constructivism

The overarching theoretical framework for the research was social constructivism.

According to Vygotsky (1989), social constructivism emphasizes the importance of

culture and context in understanding what occurs in society and constructing knowledge

based on that understanding. Social constructivism is based on specific assumptions

about reality, knowledge, and learning. For Vygotsky, in a constructivist learning

environment students acquire knowledge by constructing bridges from former knowledge

to new ways of knowing. The characteristics of social constructivism fit well to my study

when meaningful learning occurs through the implementation of Web2Quest

technologies into multicultural education courses. Knowledge, meaning, and

understanding of the world can be reconstructed with the aid of Web2Quest technologies,

from both the view of the individual learner and the collective view of the global

audience.

Research Design

Research context.

Four teacher education programs in Taiwan were selected for this study because

of their strong, well-defined undergraduate and graduate teacher education programs.

These programs require one multicultural education core course. All students entering the

programs are required to take this introductory foundation course. One of the purposes of

the multicultural course is to provide the pre-service teachers with an opportunity to

examine and discuss classroom diversity and the multicultural attributes that students

bring to K-12 classrooms.

The sampling plan.

The method of purposeful sampling was employed in this study. Denzin and

Lincoln (2005) noted that purposeful sampling is a type of nonprobability sampling in

which one selects the units to be observed on the basis of the researcher's own judgment

about which ones will be the most useful or representative. According to Patton (2002),

this technique engages a process that is designed to generate a group that is information-

rich, which this study aimed to obtain. Wiseman and Garza (2002) stated that if the

process is successful, the selected group will be sufficiently knowledgeable about the

phenomena being studied and, therefore, should represent the character of the population

in a meaningful way. This methodology was selected because groups not only provide

rich information but also in-depth understanding. Gall, Gall, and Borg (2003) argued that

the intent is to achieve an in-depth understanding of selected individuals.

Study participants.

I emailed the chairpersons of the Department of Education in the three universities

to ask if I could invite a teacher educator and the pre-service teachers in one of their

multicultural education sections to participate in my study. With the permission of the

chairpersons, I emailed all the teachers of the core multicultural education course within

the three Departments of Education to seek volunteers for my study. I chose three teacher

educators from the six who volunteered in response to my e-mail. I then explained to the

selected teachers what Web2Quest is and how it can be integrated in multicultural

education courses. I e-mailed a Web2Quest example "Searching for China" (Appendix

A) by Dodge (1995) to the three teacher educators, so they could make an informed

decision about their participation. All the possible questions raised by the teacher

educators were answered by the researcher via e-mails or Skype prior to their signing the

Informed Consent Form for Teacher Educators (Appendix C).

I met with each of the teacher educators after arriving in Taiwan to describe more about the study and answer any questions they had. I set up a time to visit each teacher educators' class to explain this research project and invite all of the students in the three courses to participate in a Web2Quest project. In each class, I demonstrated the six steps of the "Searching for China" WebQuest and answered questions raised by the pre-service teachers as well as the teacher educators to help them feel comfortable to integrate the WebQuest into their multicultural education course. I then distributed the Informed Consent Form for pre-service teachers (Appendix D) and a total of 120 pre-service teachers signed and returned the consent forms. I encouraged all the participants to contact me for further questions via e-mails or Skype at any time during the process of completing the Web2Quest projects.

The pre-service teachers who signed and returned the consent form then completed the Demographic Information Form (Appendix E). The following section describes the demographic information of the pre-service teachers.

The demographic information of the pre-service teachers.

In order to better describe the study participants, I asked the pre-service teachers to answer 13 questions concerning demographic information. The following demographic

information data items were adopted from Hopkins-Gillispei (2008). Questions four, six,

and seven are not presented in a table. Only five pre-service teachers indicated their GPA

because the others considered it confidential. In addition, all the participants majored in

education, and only 12 of them stated that they had minors such as English, Japanese,

culture and environment, and business. The majority of the pre-service teachers in the

study did not have minors. Data from the other 10 questions concerning demographics

are discussed in the following paragraphs.

Table 3.1 indicates that the majority of the pre-service teachers (85%) were

female; whereas 15% were male. There were 33 females and 8 males in University A, 28

females and 6 males in University B, and 41 females and 4 males in University C.

Table 3.1

Demographics of the Pre-service Teachers: Gender

	Female	%	Male	%
University A	33	80.5	8	19.5
University B	28	82.4	6	17.6
University C	41	91.1	4	8.9
Total	102	85.0	18	15.0

Table 3.2 shows that the majority (80.8%) of the pre-service teachers were

undergraduate students (age 18-21), and 19.2% were graduate students (age 22 -35).

There were 36 undergraduate students and 5 graduate students in University A, 25

undergraduate students and 9 graduate students in University B, and 36 undergraduate

students and 9 graduate students in University C.

Table 3.2

Demographics of the Pre-service Teachers: Age

	18-21	%	22 & 22+	%
University A	36	87.8	5	12.2
University B	25	73.5	9	26.5
University C	36	80.0	9	20
Total	97	80.8	23	19.2

Table 3.3 illustrates that Taiwanese students were the overall majority (79.8%),

followed by Hakka (10.6%), Mainlanders (7.7%), and the Taiwanese aborigines (1.9%).

There were 104 pre-service teachers who responded to their ethnicity. In University A,

the percentage of Taiwanese was (81.1%), Hakka (10.8%), Mainlanders (8.1%), and the

Taiwanese aborigines (0%); in University B, Taiwanese (77.2%), Hakka (11.8%),

Mainlanders (5.9%), and the Taiwanese aborigines (5.9%); and in University C,

Taiwanese (81.8%), Hakka (9.1%), Mainlanders (9.1%), and the Taiwanese aborigines

(0%).

Table 3.3

Demographics of the Pre-service Teachers: Ethnicity

	Taiwanese		Hakka		Mainlanders		Aborigines	
	N	%	N	%	N	%	N	%
University A	30	81.1	4	10.8	3	8.1	0	0.0
University B	26	77.2	4	11.8	2	5.9	2	5.9
University C	27	81.8	3	9.1	3	9.1	0	0.0
Total	83	79.8	11	10.6	8	7.7	2	1.9

Table 3.4 shows that the majority (71.6%) of the pre-service teachers were from

the six major counties in Taiwan: Taipei and Taoyuan counties (located in northern

Taiwan) 25.8%, Hsinchu County (located in northern Taiwan) 6.7%, Taichung County

(located in the central region of Taiwan) 22.5%, Tainan County (located in southern

Taiwan) 8.3%, and Kaohsiung County (located in southern Taiwan) 8.3%. The rest of the

pre-service teachers (28.3%) were from other counties in Taiwan. University A is located

in an international city of Taiwan where there are more resources and it is easier to get

around. Therefore, Taiwanese students from other than the six major counties preferred to

study in University A; this may explain the reason why the percentage was 36.6%, the

same percentage as residents of Taipei and Taoyuan counties. University C is located in

the central region of Taiwan, which may explain why 46.7% of the students were from

Taichung County; students from the southern region of Taiwan also preferred to study

there since it was not too far from their hometowns. This may contribute to why the

percentage was fairly high (28.9%).

Table 3.4

Demographics of the Pre-service Teachers: Home Town

	A		B		C		D		E		F	
	N	%	N	%	N	%	N	%	N	%	N	%
University A	15	36.6	3	7.3	3	7.3	3	7.3	2	4.9	15	36.6
University B	12	35.3	3	8.8	3	8.8	4	11.8	6	17.6	6	17.6
University C	4	8.9	2	4.4	21	46.7	3	6.7	2	4.4	13	28.9
Total	31	25.8	8	6.7	27	22.5	10	8.3	10	8.3	34	28.3

A: Taipei and Taoyuan Counties   B: Hsinchu County   C. Taichung County

D: Tainan County   E: Kaohsiung County   F: Other Counties in Taiwan

Table 3.5 illustrates that over half (56.7%) of the pre- service teachers in this

study were from urban residential areas, 25.8% from suburban area, and 17.5% from

rural residential areas. In general, Taiwanese pre-service teachers are from middle-class

families who usually live in urban and suburban areas.

Table 3.5

Demographics of the Pre-service Teachers: Type of Residential Area

	Urban	%	Suburban	%	Rural	%
University A	20	48.8	11	26.8	10	24.4
University B	24	70.6	5	14.7	5	14.7
University C	22	48.9	15	33.3	8	17.8
Total	68	56.7	31	25.8	21	17.5

Table 3.6 indicates that 99.2% of the pre-service teachers had access to the

Internet at home; only one student (.8%) did not have Internet access. All the pre-service

teachers in University A and University C indicated that they had access to the Internet at

home. There was only one pre-service teacher in University B who indicated that he had

no access to the Internet at home.

Table 3.6

Demographics of the Pre-service Teachers: Access to the Internet at Home

	Yes	%	No	%
University A	41	100.0	0	0.0
University B	33	97.1	1	2.9
University C	45	100.0	0	0.0
Total	119	99.2	1	0.8

Table 3.7 illustrates that regarding hours using the computer per day, 41.7% of the

pre-service teachers used one-to-three hours, 45% four-to-six hours, 13.3% over six

hours; five of the pre-service teachers used the computer over eight hours a day. For

University A, the percentage of pre-service teachers using one-to-three hours was 51.2 %

four-to-six hours, 36.6% , and over six hours 12.2%; for University B, one-to-three hours

was 35.3% , four-to-six hours, 50% , and over six hours, 14.7% ; for University C, one-

to-three hours was 37.8 %, four-to-six hours, 48.9% , and over six hours, 13.3%.

Table 3.7

Demographics of the Pre-service Teachers: Hours Using the Computer per Day

	1~3	%	4~6	%	Above 6	%
University A	21	51.2	15	36.6	5	12.2
University B	12	35.3	17	50.0	5	14.7
University C	17	37.8	22	48.9	6	13.3
Total	50	41.7	54	45.0	16	13.3

Table 3.8 indicates that the majority (80.8%) of the pre-service teachers had

connected with foreigners via the Internet. The percentage of the pre-service teachers

who had connected with foreigners via the Internet was 73.2% in University A; 82.4% in

University B; and 86.7% in University C.

Table 3.8

Demographics of the Pre-service Teachers: Connecting Foreigners via the Internet

	Yes	%	No	%
University A	30	73.2	11	26.8
University B	28	82.4	6	17.6
University C	39	86.7	6	13.3
Total	97	80.8	23	19.2

There were120 participants who responded to the question regarding the level of

teaching; Table 3.9 reveals that 7.5% of the pre-service teachers preferred to teach

kindergarten, 35.8% elementary school, 20.8% middle school, 29.2% high school, and

6.7% at a university.

Table 3.9

Demographics of the Pre-service Teachers: The Level of Teaching

	K	%	E	%	M	%	H	%	U	%
University A	3	7.3	16	39.0	4	9.8	14	34.1	4	9.8
University B	0	0.0	25	73.5	4	11.8	5	14.7	0	0.0
University C	6	13.3	2	4.4	17	37.8	16	35.6	4	8.9
Total	9	7.5	43	35.8	25	20.8	35	29.2	8	6.7

K=Kindergarten; E=Elementary School; M=Middle School; H=High School; University=U

Table 3.10 reports that 1.7% of the pre-service teachers were freshmen, 19.2%

sophomore, 37.5 junior, 22.5% senior and 19.2% graduate students. In Taiwan,

multicultural education courses are usually offered to both undergraduate and graduate

students; however, graduate students are required to do more assignments than

undergraduate students. The largest number of the pre-service teachers was taking the

multicultural education courses when they were juniors. However, the data suggested that

the pre-service-teachers in University A preferred to take multicultural education courses

when they were sophomores. I believe that these students had more opportunities to

expose themselves to a diverse setting since the school was located in an international

city; there were more international students who came to study Mandarin in University A

compared to University B and University C. The Mandarin program was well-known in

University A; according to Ministry of Education (2011) in Taiwan, 95% of the

international students chose to study Mandarin in University A. As a result, the school

climate there may have helped the pre-service teachers feel comfortable when addressing

multicultural-related issues and prepared to take the multicultural education course as

sophomores.

Table 3.10

Demographics of the Pre-service Teachers: Class Ranking

	F	%	S	%	J	%	S	%	G	%
University A	0	0.0	18	43.9	12	29.3	6	14.6	5	12.2
University B	2	5.9	3	8.8	15	44.1	5	14.7	9	26.5
University C	0	0.0	2	4.4	18	40.0	16	37.8	9	17.8
Total	2	1.7	23	19.2	45	37.5	27	22.5	23	19.2

F=Freshman; S=Sophomore; J=Junior; S=Senior; G=Graduate

Data Sources

I chose a mixed methods design with six data sources: the Teacher Multicultural

Attitude Survey (TMAS, Appendix F) by Ponterotto, Baluch, Greig, and Rivera (1998), a

Web2Quest Questionnaire (Appendix G) which I developed with 20 items in a Likert-

scale format and four open-ended questions, three focus groups with 18 pre-service

teachers, one-on-one interviews with five teacher educators, the researcher's field notes,

and the pre-service teachers' final Web2Quest projects. A permission letter from

Professor Ponterotto is included in (Appendix H). Responses from questionnaires

provided the insight for questions to be used in focus groups with the pre-service teachers

and one-on-one interviews with the teacher educators.

Teacher multicultural attitude survey.

The Teacher Multicultural Attitude Survey (TMAS) was selected to measure pre-service teachers' beliefs and attitudes about multicultural education. This survey was selected as the most appropriate tool for the purpose of the study after a thorough review of the literature about multicultural sensitivity and competence, as well as various ways to measure teachers' awareness of, comfort with, and sensitivity to issues of multicultural education in diverse classrooms. The TMAS consists of a 20-item questionnaire using a five-point Likert Scale which is designed to obtain information in a standardized way regarding pre-service teachers' attitudes and beliefs about multicultural education. The survey (TMAS) was administered to the pre-service teacher participants prior to the implementation of the Web2Quest.

Web2Quest questionnaire.

The other quantitative data source was the 20 Likert Scale items on the Web2Quest Questionnaire (Appendix G) which was administered to the pre-service participants after they completed the Web2Quest projects. In addition, qualitative data were collected through four open-ended questions on the Web2Quest questionnaire.

Focus group discussions.

Rationale of focus group discussions. Patton (2002) described a focus group as a

carefully planned discussion designed to obtain perceptions on a defined area of interest

in a permissive, nonthreatening environment. The interaction among the participants may

stimulate participants to state their feelings, perceptions, and beliefs that they might not

express if interviewed individually. Patton recommended that focus groups should be

conducted with approximately four to six people by a skilled interviewer. My rationale

for using six students in each focus group was to assemble a heterogeneous group of

students who were in the multicultural education courses for this study and who had

diverse backgrounds in relation to gender, race, ethnicity, and socioeconomic status. I

also wanted some diversity based on their part-time working experiences and travel

experiences. Therefore, I invited six students per class from those who volunteered to

participate in a focus group session.

Denzin and Lincoln (2005) suggested that focus group interviews can be used for

triangulation purposes and in conjunction with other data-gathering techniques. Groups

are not simply a convenient way to collect individual knowledge from their members.

According to Denzin and Lincoln as well as Patton (2002), focus group interviews help to

make data more in-depth, encourage interactions among participants to enhance data

quality, and provide checks and balances on each other. The goal for the focus groups in

this study was to establish the widest range of meaning and interpretation of the pre-

service teachers' attitudes and beliefs regarding multicultural education and the use of

Web2Quest to facilitate multicultural education. Therefore, the four open-ended

questions on the Web2Quest Questionnaire (Appendix G) were asked to probe for a

deeper understanding regarding those questions.

　　　　The participants and settings of the focus group discussions. After examining

the data from the pre-service teachers' responses to the TMAS and Web2Quest

questionnaire, I conducted three sessions of focus group discussions. Each focus group

discussion was conducted after class in a quiet and cozy café near their university. I

selected cafés I thought might be conducive to conversation and free from distractions. I

provided the pre-service teachers lunch, and the discussions began with protocol

questions which were the same as the four open-ended questions on the Web2Quest

Questionnaire. The protocol served as a guideline to focus the direction of the

discussions. All the participants volunteered to share their ideas, perceptions, and

experiences with openness. The discussion was characterized as comfortable for the

participants. Each focus group session was audio taped and lasted approximately two and a half hours.

These participants included four Taiwanese, one Hakka, and one Mainlander from University A; two Taiwanese, two Taiwanese aborigines, one Hakka, and one Mainlander from University B; four Taiwanese, one Hakka, and one Mainlander from University C. More Taiwanese pre-service teachers were selected because they were the majority (78%) of the pre-service teacher participants. There was only one male in each focus group since the majority of the pre-service teachers were female.

My role in the focus group discussions. During each focus group session, my role included using responses such as active listening, minimal encouragement, being objective, and probing for further explanations. I made sure that the participants had ample time to convey the way they conceptualized their experiences. Questions were left open-ended; I probed to obtain more in-depth and complete information or to clarify a response. I listened attentively as the participants answered questions.

One-on-One Interviews.

Another data source was one-on-one interviews with five teacher educators.

***Rationale of one-on-one Interviews*.** I conducted semi-structured, in-depth

interviews with five teacher educators. The purpose of using in-depth interviewing of the

teacher educators was to understand their attitudes and belief regarding multicultural

education as well as their teaching strategies. With the three teacher educators who

integrated a Web2Quest in their course, I wanted to learn their perceptions and

experiences. Two additional teacher educators who also taught multicultural education

courses were interviewed using the same set of questions (Appendix I) with the exception

of asking them what they thought might be the opportunities and challenges regarding the

implementation of Web2Quest technologies into the multicultural education courses.

The interviews with the five teacher educators provided rich in-depth information about

the current status of multicultural education in Taiwan, how they prepared the pre-service

teachers to meet the needs of diverse K-12 students, and their perceptions regarding the

integration of Web2Quest technologies into multicultural education courses. The

participants being interviewed openly expressed their ideas and insights. Each

participant's interview session was audio taped and the sessions lasted approximately 60

to 90 minutes.

*The setting of the one-on-one interviews***.** The three teacher educators who welcomed me into their classes to conduct this research study were interviewed before and after the integration of a Web2Quest in their multicultural education courses. The one-on-one interviews were conducted in a quiet setting. Two additional teacher educators were interviewed via Skype after I returned to the U.S.

*My role in the one-on-one interviews***.** During the interview process, my role included using responses such as active listening, being objective, and probing for further explanations. Since questions were left open-ended (Appendix I), the teacher educators had the opportunity to be flexible in their answers.

Data Collection Procedures

To start, the demographic data and the TMAS questionnaire were completed in the first week of December 2010 after students signed the Informed Consent Form for pre-service teachers (Appendix D). Second, I conducted the first one-on-one interview with the teacher educators whose classes were participating in the study. Third,   the Web2Quest Questionnaire with both Likert Scale items and open-ended questions, the focus group discussions with 18 pre-service teachers, and the second one-on-one interviews with the three teacher educators were completed after the pre-service teachers

had finished the Web2Quest project. In addition, I asked the three educators for

permission to be an observer in their classrooms, and I kept field notes. Each teacher

educators sent me two final Web2Quest projects at the end of the semester. Two

additional teacher educators who also taught multicultural education courses were

interviewed via Skype in April. Data analysis and interpretation were completed by the

end of May 2011.

The TMAS and Web2Quest Questionnaire were distributed at prearranged times

by the researcher and the course instructors. All pre-service teacher participants were

given verbal and written instructions to respond to the instruments independently. The

researcher was in the three classes when conducting the surveys to answer any possible

questions.

Data was collected through three focus groups, each with six pre-service teachers

and one-on-one interviews with three teacher educators who taught the courses I

observed and two additional teacher educators who also taught university level

multicultural education courses. Protocols of questions were followed for each interview

session, allowing for some flexibility in the conversations for clarification purposes. All

participants were given a copy of the transcript of the interview or focus group session to

verify the accuracy and completeness of information. This procedure helped with the

validity of data through member checking, which allowed participants to validate the

researcher's reconstruction of the participants' perspectives (Gall et al., 2003; Patton,

2002).

Data Analysis and Interpretation

   Data analysis.

   Quantitative data analysis. Data from the Teacher Multicultural Attitude Survey

(TMAS) as well as the 20 Likert Scale items from the Web2Quest Questionnaire were

analyzed using Microsoft Excel.

   Qualitative data analysis. Patton (2002) stated that analysis of all data is an on-

going process. Interviews and focus group sessions were completed for rich in-depth

information; field notes were taken to record various aspects of the fieldwork: non-verbal

cues, feelings perceived, and body language demonstrated by the participants. Ideas

emerged and patterns began to take shape. According to Patton, fieldwork is initially

generative and emergent, following the flow of the data with data analysis taking place

throughout the process of data collection.

Audio tapes were transcribed. Transcripts were read when listening to recordings

in order to verify information on transcripts. This process helped to provide a clearer and

accurate picture of responses by the participants. Each transcript was analyzed through a

process of open coding for conceptualizing and categorizing the data, followed by axial

coding for making assumptions and developing emergent themes. Patton (2002)

suggested that data should be organized by emergent ideas, and a coding system used for

content analysis, involving "identifying, coding, categorizing, classifying, and labeling"

the information from the transcription (p.463). Transcribed data was coded and

identifying labels were given to each meaning segment (part of a sentence, whole

sentence, or even paragraphs) as a coding program.

Analyses of open-ended questionnaire items. Cooper and Patall (2009) stated

that all responses should be scored holistically as described above and the participant

responses coded by the researcher manually. For this study, coded responses from the

four open-ended questions in the Web2Quest Questionnaire were matched with emerging

themes and patterns in the data as a means to draw a summary of the findings.

Interpretation of data.

In order to seek rigor in my research method and analysis, I sought validity

through methodological triangulation and data triangulation. A description of qualitative

methods used to establish validity and reliability is explained as follows.

Patton (2002) stated that there are four basic types of triangulation for establishing

the validity of the findings. These include: (a) Data Triangulation; (b) Methodological

Triangulation; (c) Theory Triangulation; (d) Investigator Triangulation or Analyst

Triangulation. To begin, I chose mixed methods which represented Patton's conception

of methodological triangulation. I then chose three multicultural education classes in

three teacher education programs. This represented Patton's conception of data

triangulation; data was drawn from different universities. I used multiple sources to study

the phenomenon of interest, which include: open-ended questions in the Web2Quest

Questionnaire, focus group interviews with 18 pre-service teachers, one-on-one in-depth

interviews with five teacher educators, the researcher's field notes, and the final

Web2Quest projects of the pre-service teachers.

The pre-service teacher participants' responses to the open-ended questionnaire

items, the focus group data, and the one-on-one interviews with the five teacher educators

were analyzed through a process of open coding for conceptualization and categorizing of

the data. Then, axial coding was used for making assumptions and developing emergent

themes.

I studied each interview and focus group transcript by listening and reading

through them several times, looking for repeating ideas conveyed by the participants.

From this review, I defined categories of phrases stated by the participants and categories

of ideas were developed as overarching themes. Repeating ideas from the participants'

responses assisted with this process of coding for specific patterns and emergent themes.

Researcher's Role

Participants were informed that participation in this research was on a volunteer

basis. Confidentiality was provided through careful maintaining of the participant's

anonymity by using pseudonyms on all of the forms. All recordings are being kept by the

researcher in a locked file. As a result, there is very minimal threat as far as any exposure

of the pre-service teachers and the teacher educators in the study as a result of their

participation.

Patton (2002) defined empathetic neutrality as the "position, feeling, experiences,

and worldview of others, different from sympathy in the addition of cognitive

understanding" (p.52). Neutrality suggests the nonjudgmental position of the interviewer;

therefore, the participants could express their opinions openly. I conveyed to the

participants that their knowledge, experiences, attitudes, and feelings were important.

However, I went on to explain that I would not judge them for the content of what they

said to me.

Trustworthiness of the Data

I used several methods to increase "trustworthiness" (Lincoln & Guba, 2000) and

to minimize common threats to the validity. Trustworthiness of data comes through

providing credibility as a result of the procedures followed in data collection and

analysis; as Patton (2002) noted, "a credible voice conveys authenticity and

trustworthiness" (p.494). Developing protocols for the interview and focus group

discussions that gave the participants opportunities to address their perspectives of the

issue provided a solid foundation for believability, along with collecting rich and detailed

descriptive data. This provided strength of trust in the research. A member check of the

data was performed by asking participants to read through the data after transcription,

checking for accuracy. This validated participants' voices as they were represented in the

data. Data and findings were triangulated to establish validity. Two types of triangulation

suggested by Patton (2002) were used in this study: data triangulation and

methodological triangulation.

      The next chapter describes the analysis of the TMAS and the Web2Quest

Questionnaires, focus group discussions, one-on-one interviews, the researcher's field

notes, and final Web2Quest projects of the pre-service teachers.

Chapter Four: Analysis of Data

This study examined the attitudes and beliefs of 120 pre-service teachers as well

as five teacher educators regarding multicultural education and the integration of

Web2Quest technologies in multicultural education courses in three teacher education

programs in Taiwan. Three of the teacher educators implemented a Web2Quest into their

multicultural education courses. The other two teacher educators were interviewed to

determine their attitudes and beliefs regarding multicultural education and Web2Quest

technologies. During the data analysis process, I focused on answering three research

questions: (1) What are the attitudes and beliefs of the pre-service teachers and teacher

educators regarding multicultural education, and how do the teacher educators prepare

the pre-service teachers to meet the needs of diverse K-12 students in Taiwan? (2) To

what extent is there integration of Web 2.0 technologies in the multicultural education

courses in the three teacher education programs in Taiwan? and (3) What are the

perceptions of the teacher educators and the pre-service teachers regarding the use of

Web2Quests to facilitate multicultural education?

Data for this study were collected through six sources: the Teacher Multicultural

Attitude Survey (TMAS), the Web2Quest Questionnaire with 20 Likert-Scale items and

four open-ended questions, focus group discussions with 18 pre-service teachers, one-on-one interviews with five teacher educators, the researcher's field notes, and the pre-service teachers' final Web2Quest projects.

This chapter encompasses two main sections. The first section presents the quantitative analysis of (a) the Teacher Multicultural Attitude Survey (TMAS) and (b) 20 Likert Scale items on the Web2Quest Questionnaire. The second section presents the qualitative analysis of: (a) the four open-ended questions on the Web2Quest Questionnaire with pre-service teachers, (b) the focus group discussions with the pre-service teachers (c) the one-on-one interviews with the teacher educators, (d) the researcher's field notes, and (e) the final Web2Quest projects of the pre-service teachers.

Quantitative Data Analyses

This section presents the results of the quantitative analysis of the responses provided by the study participants. Results were given based on the data sources used in the following order: the Teacher Multicultural Attitude Survey (TMAS) and the 20 Likert Scale items on the Web2Quest Questionnaire.

Teacher multicultural attitude survey.

The TMAS (Appendix F) consisted of 20 questions asking for a participant's

degree of agreement on a five-point Likert scale (1 = strongly disagree; 2 = disagree; 3 =

uncertain; 4 =agree; 5 = strongly agree) (Lester & Bishop, 2000). The instrument

measured "teacher awareness of, comfort with, and sensitivity to issues of cultural

pluralism in the classroom" (Ponterotto et al. 1998, p. 1003). The survey was

administered to three different classes of the pre- service teachers from three teacher

education programs in Taiwan.

Descriptive statistics. The TMAS was administered to the three groups of pre-

service teachers in winter of 2010. Data analysis of the descriptive statistics illustrated in

Table 4.1 indicated a total mean score of 4.01 on the TMAS with standard deviations of

the first group being .682, the second group .719, and the third group .729

respectively. The mean score indicated that overall the pre-service teachers had positive

attitudes toward multicultural education.

Table 4.1

TMAS: Means and Standard Deviations (N=120)

	Mean	Std. Deviation	N
University A	3.984	.682	41
University B	4.047	.719	34
University C	4.000	.729	45
Total	4.01	.71	120

Mean scores suggested that the pre-service teachers in the study were culturally sensitive to working with culturally diverse students. The data also indicated that the pre-service teachers had a good understanding of such students. The results revealed that there was minimal variation among the three groups regarding the pre-service teachers' attitudes, beliefs, and sensitivity in working with culturally diverse students.

Item analysis. TMAS (Appendix F) beliefs and attitudes scores were obtained from the pre-service teachers' responses to the five-point Likert Scale items. Items number 3, 6, 12, 15, 16, 19, 20 were designated as inconsistent items and thus were reverse-scored prior to data analysis. The overall mean on the teacher multicultural attitude survey was 4.01, which suggested a high level of sensitivity toward multicultural education (Ponterotto et. al, 1998).

Figure 4.1 shows the mean scores of the TMAS of the pre-service teachers for each item. Data presented mean scores of items 2, 11, and 12 were 4.19-4.39, the higher scores compared with other items. Based on the scores, the majority of the pre-service teachers strongly believed that teaching methods need to be adapted to meet the needs of culturally diverse students, the pre-service teachers can learn a great deal from students with different backgrounds, and multicultural training for teachers is necessary. Data presented mean scores of items 3, 16, and 17 were 3.48-3.73, the lower scores compared with other items. These questions asked if teachers believed that sometimes there is too much emphasis on multiculturalism and training for pre- service teachers, current curriculum gives undue importance to multiculturalism and diversity, and if they were aware of the diversity of cultural backgrounds of the students they were working with.

Figure 4.1

Mean Scores of the TMAS for Each Item
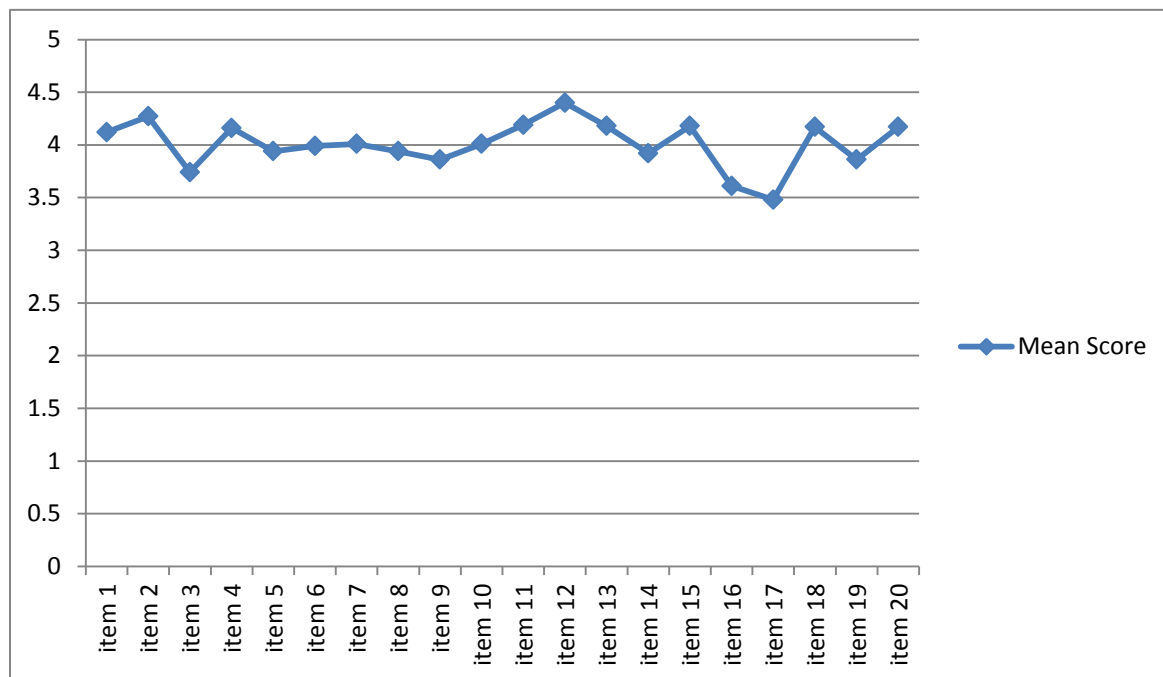
Web2Quest questionnaire.

The Web2Quest Questionnaire (Appendix G) was developed by the researcher to

address the attitudes associated with the integration of Web2Quest and was given to the

pre-service teachers in the three multicultural education courses after they completed

their Web2Quest projects. The scores were obtained from the responses to the five-point

Likert scale items. The Web2Quest Questionnaire consisted of 20 questions asking for a

participant's degree of agreement on a five-point scale (1 = strongly disagree; 2 =

disagree; 3 = uncertain; 4 =agree; 5 = strongly agree). Table 4.2 reports the mean scores

of each class ranging from 3.850--3.892. Data analysis of the descriptive statistics in

Table 4.2 indicates a total mean score of 3.877 on the Web2Quest Questionnaire with

standard deviations of the first group being .554, the second group .524, and the third

group .656. The mean score indicates that overall the pre-service teachers had

moderately positive views toward the integration of Web2Quest in multicultural

education courses. The mean score of a larger majority, 80% of the pre-service teachers,

was above 4.0. Data supports the results that there were no significant differences among

the pre-service teachers in the three groups.

Table 4.2

Web2Quest Questionnaire: Means and Standard Deviations (N=120)

	Mean	Std. Deviation	N
University A	3.892	.554	41
University B	3.850	.524	34
University C	3.890	.656	45
Total	3.877	.578	120

Figure 4.2 shows the mean scores of Web2Quest Questionnaire of the pre-service

teachers for each item. The data presents the mean scores of items one, four, six, and ten

were 4.01-4.19, higher scores compared to the other items. In general, the pre-service

teachers in the study believed that Web2Quest could be used to connect learners to a

global audience and broaden their worldviews. In addition, the data suggests that the pre-

service teachers favored using Web2Quests as an attractive and inexpensive teaching

strategy to enhance educational opportunities for students. They also indicated that

Web2Quests could connect teachers to a net of educators around the world and open up

their classrooms to increase their own and their students' learning experiences. The

majority of them, over 90%, believed that Web2Quests could provide opportunities for

teachers to engage in conversations with teachers from various cultures. Furthermore, the

data suggests that majority of the pre-service teachers agreed that Web2Quests provide

teachers with opportunities to contribute to the global online community. The majority

also argued that Web2Quests helped teachers feel valued for their ideas and expertise as a

result of their contributing to an online community. The data presents the mean scores of

items five, nine, and fifteen which were 3.56-3.61, lower scores compared with other

items. These questions asked their perceptions regarding: (1) Web2Quest helps learners

increase their problem solving skills, (2) Web2Quest provides learners opportunities to

serve as experts in a field, and (3) Web2Quest could have a significant influence on

teachers' attitudes and beliefs on multicultural education. Since the pre-service teachers

only worked on the Web2Quest projects for two months, the results may not reflect

strong influence on their problem solving skills. Also, due to the time constraints, the pre-

service teachers might not have opportunities to have dialogues with multicultural

education experts before the end of the semester. This may have contributed to their lack

of confidence in Web2Quest providing opportunities for learners to serve as experts in a

field. The majority of the pre-service teachers stated that Web2Quest could have a

positive influence on their attitudes and beliefs on multicultural education. However,

since the Web2Quest was a short-term project, they were more uncertain regarding if

Web2Quests could have a significant influence on their attitudes and beliefs on

multicultural education. The reason why some items scored higher or lower than other

items needs further research.

Items 12 and 16 are not similar to others regarding desirability for "Agree," so

they were reported separately and not included in the mean score. The data from item 12

"The amount of time it takes for learners to complete a Web2Quest may influence

whether I use Web2Quest as a teaching strategy" indicates that 15% of the pre-service

teachers were not sure if they would use Web2Quest as a teaching strategy because of

time constraints. The data from item 16 "Older teachers are less likely to use Web2Quest

in their classrooms" indicated that 71% of the pre-service teachers agreed with the

statement.

Figure 4.2

Mean Scores of Web2Quest Questionnaire for Each Item
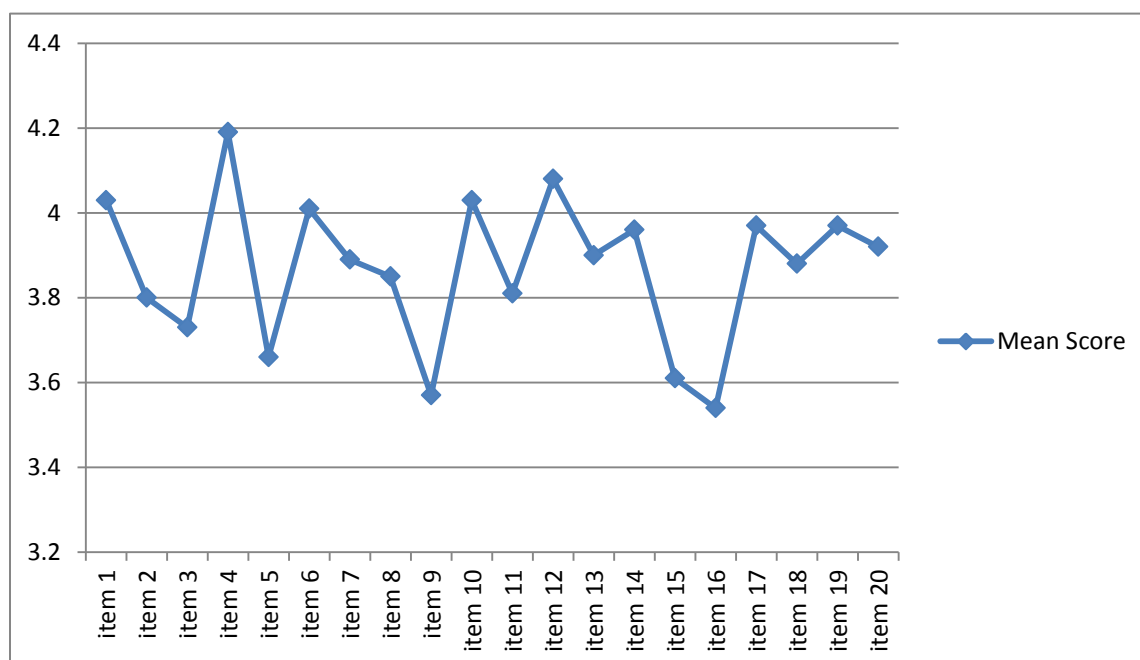
Qualitative Data Analysis

    Analysis of the open-ended questions.

        The results of the four open-ended questions and the focus group discussions with

the pre-service teachers in this study are summarized in this section. The results are my

best understanding of their views, insights, and thoughts regarding the integration of

Web2Quests in multicultural education courses. There was a large amount of overlap

across the open-ended questions and the focus group discussions. The pre-service were

asked the following questions: (1) What is your perception of how multiculturalism

should be promoted in school settings? (2) How will your teacher preparation

coursework in multicultural education impact your teaching of culturally and

linguistically diverse students? (3) What are the opportunities and challenges of using

Web2Quests to promote multicultural education? Please indicate specific opportunities

and challenges. (4) When you complete a Web2Quest project in a small group (3-4

people), what are the advantages and difficulties?

The pre-service teacher participants' responses to the open-ended questionnaire

items and the focus group data were analyzed through a process of open coding for

conceptualization and categorizing of the data. Then, axial coding was used for making

assumptions and developing emergent themes. I studied the responses to the four open-

ended questions and focus group transcripts by reading and listening through them

several times, looking for repeating ideas conveyed by the participants. From this review,

I defined categories of phrases stated by the participants and categories of ideas were

developed as overarching themes. Repeating ideas from the participants' responses

assisted with this process of coding for specific patterns. The responses of the pre-service

teacher participants were categorized into five themes: (1) cultural knowledge and awareness, (2) life experiences (respect, stereotypes, assumptions, cultural misconceptions, discrimination and labeling), (3) attitudes, (4) technology access and support, and (5) cooperative learning.

Six pre-service teachers from each of the three classes participated in focus groups for this study. Their responses related multicultural education through technology to what was being taught in the curriculum such as being aware of cultural knowledge and awareness, and life experiences. The responses of the pre-service teachers indicated that multicultural education could be promoted through technology in order to help pre-service teachers connect with people from various cultures and backgrounds.

There were 65 out of the 120 pre-service teachers who responded to the four open-ended questions. I accumulated the similar responses to each question, and then came up with the percentage of responses for each category. The first question asked "What is your perception of how multicultural education should be promoted in school settings?" First, the majority of them (80%) suggested that it was important to help students make connections between multicultural education and their daily life experiences. Second, 78% of them noted that teachers should help students be proud of

their own cultures. Third, 75% of them noted that pre-service teachers should redefine

their positions on multicultural-related issues and understand the true meaning of

multicultural education through class discussions, narrative stories, sharing, or listening

to real life experiences. Fourth, 70% of them indicated that each culture is unique and has

its own customs. Inclusion is important; no culture is better than any other culture. Fifth,

70% of them stated that teachers should be open-minded and adjust their teaching

strategies to meet the needs of diverse students; not all students get straight A's. Sixth,

68% of them argued that reading multicultural-related literature and watching Oscar

winning movies like "Crash" can challenge students' stereotypes and help them be more

open to new ideas and cultures. Finally, 60% of them wrote that what they learned from

multicultural education classes could offer them some examples to know how to deal

with the similar situations.

In summary, the responses among the pre-service teachers in the study were very

similar. The majority of them stated that teachers need to understand how the dynamics

of language, culture, prejudice, and economic equality affect learning and teaching. In

addition, they acknowledged that teachers have to recognize how their own backgrounds

affect their teaching and students' learning outcomes; they believed that teachers should

respect and appreciate students' cultural differences, hold high expectations, and develop

caring relationships. Furthermore, they noted that teachers need a solid foundation of

knowledge of multicultural education and should have encounters with people from

different backgrounds in order to meet the needs of diverse students.

The data also suggested that the integration of Web2Quest could be used to

connect learners to a global audience and broaden their worldviews. The pre-service

teachers identified that Web2Quests could serve as an attractive and inexpensive teaching

strategy to enhance educational opportunities for students. In addition, they indicated that

Web2Quests could improve their critical thinking skills; the scaffolding process of

completing a Web2Quest project could open up their classrooms and allow students to

engage in conversations with people from various cultures. Additionally, the majority of

the pre-service teachers agreed that Web2Quests provided teachers with opportunities to

contribute to the global online community. Finally, they believed that Web2Quests

helped them feel valued for their ideas and expertise as a result of contributing to an

online community.

Items within the following tables in this section are arranged by the level of

importance. For example, item a in each section of a table indicates a higher percentage

of the pre-service teachers' voices than item b. Table 4.3 illustrates the responses of the

pre-service teachers to open-ended question one.

Table 4.3

Responses of the Pre-service Teachers to Open-ended Question One: "What is your perception of how multiculturalism should be promoted in school settings?"

Group	Example of responses	Themes
University A	(a) "It is important to help students make connections between multicultural education and their daily life."	life experience, awareness
	(b) "Self-reflection is essential to mirror current multicultural-related issues."	life experience, awareness
	(c) "I did not have much exposure to diversity; my school was predominately mainstream Taiwanese."	life experience
	(d) "Students can better understand multicultural education by completing a project through cooperative learning and sharing their findings in class."	curriculum, cooperative learning
University B	(a) "Teachers should be open-minded and adjust their teaching strategies to meet the needs of diverse students. Not all students get straight As."	curriculum, awareness, attitude
	(b) "Students should redefine their positions on multicultural-related issues and understand the true meaning of multicultural education through class discussions, or listening to real life experiences."	curriculum, life experience, knowledge
	(c) "Role-playing, movies, and songs offer students opportunities to appreciate different cultures and enrich their life experiences."	curriculum, life experience
	(d) "Having students discuss some biased terms such as Negros, Banana, Oreos, and White Ghosts as well as their own biases toward different people in class would help them examine their stereotypes and prejudices."	curriculum, life experience
University C	(a) "Self-identity is important, or people may lose their own identities in a mainstream culture. Teachers should help students be proud of their own cultures."	curriculum, awareness
	(b) "Teachers should offer students ample opportunities to meet with people from different backgrounds."	curriculum
	(c) "Race-related issues should be addressed in classroom discussions openly."	curriculum, racial relationships
	(d) "Teachers' interactions with their students impact students' future learning and teaching."	racial relationships

The following paragraphs are based on the most predominate themes suggested by the 65 pre-service teachers who responded to question two: "How will your teacher preparation coursework in multicultural education impact your teaching of culturally and linguistically diverse students? Please provide specific examples." First, the majority (81.5%) suggested that each culture is unique and has its own customs; each of us should respect cultural differences. Second, 78.5% stated that what they had learned from the multicultural education classes could offer them knowledge and hands-on examples to be used in similar situations. They believed that people should treat all the students equally to practice social justice. Third, 66.2% wrote that multicultural education courses helped them adjust their teaching strategies to meet culturally and linguistically diverse students' needs. They believed that engaging dialogues in class also helped them reduce their stereotypes of Taiwanese aborigines and others from different backgrounds. Moreover, they noted that before taking multicultural education courses, they previously had stereotypes about students from single-parent families as well as the new immigrant children. Now they realized that they had to reexamine their biases. They believed that multicultural education courses helped them toward their future career. Fourth, 46.2% of them addressed that cooperative learning helped them get to know more people and

cultures which, in turn, helped them become more empathetic and open-minded. Fifth,

30.8% of the pre-service teachers believed that they need to be more sensitive when

working with the new immigrant children and students from single-parent families, or

those with disabilities. Finally 23.1% argued that it was not easy to break their own

stereotypes. According to the pre-service teachers, teacher educators need to offer them

authentic learning experiences in diverse settings in order to dispel their biases.

In conclusion, the majority of the pre-service teachers believed that if students are

willing to learn more about other cultures and peoples, they can better understand

themselves; in turn, they will be more empathetic and take action when they see injustice.

They argued that students need to be re-educated if they hold biases towards people from

different cultures. Teachers need to seize the teachable moments to try and reduce

students' stereotypes and prejudices. Table 4.4 illustrates the responses of the pre-service

teachers to open-ended question two.

Table 4.4

***Responses of the Pre-service Teachers to Open-ended Question Two: "How will your
teacher preparation coursework in multicultural education impact your teaching of
culturally and linguistically diverse students?"***

Group	Responses	Themes
University A	(a) "Teachers should listen to multiple perspectives about different issues.	awareness
	(b) "Integrating technology into multicultural education curricula helps impact the teaching of culturally diverse students."	curriculum, technology
	(c) "Multicultural education courses helped me be more sensitive and avoid conflicts when student teaching at an elementary school."	curriculum, knowledge
	(d) "Each culture is unique and has its own customs. Inclusion is important; no culture is better than any other culture."	curriculum, awareness
University B	(a) "We should treat all students equally	Attitude
	(b) "Before taking multicultural education courses, I had stereotypes about students from single-parent families and the new immigrant children. Now I realize that I have to reexamine my biases."	curriculum, life experience, awareness
	(c) "Teachers at teacher education programs often respect their students; their encouragement impacts our learning and teaching in the future."	curriculum, attitude, life experience
	(d) Multicultural education courses helped me better understand people from various backgrounds. This will benefit me with my future career. "	curriculum, awareness, knowledge
University C	(a) "Cooperative learning helps us get to know more people and cultures so that we can become more empathetic and open-minded."	cooperative learning, life experience
	(b) "Teachers need to be more sensitive when working with new immigrant children, students from single families, and the disabled."	awareness, attitude
	(c) "Some students hold biases towards people from different cultures; they need to be re-educated. Teachers need to seize the teachable moments to reduce students' stereotypes and prejudices."	life experience, awareness, attitude
	(d) "Understanding multicultural knowledge will help us apply what we have learned in our classrooms; each culture should be recognized, respected, and appreciated."	curriculum, awareness

The third question asked "What are the opportunities and challenges of using Web2Quests to promote multicultural education? Please indicate specific opportunities and challenges." The pre-service teachers who responded to the question suggested the following opportunities of using Web2Quests to promote multicultural education. First, Web2Quests can broaden the worldviews of teachers as well as students and present different multicultural education aspects. Second, a Web2Quest is an open learning platform; it is free and interesting. Third, Web2Quest is convenient and meaningful since students can exchange ideas with peers after class; in addition, the brainstorming activities foster critical thinking skills. The pre-service teachers stated that Web2Quest is easy to access, free and highly efficient. Fourth, the pre-service teachers noted that it is easy to get to know foreigners via technology without spending extra money to study abroad. They enjoyed authentic opportunities to exchange ideas with people beyond classrooms, particularly chatting or sharing with foreigners. Fifth, the pre-service teachers believed that Web2Quest learning activities helped them challenge their prejudices and stereotypes; they better understood their positions and roles in the world after connecting to a global audience. They became more open-minded and cared about what was happening in the world. Finally, they believed that exchanging ideas with

people from different backgrounds and ethnicities via Web2Quest technologies can help

foster healthier worldviews. Table 4.5a illustrates responses of pre-service teachers

(opportunities) to open-ended question three.

Table 4.5a

Responses of the Pre-service Teachers (Opportunities) to Open-ended Question Three: "What are the opportunities and challenges of using Web2Quests to promote multicultural education? Please indicate specific opportunities and challenges."

Group	Opportunities	Themes
University A	(a) "We can meet more people through Web2Quest project**s**. Web2Quest can broaden the worldviews of teachers as well as students and present different multicultural education aspects."	technology, awareness, life experience
	(b) "Web2Quest is an open learning platform; it is free and interesting. Students and teachers can share their different perspectives on the same issues."	technology, awareness, life experience
	(c) "Web2Quest is convenient and meaningful. Both students and teachers are learners. Web2Quest can help students learn more about cultural differences."	technology, life experience, rich resources
	(d) "The brainstorming activities can foster critical thinking skills. Web2Quest is easy to access, and is inexpensive to connect people around the world. Students can have authentic connection with foreigners; they can save money and time."	technology, awareness, life experience, access, critical thinking skill
University B	(a) "Student can have more opportunities to exchange ideas with people beyond classrooms. Chatting with foreigners could help students know more about different cultures. Multi-media can be good tools for multicultural education teaching."	technology, awareness, life experience, access
	(b) "It is easy to complete the projects through technology, but our understanding may be superficial."	technology, awareness
	(c) "We can get new information anytime and anywhere. Each person can contribute his/her talents. For example, making a film takes a lot of effort; cooperative learning increases the quality of the final projects."	technology, cooperative learning
	(d) "Beyond the classroom walls, teachers and students can connect people to help understand various cultures through Web2Quest."	technology, life experience,
University C	(a) "Information and new ideas can be shared via the Internet. The Internet shortens the distance between people. If teachers are open-minded, Web2Quest can be an attractive and inexpensive learning platform to connect students as well as teachers to a global audience."	technology, awareness, life experience
	(b) "Web2Quest is a fast and convenient way to get the latest information about different cultures and it can also foster students' growth and development.	technology, awareness, life experience, knowledge
	(c) "Web2Quest helps me get more information and enhance my foreign language abilities. We can learn multicultural education issues at home without spending extra money."	technology, awareness, knowledge, life experience
	(d) "We are able to get more live, authentic experiences."	life experience

Regarding the challenges of using Web2Quests to promote multicultural

education, the pre-service teachers who responded to question three suggested the

following possible challenges. First, they noted that language barriers may be an issue

since most of the Web2Quests on the Internet are in English. It would take up a lot of

class time translating and explaining. However, some pre-service teachers stated that they

did not mind translating a Web2Quest activity into Mandarin if it was a useful one. They

said that they read "Oppression and Pedagogy" by Freire (1970) in the Mandarin version.

Second, the pre-service teachers mentioned that access to the Internet might be an issue;

some students might not have Internet access at home. Third, teachers need to spend a lot

of time guiding students effectively and offering them immediate feedback. Not all of the

pre-service teachers felt comfortable with the advanced technologies; this would prevent

them from the integration of Web2Quest in their classes. Fourth, they believed that some

influential life experiences cannot be gained via technology; a small number of them

preferred traditional face-to-face interactions, if possible. Finally, the information from

the Internet is not necessarily always correct; if the information is written by someone

who has biases about certain cultures, stereotyping information may be given to the

students.

In summary, the majority of the pre-service teachers believed that they need to

make some systemic changes to how they use technology in the classroom, rather than

regard technology as a magic pill. Table 4.5b illustrates the responses of the pre-service

teachers (challenges) to open-ended question three.

Table 4.5b

Responses of the Pre-service Teachers (Challenges) to Open-ended Question Three:
"What are the opportunities and challenges of using Web2Quests to promote
multicultural education? Please indicate specific opportunities and challenges."

Group	Challenges	Themes
University A	(a) "Language barriers may be an issue and Web2Quest projects takes lot of time. Access is another issue for some students who do not have a computer at home."	language barrier, access, time constraints
	(b) "Some influential life experiences cannot be gained via technology."	life experience
	(c) "Web2Quest can promote self-directed learning; however, it would take more time when teaching elementary students."	time constraints
	(d) "Non-English speakers may be excluded because of the language barrier since most of the Web2Quests on the Internet are in English."	language barrier
University B	(a) "The information from the Internet is not necessarily correct; if the information is written by someone who has biases about certain cultures, it may offer stereotyping information."	incorrect information
	(b) "False information may reinforce students' stereotypes."	knowledge, awareness
	(c) "It would be difficult to evaluate students' outcomes."	Evaluation
	(d) "It would be inconvenient if there was no access to a computer or if someone does not have computer skills."	Access
University C	(a) "Information may be misunderstood or reported incorrectly."	incorrect information
	(b) "Real face-to-face communication deepens the learning outcomes."	knowledge, life experience
	(c) "It is not about the technology or website, it is about the willingness of people who respect and accept people from other cultures."	attitude, life experience
	(d) "Basic multicultural knowledge can be understood through technology, but deeper understanding needs authentic experiences."	knowledge, life experience
	(e) "There are a lot of racial and ethnic jokes in movies and the media; students may accept this incorrect information via the media."	knowledge, life experience

Question four asked "When you complete a Web2Quest project in a small group

(3-4 people), what are the advantages and difficulties?" Based on the 65 responses, the

data revealed the following results: First, the pre-service teachers stated that students can

gain critical thinking skills and build friendships during the cooperative learning process.

Second, they believed that Web2Quest projects helped them address multicultural-related

issues in a broader way and increase their worldviews. For them, the process of

negotiation is the practice of multicultural education. They wrote that sharing the final

projects and learning from each other enhanced their learning outcomes. In addition, it is

easier to have group discussions via the Internet after class. They also stated that they

saved time and had opportunities to be familiar with new technologies. They enjoyed

using different presentation forms to complete their projects and present them in class. It

was a new learning opportunity since they had never integrated Web2Quest in

multicultural education courses. Third, they believed that collaboration helped them to

learn from each other by listening to different perspectives. Using Skype or

videoconference was convenient; completing Web2Quest projects made their learning

intriguing and challenging. Finally, they agreed that the process of completing the

Web2Quest project pushed them to step out of their comfort zones to take action. Table

4.6a illustrates the responses of the pre-service teachers (advantages) to open-ended

question four.

Table 4.6a

Responses of the Pre-service Teachers (Advantages) to Open-ended Question Four:
"When you complete a Web2Quest project in a small group (3-4 people), what are the
advantages and difficulties?"

Group	Advantages	Themes
University A	(a) "Students can gain critical thinking skills and build friendships during the cooperative learning process."	critical thinking, cooperative learning
	(b) "Web2Quest technologies can help students address multicultural-related issues in a broader way and increase their worldviews. The process of negotiation is the practice of multicultural education."	knowledge, life experience
	(c) "Each person can contribute his or her own talents, so it becomes easier to complete the project."	cooperative learning
	(d) "It is easy to integrate opinions in a small group; this allows everyone to fully participate in the project. Students can solve real problems as a group."	cooperative learning
	(e) "It would be helpful if someone in the team were from a different culture. This would increase the students' motivation. Students learn something new from their peers."	cooperative learning, knowledge
University B	(a) "Learners can save time and become familiar with new technologies. Students can use different presentation forms to complete their projects; it is easier to do a project with the aid of Web2Quests. It is a new learning opportunity."	technology support
	(b) "Students can modify their unclear ideas by brainstorming activities with team members. Many hands can make work light."	cooperative learning, life experience
	(c) "Web2Quest helps us to be more open-minded and connect to people from different cultures. Immediate feedback, cooperative learning, two-way communication, and social skills are essential skills for the teachers of tomorrow."	attitude, life experience, cooperative learning
University C	(a) "It is easier to get more information and come up with better ideas."	cooperative learning
	(b) "Collaboration helps students learn from each other by listening to others' opinions. Using Skype, or videoconferencing makes it more convenient."	cooperative learning, technology
	(c) "Brainstorming can help students create new ideas and promote harmonic relationships among people. Cooperative learning can lessen a student's work load and promote deeper learning."	cooperative learning

Regarding the difficulties of completing a Web2Quest project in a small group (3-4 people), the data suggested the following results: First, the majority of the pre-service teachers indicated that sharing the final projects with team members who did not contribute to the work can be frustrating; some team members dodged their responsibilities and conflicts occurred. Students who worked on the project individually without two-way communication only knew their own part, not the whole project. They stated that some team members dominated the discussion or chose to do the easier parts of the project. Second, they noted that it was not easy to focus on certain issues because it was easy to get side tracked when working with friends. Third, they stated that it may take time to get feedback because of the different time zones. Also, it was often difficult to get together at the same time. Finally, they wrote that it was not easy to put different opinions together. Table 4.6b illustrates the responses of the pre-service teachers (difficulties) to open-ended question four.

Table 4.6b

Responses of the Pre-service Teachers (Difficulties) to Open-ended Question Four:
"When you complete a Web2Quest project in a small group (3-4 people), what are the
advantages and difficulties?"

Group	Difficulties	Themes
University A	(a) "Sharing the final projects with team members who did not do the work can be frustrating. Positive attitudes and responsibility are the keys to quality of projects."	attitude, cooperative learning
	(b) "Conflicts may occur when people have different ideas; it might be even more difficult when facing people from different cultures." Interpretation and perceptions from different cultures may cause conflicts."	life experience, awareness
	(c) "There is no dominating culture among group discussion. If there is a bossy leader in a small group, someone's voice may be silent."	awareness, attitude
	(d) "In a small group, students' opinions may be limited. Teachers play important roles during the process. Opinions may not be expounded in full disallowing students to notice their own biases."	cooperative learning, life experience
University B	(a) "Unequal responsibility may cause conflicts; some students are not willing to participate in teamwork."	cooperative learning
	(b) "Some students are not good at using technology tools. It is not always easy to get together at the same time."	technology, time
	(c) "The gap among students understanding of an issue may cause problems. The quality of the final project may vary due to the efforts of the team members."	cooperative learning, attitude
University C	(a) "Some team members dominate the discussion or do the easier parts of the project. It is not always easy to put together different opinions."	cooperative learning,
	(b) "Some students may have difficulties in using technology tools, so they are not willing to participate in the teamwork."	technology, cooperative learning

Overall, the pre-service teachers expressed enthusiasm for learning from experts whom they had never met. The majority were willing to implement Web2Quests in the subjects they were going to teach such as social studies, art, music, language, math, and science. In addition, they hoped that there would be more Web2Quests in Mandarin; the teacher educators could help them design effective and feasible Web2Quests. However, the quality of the final projects could be challenging due to language barriers, time constraints, access to the Internet, and the effectiveness of team work.

In summary, data from the open-ended questions revealed that the pre-service teachers believed that their personal experiences, family backgrounds, the community, working in diverse settings, multicultural education courses, and connecting with people from various cultures in person or through Web2Quest technologies helped them gain a deeper understanding of multicultural education. The real life experiences broadened their worldviews and helped them be more empathic and open-minded. The majority of the pre-service teachers expressed how the authentic learning experiences changed their

attitudes and beliefs. For example, one pre-service teacher stated,

> I felt uncomfortable being the minority. I am a Han college student walking down the hallway with several eyes staring at me. However, the uneasy feelings disappear after a few weeks working at the aboriginal school. I think I am more accepting and sensitive to Taiwanese aboriginal students. I also learned that they could be academically successful if teachers better understand their learning styles and hold high expectations to them.

Another pre-service teacher noted that after interviewing people from various cultures regarding their opinions of the Oscar winning film "Crash", she realized that people could have very different perspectives on the same movie. She stated that "many teachers in Taiwan used this film in multicultural education courses to raise multicultural-related issues and believed that the movie could help students reflect on their prejudices. However, two black students told her that they disliked the movie because there was nothing positive about black people in the movie.

The majority of the pre-service teachers enjoyed the Web2Quest projects even though it took them a lot of time. Many of them have kept in touch with me since I came back to the U.S. They stated that they would like to use Web2Quest projects in their classrooms. To my surprise, they were willing to spend time learning more about how to design Web2Quests; some of them e-mailed me to ask further questions.

Analysis of focus group discussions.

Voices of the pre-service teachers. Each focus group discussion lasted

approximately two and a half hours since we ate lunch during our discussions. This

section reports what I believe were the main ideas from each participant. At University A,

pre-service teacher A said, "Now that the world is like an international village, people

should be open-minded, respectful, and inclusive in order to create a better culture for all

human beings." Initially, she thought the new immigrant women married the Taiwanese

men for the sake of money. She now realized that these women were courageous to leave

their countries for a better life; they worked hard to help themselves and their families.

She also stated that most of the new women immigrants wanted to be treated the same as

the local Taiwanese people.

Pre-service teacher B stated that "I think that treating the new immigrants just like

any one of us equally is essential; I was surprised that my parents told me that it would be

fine if I married someone from a different country, but not a black woman." He said that

what he had seen during his trip to Cambodia impacted him deeply. He bought some

crosses with disabled figures and gave them to the Father in his community. He believed

that each person should be treated equally regardless of race, gender, class, religion, and disabilities.

Pre-service teacher C tutored some children in an after-school program. She stated that "if the new immigrant children could communicate in Mandarin, they would soon catch up with the lessons."

Pre-service teacher D noted, "I think multicultural education should help us better understand and respect people who are from different backgrounds." She also addressed that teachers should help students in wealthier school districts cultivate multicultural awareness even if the students could not see the urgent need.

Pre-service teacher E said, "I think teachers should address multicultural education in elementary school. In Germany, there are pictures of black people in elementary school textbooks." For her, planting seeds in the minds of young students is important. In addition, she observed that the media prefers to interview people who are successful. As a result, the new immigrants seldom have opportunities to voice their opinions since most of them are from the lower socio-economic groups.

Pre-service teacher F shared her experience of seeing her mother who owns a restaurant help a low income family. The impact encouraged her to volunteer in a community center to help disadvantaged students with their studies.

At University B, pre-service teacher A stated that multicultural education is not addressed in middle and high schools because teachers at these schools only teach to the tests due to the competiveness of the high school and university entrance examinations.

Based on her travel experiences, pre-service teacher B had a few biases. She thought Japanese people were polite, the Germans were serious, and the Italians were very casual. She stated that once she was treated differently in Hong Kong when she was waiting to buy some souvenirs. The clerk served Westerners first and skipped her entirely.

Pre-service teacher C said that when she was in Egypt she needed to see a doctor. The doctor was performing an operation on a patient, so the nurse informed her that she would have to wait for an hour. Then the nurse asked her if an assistant could check her eyes. The assistant was a black man, and because of his skin color, he looked dirty to her. To her surprise, he was patient and did a good job; she also found that the facility was very good for such a small town.

Pre-service teacher D noticed that many low income people in Taiwan did not ask for a discount when eating out. On the contrary, some middle-class or upper middle-class Taiwanese asked for free snacks or a discount; some of them were from big companies and just wanted to show that they had the power to get them.

Pre-service teacher E noted that it was difficult for him because he was not aware of multicultural education issues before entering college. He stated that Web2Quest could help students gain multicultural education knowledge; this learning platform could save students time. Finally, he stated that since students spend so much time on computers, why not encourage them to use the technology to connect with people from all over the world and promote multicultural education.

Pre-service teacher F noted that stereotypes about people from different cultures may be reduced when they get to know more about each other. She said that she was once treated differently in England because of her accent. In addition, some British teenagers made fun of her behind her back. Initially, she was angry, but later she knew that they were just like the young students in Taiwan. She could understand why they did silly things like that.

At University C, pre-service teacher A reported, "some travelers went to poor communities in China to introduce different cultures to the local people; they did not have the Internet to connect with people from foreign countries." She believed that this could be a good way to bridge the cultural gap. Also, she noted, "foreign students preferred to stay with people from their own cultures. For example, the Vietnamese like to stay with other Vietnamese. She believed that the Internet, YouTube, blogs, Podcasts, Skype and videoconferencing could be great tools to promote multicultural education.

However, pre-service teacher B said that when she visited with someone via Skype, she did not really know if his or her words were true. She said that many teachers in Taiwan used E-learning, which is similar to Blackboard, to have engaging conversation with their students after class. She suggested that a good technology facility is essential; students and teachers need more technology support. In addition, she believed that the social and critical skills could be increased through completing Web2Quest projects in a safe and comfortable learning environment. However, students cannot do a good job without proper guidance; teacher educators play important roles when using new technologies in their classrooms. In addition, students should be informed as to how to verify and evaluate if the information is correct.

Pre-service teacher C used to volunteer in a New Immigrant Center; he learned

that starting with celebration activities may be a good way to draw on more participants.

For example, local food from different cultures could help students understand some

similarities and differences of various cultures. He suggested that teachers plan a day

field trip to the New Immigrant Center, so their students could have the opportunity to

gain exposure to diverse settings and connect with the new immigrant children and their

families. He has tutored many new immigrant children, and he found that they are able to

do well academically if the expectations of the teachers are high. Teachers should not

view the new immigrants as burdens but rather they should treasure the rich resources

these students bring into classes. He also stated that technology could be a good tool and

teachers should guide their students to use it wisely.

Pre-service teacher D stated that Taiwanese aborigines and the new immigrant

children were blessed because of their bi-cultures. However, some of the new immigrants

are not proud of their cultures; they do not respect their mothers' cultures. Pre-service

teacher D believed that pre-service teachers should not only care about their studies but

also need to volunteer or work in diverse settings to better understand the difficulties their

students may encounter on a daily basis. She believed that the world history could be

taught through the Web2Quest platform; students could work together to search for information, synthesize it, and share the results with the class. For example, each team would share a different cultural history, so the whole class could have dialogues about world history from various perspectives. She also argued that the media should present accurate history and information about specific groups of people.

Pre-service teacher E believed that respect is important, and we should not label people who are different from us. However, she argued that if people do not understand someone's culture, it may be difficult to respect the culture. She stated that the new immigrant children were treated differently; many teachers did not view them as resources but burdens. She argued that we should not criticize a custom before understanding its culture.

Pre-service teacher F emphasized that teachers should be open and hear the voices of people from various backgrounds. For example, she argued that some drivers in China honk the horn to warn people in the rural areas; this behavior might be interpreted as rude by tourists who do not understand why they honk the horn. In China, the workers in the fields may have never seen cars before and may not anticipate a car, so they might be hit if the drivers do not warn them ahead of time. Pre-service teacher F argued that her uncle,

a Taiwanese aborigine, was asked to do heavier work than the mainstream people, but he

did not receive more pay. She also stated that a woman with a wheelchair was not

allowed to take the train because there was no facility to help the disabled get on a train.

As a result, people with disabilities are not welcome in some train stations in Taiwan. For

pre-service teacher F, people should be treated equally regardless of their race, gender,

class, religion, and disabilities.

    Main themes of the focus group discussions. I studied the focus group

discussion transcripts by reading through them several times, looking for repeating ideas

conveyed by the pre-service teachers. I then defined categories of phrases stated by the

participants and categories of ideas were developed as overarching themes. Repeating

ideas from the participants' responses assisted with this process of coding for specific

patterns. From this overall process, I began to make assumptions and find emergent

themes. Based on the focus group discussions with the pre-service teachers, five themes

emerged which were similar to those that emerged from analyzing the four open-ended

questions on the Web2Quest questionnaire: (1) cultural knowledge and awareness, (2)

life experiences (respect, stereotypes, assumptions, cultural misconceptions,

discrimination and labeling), (3) attitudes, (4) Web2Quest technologies and multicultural learning, and (5) cooperative learning.

Cultural knowledge and awareness. Based on the focus group discussions, the pre-service teachers in the study believed that teachers need to have solid multicultural knowledge and awareness so that they could be aware of different learning styles of diverse students. The pre-service teachers noted that taking multicultural education courses, encountering people from various cultures, traveling, and working in diverse settings could help teachers see the world with multiple perspectives.

Life experiences. The majority of the pre-service teachers expressed how authentic learning experiences changed their attitudes and beliefs toward people from different backgrounds. However, the data also showed that the pre-service teachers sometimes reinforced their stereotypes due to their individual negative encounters. The pre-service teachers also suggested that teacher educators should offer them ample opportunities to meet with people from diverse backgrounds and engaging dialogues need to be encouraged. In addition, the pre-service teachers stated that they have been treated differently when traveling in other countries; the experiences helped them be more sensitive and empathetic when working with minority groups.

A*ttitudes.* Data from the focus group discussions suggested that positive attitudes toward Taiwanese aborigines and new immigrant children are essential. Teachers need to create equitable learning environments for all students so that they can explore, and learn about various cultures from each other; in turn, the uniqueness of each culture is recognized. All of the pre-service teachers who participated in the focus group discussions believed that people should respect and appreciate cultural differences and treat others as the way they want to be treated.

Web2Quest technologies and multicultural learning. The data suggested that the integration of Web2Quest could be used to connect learners to a global audience and broaden the worldviews of the pre-service teachers. In addition, the pre-service teachers indicated that Web2Quests could improve their critical thinking skills; the scaffolding process of completing a Web2Quest project could open up their classrooms and allow students to engage in conversations with people from various cultures.

Cooperative learning. Data from the focus group discussions suggested that the majority of the pre-service teachers gained critical thinking skills and built interpersonal friendships during the cooperative learning process. The pre-service teachers stated that it is easier to get more information and come up with better ideas through team work.

Collaboration helped them learn from each other by listening to others' opinions. Using

Skype, or videoconferencing makes it convenient to have dialogues after classes.

Summary. Data from the open-ended questions on the Web2Quest questionnaire

and the focus group discussions suggested that the majority of the pre-service teachers

have traveled to different countries and have worked or volunteered in diverse settings.

They have positive attitudes toward people from different backgrounds; however, the

data also showed that the pre-service teachers sometimes reinforced their stereotypes due

to their individual negative encounters. In addition, they stated that they have been

treated differently; the experiences helped them be more sensitive and empathetic when

facing minority groups. All of the pre-service teachers who responded to the four open-

ended questions and participated in the focus group discussions believed that people

should respect and appreciate cultural differences and treat others as the way they want to

be treated.

Analysis of one-on-one interviews.

Profiles of the five teacher educators. Professor A has taught multicultural-

related courses for about 20 years in Taiwan. He has published numerous journal articles

and two books which addressed multicultural education, specifically regarding the

education of Taiwanese aborigines. A friend of his, Mr. X, is a Taiwanese aborigine and

was treated differently when he was young. Mr. X put himself through college by

working extremely hard; now he holds an important position in the government.

Professor A was touched by the efforts of his aboriginal friend and started to devote his

time to the education of Taiwanese aborigines. He believed that Taiwanese aborigines

could be successful if teachers offered them equal educational opportunities. For

Professor A, becoming a multicultural person and multicultural educator is a challenging

but rewarding journey. It is a process that has helped him understand the importance of

who he is and who he could be.

According to Professor A, gender and aboriginal issues have been addressed in

Taiwan for the last 20 years but not under the big umbrella of multicultural education. In

the 1980s, because of political and social changes, Taiwanese local culture started to be

recognized. Local culture has been included in the school curriculum, but multicultural

education issues are still in a theoretical stage. Professor A argued that local governments

should evaluate the multicultural education practice of current teachers to examine how

teachers and the school environment contribute to the isolation, invisibility, and

marginalization of minority groups. In addition, schools and the government need to offer

professional development for teachers such as seminars, guest speakers, and

multicultural-related activities. He also argued that multicultural education should start

when students are young; early school education is important to help children judge right

from wrong. Professor A stated his belief that top-down policies may work in the

Taiwanese context; in turn, teachers and students will have a deeper understanding of

multicultural education. Based on his experiences, he has proposed substantial strategies

to the educational policymakers to improve the education of Taiwanese aborigines. He

suggested that religious leaders as well should make efforts to promote multicultural

education.

Professor B received his Ph .D. from a university in the U.S. in 1990. He has been

teaching at University B since then. He was not under the pressure to "publish or perish."

Therefore, he could spend more time with his students helping with their research. He

emphasized the importance of narrative and encountering people from different

backgrounds. He stated the belief that multicultural education begins in many places,

such as communities, classrooms, schools, and, more importantly, within ourselves in

how we value and approach our students. He argued that there should be comprehensive

multicultural education curriculum reform in Taiwan; however, this would be difficult

since the majority of Taiwanese teachers and students are used to a banking system

(Freire, 1970) where knowledge is deposited in order to be withdrawn when needed. In

addition, the competiveness of the high school and university entrance examinations

contribute to the rigid educational system in Taiwan.

Professor B argued that racial relationships in Taiwan have not been addressed.

Even worse is that politicians in Taiwan like to instigate tension among different groups;

these politicians benefit from bringing about the controversial issues. For him, a political

issue like whether Taiwan should be an independent country or unite with China is

debatable. Each group should express their ideas and explain why they believe that way.

He encourages his students to be more open-minded and empathetic when working with

students from China.

Some Taiwanese people worry that the new immigrant children will lower the

competitiveness of Taiwan; however, professor B suggested those holding that belief

most likely feel uneasy because they do not understand the new immigrants. For him,

people from the mainstream culture often reflect their exclusive positions; they need to

have more dialogues with people from different backgrounds. He encouraged his students

to listen to the new immigrants' stories, write reflections, and share these in class; he

shared his own encounters with them as well. For professor B, teacher educators should

encourage pre-service teachers to have engaging dialogues with people from various

backgrounds. He believed that belonging to a committee for a multicultural association is

a good way to make connection among teacher educators.

Professor C completed her Ph.D. in the U.S. in 1997. Her advisor's field was

multicultural education; she was inspired by her professors and chose some multicultural-

related courses. She went back to Taiwan in 1998 and has taught at University C for 13

years. She has published numerous multicultural-related articles and has devoted her time

to the education of the new immigrant children in Taiwan. She noted that the Taiwanese

people were conservative and did not know much about multicultural education. She

stated the belief that teachers should help students discover their talents, and, in turn, they

could be more comfortable with who they are and contribute to the world.

Professor C argued that the new immigrant children should learn about their

mother's own culture, or they may be strangers when they return to their mother's

homeland. She also noted that the population of Pin-pu aborigines in Taiwan is dying off.

Therefore, it is essential to help the new immigrants preserve their own languages and

cultures. She suggested that teachers could use the morning hours before class and invite

the new immigrant children's mothers to be guest speakers and introduce their cultures.

Also, the children could ask their parents about their cultures and then share them with

the class. If students laughed at the new immigrant children, teachers should seize that as

a teachable moment. Teachers can communicate with the new immigrants' parents in

basic English. Professor C acknowledged that many of the parents have limited Mandarin

and low education background and are, therefore, timid to meet with their children's

teachers. Some mainstream students often say "Go back to Vietnam," for example, to the

new immigrants. Sometimes, even teachers say, "What language are you speaking?"

Professor C suggested that both teachers and students be sensitive when communicating

with the new immigrant children and their parents.

After interviewing Professor A, he suggested that I should interview more

multicultural teacher educators in order to have a deeper understanding of the current

status and challenges of multicultural education in Taiwan, and he kindly recommended a

few teacher educators to me. I then searched on the Internet for these teacher educators'

academic backgrounds and their publications. Upon receiving the IRB approval, I e-

mailed two teacher educators to request an interview with them. They were glad to share

their teaching experiences with me and said that they had been helped by many teacher

educators when they were working on their dissertations.

Professor D taught at a vocational high school for two years; she also taught at

two different universities. Looking back on the past 10 years, she thought that she was

blind to multicultural education during her first year of teaching. She was not satisfied

with the social studies textbooks because they were incorrect and often dominated by the

mainstream culture. Therefore, she completed her Ph.D. in education in the United State

to better understand the essence of multicultural education. When Professor D studied in

the US, someone left a message on her answering machine, "Get out of my country!"

Also, a lady yelled at her and her friend, "Speak English!" The negative experiences

reminded her to be more sensitive to people from different cultures. She has published

numerous multicultural-related papers and books. According to Professor D, the term

"multicultural education" first appeared between 1996-2010 in Taiwan and

multicultural-related issues have only been recognized for the past 10 years.

Professor E has been teaching multicultural-related courses in two schools for the

past 10 years. She has always been interested in culture and gender issues; she expressed

the belief that power is related to many issues. There are seven multicultural education

teams in universities that are supported by the government; she is the coordinator of one

of the teams. Professor E and her team help current k-12 teachers, and pre-service

teachers be more aware of multicultural-related issues and modify their teaching

materials and strategies accordingly.

Professor E argued that multicultural education is needed in Taiwan even though

many local Taiwanese and current teachers are not aware of the urgent need. If people

would immerse themselves in other cultures, they could better understand their own.

Professor E expressed the belief that teachers have to associate with more cultures in

order to critically examine and analyze the historical, contemporary, collective, and

personal cultural stories of different ethnic groups and individuals. She stated that if we

do not understand a new culture, we are not likely to appreciate that culture. To truly see

the world, both students and teachers must learn about different cultures; this helps us

cultivate our cultural awareness.

On Wednesdays this year, Professor E helped the current teachers supported by

her multicultural education team to read and discuss multicultural-related issues. She

expressed the belief that real life encounters help teachers to become more sensitive

toward students from various backgrounds. The outreach service she performs for the

multicultural education team does not assist with her promotion; however, she is willing

to spend time with the current teachers to guide them effectively in surpassing just

superficial levels of multicultural understanding. For Professor E, a deeper understanding

of multicultural education should be promoted so that teachers can be more open-minded

and empathetic.

  The voices of the teacher educators.   The three teacher educators who

implemented a Web2Quest in their multicultural education courses were interviewed in

person in their offices at the beginning of the study and again after the pre-service

teachers completed the Web2Quest. Two additional sessions of one-on-one interviews

with two teacher educators who were recommended by Professor A were conducted

through Skype after I returned to the U.S. and secured my university's Institutional

Review Board approval. One of these interviewees was from one of the three universities

originally selected for the study and also taught a multicultural education course. The

other interviewee taught a multicultural education course in another university.

  The interview sessions began with protocol questions (Appendix I). For the first

interview, I asked the three professors the first two questions: (1) What is your definition

of multicultural education and has your definition changed? (2) What are your teaching

strategies? For their second interview: (3) What are the opportunities and challenges of

implementing Web2Quest technologies in multicultural education courses? and (4) What

is the current status of multicultural education in Taiwan, and what are the challenges

involved in multicultural education? For the interviews of the two teacher educators I

added to the study after returning to the US, I asked all four protocol questions even

though these professors had never included a Web2Quest in their classes. I asked them

what they thought might be the opportunities and challenges from implementing

Web2Quest technologies in their multicultural education courses. The following section

summarizes the five teacher educators' responses to the protocol questions.

 Responses to question 1: What is your definition of multicultural education and

has your definition changed? Professor A stated that multicultural education means all

students should have equal educational opportunities to develop their skills, attitudes, and

knowledge which will help them become well-rounded global citizens and, in turn, have

the abilities to give back to the world. Professor A argued that multicultural education

issues should include broader themes such as gender, class, race, religion, sexual

orientation, and disabilities. He also explained that the definition of multicultural

education serves as a guide for teachers; however, it should not be regarded as a magic

pill that will solve all education problems.

The philosophy of Professor B is parallel with theories of hooks (1994) and Freire

(1970): to encounter real life experiences rather than view learning as depositing

knowledge like in a banking system. For Professor B, sharing true stories can help

students move a step forward and encourage them to take actions. Professor B firmly

stated his belief that helping each student become a whole person with balanced intellect,

spirit, and emotion is the core value of multicultural education.

Professor C stated the belief that different social classes, races, and religious

groups should be treated equally. The majority of the Taiwanese people view learning

about different cultures as multicultural education. In University C, some teachers and the

staff viewed multicultural education as cultural activities; they practiced multicultural

education on a superficial level: celebrations and heroes. Professor C argued that

multicultural education should be more than just celebrating diverse cultural activities.

According to Professor C, many teachers believe that Taiwanese aborigines and the new

immigrant children have been assimilated into the mainstream culture; however,

assimilation violates the spirit of multicultural education. She noted that having correct

multicultural education knowledge is fundamental. Professor C argued that the primary

spirit of multicultural education includes respecting different racial groups and those

from the lower socioeconomic class as she encourages her students to be open-minded.

Professor D stated that her definition of multicultural education has undergone

transformation over the past years. For her first two years of teaching at a university, she

addressed appreciation, tolerance, and cultural differences in her classes; it was a safe

way for her to teach. Years later, she addressed critical issues such as power and

privilege, and had her students do action research to view multicultural education

critically. For her, practicing social justice is the primary goal of multicultural education.

Professor E stated that culture is recognized by specific groups of people adhering

to a set of values and norms. For her, science is the product of culture created by western

male Christians. Professor E stated that the definitions of science may vary due to

cultural differences. For example, she said that Taiwanese aborigines have their own

definition of science; science is part of culture. Professor E argued that Han Taiwanese

(just as Whites in the United States) need multicultural education the most because they

are not aware of the urgent need for multicultural education.

Responses to question 2: *What are your teaching strategies?* Professor A selected

reading materials written by authors from a variety of ethnic backgrounds. For him, being

aware of how authorship influences knowledge is a crucial step in finding representative

voices. He encouraged his students to view an event, issue, or problem from different

ethnic perspectives to synthesize what they have read and then discuss their findings in

class. By doing so, Professor A facilitated his students in active learning and engaging

dialogue, which deepened their thoughts and reflections.

According to Professor A, it is not enough for pre-service teachers to acquire

knowledge about culturally diverse issues; they need opportunities to take action. In his

class, he asked his students to examine social injustice issues and then seek the best

possible action plan to solve the problems. He acknowledged that service-learning is a

good way to practice social justice. He encouraged his students to connect content being

studied in the class to community action. For example, he asked his students to

brainstorm their beliefs and attitudes regarding Taiwanese aborigines and the new

immigrants and then write down their reflections to examine their own prejudices and

stereotypes.

Professor A stated his belief that teachers can reduce stereotypes by sharing and

listening to real stories about people from various backgrounds. For example, he used the

Oscar winning movie "Crash" to motivate engaging dialogues regarding racial

relationships. He argued that the conflicts between white people and people of color

reinforce stereotypes and discrimination. He stated that teachers should be empathic and

treat people equally in order to practice social justice. Another video he used to

encourage meaningful conversation in his class was "Please Give Me a Job!" The video

addressed the predicament of finding jobs for Taiwanese aborigines. Another classroom

activity that was popular with his students was visiting a Taiwanese aboriginal school,

Wulai Elementary School. His students enjoyed having conversations with the local

aborigines; the authentic learning environment was an eye-opening experience for the

pre-service teachers.

Professor A suggested that teacher educators who teach multicultural education

courses should be more open about different issues. For example, he asked his students to

study a fatal political incident, the 228 Incident which happened in 1947 and

approximately 30,000 Taiwanese elite were killed. The incident was an anti-government

revolution that was triggered by a dispute between a government agent and a female

cigarette vendor. The government quickly responded to the spontaneous revolution and imposed martial law and then negotiated with the local elites for the next week. However, when reinforcements from China arrived in Taiwan, the troops were dispatched over the next six weeks to kill and suppress local elites who were calling for more local autonomy. Professor A asked his students to complete group projects and discuss how the tragedy impacted the racial relationships in Taiwan. His students were encouraged to interview people who were involved in the 228 Incident in order to examine the incident from different perspectives. For Professor A, the government version of the history is not the whole truth.

According to Professor B, before educators start practicing multicultural education, they should fully understand what multicultural education is. Professor B did not use a lot of textbooks--instead he wanted his students to listen to different stories and voices. In class, he used videos to facilitate engaging conversations and to help the students understand themselves through watching and listening to stories of people from different backgrounds. He chose videos which could make connections to students' life experiences or help them reflect on their own lives. Professor B argued that teacher

educators should address injustice issues in the society and ask their students to mirror

their positions and responsibilities to practice multicultural education in Taiwan.

Beyond the classroom, Professor B encouraged his students to visit a correction

school for middle school and high school students and invite those prisoners to write

letters to his students in order to express their life experiences and dreams. His students

also wrote letters to the prisoners regarding their dreams. He offered opportunities for

those teens who had lost their freedom to have a dialogue with his students. By doing so,

his students could see the limitations imposed on these prisoners and understand their

positions and life experiences. In addition, his students volunteered as tutors at Big

Brother and Sister programs assisting students from lower socioeconomic classes to

improve their social skills. The primary goal of the tutoring programs was to provide

students from different backgrounds a safe and nurturing environment to develop into the

whole person they could be. Most teachers wanted to help these poor students achieve

higher academic standards, as well. However, Professor B argued that the needs of these

students are different. These particular students were far behind academically. If teachers

tried to ask them to repeat all the assignments again and again, these students would lose

their confidence. Professor B encouraged his students to offer an environment that uses

art activities, so the students could regain self-confidence. For example, learning how to

make Hakka tea helped the students have a sense of belonging because they were Hakka.

The process not only helped the students but also the pre-service teachers to better

understand their cultures. The pre-service teachers had to write journal reflections

regularly to show improvement and to practice genuine multicultural education.

Professor B argued that knowledge is not passive; his students were creators who

reconstructed their knowledge in a social setting. Through interviewing a wide variety of

people about their life stories, for example, those with disabilities and the elderly, the

students themselves reflected on their own life stories. As a result, they became part of

the overall story. The pre-service teachers used different and powerful presentations such

as readers' theater, role-playing, and dancing. Professor B suggested that the authentic

learning process allowed his students to examine and appreciate their own culture and

ethnic backgrounds.

Professor B noted that his students did change their attitudes after taking the

multicultural education class. However, he argued that it will take them time to have a

deeper understanding of multicultural education and then take action. Some of his

students had taken several multicultural education courses which he had offered. He

believed that multicultural education classes should be longer than a semester. For him,

multicultural education should not be limited to a "buffet" style course selection. Instead,

all students should be required to take multicultural education courses.

Regarding community service, Professor B argued that teacher educators should

help students get ready before they go to Taiwanese aboriginal regions. For him,

sufficient preparation before students start the community service there is imperative.

Teacher educators need to spend time with the pre-service teachers, compare dialogues,

and reflect on their life experiences. Professor B noted that if the pre-service teachers did

not know anything about the people with whom they were to work, the cultural

differences might increase stereotypical thinking. He suggested that it would be more

likely that people would reduce their stereotypes through encounters and real life

experiences. However, this is not always the true picture in Taiwan.

Professor B stated that the Taiwanese people should address the political issues

from their historical contexts. He suggested that people from the mainstream culture

should be more sensitive about their prejudices and biases, noting that biases are not easy

to reduce. He mentioned that the Taiwanese people will come to know the importance of

multicultural education if or when their children marry the new immigrants.

At the beginning of the semester, Professor C asked her students to talk about

their definitions of multicultural education. About two-thirds of them did not know what

multicultural education was. Her students thought multicultural education was about

studying different cultures. By the end of the semester, the students had learned what

multicultural education really was. Professor C encouraged her students to care about

people in their communities. For example, she often asked her students to reflect on their

attitudes and stereotypes toward people and family members around them. According to

Professor C, each student in University C, needed to complete 18 hours of volunteer

work per semester. She noted that her students had a deeper understanding of

multicultural education at the end of the semester, which consisted of 20 weeks. In

reflecting back to her own beliefs many years ago, Professor C stated that she did not

understand why her mother-in-law liked to worship different gods. After taking

multicultural education classes, she could better understand her mother-in-law's beliefs.

Professor C asked her students to find unjust situations in society. For example,

the students did action research projects regarding gays, the new women immigrants,

single women, and betel nut ladies who sell betel nuts, cigarettes and drinks through a

glass window booth. Furthermore, her students had to read newspaper articles about

unjust issues and interview people from different backgrounds, so they could learn and

reflect on their own prejudices and biases. Her students needed not only to get

information but to be critical and engage in conversations with their peers. Additionally,

they had to present their findings in class and hand in written reports at the end of the

semester. For example, once her students interviewed a betel nut lady, they learned that

they should look at a betel nut lady from a different perspective. The professor reported

that some of the betel nut beauties had dropped out from middle school, and they had not

let their parents know about their jobs.

Professor C said that some of her students interviewed several blind students on

campus and had also pretended to be blind for a day, so they might better understand how

difficult it would be to live with a disability. This taught them to become more

empathetic and sensitive. Her students also needed to read multicultural-related teen

literature and discuss related issues in class. In addition, Professor C used film as a tool to

motivate students to have dialogues afterwards. Professor C assigned her students to

watch a film at home and discuss it in class. It was her hope that the students could see

themselves through other people's stories and come up with the best possible solution to

help solve similar difficulties. For her, the process helped her students combine theory with real life experiences.

For Professor D, multicultural education needs to involve practicing social action, for example, in order to understand students who have lower socioeconomic backgrounds. She encouraged her students to do action research with the hope that they might change their attitudes. She stated the belief that once people open their eyes, they never close them again. For example, a student from her class offered an article written by Chung, "Who needs Multicultural Education the Most?" to a professor who did not think multicultural education was needed in Taiwan. Professor D was delighted that her student asked critical questions and took action after taking her class.

Professor D noted that many people think that Taiwanese aborigines and the new immigrants should assimilate into the mainstream culture so that multicultural education would not be necessary in Taiwan. However, she argued that each of us may have the power to affect many people's lives; she stated her belief that both teachers and students should look at the issues from different perspectives. She also stated that some teachers do not like to teach   Taiwanese aborigines or the new immigrant children because it is not an easy job. These teachers know that some parents need to work long hours every

day, so they do not have time to help their children as the mainstream parents do.

Taiwanese aborigines and the new immigrant children may not be treated equally because

these teachers hold low expectations of them.

For Professor D, Taiwanese aboriginal students in the multicultural education

class helped the mainstream students understand why the government permits the

aboriginal students to enter a high school or university with a lower score than that

required for mainstream students; Taiwanese aborigines are given an extra 25% points on

their entrance examinations. Professor D did not judge but offered real stories to help her

students look at different issues from diverse perspectives. For example, A-may, an

aboriginal student in her class expressed how thankful she felt for the government policy

because it offered her the opportunity to receive a higher education. The student, her eyes

welling with tears, said that she would have ended up working in a factory at minimum

pay her whole life, as most of Taiwanese aborigines do. Professor D noted that the

aboriginal student's story affected the mainstream students' attitudes. Her students

previously thought that the policy which offers a different standard for Taiwanese

aborigines to enter high school or a university was unfair. After listening to A-may's

story, they understood why the government provides Taiwanese aborigines more educational opportunities.

Professor D's students could choose from different research activities such as participating in a new immigrant activity, volunteering at after-school programs, or visiting the elderly in the local community. Professor D stated that her students thought that old people may be dirty; however, they learned that the elderly were often much cleaner than they were.

In addition, professor D offered an alternative assignment to students who were not ready for an action research project; they could be involved in role playing to address multicultural-related issues, read literature from different cultures, and then present their findings to the class. To help her students do meaningful action research, professor D invited her previous students to share their experiences before, during, and after the action research; she also shared her own action research with her students. After participating in action research, one of her students decided to be a teacher; the student felt that she would like to work with disadvantaged children.

Professor E stated that the goal of multicultural education is respect; we should not look down on people who are different from us. According to Professor E, many

Taiwanese teachers experience culture shock when working with the aboriginal students

who are in the majority in their classrooms. Her students, both the pre-service teachers

and current elementary teachers, felt uncomfortable and resistant when they were the

minority in class. However, the majority of the students in the eastern region of Taiwan

are aborigines. Therefore, professor E suggested that teachers need to get to know the

community in which they are teaching. She asked her students to complete a community-

based project. They took pictures of the current state of the community and compared

these pictures with the pictures of the old community found on the Internet or in the

library. Her students were forced to learn about their students' communities. However,

Professor E also asked them to introduce their own community to the class so that they

could reflect on why they felt so comfortable when in their own community. By doing so,

they could be more empathetic and understanding about the aboriginal students who have

to face the similar dilemma of fear and anxiety when they study in the mainstream

schools.

According to professor E, Taiwanese aboriginal students get 25% extra points

when taking the high school or university entrance examinations because the government

offers them educational opportunities. In addition, Taiwanese aboriginal low-income

families get money from the government when they have children. The majority of the

students of Professor E could not accept these policies; they thought that the unfair

policies might spoil Taiwanese aborigines. Professor E invited her students to have

dialogue regarding these policies. She did not judge her students but listened to their

voices. From the historical context, however, Professor E believed that it is necessary to

offer Taiwanese aborigines more educational opportunities; their language learning has

been fragmented because of historical and political factors in Taiwan. Also,   Taiwanese

aborigines do not start at the same baseline as the mainstream students. Offering them

educational opportunities is a key element to practicing social justice. Professor E noted

that Taiwanese aborigines have lost much of their native culture and languages; she

explained that language and culture are closely related.

Professor E spent two-thirds of her class time creating engaging dialogues about

multicultural-related issues, and afterwards her students had to write journal reflections.

Most of them were current elementary school teachers; as a result, she spent one-third of

the class time helping them design effective and feasible multicultural education

curricula. After finishing their course designs, the teachers had to give each other

constructive feedback on their course designs. She required her students to include two

important elements in their course design. First, they had to offer examples based on different cultures; for example, relationships between stars and navigation are important for Hawaiian people. Second, teachers had to disclose different people's attitudes toward other people and the earth, namely the environment. Professor E argued that some beliefs may be viewed as superstition when interpreted by people from other cultures. For her, Taiwanese aborigines respect the relationships between human beings and nature; they are more environmentally friendly. Professor E noted that the attitudes of Taiwanese aborigines are relatively different from some western people who hardly ever reflect on the relationships between people and nature; they often consume larger amounts of natural resources because of their lifestyles.

Professor E asked her students to interview their friends to better understand culture shock. For example, the roles females and males play in important familial occasions usually show family structures and power. In Taiwan, the role of Tomb Sweeping reveals the power and positions among family members. On April 5th, the Taiwanese people have to sweep the tombs of their ancestors. Men usually take important responsibilities; whereas, women do the trivial work. Professor E addressed that something we take for granted is not always right. For example, when a Taiwanese

woman gets married, she is a member of her husband's family, and no longer a member

of her original family. Also, a divorced Taiwanese woman cannot go to her parents'

home on the first day of the Chinese New Year; it is a family time for sons and their

parents, not their daughters. Traditionally, married Taiwanese women go back to their

origin family on the second day of the year.

Professor E noted that her students asked superficial questions at the beginning of

the class; over time their journal reflections revealed that they had gained a better

understanding of multicultural education. However, it was not easy for students to

transform their ideas into practice; they usually asked for specific examples that they

could later utilize in their classrooms. Her students often asked her how and what they

could teach in certain units. It was difficult for them to take a step further. Professor E

offered her students some examples from the works of key western multicultural

education leaders; unfortunately, there are not so many good examples applicable to the

Taiwanese context since multicultural education is still young in Taiwan. Professor E

argued that even professors do not know how to provide proper multicultural-related

examples. She stated that it is not easy to put our feet in another's shoes; teachers may

not realize, for instance, that Taiwanese aborigines do not sell or buy pigs but instead

hunt pigs in the mountains. How much they can hunt is based on permission from their ancestors, not their efforts. As a result, Taiwanese aborigines cannot predict how much they can hunt to meet the policy of the Taiwanese government.

Professor E encouraged her students to design one multicultural activity per semester. If they designed one activity per semester, they would have ten activities collected over their five years of teaching. She encouraged her students to offer opportunities to Taiwanese aborigines and the new immigrants, so they could share their cultures in class. Professor E also suggested that teachers learn one new culture each semester, so as not to be overwhelmed by learning all their students' cultures in a short period of time. Professor E encouraged the teachers to invite students to introduce their cultures to the class or the teachers could search for information on the internet.

In summary, Professor E believed that if teachers have a solid foundation in multicultural education, they can weave multicultural education into all of their courses. Professor E said that educators need to be "impatiently patient" in Freire's words (1970).

Responses to question 3: What are the opportunities and challenges of implementing Web2Quest technologies in multicultural education courses? For Professor A, teachers who study in foreign countries are more likely to use technology to foster

multicultural education. Personally, he would rather use traditional teaching strategies than the Internet. However, he argued that teachers using blogs and multimedia need to give students a specific issue to explore. For example, students could research Maori culture and interview the local people from the culture via Skype; this could help students to connect to the world and gain authentic experience.

Professor A believed that Web2Quests could help learners across the boundary of time and space. However, a Web2Quest has its limitations; it would take the pre-service teachers more time to complete the final Web2Quest project if their English command was not good enough since most Web2Quests are written in English. He also argued that teachers need more technological support such as in-time maintenance when something goes wrong with the Internet before implementing Web2Quests into multicultural education courses.

In summary, professor A argued that most Taiwanese teachers addressed the superficial levels of multicultural education such as cultural holidays and celebrations in class. He suggested that travel, student exchange programs, and study abroad programs could offer real life experiences to help the pre-service teachers see themselves in foreign lands so that they could better prepare to meet the needs of diverse students. A student of

Professor A went to Chile to study for a year before entering the teacher education

program; the journey was an eye-opening experience for the student and helped him to

look at issues from different ethnic perspectives.

For professor B, students can connect with people from all over the world more

easily via technology; however, fast traveling information could also reinforce

discrimination. The Internet is a learning platform, but it is competitive, as well.

Professor B argued that teachers had to ask the following questions before implementing

technology in their multicultural education courses. For example: Who is in power? With

whom are the students interacting? Why do they use Web2Quests? What is the context?

What does it mean to the students? Why do they have the conversations? He believed

that students should have the opportunity to move across the classroom walls and have

engaging conversations through Web2Quest technologies. For him, technology is only a

tool. The human relationship is the most important issue; in turn, educators should create

a nurturing and safe environment for students in which to learn and grow.

Professor C proposed that technology might help students gain information and

connect with people from all over the world. However, she used a very traditional way of

teaching; she would like to use more technological tools if she were better at using

computers or if she had a teaching assistant to help her in class. She stated that many

teachers in Taiwan use E-learning which is similar to Blackboard to have discussions

with students after class.

Professor C noted that she could assist her students to work more effectively after

having an open discussion with them. Her students chose their own team members; if

students did not have partners, she helped them join in a group. According to Professor C,

some of her students complained that they did more work than others had done. She

would make sure that each student indicated what he/she contributed to the team. If

students did less work, they would get a lower score. Once in a while, a few students

dominated the group discussions; Professor C would address the problems in class

without stating any student's name. She noted that the students in the teacher education

program were top students in their classes. However, they were not used to having

discussions and working in teams; they got used to these kinds of assignments after

completing a semester. She encouraged her students to work with their peers since they

need to collaborate with people from different backgrounds when they become teachers.

For professor C, teacher educators should be open-minded in order to be more

empathic and better role models for the pre-service teachers. For her, weaving

multicultural education into different courses is essential. For instance, she used picture

story books to introduce how different races celebrate the New Year. She noted that

many of her students will be elementary and middle school teachers; they will not teach

multicultural education courses but will convey their multicultural education spirit to

their students. Professor C further explained that, when teaching Math, teachers had to

give examples based on students' cultural backgrounds. For example, when asking math

questions, teachers should keep in mind that not all students have eaten at McDonald's

because some just do not have the money.

According to Professor D, the new generation is very technologically savvy and

more likely to express their opinions online. Interviewing people from different cultures

through technology could help connect students to a global audience. However, language

abilities and interview skills could be challenging. Students should learn how to ask

critical questions; some students may only ask superficial questions. Professor D stated

that if the Web2Quest projects are interesting, students will enjoy doing them.

According to professor E, promoting multicultural education through technology

could motivate students' participation since the majority of them spend more than five

hours on the Internet every day. This type of learning might be interesting for her

students. She believed that teacher educators ought to provide students specific kinds of

issues to be addressed on the Internet. She argued that it might be difficult to define the

effectiveness of Web2Quests. Regarding teamwork, she said that some of her students

could not meet with their team members at certain times. Her students usually worked

individually, and they only got together to integrate the outcomes. As a result, the key

element of cooperative learning was somehow missing. Professor E believed that it

should be the responsibilities of the students to have a group discussion and decide the

form of the presentation. Professor E noted that other students liked to share and

exchange ideas with their team members; they believed that two heads were better than

one. However, her students often preferred to work with their friends because they liked

each other and the outcomes were usually better.

Professor E also noted that some students dominated the discussions, and

competiveness occurred within and among groups. Some members liked to have a leader

and were willing to be followers. However, if someone talked for too long a time, she

would pick the quiet student to speak up. Professor E argued that language may be the

biggest issue when implementing a Web2Quest in class; not all students had good

command of English. She further stated that when considering how much time students

actually could spend getting to know people from other countries due to time constraints,

students might actually reinforce their biases. For her, evaluation was another challenging

issue.

Responses to question 4: What is the current status of multicultural education in

Taiwan, and what are the challenges involved in multicultural education? Professor A

stated that multicultural education is in its infant stage in Taiwan. He acknowledged that

the central and local governments have taken actions to address the importance of

multicultural education in the past 10 years, such as building cultural centers for the new

immigrants to learn languages, study cultures, and acquire social and survival skills.

Professor A indicated that there is still room for improvement; he argued that educators

can only make changes when facing a lot of pressure from the minority groups.

According to Professor A, the birth rate in Taiwan is drastically dropping, so there

are fewer open teaching positions. Half of the pre-service teachers in Taiwan cannot find

a full-time teaching position; as a result, most of them are willing to work in rural areas.

Professor A stated that some teachers volunteered in Lanyu, a poor county with little

resources, for humanitarian reasons many years ago; nowadays, teachers go to rural areas

for job opportunities. Professor A advocated the belief that pre-service teachers can teach

more effectively in poor school districts if teacher educators guide them properly.

According to Professor A, poverty prevents students from academic success, not

culture or ability. He reported that about 99% of Taiwanese aborigines said that they

hoped their children could receive higher education. However, they did not know how to

create a better environment for their children's education. For example, parents asked

their children to study hard; whereas, they watched TV all night themselves in the living

room which was next to the bedroom of their children.

When reflecting on his own attitude, Professor A said that he used to dislike

Taiwanese aborigines because no one offered him the correct information; therefore, he

had a negative impression of them. He also argued that social studies should address

more about the cultures of Eastern Asian countries since there are more new immigrant

children than Taiwanese aborigines in Taiwan. Professor A suggested that male and

female pictures should be balanced in textbooks. He also noted that textbooks hardly ever

show pictures of a deaf or blind person. In addition, he argued that the media has not

changed very much over the decades. There is too much ideology in the media; gender

roles portrayed in the local advertisements and Taiwanese soap opera as well as Japanese

and Korean soap operas still reproduce stereotypes. Japanese and Korean soap operas are very popular in Taiwan.

According to Professor A, there is no research regarding the perceptions of pre-service teachers and current teachers towards the new immigrant children in Taiwan. He argued that recent research has indicated that the new immigrant children are as smart as students from the mainstream culture. However, many Taiwanese teachers still have negative stereotypes towards   Taiwanese aborigines and the new immigrants. Professor A reported that there are more new immigrant students than Taiwanese aborigines in Taiwan. Therefore, he suggested that the textbooks should have more pictures and information about the Eastern Asian cultures to make their cultures more visible.

In conclusion, Professor A argued that comprehensive multicultural educational reform is essential in order to practice and teach social justice. He argued that those in power should spend more time on improving the quality of education for all students in Taiwan. In addition, policymakers should require more multicultural education courses for teacher education programs as well as for general courses.

The educational system should be examined, and the voices of the students, teachers, and parents should be heard before educators make any important educational

policies. A policy should not be made lightly before thorough research has been done and

its pros and cons debated. Finally, he echoed the idea advocated by So and Brush (2008)

when he reminded teachers that dialogue across the differences in people is essential to

achieving freedom, equality, justice, caring, love and trust. Most importantly, he

encouraged teachers to reflect on and critically analyze their perceptions of minority

groups and how these perceptions affect their relationships, instructional pedagogies, and

overall educational equality.   He emphatically argued that teachers need to unlearn,

relearn, and step out of their comfort zones to have personal interactions with people

from different backgrounds. Professor A firmly proposed that establishing relationships

with different ethnic groups can help teachers recognize the differences and similarities

among cultures, and reduce some ingrained stereotypes in order to provide the best

possible education for all students.

Professor B did not like the idea of pluralism as tolerance and acceptance; such an

idea is "fake," in his words. For him, pluralism masks the relationships between

oppression and control; it ignores the haves and the have-nots. He argued that critical

consciousness helps us reveal social construction; oppression and power should be

addressed in multicultural education courses, or it will be sugar coated by politicians.

Teachers need to critically analyze the distributions of power and privilege in school. For him, learning how to promote the redistribution of power and privilege is the heart of multicultural education. He argued that most people do not think multicultural education is needed in Taiwan; however, he emphasized that it is definitely needed. Finally, he encouraged teachers to examine their own prejudices and redefine their responsibilities in order to meet the primary goal of multicultural education, social justice.

Professor C stated that the central and local government or the university have offered multicultural-related workshops and seminars to everyone. She argued that current teachers are required to have 18 hours of professional development classes per semester; however, they usually choose seminars such as how to make money, or how to make practical things like cakes. Some teachers may rest their eyes during the seminars; however, a few of them do conscientiously take notes. Professor C usually offers her e-mail to participants in the workshops she conducts, but no one ever asks her any questions. For her, multicultural-related issues should be addressed at all levels, ranging from pre-school to the university. Professional development is essential for current teachers in order to offer equal educational opportunities for all students.

In summary, Professor C suggested that teachers take advantage of the opportunities provided in the literature that are a part of our daily lives to better facilitate their multicultural learning about how ethnic images are presented; teachers can use these to practice problem solving in class on ethnic issues such as prejudice, stereotyping, and discrimination by analyzing examples in the books. She stated the belief that engagement with various literature and lived experiences from ethnic groups will help students in their ongoing process of becoming a multiculturally aware person and educator.

Professor C argued that having dialogues with people from different backgrounds is one of the key elements to cultivating multicultural awareness for students; however, it is also important to have dialogues with oneself. She encouraged her students to find key elements of their own lived experiences in some of the books they read; this made their lives feel more positive and powerful. Reading the stories helped the students reflect on their own feelings and cultural experiences. Professor C hoped that her students would be more empathic and appreciate cultural differences and, in turn, be well prepared to construct and live in a more caring, compassionate, and inclusive society. Her students were encouraged to practice self-reflection, cultural consciousness, and social activism to convey the spirit of multicultural education--social justice in their classrooms.

Professor D thought that she had done a good job and had offered many effective

multicultural-related activities. She once felt frustrated when she asked her students to

wear various Taiwanese aboriginal costumes during multicultural week; this kind of

activity had worked well with her undergraduate students. However, her graduate

students were not as lively as the undergraduates; they felt anxious about the activity.

These students revealed their worries to one of Professor D's colleagues. A day before

the activity, Professor D had learned the truth and then discussed the issue with her

graduate students who were surprised that their professor was so open-minded. Professor

D thought that this experience had helped her reexamine her own teaching strategies.

Professor D also mentioned that male teachers were often uncomfortable

discussing gender issues; they said that they were criticized all the time because of their

gender. She noted that the attitudes of her male students often had changed by the end of

the semester. They had felt better about themselves.

Professor D always shared her own experiences with her students but never made

judgments. However, she did argue that some people cannot see what they do not want

to see. Most of her students, however, were open-minded; they addressed their sexual

orientation in their cultural autobiographies. Her students asked questions such as, "When

do you start to like females? When do you start to like males? Are you female or male?"

Broader multicultural issues were also addressed in her class. Her students shared their

final projects on a Moodle or class blog before a class presentation; however, her students

were not used to giving other students feedback.

In a larger context, Professor D addressed the following challenges which need to

be overcome in order to practice comprehensive multicultural education in Taiwan. First,

educators should not exclude people from entering the teaching profession even if they

do not initially have a passion for teaching. She argued that love would transform pre-

service teachers because she believed that all students can learn. Teacher education

programs in Taiwan usually recruit those with higher scores; for Professor D, this is a

very objective process. However, she argued that the typical teacher interview of 20

minutes teaching and 10 minutes for asking questions was not really sufficient for teacher

educators to find the right people for the teaching profession; in addition, teacher

educators usually select those prospective teachers who are good speakers. Professor D

suggested that teacher educators should spend more time during the interview process in

order to choose the right people for the teacher education program. Second, she noted that

teacher education courses are shared by different departments; educators agree that

multicultural education and morals are important but do not place them at high levels of

priority. Third, many textbooks state that people should respect and appreciate cultural

differences; however, she argued "how could students possibly respect and appreciate

differences if they do not fully understand the cultures?" For Professor D, understanding

and empathy are important and should be addressed during interviews at the top of the

priority list. Teachers and students need to fully understand the essence of multicultural

education in order to practice social justice. Professor D argued that multicultural

education was not just a rainbow or a party; teachers should not limit their multicultural

education practices to superficial activities such as celebrations and heroes. Fourth,

educators should try to avoid overloading the curriculum; they should not add but rather

eliminate courses. If teachers had a solid base of multicultural knowledge, topics such as

art appreciation, gender awareness, and inclusion issues could be woven into their

different courses.

Professor D noted that if teachers have a solid foundation of multicultural

education, it will be easier for them to practice social justice. She expressed the belief

that designing a course required not only skill but passion as well. She argued that most

science and math teachers do not think multicultural education is relevant to their

teaching. In addition, she noted that professional development is not welcome among

professors; the majority of professors do not think they have to be told how to teach.

Professor D strongly believed that professional development is an ongoing process;

teachers have to continually learn new knowledge to meet the challenges of a constantly

changing world.

Professor E stated that self-reflections, real life encounters, and community

service helped her students think critically and look at the world with different ethnic

perspectives. A solid multicultural education foundation, knowledge, time, commitment,

and patience are key elements to the practice of social justice in a diverse classroom.

According to Professor E, people in the southern region of Taiwan have strong

ideologies. It would be easier to promote multicultural education in Hualien County

because of the climate of the school and community; the majority of Taiwanese

aborigines live in Hualien County.

Professor E believed that if teachers are aware of cultural differences before

traveling to foreign countries, they will be more likely to appreciate the new cultures. If

not, reinforcement of their stereotypes may occur especially if they have biases towards

certain groups of people.

Professor E revealed that she used to think Taiwanese aborigines were

unreasonable, stubborn, and uncivilized; they always listened to the older people in their

tribes. For Taiwanese aborigines, knowledge is transmitted by the elderly and oral history

and culture are important. Students who live in a mainstream cultural environment have

fewer opportunities to encounter people from different backgrounds.

Based on her teaching experience, Professor E reported that people in Tainan, the

southern region of Taiwan, appreciate their local culture; they love their community and

strongly believe that Tainan is the best place in the world. Professor E suggested that

teachers need to build networks to support each other in order to sustain the ongoing

process of multicultural education.

Main themes of the one-on-one interviews. I studied the one-one-one interview

transcripts by reading through them several times, looking for repeating ideas conveyed

by the teacher educator participants. I then defined categories of phrases stated by the

participants and categories of ideas were developed as overarching themes. Repeating

ideas from the participants' responses assisted with this process of coding for specific

patterns. From this overall process, I began to make assumptions and find emergent

themes. Based on the one-on-one interviews with the five teacher educators, six themes

emerged: (1) teachers' self-exploration, (2) effective cross-cultural teaching, (3) building

relationships and classroom environment, (4) professional development, (5) curriculum,

and (6) the challenges of multicultural education in Taiwan and the development of

global learners and citizens.

Teachers' self-exploration. Self-exploration is one of the most critical essences to

increase multicultural awareness. In order to meet the needs of students from various

cultures, teachers need to unlearn their prejudices and biases and learn about students'

learning styles and cultures. Professor D argued, "Teachers need to identify and work to

reduce their own biases, prejudices, and assumptions about various groups of students to

broaden their teaching styles and consider the significance of the teacher and student

power relationship." The teacher educators firmly expressed the belief that pre-service

teachers have to examine their privilege, being the oppressed or oppressor, racial and

ethnic identity, cultural values, and social justice. By doing so, the pre-service teachers

could ask critical questions as they pay attention to inequity in classrooms as well as in

the greater society to address sociopolitical relationships, power, and privilege in the

classroom.

Effective cross-cultural teaching. The student-centered concept involves culturally responsive teaching that reflects the core value of multicultural education. Professor E stated, "Culturally responsive teaching could help all students achieve and explore their full potential." Professor C argued that teachers need to understand students' different learning styles and their family backgrounds in order to realize effective cross-cultural teaching. Professor C shared a similar idea with Trumbull and Rothstein-Fisch (2008) who stated that effective teachers make sure that their strategies are in tune with their students' cultures. Professor D also stated, "Teachers need to modify their curriculum and teaching styles to meet various students' needs." Professor E suggested that teachers need to vary their instructional materials as a way to draw in students with various learning styles and encourage students to raise critical questions about how the content is presented in educational materials such as textbooks or media.

Professor C stated, "Teachers need to provide ample opportunities for students to work together and encourage them to help one another." According to Dewey (1938) the aim of education is development of individuals to the utmost of their potential who contribute to enrichment of other's lives through cooperation and spirit in equality for all. In this process, teachers need to watch for and challenge student behaviors and

relationships that reflect stereotypical roles, e.g., men assuming the lead in classroom

activities, or women being note-takers in small groups. Being educator leaders, teachers

have to be thoughtful about how cooperative teams or small groups are presented, e.g.,

avoid temptation as Gorski (2007) warned to "distribute" people from under-represented

groups (p. 51).

All of the five teacher educators also agreed that teachers need to effectively

facilitate difficult dialogues about racism, sexism, classism, heterosexism, or other

inequities. Professor C argued that teachers need to seize teachable moments for social

justice: when students make fun of other students, teachers could talk about different

cultures, norms, and experiences to avoid bullying. In addition, Professor D stated,

"Teachers could allow students to choose how they will be assessed since people do not

demonstrate understanding and application in the same way." Realistically, teachers

need to incorporate different styles of learning and levels of critical thinking in their

lectures and tests for students to receive more equitable treatment.

Building relationships and classroom environment. The development of

relationships is one of the most critical features to foster multicultural education in order

to create equitable learning environments for all students. All the five teacher educators

agreed that building trust and caring could increase the learning outcomes of their

students. Teaching by example, as a model, is the most powerful approach. Professor B

stated the belief that if teachers learn about the lives and cultural backgrounds of their

students, they can naturally bring in stories about what students know, value, and

experience. Professor C addressed, "Inviting the immigrant students' families to be guest

speakers in class could help the whole class better understand cultural differences." By

doing so, students would respect and appreciate the beauty of each culture. In addition,

the real-life experiences and narrative stories could help the minority students as well as

their parents build the sense of belonging.

Creating a culturally responsive classroom requires that teachers provide an

environment in which all students in the community feel comfortable and welcome.

Professor C argued, "Teachers should create equal opportunities for all students,

regardless of race, gender, or age." Professor B stated the belief that inclusive classrooms

can provide all students safe, comfortable, and nurturing environments to learn, explore,

and grow. Professor D indicated that teachers must make sure the images in their

classrooms represent a variety of ages, genders, social classes, and different ethnic

groups. Professor A suggested that teachers need to clarify and explain inaccurate

portrayals of ethnic groups in the textbooks, mass media, and popular culture. All the

five teacher educators argued that teachers need to help students to make connections

between curriculum and their lives.

Professional development. Professional development is an on-going process for

teachers in order to meet the challenges in diverse classrooms. Professor C noted,

"Engagement with various literature and lived experiences from ethnic groups will help

teachers in their continuing process of becoming a multiculturally aware person and

educator." However, Professor D argued, "Professional development is not welcome

among current teachers; the majority of them do not think they have to be told how to

teach." Professor D further explained, "Professional development is a life-long learning

process; teachers have to continually learn the latest information and perspectives to meet

the challenges of a constantly changing world." Professor A stated, "Traveling, student

exchange programs, and study abroad programs could offer real life experiences to help

pre-service teachers see themselves in foreign lands so that they could better prepare to

meet the challenges in the diverse classrooms."

Professor B stated, "Current teachers could engage dialogues with people from

various backgrounds through Web2Quest technologies to expand their multicultural

journey. Professor B also noted, "Belonging to a committee for a multicultural education association is a good way to make connections among teacher educators. Three out of the five teacher educators noted that joining professional development groups not only helps teachers to gain the latest multicultural education information but also provides emotional support to each other since multicultural education is a daunting task and on-going process.

Curriculum. Both teachers and students bring their past educational experiences, complex identities, prejudices, and biases to the classroom. The expectations of both students and teachers affect students' learning outcomes. Teachers' complex identities, biases, prejudices, and notions about the purposes of education and roles of teachers affect their curriculum. The positive attitudes influence their expectations of students. Professor A argued, "In developing and examining curriculum, teachers should ask the following questions: Who is represented in readings, examples, and illustrations? What are the perspectives and the worldview of those who are represented? Whose voices are centered? Who are "others?" With these questions in mind, teachers could integrate curriculum into students' lives to promote meaningful learning. Sleeter and Grant (2007) also reminded teachers of a deeper question: "Whose point of view guides the knowledge

in curriculum?" (p. 164). For example, if one is teaching history or social studies, an inclusive curriculum should not only include the new immigrants, but also their perspectives. All of the five teacher educators agreed that students' voice should be heard, and their cultures need to be woven into curriculum seamlessly. Both teachers and students can learn from each other to explore their full potential.

The challenges of multicultural education in Taiwan and the development of global learners and citizens. All the five teacher educators agreed that many Taiwanese people as well as teachers do not see the urgent need of multicultural education; however, it means that multicultural education needs to be promoted at all school levels. Professor D stated the belief that teachers in Taiwan can learn lessons from the experiences of multicultural education practice in other countries such as the United States, Canada, Australia, and Sweden. Teachers might avoid similar mistakes so that they could offer equitable educational opportunities to all students.

Professor A argued, "Teachers can only make changes when facing a lot of pressure from the minority groups." Professor A also noted, "Many teacher educators emphasize teaching techniques and do not value multicultural education, so they do not make multicultural education as a required course in teacher education programs."

Professor C argued, "A comprehensive educational reform is essential in order to promote multicultural education in Taiwan." In Taiwan, the majority of junior high and high school students spend most of their time studying in order to go to a prestigious school; study hard and get good grades means everything for them. However, Professor B argued that students should not suffer from giving up their social lives, the opportunities to learn about different cultures, and to see the beauty of the world.

All of the five teacher educators agreed that teachers can help their students connect to the world through Web2Quest technologies. These teacher educators stated the belief that if the internet is used wisely and responsibly, it can surpass the potential of other educational media as a means to practice and supplement interactive, inclusive, active, and collaborative teaching and learning. For example, after reading a multicultural-related book or watching an Oscar winning movie like "Crash," students could ask critical questions and exchange opinions with other students or teachers from various cultures through the internet. Professor E stated "Teachers can use the internet to build upon their own knowledge or to diversify the perspectives and voices dominating traditional educational media." Similarly, Professor A stated "The internet can also help facilitate inclusive teaching and learning through projects and sites that encourage

teachers as well as students to participate in virtual global communities with peers who may be culturally different." According to the five teacher educators, Web2Quest technologies could help the pre-service teachers to connect with a global audience. Consequently, these teachers could develop problem solving skills in perspective consciousness, as Cho and Jonassen (2002) described the ability to recognize how people different from themselves construct events and issues through their own cultural lenses, their knowledge bases, and their own life experiences.

The teacher educators recognized that incorporating current events into their multicultural education courses through Web2Quest technologies could help students make connections between real life and multicultural learning. Current events could motivate students because they are immediate and tangible. For example, students can exchange their viewpoints with people from various cultures via Web2Quest technologies regarding whether the United Nations has the right to name Taiwan as one province of China. By doing so, students could understand their own connections to the larger world, see local issues through global perspectives, and recognize that global issues are often significant within their own community, region, or country.

In conclusion, the philosophy and teaching strategies of the five teacher educators are very similar. First, all of them argued that pre-service teachers with little multicultural experience need to acquire the appropriate knowledge and skills, but they also need to readjust their roles as teachers by recognizing the importance of diversity in all of their educational decision making, from understanding their students' backgrounds and learning styles, to designing curricula, selecting instructional materials, assessing performance, and developing appropriate programs and teaching strategies. Second, they advocated that practicing social justice is the primary goal of multicultural education. They all stated that teacher educators need to have a solid foundation in multicultural education in order to help pre-service teachers as well as current teachers provide equal educational opportunities to all students; in turn, social justice will be practiced in all of their classrooms. Third, these teacher educators argued that teachers should value their students' cultures and help them be proud of their heritage. According to the teacher educators, there is no culture that is better than another culture, so we have to learn to respect and appreciate all cultural differences. Fourth, they suggested that all the following strategies are effective in helping to re-examine one's prejudices and biases: reading literature by various ethnic authors, watching multicultural-related video and

films followed by engaging dialogues, connecting with people through Web 2.0

technologies, and traveling to foreign countries. Finally, they encouraged their students to

do action research and participate in community service so that they might be more

empathetic and open-minded when working with people from different backgrounds. The

five teacher educators echoed the philosophy expressed by Boyle-Baise and Sleeter

(1996) that it is essential to plant seeds (multicultural knowledge) and pull weeds (one's

prejudices and biases).

In order to create an equitable environment for all students, the five teacher

educators stated the belief that teacher education programs need to offer more

multicultural education related courses and workshops to help pre-service and current

teachers to gain a deeper understanding about multicultural education**.** The viewpoint of

the teacher educators is similar to my own and could be characterized by Style's (1998)

analogy with window frames and mirrors whereby multicultural experiences help

teachers look through window frames in order to see the realities of others and into

mirrors in order to see their own reality reflected. As Style stated it, "knowledge of both

types of framing is basic to a balanced education which is committed to affirming the

essential dialectic between the self and the world" (p. 35).

All of the five teacher educators also informed their students that they need to face the reality that language diversity issues will become part of the normal experience. That means welcoming the opportunity to alter traditional classroom practices in a creative way so that the democratic ideal of education for everyone can be realized.

According to the five teacher educators, self-reflection is the first step in moving beyond one's comfort zone; they always encouraged their students to look at history and social issues from different perspectives. Most importantly, all of the five teacher educators provided a good model for their students by devoting their time to multicultural education. For these teacher educators, taking action to bring about social justice is the essence of multicultural education; they are the seed sowers who are planting seeds with care, love, compassion, and patience. They noted that their task is daunting; however, they believed that the seeds, even though some of them may fall on rocks or bad soil, will eventually be blossoms in the near future.

Despite the similarities, these teacher educators differed slightly on their focus of multicultural education. For example, Professor A devoted his time to Taiwanese aboriginal education and helped pre-service teachers better understand Taiwanese aborigines. Professor B spent much of his time with the pre-service teachers to assist

them to have better skills to help disadvantaged students gain their self-confidence

through art, singing, dancing, and cultural activities. Professor C devoted her time to

improving the education of the new immigrant children and helping women immigrants

adjust to their new life in Taiwan. Professor D has published numerous multicultural-

related articles and books to help current teachers develop their multicultural knowledge

to meet the challenges of a diverse classroom. Similarly, Professor E worked with pre-

service teachers as well as current teachers to assist them in designing effective

multicultural curricula.

Analysis of field notes.

At University A, I noticed that Professor A respected his students and built a good

rapport with them. The students got along well and were willing to put forth effort to

improve their final projects. Professor A provided a good role model for his students

because he has devoted most of his time, 20 years, to the education of Taiwanese

aborigines. Two weeks after I conducted the one-on-one interview with Professor A, I

was invited as a guest speaker to share my journey of becoming a multicultural person by

way of the US context. His students were open-minded and willing to share their personal

lives and teaching experiences with me in the focus group as well as during the

discussions on the day I was a guest speaker in their class. One of the pre-service teachers

asked, "Why do we not have movies or TV programs from the south Asian countries

even if we have more and more new immigrants from these counties?" A graduate

student stated that he did not have the opportunity to take multicultural-related courses

when he was an undergraduate student in a prestigious university. Most of the pre-service

teachers in University A told me that their becoming multicultural persons did not take

place until after they had entered the teacher education program.

During the engaging three-hour discussions when I was a guest speaker at

University A, the students were curious about the practice of multicultural education in

the United States, particularly issues regarding racial relationships. They demonstrated

positive attitudes towards people from various cultures. I believe that they have great

potential to be effective teachers when working with diverse student bodies. Two of the

pre-service teachers in the focus groups stated that they were not able to reduce their

prejudices after taking the multicultural education course, and this really bothered them.

Another pre-service teacher noted that she reinforced her stereotypes of Hakka--one of

the minority groups in Taiwan--because of her personal encounter with some Hakka

people. I encouraged them to treat people the way they wanted to be treated and to look at

people from different backgrounds as individuals not as specific ethnic groups.

Professor B was generous in allowing me to observe his classes for six hours over

three weeks. The classroom setting was different from the traditional one. For his class,

Professor B reserved an exercise room which had full-length mirrors lining four sides. He

stated that the setting might help students better reflect on their prejudices and biases by

looking into the mirrors and looking out the windows. In addition, he started his lessons

by basic stretching movements and chatting for the first five-to-ten minutes. For

Professor B, this exercise helped his students get ready for class; those who were late did

not feel stressed or embarrassed. Professor B created a safe and inviting environment for

his students to participate in engaging dialogue.

During my first observation, two groups of students were leading class

discussions regarding Freire's (1970) book "Pedagogy of the Oppressed." To my

surprise, the textbook was in Mandarin. For the pre-service teachers, there was some

jargon in the textbook; however, Professor B encouraged them to share what they had

learned from the chapter. Each group with four to five members had to lead a class

discussion for a chapter. There were about 35 students in the class; however, there were

only six students who responded to the class discussion. Professor B stated that the pre-

service teachers were used to a banking system of education (knowledge deposited for

withdrawal when needed) before entering the university; some of them were not

comfortable speaking up in class. Most of the students were silent when Professor B

asked critical questions; however, the graduate students were more willing to respond to

the questions. Professor B was patient and tried his best to break the ice by offering

different perspectives regarding an issue or problem which helped motivate an engaging

dialogue.

During my second observation, the students had their final Web2Quest

presentation, 15-20 minutes for each group. Two groups of the students shared the stories

they had read and were asked to reflect on how the stories related to their own life

experiences. Professor B always gave his students positive feedback; however, he

emphasized the importance of deeper reflections. Professor B did not ask his students to

stop even if they had taken more time than they were assigned. Because of the time

constraints, there was not enough time to have discussions after the presentations.

During my third observation, two Taiwanese aboriginal students demonstrated

their traditional dress and shared their cultures for their final projects. I was delighted to

have the opportunity to meet Taiwanese aboriginal students; they participated in a focus

group discussion, as well. The pre-service teachers in this class seemed to enjoy having

Taiwanese aboriginal students in class. These two students were from different aboriginal

tribes in Taiwan; they pointed out how some pictures in the textbooks indicated incorrect

information about their cultures. This was an eye-opening experience for me; prior to this

class, I had never had a conversation with a Taiwanese aborigine. For me, the authentic

learning was rewarding and more meaningful than just reading about them in textbooks.

I was in University C for only four hours, but I observed that professor C created

a welcoming and comfortable learning environment for the students. The students

appeared to enjoy her classes and work very hard to live up to her standards. Each group

had presented their finalWeb2Quest projects in different forms; they had to hand in

written reports after the oral presentations. Overall, I found that the graduate students did

a better job than the undergraduates. Two groups shared their written reports with me:

one was an interview regarding the difficulties of the disabled in the Taiwanese context;

the other one was about a book which described a child who was hyperactive and asked

to transfer to another school because her teachers and peers could not tolerate her.

Fortunately, the little girl in the story was accepted by an alternative school where the

principal had listened to her for hours on her first school day there. As a matter of fact,

the little girl was also the author of the book. Professor C asked her students to reflect on

the stories they had read or the interviews they had conducted and seek a better way to

solve similar problems.

In summary, all of the three educators encouraged their students to view

multicultural education issues from critical perspectives. The climate of the classroom

was welcoming and caring; the pre-service teachers were encouraged to be open-minded

and reflected on their own prejudices through class discussion regarding multicultural-

related issues. The teacher educators tried their best to promote engaging dialogues even

though some of the pre-service teachers were not accustomed to the student-centered

teaching approach; the teacher educators also asked critical questions to promote higher

order thinking.

Analysis of the final Web2Quest projects of the pre-service teachers.

Each of the three teacher educators who integrated a Web2Quest in their class

shared two final Web2Quest projects with me. The following paragraphs describe one

project from each university. A Web2Quest created by the pre-service teachers at

University A was an interview regarding the Oscar winning film movie "Crash." The

movie depicts the intersection of race, ethnicity, religion, and social class in a culturally

and politically charged environment. The pre-service teachers interviewed people from

different cultures on campus or through Skype or videoconferencing and asked if the

movie could help people reflect on their prejudices and biases. Because University A is

located in an international city, it was easy for the pre-service teachers to connect with

foreigners; they were surprised to learn that many foreigners were friendlier than they

had thought. If the foreigners had seen the movie and if time permitted, the majority of

them were willing to respond to the questions. Based on their responses, the majority of

the interviewees were impacted deeply by the movie regarding stereotypes and

prejudices. In addition, the pre-service teachers had the opportunities to step out of their

comfort zones through the interviewing process. Initially, they felt timid to ask strangers

questions; especially, they did not feel comfortable when people rejected their request for

an interview.

A Web2Quest created by the pre-service teachers at University B involved an

interview regarding a true story of one of the pre-service teacher's parents. The pre-

service teacher's father was in a vegetative state following a stroke; her grandmother

blamed her mother and hit her harshly. Her grandmother thought if her daughter-in-law

would have been tender and had not argued with her son, the tragedy would not have

happened. Meanwhile, the pre-service teacher's uncle asked her mother to divorce her

father. The pre-service teacher's brother splashed a glass of water on his uncle's face and

stated that he would always take care of his parents no matter what happened. Two years

later, the father awakened and could recognize his family. The family cherishes their time

together and felt contented even when the father had not recognized each individual. The

pre-service teacher, her sister, and the younger brother do most of the house chores for

their mother now and make sure their mother is not harmed. The pre-service teacher's

mother is delighted because her husband is with her and the family. The family often

pushes the father in his wheelchair; they experience every little thing with joy. The

family is alive as they spend their time together. However, they notice that people are

staring at them with looks that are unmistakably concerning, sympathetic, or pitiful. It

seems funny, ridiculous, ironic, and silly to the family that they who are so full of great

joy and tremendous relief, are the objects of pity from others. The pre-service teacher

realized at that moment that people make judgments about one another's lives,

particularly about those with disabilities. She decided to dedicate her future to inclusive

education because she believed that within inclusive schools, people learn the importance

of unconditional acceptance and support.

A Web2Quest created by the pre-service teachers at University C was an

interview regarding a betel nut beauty in Taiwan. According to the final Web2Quest

project, a betel nut beauty is a unique part of Taiwan culture. The betel nut beauties

usually sit in brightly-decorated glass booths wearing skimpy outfits, and sell cigarettes,

drinks, and betel nuts to passing drivers. A betel nut is the nut of the areca palm, which

gives a mild narcotic effect when chewed. Selling betel nuts by young ladies is a

controversial trade, but it is not actually illegal. The question of whether the ladies are

exploited is open to debate–certainly their own perceptions are mostly that they are doing

a job like any other, and the less they choose to wear, the more they sell. The pre-service

teachers used Skype to interview a South African photographer, who had spent seven

years in Taiwan photographing the betel nut beauties, and learned that the photographer

had positive attitudes towards these ladies. On the contrary, the majority of Taiwanese

have negative attitudes towards the betel nut ladies. The photographer interviewed many

betel nut beauties and learned that some of the ladies who worked in the booth during the

day also studied part-time at night. Interviewing the photographer helped the pre-service

teachers look at an issue with different perspectives. Also, interviewing a betel nut lady

helped the pre-service teachers realize that these ladies typically dropped out of school

early, were now regretting it, and were taking night classes. Most of them hoped that the

local people would treat them with respect. For the pre-service teachers, they learned not

to judge people because of their job or looks and to be more empathetic to disadvantaged

groups.

In summary, after completing the Web2Quest projects, the pre-service teachers

became more aware of their own prejudices and biases. According to Kolb (1984),

experiential learning is a supportive match to lectures, reading, and examinations. In

addition, Kolb stressed the importance of reflecting on feelings, values, and thoughts

related to experiential activities, for example, using Skype or videoconferencing. Teacher

educators can guide students to have classroom discussions, debriefings about

experiential learning activities, and journals for self-reflection, which provide an

increased understanding of individuals who are different from themselves.

The next chapter describes the discussion of the three research questions,

implications for practice and recommendations for further research, limitations of the

study, and the conclusion.

Chapter Five: Discussion

This study examined the attitudes and beliefs of 120 pre-service teachers as well as five teacher educators regarding multicultural education, how multicultural education could be promoted in school settings, as well as integration of Web2Quest technologies in multicultural education courses in three teacher education programs in Taiwan. The research questions were: (1) What are the attitudes and beliefs of the pre-service teachers and teacher educators regarding multicultural education, and how do the teacher educators prepare the pre-service teachers to meet the needs of diverse K-12 students in Taiwan? (2) To what extent is there integration of Web 2.0 technologies in their multicultural education courses in the three teacher education programs in Taiwan? (3) What are the perceptions of the teacher educators and the pre-service teachers regarding the opportunities and challenges of using Web2Quests to facilitate multicultural education?

Research Questions

> **Question 1: What are the attitudes and beliefs of the pre-service teachers and teacher educators regarding multicultural education, and how do the teacher educators prepare the pre-service teachers to meet the needs of diverse K-12 students in Taiwan?**

Attitudes and beliefs of the pre-service teachers. Data from the Teacher

Multicultural Attitude Survey indicated that the pre-service teachers had positive attitudes

toward people from different backgrounds. Data from the Web2Quest Questionnaire

showed that the Web2Quest projects helped them connect to a global audience. Data

from the open-ended questions and the focus group discussions suggested that the

majority of the pre-service teachers have traveled to different countries and have worked

or volunteered in diverse settings. In addition, the pre-service teachers stated that they

had been treated differently when they were the minority; the experiences helped them be

more sensitive and empathetic when working with minority groups. All of the pre-service

teachers who responded to the four open-ended questions and participated in the focus

group discussions believed that people should respect and appreciate cultural differences

and treat others as the way they want to be treated.

The results of the study revealed no significant differences among the three

groups regarding the pre-service teachers' attitudes, beliefs, and sensitivity in working

with students from diverse cultures. However, the pre-service teachers expressed their

own prejudices and biases toward people from various cultures. Seven out of the 18 pre-

service teachers in the focus groups shared some stereotypes toward specific groups of

people. Some of the stereotypes that were mentioned were: Americans are honest but

selfish, Germans are serious, Italians are romantic, Spaniards are hospitable, British and

Australians are distant, the Taiwanese people are friendly, and the Mainlanders are loud.

During the focus groups, four pre-service teachers indicated their negative encounters

with specific groups of people reinforced their stereotypes. These attitudes have

reinforced my belief that culture is a complex construct to be understood and examined

through multiple perspectives. In the classes I teach in the future, I will strive to

emphasize that individual behaviors should not be the basis for generalizing.

The findings from this study affirmed that those who are unfamiliar with the

political history of the minority groups are unlikely to appreciate the challenges and

plight of these groups. According to Gay (2000), prospective teachers should be

prepared to function as culture brokers, possessing the knowledge and skill base required

to present an instructional program that connects students' experiences to the curriculum.

The study also affirmed that teacher educators need to help pre-service teachers gain an

in-depth understanding of the roles of various cultures in our society and their impact on

the education process.

Based on the focus group discussions, 15 out of the 18 pre-service teachers stated

that they expected their affluent students to achieve and continue in the direction set

before them, while their poor students would probably need to find ways to overcome

many difficulties in order to be successful. As a result, the pre-service teachers suggested

that teachers in poor school districts must have warm dispositions, patience, and passion

to assist students in reaching their fullest potential. However, during their student

teaching, the pre-service teachers noted that many current teachers set low expectations

toward the disadvantaged students; some teachers do not believe that minority students

are capable of learning high-level concepts or of achieving academic excellence.

According to Irvine (2003), teachers practice great energy toward those students they

expect to succeed. In contrast to this, teachers who expect little success of their students

often are less rigorous or comprehensive in their instructional programs. What is ironic is

that most school districts' mission statements in Taiwan include teaching about and

promoting multicultural education. My philosophy will continue to be that teachers need

to "plant seeds on good soil," a safe and welcoming learning environment. Teachers also

need to "water the seeds" with care, patience, passion, and love. As a result, each person

can contribute to the world at different times and in different ways; even the late

bloomers can excel.

Data based on the open-ended questions and the focus group discussions

suggested that the pre-service teachers who had volunteered or worked in diverse settings

were more likely to find ways to bridge home and school. Similarly, Ladson-Billings and

Brown (2008) suggested that culturally responsive teachers see themselves as part of the

community encouraging "fluid and equitable relationships" among the student population

(p. 25). The results of this study give support to teacher educators in offering pre-service

teachers ample opportunities to encounter people from various backgrounds; in turn, as

future teachers they might be more empathetic and able to create equitable learning

opportunities for all of their students.

The focus group discussions showed that the majority of the pre-service teacher

participants in the study are Han middle-class Taiwanese (similar to white middle-class in

the U.S.); as a result, they might encounter similar diversity challenges when teaching

and working with students whose backgrounds are quite different from their own. Many

had grown up in mainstream communities with little or no diversity at their schools. In

addition, most of their friends were similar in class and ethnicity. As a result, they shared

a common set of values and opinions. However, the results of this study revealed that the

pre-service teachers were willing to move beyond their comfort zones and seek different

perspectives while working with students from diverse backgrounds. Their voices

showed words of appreciation for the various life experiences that supported their

development of attitudes of acceptance for people who were different from themselves.

Consistent with one of the major multicultural themes, cultural awareness, the pre-service

teachers expressed their desire to meet the needs of diverse students and wanted to

acquire knowledge about different groups in order to be a culturally responsive teacher.

Half of the focus group participants had some prior knowledge of minority groups;

however, some of their knowledge was limited or inaccurate. They wanted to learn more

about cultural differences from their minority students to dispel their previous stereotypes

regarding diverse groups. The majority of the pre-service teachers in the focus groups had

previous experience traveling abroad prior to student teaching or traveling with family

members or church groups, or working at Big Brother/Big Sister programs. These

authentic life experiences helped them reflect on their own prejudices and biases; in turn,

they believed that they were better equipped, and thus more likely to provide the best

possible education for all students in order to bring about social justice.

Data also revealed that over 90 % of the pre-service teachers in the focus groups believed that differences among students from various cultures should be recognized, respected, and appreciated in order to help their students be proud of their own cultures. The pre-service teachers, like many k-12 teachers, suggested that they need to help minority students understand what the mainstream culture expects and learn to conform to the Taiwanese majority culture. They believed that assimilating into the mainstream culture is very important for minority students. In addition, all of the 18 pre-service teachers said that cultural celebrations and holidays help students understand others' cultural differences and similarities. However, from a social justice perspective, these activities are entertaining but do not reflect the need to address social inequalities. Such activities might well mis-educate students by representing to them that multicultural education consists of only happy celebrations. Professor D in this study noted that multicultural education should go beyond celebrations and holidays. Teachers need to better understand and critically examine their own philosophies and consider how the specific approaches by Banks and Banks (2007), and Sleeter and Grant (2003) can guide teachers' decision making in becoming multicultural persons and in teaching

multicultural education. Professor D in this study also argued that culturally responsive

pedagogy should be understood thoroughly and tailored to fit the Taiwanese context.

    Attitudes and beliefs of the teacher educators. All of the teacher educators in

this study advocated that culturally responsive pedagogy could help minority students

learn to play the game in mainstream society in order to bring about a change in the

distribution of power. Both teacher educators and pre-service teachers in the study

attempted to incorporate many of the components of Gay's (2000) model, such as: using

a variety of instructional strategies, addressing different learning styles and multiple

intelligences, making learning authentic, and building connections between home and

school while acknowledging the legitimacy of the cultural heritages of diverse students.

The data substantiated that all of the five teacher educators valued the experiences of

their students and were working toward a more just society.

    As pre-service teacher participants in the study will be teaching in diverse

classrooms, they will most likely need to expand their views of what it takes to be a

successful teacher in the classroom. To become competent and effective teachers, pre-

service teachers have to acquire critical and social skills, positive attitudes, and positive

multicultural pre-conceptions. Data from the teacher educators suggested that during the

student teaching phase of their programs, the pre-service teachers have learned to focus

on the learning strengths of students in the classroom, to identify different student needs,

and to adjust for different learning styles. The teacher educators also indicated that many

of the pre-service teachers had developed cultural competence and critical consciousness

to actively challenge social injustice.

The philosophy and teaching strategies of the five teacher educators are very

similar. First, all of them argued that pre-service teachers with little multicultural

experience need to acquire the appropriate knowledge and skills to understand their

students' particular needs and backgrounds, but they also need to readjust their own roles

as teachers by recognizing and celebrating the diversity in all of their educational

decision making. The diverse needs will be addressed by understanding their students'

backgrounds and learning styles, designing individualized curricula, selecting

instructional materials, assessing performance, and developing appropriate programs and

teaching strategies.

Second, all the five teacher educators advocated that practicing social justice is

the primary goal of multicultural education. They all stated that teacher educators need to

have a solid foundation in multicultural education in order to help pre-service teachers as

well as current teachers provide equal educational opportunities to all students; in turn,

social justice will be practiced in all of their classrooms.

Third, these teacher educators argued that teachers should value their students'

cultures and help them be proud of their heritage. According to the teacher educators, it is

important to recognize that there is no single culture that is better than another culture, so

educators have to learn to respect and appreciate all cultural differences.

Fourth, the teacher educators suggested that all the following strategies are

effective in helping to re-examine one's prejudices and biases: reading literature by

various ethnic authors, watching multicultural-related video and films followed by

engaging dialogues, and connecting with people through technology.

Fifth, the teacher educators stated the belief that Web2Quest could help their

students connect to the world. They also indicated that traveling to foreign countries

allows a person to be aware of cultural differences more easily than simply reading or

hearing about it.

Another similarity among the educators was that they encouraged their students to

do action research and participate in community service so that they might be more

empathetic and open-minded when working with people from different backgrounds.

They felt that self-reflection should be the first step in moving beyond one's comfort

zone; they reported encouraging their students to look at history and social issues from

different perspectives.

Most importantly, all of the five teacher educators provided a good model for

their students by devoting their own time to multicultural education. For these educators,

taking action to bring about social justice is the essence of, and reason for, multicultural

education; they are the seed sowers who are planting seeds with care, love, compassion,

and patience. They noted that their task is daunting; however, they believed that the

seeds, even though some of them may fall on rocks or bad soil, will eventually be

blossoms in the near future.

Question 2: To what extent is there integration of Web 2.0 technologies in their multicultural education courses in the three teacher education programs in Taiwan?

All of the five teacher educators in the study noted that Web2.0 technologies

could impact students' learning and teaching strategies. They stated the belief that

implementing Web2.0 technologies into multicultural education courses would help

connect their students to a global audience; they also noted that E-learning, similar to

Blackboard, has been widely used in universities in Taiwan for the past 10 years. Since

Taiwan is a small island, these teacher educators stated the belief that it is essential to

help their students connect to the world. Ultimately, the aim is for the pre-service

teachers to become responsible global citizens who will be able to serve those people

who are most in need. However, none of the five teacher educators in the study had used

Web2Quests in their classrooms prior to participating in this research.

The five teacher educators in this study had utilized multicultural-related films

and videos in their classrooms. Four of them showed the Oscar winning film "Crash" in

class and had their students express their opinions afterwards. Films like Crash may have

the potential to help pre-service teachers reach what Freire (1970) called critical

consciousness. According to Freire, critical consciousness is achieved when individuals

begin to consider the historical, geographical, sociological, psychological, and cultural

contexts behind the experiences of the oppressed and marginalized. Gaining critical

consciousness is a two-sided process for helping teachers redefine their roles; it is equally

important to consider the contexts of their own experiences and the contexts of oppressed

or marginalized individuals. Furthermore, for critical consciousness to occur, an

individual must make an effort to take action with reflection, or what Freire called

"praxis." Although the action Freire speaks of emphasized working with marginalized

populations in their homes, places of work, schools, or community centers, for example,

it is possible to attain critical consciousness through experiential learning activities.

While experiential learning activities can facilitate student learning and enhance

multicultural competence, Fier and Ramsey (2005) suggested that teachers should inform

students of the potential risks of the activity prior to their participation, for example,

increased levels of discomfort associated with self-awareness: anger, frustration, or

sadness related to the depiction of certain character's narratives and how they coincide

with the actual experiences of diverse individuals.

Villalba and Redmond (2008) noted that one scene in the film "Crash"

exemplifies how individuals may unknowingly hold negative stereotypes toward a

specific group, and how a lack of self-awareness with regard to these stereotypes can lead

to potential conflict. One of the most powerful scenes in the movie occurs between a

young white police officer and an African American hitchhiker. Throughout the film, this

young police officer is disgusted by the racist behaviors of a more veteran counterpart.

Because of his stance against the unequal treatment of African Americans, this police

officer is portrayed as brave, just, and virtuous. Toward the end of the film, however, the

qualities and beliefs he appeared to embrace are challenged. During a conversation, the

African American male reaches into his pocket to get something to show to the young

police officer. The police officer, presuming that the hitchhiker is reaching for a weapon,

draws his gun, shoots, and kills the passenger. After shooting the hitchhiker, he discovers

that the hitchhiker was simply reaching for a good luck charm, similar to the one the

young officer had on his dashboard.

This particular scene can be harsh for pre-service teachers who might have

identified with the young police officer as the good guy. If they identified with the police

officer early on, they must then reflect on their feelings once they learn that he, like the

other characters, held negative stereotypes toward different groups. This scene challenges

pre-service teachers to consider their own stereotypes of members of groups who are

different from themselves and how those stereotypes affect their actions. Although they

may be well-intentioned when working with students from diverse backgrounds, this

scene reminds them there are inherent biases and beliefs that may impact their

relationships if they are not addressed and resolved.

As teachers in the 21st Century, we cannot escape the technology revolution that is

changing our world. People are connecting in meaningful and new technological ways on

a global scale; students are consuming social media whether teachers utilize the media as

a teaching tool or not; thus, this study reinforced my belief that it makes sense for teacher educators to use critical thinking about the application of technology for educational purposes. Because it can be difficult to keep up with all of the technological innovations and to find ways to thoughtfully implement them into our classroom instruction, teachers must reach out, tinker, explore, and use our collective intelligence as educators to tap into the power of technology. Based on my teaching experiences, I believe that teachers have an amazing resource for assistance in the use of technology. Our students are very technologically savvy and willing to help those who are not so savvy.

Question 3: What are the perceptions of the teacher educators and the pre-service teachers regarding the opportunities and challenges of using Web2Quests to facilitate multicultural education?

Perceptions of the teacher educators. The following paragraphs summarize the viewpoint of the participants in this study regarding research question three. Professor A stated that he preferred to read and write and did not like to spend time on the Internet. He noted that teachers who have studied in a foreign country are more likely to use Web2.0 technologies. Professor B suggested that teachers need to ask questions such as "What are the purposes of the dialogues through Web2Quests?" In addition, he argued that teachers need to scaffold the process before, during, and after the implementation of

Web2Quests in their multicultural education courses. Professor C said that she would

implement Web2.0 technologies in her classroom if there was technological support

available during class time. Professor D stated the belief that teachers using Web2Quest

would have to provide specific issues so that pre-service teachers could reflect on their

prejudices when encountering people from various cultures. Professor E stated the belief

that Web2Quests could offer the pre-service teachers authentic learning experiences

which might not occur in traditional classrooms. However, she argued that it might be

difficult to evaluate the effectiveness of Web2Quests.

Data revealed that through the use of Web2Quest the teacher educators opened

up their classrooms to the world by engaging dialogues with pre-service teachers as well

as multicultural teacher educators from various countries such as the United States,

Canada, Australia, and New Zealand. With the aid of videoconferencing, the pre-service

teachers in the focus groups expressed that the authentic experiences helped them be

more aware of multicultural issues. However, the teacher educators suggested that

preparing their students with interviewing skills was essential. They helped their students

brainstorm meaningful questions on specific issues and become aware of the culture of

the individuals with whom they were having dialogues. Afterwards, the pre-service

teachers were required to write personal journal reflections and share their findings in

class. The three teacher educators who incorporated the Web2Quest in their classes

acknowledged that the negotiation process when completing Web2Quest projects helped

their students learn social and critical skills. For example, some pre-service teachers

preferred to interview students from Japan, Thailand, or Korea whereas others wanted to

learn more about western cultures. Teacher educators in this study encouraged their

students to have a conversation before decision making and each group could interview

people from different cultures; in turn, the whole class could better understand more

cultural differences and thus respect and appreciate the beauty of each culture. In order to

maximize the opportunities of the implementation of Web2Quests into multicultural

education courses, the teacher educators in the study suggested that students need to learn

how to evaluate the correctness of the information they received from the Internet or

someone they interviewed. They argued that it takes time to understand a new culture; the

Web2Quest projects might help their students to move beyond their comfort zones and

build relationships with people from various cultures. However, ongoing dialogues need

to be encouraged after the pre-service teachers complete their Web2Quest projects. All of

the five teacher educators advocated that would be worthwhile to help their students

expand their experiences through Web2Quest technologies even if it is consuming.

   Perceptions of the pre-service teachers. Data based on the Web2Quest

Questionnaire and the focus group discussions with the pre-service teachers suggested

that Web2Quests could help them connect to a global audience and broaden their

worldviews; in turn, they could also reflect on their own prejudices and biases during and

after completing Web2Quest projects. They stated that self-reflection is the first step to

move beyond their comfort zones in order to meet the challenges of teaching students

with diverse backgrounds and experiences.

   A negative result, however, was reported by two Taiwanese aboriginal pre-service

teachers in the study who expressed less favorable experiences during the Web2Quest

projects. They noted that it was difficult for them to connect to the mainstream students

in their daily life; as a result, they did not feel comfortable to engage in dialogues with

people from different cultures. In this case, the evidence of their identity change was less

dramatic and less obvious. This finding reinforced the importance that teacher educators

can havein encouraging all students to move beyond their comfort zones while

encouraging diversity in education.

The Potential of Multicultural Education through Web2Quest Technologies

The majority of the pre-service teachers expressed enthusiasm when I explained

what We2Quest was in the three classes. During the focus groups, the pre-service

teachers indicated that experiential helped them connect to a global audience fostered

their multicultural knowledge and helped them to reflect on their own prejudices and

biases. According to Kolb (1984), experiential learning is a method of acquiring

knowledge through lived experiences, experimentation, simulations, role plays, or

viewing-videos and films. For Kolb, experiential learning is a supportive match to

lectures, reading, and examinations. In addition, Kolb stressed the importance of

reflecting on feelings, values, and thoughts related to the experiential activity. Teacher

educators can guide students to have classroom discussions, hold debriefings about

experiential learning activities, and keep journals for self-reflection. These methods will

help provide an increased understanding of those individuals who are different from

themselves.

The world of Web 2.0 provides teachers with a variety of tools that can be used to

make their teaching jobs easier. With the arrival of Web2.0 technologies into informal

and formal learning contexts, a new virtual space or what Jang (2008) called a third space

is opening up that is redefining where, when, why, and what kind of learning takes place

and the influence that learning is having on learners' agency and ultimately their

identities. It is this third space in which educators see hope for individuals to connect and

construct knowledge in ways that traditional contexts have not always allowed. I argue

that technology helps save students time in completing their assignments; however,

without a teacher's proper guidance, technology may reduce social interchange and the

use of soft skills such as communication and formation of interpersonal relationships.

The results of the study further affirmed my belief that students can benefit from both

collaboration and competition in intra- and inter-group interactions with positive

scaffolding activities.

The responses of the pre-service teachers in the focus groups showed positive

support for using web2.0 technologies such as Skype or videoconferencing to provide a

context for effective and efficient learning. The changes in the identities of some

participants in becoming more empowered and self-directed were crucial factors that also

surfaced in the focus groups. Many of the pre-service teacher participants who used

Skype or videoconferencing for completing their final Web2Quest projects were able to

evaluate themselves and their learning progress, as well as focus and be able to benefit

from their success. This was an important factor for the participants who in this case were

learning multicultural knowledge. The value of having the chance to reflect on their own

cultures and identities led to those participants being able to use that knowledge and to

relate it to students when teaching opportunities presented themselves.

Due to their familiarity with social media, students may in the past have been

called "digital natives" (Prensky, 2001). The findings of the study, however, showed that

pre-service teachers need to receive adequate and substantial scaffolding to make

effective use of web2.0 technologies for multicultural learning purposes. In Taiwan,

teachers are talking about building a more diverse curriculum to meet the three R's: rigor,

relationship, and relevance, borrowing from the words of Gaynor and Shanklin (2011).

The voices of the pre-service teachers allowed teacher educators to see that providing

such a curriculum is essential and that feedback from their students might give them

additional ideas for making curriculum improvements in order to better meet students'

diverse learning needs.

Nevertheless, developing a computer-based collaborative learning project might

not be an easy task. Teacher educators would need to offer pre-service teachers

communication and collaboration tools tailored to their social and cultural characteristics.

For example, if pre-service teachers do not work well with time and deadline constraints, teacher educators might consider being flexible with deadlines. If students are shy, quiet, and reserved, teacher educators might encourage them to participate. If students have strong relationships with only a few other students, teacher educators might encourage them to work with different students.

One important caution for any teacher considering using Web2Quest in their teaching is the increased administrative load associated with the nature of this task. The decision to implement such a practice should not be taken lightly as learners will undoubtedly require some form of support over the course of the semester, be it either small scale technical support or learner support. The reality of providing adequate integration guidance requires that the teacher monitor the Web2Quest projects often from the beginning of the semester to make sure at least that learners are set up on their individual blog spaces to share their ideas before, during, and after the projects. The demands of this role can vary depending on the student variables, but it is advisable that strategies to manage the administrative load are defined and set in place early on. MacLean and Elwood (2009) also reported problematic variables (proficiency with technologies, tradition, willingness to use technology and gender) with so-called digital

natives. Even though the pre-service teachers might belong to the digital native

generation, data in the study showed that many of them would require explicit direction

and validation in completing their Web2Quest projects.

According to Vygotsky (1989), learning is understood as life-long, socially

constructing knowledge in a dialogic activity with others; social interaction is the

precursor to higher order thinking rather than the reverse. The challenging question

emerging for many educators is how new technologies can support knowledge and skill

building in social constructivist-based learning settings. The pre-service teachers were

encouraged to use Web 2.0 tools such as Skype or videoconferencing in completing the

Web2Quest projects in order to connect to a global audience. Outcomes from ongoing

qualitative and quantitative findings indicated that these dialogic opportunities had a

positive influence on some of the pre-service teachers' professional and personal

identities as well as their views of multicultural education through Web2Quest

technologies.

According to Barron, Harmes, and Kemker (2006), video-based web conferencing

technology is reconstructing what it means to teach and learn. With the enhanced

qualities of the interactions supported by this technology, teachers in the study were

being drawn to adopt an interactive, communicative, and student-directed approach. Data in the study suggested that some of the pre-service teachers did not only develop their multicultural awareness and knowledge but also had more empowered identities. The pre-service teachers who participated in Web2Quest also took on a self-directed role in terms of their learning.

The aim of the implementation of Web2Quest via Skype or videoconferencing in multicultural education courses was to expose the pre-service teachers in this study to a large variety of multicultural-related topics for discussions in order to help them become more culturally responsive multicultural educators. Professor B reported that the interactive process helped his students develop ways to support their peers in the classroom, even the most reserved, and to create a space for their own voice and lead to progress in their multicultural learning.

Web2Quests designed to be learner-centered projects where students have an active role in the knowledge producing activities are not without precedence. As Thorne and Black (2007) observed, computer-mediated communication has the potential to transform what is often teacher-centered communication in traditional classroom settings into more multidirectional interaction in computer-mediated contexts. Professor B in the

study noted that the process of dialogue could help pre-service teachers create and

exchange knowledge, both locally and globally. I believe that this process in formal

education contexts is essential to the kind of identity construction that leads to life-long

learning. Teachers who use videoconferencing as part of their instruction must be more

flexible and patient than they need to be in a traditional class. The three teacher educators

whose students completed a Web2Quest project indicated they let their students take

charge of the discussions.

Implications for Practice and Future Research

This research study contributes to the knowledge base on multicultural education

through the use of Web2Quest technologies in three multicultural education courses in

Taiwan.

Based on the results of the study, I propose the following recommendations that

teacher education programs might consider for preparing teachers of tomorrow to meet

the challenges of an increasingly diverse society: (1) teacher education programs should

recruit and retain a diverse faculty who are qualified and committed to provide the best

possible education for all students; (2) teacher educators as well as pre-service teachers

should avoid reinforcing stereotypes that stem from assumptions, negative attitudes, and

low expectations about specific groups; they should set high expectations for all students and believe that they can learn; (3) instructions should be reviewed and modified based on students' learning styles and cultural backgrounds; to enhance and promote teacher practice, curriculum design should connect students' prior learning and experiences; (4) professional development programs should offer pre-service teachers, as well as current teachers, more extensive diversity programs. These programs should include multiple courses and appropriate follow-up after they take the courses or their authentic experiences such as study abroad or volunteering in communities; (5) university and K-12 school districts should establish partnerships which would offer learning opportunities at the school site. Paired with university faculty, experienced teacher educators could facilitate the pre-service practicum and internship experiences as well as assist in the coordination of university level professional development for the veteran staff; (6) teacher education programs should organize and facilitate a mentor program where skilled teachers are identified at each site and provided training and materials to assist their development as teacher leaders; (7) teacher educators need to help pre-service teachers design effective and feasible Web2Quests to connect with students as well as teachers from various cultures; in turn, both teachers and students can be responsive

global citizens; and (8) future research could investigate more specific learners' skills,

abilities and achievements that are affected when they participate in Web2Quest projects.

Also, further research is needed in order to develop the evaluation criteria for pre-service

teachers' Web2Quest projects and to determine the overall objective of integrating

Web2Quest within multicultural education courses.

Limitations

There are some limitations of this study. First, given the political and sometimes

controversial topics related to multicultural education, some pre-service teachers might

have responded to the questions from what they perceived to be the best answer or most

politically correct response. Second, since this study utilized only three universities, the

findings might not be representative and generalizable across other populations. Third,

the pre-service teachers in the study only used one Web2Quest for two months in their

multicultural education classes. The effectiveness of long-term implementation of

Web2Quest into multicultural education courses should be examined. Fourth, the

researcher was not able to invite a broad representation of pre-service teachers from

various ethnicities to participate in the focus groups because very few of them were not

members of the four main ethnic groups in Taiwan. I made choices based on student

availability, strove for balance between various ethnic groups, and tried to find both

female and male pre-service teachers to represent voices from both genders. Finally,

when it came to trying to obtain a diverse sample based on age, gender, and region of

residence, it proved to be impossible to include all major categories of pre-service

teachers in the study since classes who participated were based on teacher educators who

volunteered.

Conclusion

The study results support that the implementation of Web2Quest technologies in

multicultural education courses may have encouraging impact on teaching approaches

and results. One caveat to these positive results, however, is that technology alone cannot

bring about the positive results that are reported here. An openness to accept the

approaches that this technology supports is intricately intertwined in these favorable

results.

The evidence also indicated that both the pre-service teachers and teacher

educators witnessed empowering possibilities that the use of Web2Quest technologies

offered for their active learning. This recognition led to changes in the ways that some of

the participants used and viewed the technology for learning and teaching. With the

increasing speed at which new computer technologies are evolving, I have argued that

there is an urgent need to ensure that the technologies that are being chosen can support

effective and efficient learning approaches and are providing empowering opportunities

for learners regardless of their identities, and most especially productive ground for self-

directed learners.

Meyertons (2011) argued that Web 2.0 technologies might be beneficial in class

activities that are engaging, rich in meaning to individuals, and potentially life-changing

if educators are willing to undergo some risk. By using Web2Quest technologies,

teachers can guide students through the process of questioning and researching which

allows for collective knowledge construction. For example, an instructor might ask

students to answer a question that has special meaning and relevance for the class such as

how multicultural education has been practiced in different countries. The class could

work together to gather information from the Internet, collect it in a shared virtual space

such as blogs or wikis, and create worthwhile presentations based on this newly gathered

information. The class might include authentic resources from anywhere in the world,

including direct contact with multicultural educators from various cultures. Individually,

students could use blogs or Twitter to reflect and share thoughts and ideas that could be

folded into the story as the process evolves. The stories could include image, audio, and

video files as well, and once the project is done, it could be shared with others around the

world. Because of the affordability of technology, the stories could continue as long as

the participants wanted to engage in ongoing conversations.

Giving students increased ownership and choice when it comes to their learning

was a key factor in the design of this research project. Web2Quests have many Facebook-

like features that make the interface user-friendly while also providing students with

searchable, threaded discussions and a space to maintain their own blogs. Web2Quest

technologies serve pre-service teachers as well as teacher educators as an extension of

their classroom and encourage them to embrace the concept that their learning and

interaction need not be limited by the constraints of a specific place and time. There

might be other benefits of Web2Quests such as: absentees can still participate and find

make-up work; students who are shy can share their opinions without a class of 40 peers

staring at them; massive amounts of paper can be saved; discussions which cut off in

class can be finished, and all of this can fit into any student's schedule because it can be

accessed anytime and anywhere.

Along with these positive benefits, using Web2Quest technologies does bring a

new set of challenges. Issues having to do with access, appropriate student behavior, and

acceptable use of language are all issues teacher educators need to deal with to some

extent. For many of the pre-service teachers, using these Web2Quest tools to enhance

multicultural education is a new and unfamiliar experience. The use of a gradual release

of responsibility model of appropriate online behavior helps students understand how to

utilize social media platforms for collaborative work.

Gorski (2009) also suggested some considerations for teachers who want to work

at the intersections of multicultural education and technology. The following four

challenges resonate with the researcher. First, teachers need to acknowledge digital

inequities and must challenge strategies for closing or bridging the digital divide. Second,

teachers must advocate cost limits on computers, educational software, Internet access,

and adaptive technologies. Third, teachers must encourage school systems to place

instructional technology specialists in every school; these specialists need to be trained

educators, not merely hardware technicians. Finally, teachers must push themselves to

transcend celebrating the joys of diversity and to move beyond learning cultural

differences; teachers should ask how they can use Web2.0 technologies to further the cause of equity and social justice in schools and society.

The results of the study indicate that Web2Quest technologies can be implemented in teacher education programs to foster multicultural education in an interesting and engaging manner. The majority of the pre-service teachers and teacher educators in the study indicated that using technology to collaborate beyond the classroom, to discuss current multicultural issues, and to share information with each other can assist both teachers and students in broadening their horizons and their understanding of self and others within larger social contexts. Web2Quests focused on multicultural education ensure that teachers obtain practical experience with using technology, while gaining insight about their own identities and about how they can better incorporate multicultural perspectives in their classrooms. It would be possible for pre-service teachers to challenge their biases and to reflect on their experiences and to take social action which is fundamental to critical pedagogy.

Preparing teachers for the multicultural classrooms of today and the diverse classrooms of tomorrow is a process that will not be accomplished by completing one project or taking one course. Being familiar with taking social action through Web2Quest

scaffolding activities may encourage teachers to carry out genuine multicultural

education through a critical pedagogy perspective. Over 50% of the participants in this

study mentioned that planning and preparing lessons with Web2Quests were time

consuming. Other concerns were access to technology in the classroom setting and

differences in language and time zones for direct communication with teachers and

students in other countries. Over 95% of the participants in the study commented on the

need for students to respect different voices among team members and professional

development for teachers to learn about technologies.

Web2Quests can provide four major functions to promote multicultural education.

First, Web2Quests can act as a tool for multicultural education scaffolding activities

which include technology tools, peer interactions, and online communities. Second,

Web2Quests can serve as a tool to increase higher-level thinking. Third, Web2Quests can

help both teachers and students eliminate or decrease their prejudices and biases toward

people from cultures other than their own. Fourth, Web2Quests can promote

collaboration so that students work together to maximize their own and each others'

learning. Implementing Web2Quest technologies into teacher education programs in

Taiwan has the potential to bring about a critical change for teachers, students, the school

environment, and consequently, the entire community and country. Through using

Web2Quests as tools to connect classrooms to the world, teachers and students can move

in a positive way toward becoming global learners and citizens.

Education should not be a single river, but should be expansive like the ocean,

containing many confluences and tributaries. The road to inclusion will bring new

directions, and Wheatley (2006) commented that in the process, "every moment of a new

journey requires that we be comfortable with uncertainty and appreciative of chaos' role"

(p.193). As the river flowing, there will be obstacles and resistance; however, teacher

educators need to be courageous and remain committed to their shared primary principles

of helping pre-service teachers reach their full potential and serve the world with their

gifts. Some changes in the school system may cause uncertainty and, in turn, students, as

Collins (2001) noted, will be more curious, wise, and courageous" (p. 191).

Each of us can contribute to the world in different times and different ways. There

is a Chinese saying: "It takes 10 years to grow trees but it takes 100 years to cultivate

people." Time, courage, and patience will be required to transform the Taiwanese

educational system to serve the needs of all of their culturally diverse students. Working

together, educators, administrators, social workers, and students can establish a creative

and culturally diverse environment, one which promotes compassion, social justice, and a

sense of hope.

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Appendix A: Searching for China WebQuest by Dodge (1995)

http://www.ozline.com/webquests/china/chinaquest.html

Searching for China

| Quest(ion) | Background | Individual Roles | Group Process | Feedback | Conclusion | Dictionary |

Destination China

China is a majestic* country (note: links followed by * go to a dictionary definition) with a long and interesting history. If, like most people in the Occidental* world, you've never been to this fascinating land, you might want to take a brief tour. Go ahead and walk a few kilometers of The Great Wall or step foot into The Forbidden City or voyage to the Yellow Mountains.

But beyond these tourist stops lives another, more complex, China. Currently, the people of China are experiencing great economic and social upheavals*. Such things as the situation in Tibet, Tiananmen Square massacre, and a scandal about treatment of orphans have brought some people to call for boycotts against China.

Being faced with the task of understanding something as complex as a nation, you might want to give up. Sometimes in life you have that choice. But to give up trying to understand the China would mean giving up chances to benefit financially, to help people, to save some of the world's natural and artistic treasures, to protect the safety and security of millions of people, or to enlighten people's lives with greater religious insight. You see, you can't give up. So, if you're ready to begin, you might want to read a Travel Advisory before embarking* on our journey.

The Quest(ion)/Task

The United States government feels very strongly about the need to understand China. To do this effectively, a special fact-finding team is being assembled that will travel to China to investigate the country, the people, and the culture. Instead of sending only diplomats or politicians, the team will comprise* people from very different backgrounds so that the facts they find present as much truth about China as possible. It's hoped that instead of bringing back stereotypes and postcards, the team members will come away with an accurate and informed perspective*.

Specially, your Quest(ion) is:

What actions should the U.S. take in its policy towards China? Your team will develop a Group Report that contains a Three Point Action Plan taking into account the following perspectives: Business, Cultural, Religious, Human Rights, Environmental, and Political.

By completing this WebQuest you should achieve the following goals:

- develop an interest in the study of China.
- use the power of the Internet for advanced exploration of China.
- learn information about six key aspects of Chinese culture.
- realize that complex topics can be looked at from various perspectives.
- formulate and support an argument from one of the six perspectives.
- work with your teammates to problem-solve a combined action plan.
- question the nature of international relations in our more interdependent world.

You should be able to achieve these goals by completing a process where you join a team and take on one of the roles listed in the Quest(ion). After each becoming experts on one of the different roles and generating a Full Report, you and your teammates will work together to create a Group Report for the American people (also known as your classmates and the World Wide Web community). This report presents your team's combined answer to the Quest(ion). You can use a Rubric to see how your work might be evaluated.

Background for Everyone

Who are the Chinese people? What makes them tick? Is this as easy a question as it sounds? Think about how difficult it would be for someone to describe you. Are you a person who always acts the same way? Aren't you sometimes happy, sometimes sad? Sometimes friendly, sometimes angry? Sometimes giving, sometimes selfish? Think about groups of people. Wouldn't you expect them to be complex and changing, too? Now think about China with over 1 billion people (more than 4 times the population of the United States!). Is it any wonder that to individuals in the western hemisphere, the Chinese are stereotypically seen as inscrutable* ? But we won't fall into stereotypes, because the gig idea behind this WebQuest is that nothing is inscrutable if you look long and hard enough. So where do we begin our Search for China...?

The Journey of a Thousand Miles...

... begins with just one step. And we will begin here. Our minds work better when they are ready to take in new information: no matter how many maps you have, if you haven't turned on the light, you'll still be in the dark. Your mind is that light. So the first activity is a short one to help you and your teammates get a better understanding of the key issues involving China (and to know your teammates better). Click on the link below to go to the activity.

Individual Roles

Because China is a complex country, it would be silly to look at it from only one perspective. If you only looked at its art, you might miss its changing politics. If you only looked at its government, you might miss important aspects of the people themselves. So the plan here is to divide expertise and look from as many perspectives as you have teammates. This is where you really begin Searching for China. Read the following instructions to get underway.

Looking at Issues from Different Perspectives

Based upon the eight main issues your team clustered, now choose which roles you will each take. Use the goal statements below to help you decide.

Note: If you have six people on your team, you can each take one role (or if you work in pairs, up to 12 people can be on one team). If you have less than six people on your team, you will have to choose the roles that you think would give you the best understanding. Will you choose similar roles or very different ones? You decide.

Role   Goal

Business Investor   to promote economic growth

Museum Curator   to preserve the world's cultural treasures

Religious Leader   to encourage spiritual understanding

Human Rights Activist   to ensure that people are treated with fairness

Environmental Activist   to protect the earth's natural resources

United States Senator   to balance all the goals and keep world peace

Now that you have chosen which roles you and your teammates will take, you're ready to become an expert. Dossiers* have been prepared for each role. These contain guided instructions that should help you gain a clear understanding of the issues involved in your role. Finally each dossier helps you discover some "truths" and to create an Action Plan that will be automatically formatted into your own customized report (**note:** To have the report automatically generated your browser must be able to use Javascript).

Group Process

Now that each member of your team has become an expert from one perspective, we're ready to combine what each of you has learned into your **Group Report**. This is not easy because you and your teammates each feel you've found the best solution based upon what you feel is most important. But problems come up: what's good for business may not be good for human rights or the environment. What is good for museums is not always good for religious temples. What's good for peace and stability may not be good for business or freedom of speech. Ah-oh! What will you do?

It looks like your team is going to have to dig deeper to come up with a compromise plan that will combine what you all think is important. We know the answer is not

easy. That's because the questions are real! In the following group activity, you and your teammates will work through a process to help you find a common Group Report. Click on the link below to go to the activity.

What actions should the U.S. take in its policy towards China?

<u>Creating a Group Report</u>

Real World Feedback

And you thought you were finished! Suggesting the best actions for the U.S. to take in its policy with China took a lot of work. But unless you test your ideas with real people, all you've done is to role-play. You can look for contacts in your school or local community or use the Internet to make a connection. If you decide to find a real world contact from the Internet, you can find all the links used in Searching for China (and more!) in the Website below. Use the instructions below to finish the project.

1. Surf through the links most closely related to the proposals in your Special Report and see if there is a chat, bulletin board, discussion group or e-mail link posted on the Website. (Note: you can also contact your own U.S. senator with <u>ZIP to It</u>).
2. Look for three different places to send your <u>Group Report</u> with its Three Point Action Plan.
3. Double check to make sure your whole group has proofread your Special Report.
4. Write an introduction to your e-mail message that gives background on why you are writing to this particular person and that you'd like to get feedback on your ideas for working constructively with China.
5. Send the report to the three locations. If you are doing this WebQuest in a school setting, use your school's policy for e-mailing, cc'ing teachers, etc.

Conclusion

We hope that by Searching for China you now appreciate the complexity of international relations, the need to look at challenging questions from different perspectives, and the power of the Internet for making contact with real people. Just to give you something more to think about, some people might suggest another Quest(ion) related to the U.S. and China: what gives us the right to tell a world power with four times our population what to do? Maybe, because our nation is only 200 years old, we should respect countries that have been around over 20 times longer than we? Maybe, because ours is a democratic system of checks and balances that values individual rights, we have something the world needs to hear? Sounds like this could start another WebQuest, huh?

It's clear, the world is full of complex topics that need sharp-thinking people to understand them and make decisions. There is a saying, "Knowledge is Power." Through your team's activities, you've learned strategies for analyzing complex topics, formulating action plans, and working together toward effective compromise solutions. We hope you feel this new power that you've gained. What will you do with it?

Appendix B: Glossary of Terminology

<u>Critical pedagogy</u>: is a teaching approach (pedagogy) that its advocates claim attempts to help students question and challenge domination and the beliefs and practices that dominate (Freire, 1970).

<u>Web 2.0</u>: The term "Web 2.0" is commonly associated with web applications that offer the opportunity to collaborate, share, and create content through social networking tools, blogs, wikis,, and so forth. A Web 2.0 site enables users to interact with others or edit content (O'Reilly, 2005).

<u>Moodle</u>: Originally an acronym for Modular-Oriented Dynamic Learning Environment. A Moodle is an open-source course management system that educational institutions use to provide an organized interface for e-learning. Many people use the activity modules—such as forums, database, and wikis—to build collaborative communities of learning around their subject matter. Anyone who uses a Moodle is a Moodler.

<u>Ning</u>: Ning is an online platform for people to create their own social networks. Users converse on a specific topic through forum posts and build resources by embedding videos and linking to articles and Web sites.

<u>Jing</u>: Jing is free software that adds visuals to online conversations. Users can create a narrated video or tutorial, snap a picture of something on their computer screen, or give verbal feedback on a project and send this material over the Web or in an e-mail or instant message.

<u>Facebook:</u> Facebook is a social networking website intended to connect friends, family, and business associates. It is the largest of the networking sites.

Skype: Skype lets a person make free calls over the internet to anyone else who also has the service. It is free and easy to download and use, and it works with most computers.

Appendix C: Informed Consent Form for Teacher Educators

Project Title: Integrating Multicultural Education and Web2Quest technologies
in Multicultural   Education Courses in Taiwan: A Potential for Globalization

Principal Investigator: Dr. Chris Ward
Student Researcher: Li-mei Grace Lin
Version Date: November 29, 2010

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1. WHAT IS THE PURPOSE OF THIS FORM?

This form contains information you will need to help you decide whether or not to be in this study. Please read the form carefully. You may ask questions about the research, the possible risks and benefits, your rights as a volunteer, and anything else that is not clear. When all of your questions have been answered, you can decide whether or not you want to be in this study.

2. WHY IS THIS STUDY BEING DONE?

The goal of this study is to investigate the beliefs and attitudes of pre-service teachers and teacher educators regarding the implementation of Web2Quest technologies in the multicultural education course required in your teacher education program.

The information in this study will be used for a doctoral dissertation as well as future publication.

3. WHY AM I BEING INVITED TO TAKE PART IN THIS STUDY?

You are being invited to take part in this study because of your expertise on multicultural education within the teacher education program.

4. WHAT WILL HAPPEN IF I TAKE PART IN THIS RESEARCH STUDY?

Li-mei Grace Lin will explain what a Web2Quest is to you via e-mail and then schedule the date for the first one-on-one interview in order to gain an understanding of your perception and past experiences regarding the implementation of Web2Quest technologies in a multicultural education course. Li-mei Grace Lin will set up a meeting with you/your students to explain this research project and invite all of the students in your class to participate in a Web2Quest project. Those students who choose to participate in this research study will be asked to provide demographic information and to complete the Teacher Multicultural Attitude Survey. After the pre-service teachers complete the Web2Quest within four weeks, you will be asked to participate in the second one-on-one interview with the student researcher. She will ask for your opinion about the opportunities and the challenges of using Web2Quest technologies in the multicultural education course.

Recordings: Because of the need for the researcher to have accurate data, the one-on-one interviews must be audio recorded and then transcribed. You will be sent a copy of the transcripts for your verification. If you like, you will be able to adjust your comments in the transcript.

Study Results: Data from the following sources will be analyzed to learn how you and your students perceive the use of Web2Quest technologies within the multicultural education course: Teacher Multicultural Attitude Survey, a Web2Quest questionnaire, focus group discussions, and one-on-one interviews. Li-mei Grace Lin is allowed to read the final Web2Quest projects for those students who give their consent for her to read them.

5. WHAT ARE THE RISKS AND POSSIBLE DISCOMFORTS OF THIS STUDY?

The potential risks may include embarrassment from answering personal questions, and the risk of potential breach of confidentiality regarding identities of the teacher educators participating in the study. Your identity will not be made public in any publication in order to minimize the risk.

6. WHAT ARE THE BENEFITS OF THIS STUDY?

This study is not designed to benefit you directly. However, taking time to examine and reflect on the integration of multicultural education and Web2Quest technologies may help you be familiar with the possibilities of using technology to foster multicultural education in teacher education courses.

7. WILL I BE PAID FOR BEING IN THIS STUDY?

You will not be paid for this study, but you will get an Oregon souvenir, approximately $10 value.

8. WHO WILL SEE THE INFORMATION I GIVE?

The information you provide during this research study will be kept confidential to the extent permitted by law. All research records will be stored securely by the principal investigator, Dr. Chris Ward. Only Dr. Ward and the student researcher, Li-mei Grace Lin, will have access to the records. All the informed consent forms will be secured in a locked file cabinet by Dr. Ward and will be retained and kept secure for three years post study termination. Federal regulatory agencies and the Oregon State University Institutional Review Board (a committee that reviews and approves research studies) may inspect and copy records pertaining to this research. After data has been collected and study participants have had the opportunity to check the interview and discussion transcripts for accuracy, all the participant names will be disassociated from the data. Names will be replaced by assigned pseudonyms

9. WHAT OTHER CHOICES DO I HAVE IF I DO NOT TAKE PART IN THIS STUDY?

Participation in this study is voluntary. If you decide to participate, you are free to withdraw at any time without penalty. You will not be treated differently if you decide to stop taking part in the study. If you choose to withdraw from this project before it ends, the researchers may keep information from the one-on-one interviews and this information may be included in study reports. During the one-on-one interviews, you are free at any time to not answer a question.

10. WHO DO I CONTACT IF I HAVE QUESTIONS?

If you have any questions about this research project, please contact: Li-mei Grace Lin at linli@onid.orst.edu or 002+1+541-908-4372 or the project's principal investigator, Dr. Chris Ward at chris.ward@oregonstate.edu or 002+1+541-737-1080.

If you have questions about your rights or welfare as a participant, please contact the Oregon State University Institutional Review Board (IRB) Office, at 002+1+541-737-8008 or by email at IRB@oregonstate.edu

11. WHAT DOES MY SIGNATURE ON THIS CONSENT FORM MEAN?

Your signature indicates that this study has been explained to you and you understand that both interviews with Li-mei Grace Lin will be audio recorded and transcribed. You also agree that your questions have been answered, and that you will participate in this study. You will receive a copy
of this form.

Participant's Name (printed): _____

_____   _____

 (Signature of Participant)   (Date)

_____   _____

(Signature of Person Obtaining Consent)   (Date)

Appendix D: Informed Consent Form for Pre-service Teachers

Project Title: Integrating Multicultural Education and Web2Quest technologies in Multicultural

Education Courses in Taiwan : A Potential for Globalization

Principal Investigator: Dr. Chris Ward
Student Researcher: Li-mei Grace Lin
Version Date: November 29, 2010

___

1. WHAT IS THE PURPOSE OF THIS FORM?

This form contains information you will need to help you decide whether or not to be in this study. Please read the form carefully. You may ask questions about the research, the possible risks and benefits, your rights as a volunteer, and anything else that is not clear. When all of your questions have been answered, you can decide whether or not you want to be in this study.

2. WHY IS THIS STUDY BEING DONE?

The goal of this study is to investigate the beliefs and attitudes of pre-service teachers and teacher educators regarding the implementation of Web2Quest technologies in the multicultural education course required in your teacher education program.

The information in this study will be used for a doctoral dissertation as well as future publication.

3. WHY AM I BEING INVITED TO TAKE PART IN THIS STUDY?

You are being invited to take part in this study because you are a student in a required multicultural education course within the teacher education program.

4. WHAT WILL HAPPEN IF I TAKE PART IN THIS RESEARCH STUDY?

Li-mei Grace Lin will explain what a Web2Quest is, and you will complete a Web2Quest project in a small group (three-four members) within four weeks. Those of you who choose to participate in this research study will be asked to provide demographic information and to complete the Teacher Multicultural Attitude Survey. After completing the Web2Quest, you will be asked to complete a Web2Quest questionnaire regarding the opportunities and challenges of using the Web2Quest. Four to six volunteers from your class will have the opportunity to participate in a focus group discussion that will be conducted by Li-mei Grace Lin to learn your opinions regarding being involved in a Web2Quest for the purpose of promoting multicultural education.

___ I agree that Li-mei Grace Lin will read my final Web2Quest projects.

___ I do not agree that Li-mei Grace Lin will read my final Web2Quest projects.

Recordings: Because of the need for the researcher to have accurate data, the focus group discussion will be audio recorded and then transcribed. Participants will be sent a copy of the transcripts for their verification and will be able to adjust their comments in the transcript.

____I am willing to participate in the focus group discussion regarding the opportunities and challenges of using Web2Quests. For data analysis purposes, the 60-90 minute discussion will be audio recorded and transcribed.

____ I am not willing to participate in the focus group discussion regarding the opportunities and challenges of using Web2Quests. For data analysis purposes, the 60-90 minute discussion will be audio recorded and transcribed.

Study Results: Responses from the Teacher Multicultural Attitude Survey, a Web2Quest questionnaire, and focus group discussions will be analyzed to look for the opportunities and the challenges of using Web2Quest technologies to promote multicultural education.

5. WHAT ARE THE RISKS AND POSSIBLE DISCOMFORTS OF THIS STUDY?

The potential risks may include embarrassment from answering personal questions, concerns regarding the student researcher's reading students' final Web2Quest projects, and the risk of potential breach of confidentiality regarding identities of the pre-service teachers participating in the study. Your identity will not be made public in any publication in order to minimize the risk.

6. WHAT ARE THE BENEFITS OF THIS STUDY?

This study is not designed to benefit you directly. However, taking time to examine and reflect on the integration of multicultural education and technology may help you be familiar with the possibilities of using technology to foster multicultural education.

7. WILL I BE PAID FOR BEING IN THIS STUDY?

Volunteers in the Focus Group Discussion will not be paid for this study, but will get a free meal.

8. WHO WILL SEE THE INFORMATION I GIVE?

The information you provide during this research study will be kept confidential to the extent permitted by law. All research records will be stored securely by the principal investigator, Dr. Chris Ward. Only Dr. Ward and the student researcher, Li-mei Grace Lin, will have access to the records. All the informed consent forms will be secured in a locked file cabinet by Dr. Ward and will be retained and kept secure for three years post study termination. Federal regulatory agencies and the Oregon State University Institutional Review Board (a committee that reviews and approves research studies) may inspect and copy records pertaining to this research. After data has been collected and study participants have had the opportunity to check the interview and discussion transcripts for accuracy, all the participant names will be disassociated from the data. Names will be replaced by assigned pseudonyms. To help ensure confidentiality, your name will not be used in the study.

9. WHAT OTHER CHOICES DO I HAVE IF I DO NOT TAKE PART IN THIS STUDY?

Participation in this study is voluntary. If you decide to participate, you are free to withdraw at any time without penalty. You will not be treated differently if you decide to stop taking part in the study. If you choose to withdraw from this project before it ends, the researchers may keep results from the questionnaires you complete and this information may be included in study reports. If you volunteer to participate in the Focus Group Discussion, you are free at any time to not answer a question.

10. WHO DO I CONTACT IF I HAVE QUESTIONS?

If you have any questions about this research project, please contact: Li-mei Grace Lin at linli@onid.orst.edu or 002+1+541-908-4372 or the project's principal investigator, Dr. Chris Ward at chris.ward@oregonstate.edu or 002+1+541-737-1080.

If you have questions about your rights or welfare as a participant, please contact the Oregon State University Institutional Review Board (IRB) Office, at 002+1+541-737-8008 or by email at IRB@oregonstate.edu

11. WHAT DOES MY SIGNATURE ON THIS CONSENT FORM MEAN?

Your signature indicates that this study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

Participant's Name (printed): _____

_____   _____

 (Signature of Participant)   (Date)

_____   _____

(Signature of Person Obtaining Consent)   (Date)

Appendix E: Demographic Information

1. Gender: _____Female _____Male

2. Age: _____

3. Ethnicity: _____Taiwanese _____Hakka _____Mainlanders _____Aborigines

   Other(s): Please list _____

4. Your Current GPA: _____

5. Home Town: _____(city) _____ (Country)

   Check one: _____urban _____suburban _____rural

6. Major: _____

7. Minor: _____

8. Do you have access to the internet at home? _____Yes _____No

9. How many hours do you spend on using the computer per day? _____

10. Have you ever connected with people from other cultures via the Internet?

    _____Yes _____No

11. Check the level you want to teach: _____Elementary _____Middle School

    _____High School

12. Check your class ranking: _____ Freshman _____ Sophomore _____ Junior

    _____ Senior _____ Graduate

13. I am willing to participate in a small group discussion (with approximately 4-5

    classmates) to express my opinions regarding the use of a Web2Quest in the

    classroom. The purpose of this discussion will be to provide the student researcher

    with further information for this research study. All comments during the discussion

will be kept confidential to the fullest extent possible. _____Yes _____No

You may contact me for participation in a small group discussion:

Name: Li-mei Grace Lin_____

Email: ____linli@onid.orst.edu_____

Telephone No. ___1-541-908-4372 (USA) _____

Appendix F: Teacher Multicultural Attitude Survey (TMAS)

		Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1	I find teaching and working in culturally diverse groups and classroom rewarding.					
2	Teaching methods need to be adapted to meet the needs of culturally diverse students in the classroom.					
3	Sometimes I think there is too much emphasis on multiculturalism and training for pre-service teachers.					
4	Teachers have the responsibility to be informed and aware of their students' cultural backgrounds.					
5	It is the teacher's responsibility to invite extended family members to attend parent-teacher conferences.					
6	It is not the teacher's responsibility to encourage pride in one's culture.					
7	As classrooms become more culturally diverse, the teacher's job becomes increasingly challenging.					
8	I believe the teacher's role needs to be redefined to address the needs of students from diverse/culturally different backgrounds.					
9	When dealing with bilingual students, some teachers may misinterpret different communication styles as behavior problems.					
10	As classrooms become more culturally diverse, the teacher's job becomes increasingly rewarding.					
11	I can learn a great deal from students with culturally different backgrounds.					
12	Multicultural training for teachers is not necessary.					
13	In order to be an effective teacher, one needs to be aware of cultural differences present in the classroom.					
14	Multicultural awareness training can help me work more effectively with a diverse student population.					
15	Students should learn to communicate in Mandarin only.					
16	Today's curriculum gives undue importance to multiculturalism and diversity.					
17	I am aware of the diversity of cultural backgrounds of the students I am working with.					
18	Regardless of the racial and ethnic makeup of my class, it is important for all students to be aware of multicultural diversity.					
19	Being multiculturally aware is not relevant for the students I teach.					
20	Teaching students about cultural diversity will only create conflict in the classroom.					

Ponterotto, Baluch, Greig, & Rivera. (1998). Development and initial score validation of teacher

multicultural attitude survey. *Educational and Psychological Measurement*, 58, 1002-1016.

Appendix G: Web2Quest Questionnaire

		Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1	Web2Quest can be used to connect learners to a global audience.					
2	Web2Quest helps learners lessen their stereotypes and prejudice about people from different cultures.					
3	Web2Quest boosts learners' motivation.					
4	The implementation of Web2Quest broadens learners' worldview.					
5	Web2Quest helps learners increase their problem solving skills.					
6	Web2Quest fosters learners' growth and development of their ideas through the feedback they received from a global audience.					
7	Web2Quest offers informal and individualized learning experiences for learners.					
8	Web2Quest enhances learners' reflections on behaviors and assumptions on multicultural education issues.					
9	Web2Quest provides learners opportunities to serve as experts in a field.					
10	Web2Quest serves as an attractive and inexpensive teaching strategy to enhance educational opportunities for students.					
11	Web2Quest helps learners become more self-directed.					
12	The amount of time it takes for learners to complete a Web2Quest may influence whether I use Web2Quest as a teaching strategy.					
13	Web2Quest explores ways of integrating the Web 2.0 tools into teachers' practice to tap into other educators' ideas on multicultural education issues.					
14	Web2Quest connects teachers to a network of educators around the world and opens up their classrooms to increase their own and their students' learning experiences.					
15	Web2Quest could have a significant influence on teachers' attitudes and beliefs on multicultural education.					
16	Older teachers are less likely to use Web2Quest in their classrooms.					
17	Web2Quest provides opportunities for teachers to engage in conversations with teachers in various cultures.					
18	Web2Quest changes the ways teachers think about technology and its integration into their practice.					
19	Web2Quest provides teachers with the opportunities to contribute to the global online community.					
20	Web2Quest helps teachers feel valued for their ideas and expertise as a result from contributing to an online community.					

Open-ended Questions:

Please provide in-depth responses to the following open-ended questions.

Question #1:

What is your perception of how multicultural education should be promoted in school settings?

Question #2:

How will your teacher preparation coursework in multicultural education impact your teaching of culturally and linguistically diverse students? Please provide specific examples.

Question #3:

What are the opportunities and challenges of using Web2Quests to promote multicultural education? Please indicate specific opportunities and challenges.

Opportunities:

Challenges:

Question # 4:

When you complete a Web2Quest project in a small group (3-4 people), what are the advantages and difficulties?

Advantages of completing of a Web2Quest project in a small group:

Difficulties of completing of a Web2Quest project in a small group:

Appendix H: A Permission Letter from the TMAS Author

To: graceaaa40@hotmail.com

Subject: Re: TMAS Utilization Request Form

From: ponterotto@fordham.edu

Date: Fri, 10 Dec 2010 20:07:19 +0000

Thanks Limei,

Good luck and please send me a copy of your final paper/report.

Joe P Sent from my Verizon Wireless BlackBerry

From: Limei Grace Lin <graceaaa40@hotmail.com>

Date: Fri, 10 Dec 2010 14:02:59 +0000

To: <ponterotto@fordham.edu>

Subject: FW: TMAS Utilization Request Form

Dear Professor Ponterotto,

The attachment is my major professor and the student researcher's signatures.

Thanks a lot for your time and great help.

All the best!

Limei

Appendix I: One-on-One Interview Questions

Question # 1: What is your definition of multicultural education and has your definition changed?

Question # 2: What are your teaching strategies?

Question # 3: What are the opportunities and challenges of implementing Web2Quest technologies in multicultural education courses?

Question # 4: What is the current status of multicultural education in Taiwan, and what are the challenges involved in multicultural education?