INTERNATIONAL DISTANCE LEARNING IN SPECIAL EDUCATION:

A PROGRAM EVALUATION OF A US-ECUADOR COLLABORATION

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The internationalization of distance learning in special education is at a pivotal point in expansion. Even with concerted efforts through traditional means to increase the supply of special educators, shortages persist; therefore, teacher preparation programs are turning to online education. This dissertation study was a formative program evaluation of a bilingual, two-course sequence within a web-based special education master's program offered at the University of North Texas (UNT), in Denton**,** Texas, and at the Universidad Casa Grande (UCG) in Guayaquil, Ecuador. The research design was based on the unfolding model of program evaluation, and it included mixed-methods of data collection. The model focused attention on (1) scientific evidence, (2) cost-benefit differential, (3) underlying values, and, (4) unintended consequences. Data came from archived documents as well as six semi-structured interviews with stakeholders and survey data from 23 student participants.

The findings for the general-orientation course, Special Education Programs and Practices, revealed mixed results concerning multicultural awareness on the part of student participants. However, it seemed to have influenced their lesson design and made a difference in other areas. Some multicultural awareness concepts frequented the discussion board. The specialized course, Assistive Technology, which had more frequent communication between UNT and UCG on the discussion board, suggested larger increases in students' multicultural awareness. With respect to both courses, the stakeholders recommended that the structure be strengthened for non-bilingual instructors and students to be able to communicate more freely.

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INTRODUCTION

Purpose of the Study

My research consisted of a formative program evaluation of the first two courses of a four-course sequence within a bilingual web-based special education master's program. I conducted my research at the halfway point of the four-course sequence. The University of North Texas (UNT) in Denton, Texas, offered the online courses to students in the United States and to students abroad at the Universidad Casa Grande (UCG) in Guayaquil, Ecuador. The courses, which are still in development, allowed special educators from both countries to engage in learning and participate in asynchronous online discussions because all the course materials (e.g. student assignments, syllabus, discussion postings, and instructor feedback) were provided in English and Spanish within the same Blackboard interface (Barrio, Tyler-Wood, Knezek, & Dunn, 2008). A grant from the UNT Global Initiative funded the four courses. The aim of my research was to conduct a formative program evaluation to identify improvements for the beginning courses, while the courses were still capable of being modified, in the hopes of improving the quality of the courses prior to offering the courses to a wider audience. I chose to examine the strengths and weaknesses of one of the course goals related with enhancing teachers' multicultural awareness. I approached this goal from two perspectives, the first being how UNT integrated the multicultural course content; and the second, how UNT employed cultural sensitivity in adapting the courses for the South American students at UCG.

In the introduction, I discuss the background of the study, the statement of the problem and research questions. After that, I examine the research perspective, overview of the

methodology, delimitations of the study, rationale for the study and definitions of key terms and abbreviations. I conclude with the organization of the dissertation.

Background of the Study

Global context. Education, I believe, is a basic human right; however, disability, religion, ethnicity, poverty, gender, or minority status may restrict or marginalize an individual's access to education. Living with a disability can present particular challenges. How the cultural, economic, and social factors affect individuals with disabilities varies from one context to another (UNESCO, 2003a). Globally, about 650 million people have a disability (UNESCO, 2009b), and an estimated 150 million are children (UNICEF, 2005). According to UNESCO (2005b), 80% of the entire disabled population resides in developing countries. Even more striking is the fact that within these developing countries an estimated 30% of street children have a disability, and 98% of children with disabilities do not attend school (UNESCO, 2009b). This information makes students with disabilities from developing countries the largest disadvantaged population in the world (UNESCO, n.d.). Many of the disabilities in developing countries are a direct result of the lack of essential goods and services and are preventable (UNICEF, 2005). In fact, the international call for inclusion practices has been achieved through comprehensive discussions at conferences in Jomtien (1990), in Salamanca (1994), and most recently in Dakar (2000) (OECD, n.d). The overwhelming consensus is that education is for all (UNESCO, 2005b; UNICEF 2005). In addition to policy demands, teacher turnover, the shortage of certified special educators, the number of students with disabilities and the global economic crisis further exacerbate the scarcity of resources for students with disabilities, and developing countries are especially hard hit (Stuecher & Suarez, 2000).

The global shortage of special educators has motivated institutions to explore innovative uses of technology in teacher preparation (Ludlow & Duff, 2009). According to UNESCO's (2006a) worldwide report on education, the need for specialized teachers, those who can work with children with special needs or teach specific subjects, is the most problematic. In light of this, distance learning is a promising remedy for the need to provide training to special educators in rural and remote locations (Ludlow, 2001), and also to those with time, job, and family constraints (Johnson, 2004; Kelly & Pearl, 2004). My study focuses on an online program that took place between the US and in Ecuador.

Ecuador is located in South America at the equator, and shares the Pacific coastline with Columbia to the North and Peru to the South and East. Though small, Ecuador is teeming with biodiversity, from the Andes Mountains to the Galapagos Islands (Handelsman, 2000). The official language is Spanish, and the currency is the US dollar. Ecuador's main exports of oil, bananas, coffee, and cacao should make it a country with few needs; in actuality, government instability, corruption and social unrest have offset these advantages (Vickers, 2003).

The World Bank's (2008) report of the country's economic inequality is startling in that the "richest 10% of the population receives three times more income than the poorest 50% and sixty times more than the poorest 10%" (p.1). In detail, 17.7% live on $1 a day, 40.8% on $2 a day and 41% are living below the poverty line (Political Overview, 2007). The children bear many of the consequences. Only 80% of children survive to reach the fifth grade, and the average grade of dropout is second (UNESCO, 2005a). Faring even worse are the children in rural areas, where only about one-third complete elementary education (Social Overview, 2007). Ecuador's indigenous children are included on UNICEF's excluded and invisible children's list (2005). In the Amazonian region only 21% of children under five have a birth certificate

compared to the national average of 89% (UNICEF, 2005). Persistent government changeovers have worsened the situation. Beginning in 1997, the last three presidents were forced to leave office (Political Overview, 2007). Awareness of these multiple factors affecting the well-being of children has motivated the compassionate response of many individuals and institutions to serve for a short term or longer in Ecuador. These individuals work with the most vulnerable population, children with disabilities. Speaking about special education assistance in Ecuador, Stuecher & Suarez (2000), write that some outside initiatives have failed to take into account the needs of the culture and were not sustainable. Still, the authors point out that there are several schools that are what they call, "shining examples of hope."

Origin of the courses. The partnership between UNT and UCG was established during 2007-2008 as a result of the Fulbright appointment of Dr. Gerald Knezek, a professor at UNT, to UCG. Although the purpose of his appointment was not directly related to this research, the friendship he fostered through his time at UCG laid the foundation for other cooperative interests between the universities (Tyler-Wood, Barrio, & Peak, 2009). UNT, located in north central Texas, is a large, public institution with over 36,000 students (The University of North Texas, 2010). UCG, is a small, private college located near Ecuador's western coast in Guayaquil, Ecuador. Around 800 students attend UCG (Universidad Casa Grande, 2010). Both institutions are familiar with online learning and possess established distance education offerings. UNT began offering online courses over 20 years ago through the WebCT learning management system. Since UCG's beginning, providing courses integrating the latest technology has been an integral component. The UCG president, Marcia Gilbert de Babra, has historically led the university to improve the technology employed in the UCG undergraduate and graduate courses.

The College of Human Ecology, Education and Development is driving the creation of the online and blended initiatives at UCG. UCG's first online course, Introduction to Municipality Management, was offered through Moodle in 2006. Also during 2006, UCG offered a course on instructional design to train teachers about Moodle. In 2007, the university offered a Teaching English as a Foreign Language (TEFL) certificate in Moodle to support face-to-face courses. UCG offered several online courses during 2008. The university expanded the availability of the virtual campus to the UCG community to support face-to-face programs. Another TEFL course was offered to students in the surrounding cities, and a master's degree in education was offered as a blended learning course. In 2009, UCG offered blending learning courses for students interested in a graduate diploma in communication. At the same time, the university launched an online certificate in virtual education to train 20 UCG teachers. During 2010, UCG will offer an online bachelor degree in international education (Lucila Perez, personal communication, April 2010).

In 2008, the UNT Global Initiatives Grant funded a collaborative distance learning initiative in special education between UCG and UNT. The initiative was a four-course sequence of master's level special education courses. UNT offered the first courses (EDSP 5710 Special Education Programs and Practices and EDSP 5560 Assistive Technologies) during the summer and fall of 2008, and the second courses (EDSP 5720 and EDSP 5321/5510) during the fall of 2009. I conducted my study during the fall of 2009 while the final courses occurred. The main goals of the courses were to meet the increasing international demand for special educators, train highly qualified special educators, enhance teachers' multicultural awareness through distance learning, and to increase opportunities for all students (Tyler-Wood, Barrio, & Peak, 2009). The focus for my formative program evaluation was on the first two courses out of the four-course

sequence, EDSP 5710 Special Education Programs and Practices, and, EDSP 5560 Assistive Technologies. UNT regarded the courses as a pilot program and was interested in using my findings to make improvements to the courses before the next offerings. The key personnel and a brief timeline of the course development are presented in the next section.

The UNT team responsible for developing the courses and their roles during the 2007-2008 school year included Dr. Tandra Tyler-Wood, the course developer; Dr. Pamela Peak, the EDSP 5710 course instructor; Dr. Mary Estes, the EDSP 5560 course instructor; Ms. Brenda Barrio, the instructional designer and translator for both courses, and grader for EDSP 5710; and Mr. Andrew Bailey, the grader and translator for EDSP 5560. Ms. Barrio and Mr. Bailey are bilingual and speak fluent English and Spanish. The undertaking required coordination with UCG as well. The UCG personnel who supported the program and their capacities were Dr. Marcia Gilbert da Barba, the UCG president; Dr. Lucila Peréz, the UCG dean of the College of Education; and Ms. Marcela Santos, the program coordinator for the UCG students.

The first two courses were developed during 2007 and 2008. During the summer of 2007, Dr. Tyler-Wood and Ms. Barrio wrote the proposal, submitted it to UNT's Hispanic and global studies department that fall, and received the acceptance letter in December. Ms. Barrio, under the guidance of Dr. Tyler-Wood, translated, modified and developed EDSP 5710 during the spring of 2008, and UNT offered the course during the 10 week summer session. To launch the first course, UNT faculty and staff traveled to UCG to provide students with orientation training to the online course management system. Faculty and staff from UNT visited several Ecuadorian schools and spoke with teachers and administrators about the needs in the context of the culture. Dr. Peak served as the EDSP 5710 course instructor, Ms. Barrio was the teaching assistant; both graded students' assignments. Also during the summer session, Ms. Barrio developed the second

course, EDSP 5560. UNT offered the second course during the fall of 2008. Dr. Mary Estes was the course instructor and Mr. Bailey was the teaching assistant. Dr. Estes graded the UNT students' work and Mr. Bailey assessed UCG students' assignments (Mary Estes, personal communication, June 2009).

Statement of the Problem and Research Questions

The lack of research and evaluation of educational innovations is a serious problem (Hart & Hord, 2006). The UNT faculty members responsible for developing the four-course bilingual online special education masters-level sequence requested that I conduct a formative evaluation to examine the strengths and weaknesses of the first two courses regarding the multicultural awareness units and the course adaptations for the Ecuadorian culture. Since the courses were still being formed, this information could be integrated in to the existing courses before the next offering. The goal of my research was to perform this formative evaluation on the first two courses by using a model that incorporated the multifaceted nature of assessment. My research took place at the midpoint of the four-course program, while the final two courses were underway. I specifically focused on the multicultural awareness components integrated within the courses and UNT's adaptations for the South American culture. This formative program evaluation was guided by the following research questions and sub-questions:

Question 1. Scientific evidence

1) What is the evidence of multicultural awareness in these two special education courses?

   a. What were the course materials related with multicultural awareness?

   b. How did students make sense of course goals related to multicultural awareness?

Question 2. Cost-benefit

2) What is the cost-benefit analysis of the course for the institutions?

a. What is the cost-benefit ratio for the bilingual delivery mode?

b. What is the viability of continuing the courses?

c. How satisfied were stakeholders with the course?

d. How satisfied were students with collaborating with an international university?

Question 3. Underlying values

3) How was the underlying course goal of enhancing students' multicultural awareness implemented in the course?

a. How were the courses adapted to reflect the different professional and cultural needs of the students from the United States and Ecuador?

b. How were the courses designed to promote cross-cultural communication among the students?

c. How did discussions about multicultural awareness materialize within student-student and student-instructor interactions?

Question 4. Unintended consequences

4) What are the unintended positive or negative consequences of the course design and implementation?

a. Was there a disconnection between the proposed course expectations for enhancing student's multicultural awareness and the actual course implementation?

b. What did students and stakeholders view as course benefits/drawbacks?

c. What are recommendations for course redesign or improvement?

Research Perspective

Constructivism is learning through hands-on activities, facilitating authentic learning through real-life activities, and implementing authentic assessment. It includes multiple methods of assessment, a student-centered focus, cooperative learning, scaffolding, and exploring the teacher's role as facilitator (Vygotskiĭ, Rieber, & Carton, 1987). These constructivist features were prevalent in the two courses. One aspect of the instructor's role was to facilitate students' understanding and investigation of cultural assumptions and the ways in which knowledge is determined within it. For example, instructors posted diversity-infused discussion topics to initiate students' cross-cultural communication, and students responded (i.e. who says assistive technology has to be expensive?; assistive technology supports for reading; la educación especial in Ecuador; early thoughts about assistive technology). Students experienced authentic learning situations through an interview activity, and by volunteering at least 15 hours at a school with children with disabilities. In addition, several activities involving video case studies presented students with real-life scenarios.

Overview of the Methodology

My research came about through an established partnership between UNT and the UCG. The most recent joint project funded by the 2007-08 UNT Global Initiatives Grant was a block of four bilingual special education graduate-level courses offered online in both English and Spanish. The intent of this research was to use a model of program evaluation, midway through the program, to identify improvements for the first two courses regarding multicultural awareness, in the hopes of improving the quality of the courses prior to the next offering. I

employed both quantitative and qualitative measures through the framework of the unfolding model (Ruhe & Zumbo, 2009), which is based on Messick's work on validity (1989).

One of the principal reasons Ruhe and Zumbo (2009) created the unfolding model was to answer the call in literature for a professional evaluation model that would be adaptable to guide studies of merit and worth for distance learning programs. The unfolding model utilizes mixed-methods to collect and analyze data along the four facets central to the framework: scientific evidence, relevance/cost-benefit, underlying values, and unintended consequences (Figure 1). The four central framework facets are further divided into scientific basis and consequential basis.

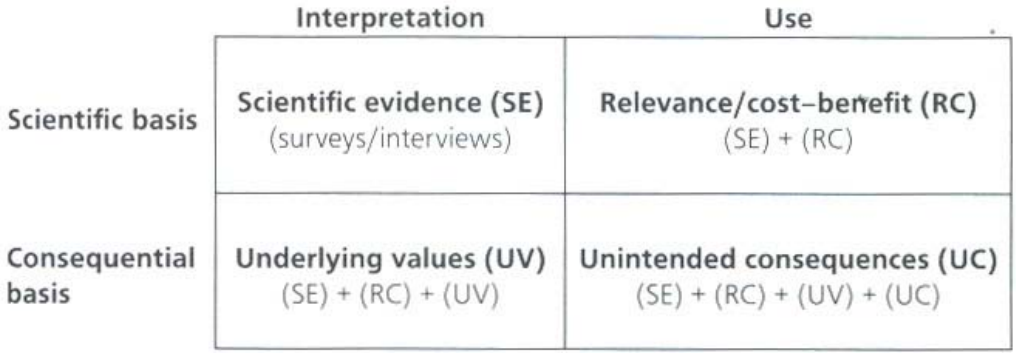


Figure 1. The unfolding model (Ruhe & Zumbo, 2009, p. 15).

It is important to point out that Ruhe and Zumbo (2009) do not define *science* as controlled experiments but as a rigorous examination of how social realities emerge, function, and affect individuals and organizations.

I chose this model because it can be used for formative evaluation, provided structure, captured the perspectives of a wider audience, and allowed for overlapping data. This is in contrast to single methods alone (Patton, 2002; Ruhe & Zumbo, 2009). Ruhe and Zumbo (2009) recommend analyzing each course as a case or unit of analysis. I treated the two courses, EDSP 5710 and EDSP 5560, as individual cases by performing an in-depth study of the components of

each course, which I describe in Chapter 3. Also, I present the findings and discussion of the courses in separate sections within Chapters 4 and 5. My handling of the courses as cases was in accordance with examples given by Ruhe and Zumbo (2009).

Research data included archived data, a purposeful sample of semi-structured interviews with stakeholders, and survey data. In carrying out my analysis, I was guided by Ruhe and Zumbo (2009) for the use of mixed methods within the unfolding model, Teddlie and Tashakkori (2003) for mixed methods, Patton (2002) for qualitative analyses, and Hinkle, Wiersma, and Jurs (2003) for quantitative analyses.

Delimitations of the Study

My research operated within four notable boundaries. First, the small sample size restricts generalizing the research findings to wider contexts. A second limitation is that, due to the use of two languages in surveys and interviews, some meaning may be lost in the translation from English to Spanish and vice versa. A third consideration is that the differences between the instructors could not be controlled; therefore, it was difficult to determine if one course received a higher rating based on the subject matter or because the students preferred the instructor's approach. In one course, due to the large enrollment, two different instructors graded students' work. The students' grades could not be compared.

A fourth boundary is that, although the UCG end-of-course survey and archived data were collected during the courses, I gathered the interviews and online learning survey data about a year after the first two courses had concluded. The final two courses were in progress during my data collection. My approaches for overcoming the drawbacks were to incorporate credibility-building measures and to be transparent in my data gathering and analyses (Patton,

2002). I remembered at all times to keep my findings in context. This study was worth pursuing because it extended the research on distance learning for special educators at a time when there was a crucial need.

Rationale for the Study

Practical and scholarly significance. The practical significance of my research is to address the confirmed global shortage of special educators and to supply information to aid UNT faculty members as they make decisions about special education coursework (Boe, 2006; Boe & Cook, 2006; UNESCO, 2006a). UNT will use my findings to improve the beginning courses before the courses are offered a second time. My research can be placed within the scholarly literature about the Internet's impact on the internationalization of higher education. Developing strategies for building collaboration among a diverse group of international learners and culturally responsive curriculum is essential as more Western universities package curriculum that is shipped world-wide via the Internet (Cerny & Heines, 2001; Onay, 2002; Rossman, 1992) and institutions extend enrollment to students abroad (Gunawardena, Wilson & Nolla, 2003;Rasmussen, Coleman & Ferguson, 2006; Rogers, Graham & Mayes 2007). In fact, Moore and Anderson (2003) devote an entire chapter to culture and online education in the *Handbook of Distance Education*. This project addressed improving the quality of educational resources for special education teachers during a time of severe global shortage and the compelling need to train educators how to teach increasingly diverse student populations (UNESCO, 2006a). The Center on Personnel Studies in Special Education reported that in the 2000-01 school year around 98% of school districts in the United States reported shortages of qualified special education teachers, noting that "approximately 47,500 special education

positions were filled by uncertified personnel—a 23% increase from the previous year" (COPSSE, 2004, p.1). Special education teachers from under-represented ethnic groups are on the decline; consequently, the current pipeline of White, middle-class, monolingual female students must be trained in diversity and multicultural best practices (Banks, 2001; Ladson-Billings, 2005; Sleeter, 2001; Tyler, Yzquierdo, Lopez-Reyna, & Flippin, 2002; Zeichner, 1993). In the United States, the continuing growth of the Spanish-speaking population, as well as the disproportionate placement of minority students in special education (Coutinho & Oswald, 2000) heightens the need for educators who understand the needs of bilingual students in special education (Cummins, 1989; Murdock, n.d).

The ongoing economic downturn worsens the educational situation in developing countries. In Ecuador, UNESCO's Regional Overview for Latin America and the Caribbean reported that only 71% of teachers were pedagogically trained (2009a), this is a 16% decrease from data gathered in 2000 (UNESCO, 2006a). Through a series of surprise visits to schools during 2002-2003, the World Bank reported that on an average day about 14% of Ecuadorian teachers are absent (Rogers & Vegas, 2009). When compared to administrative records, researchers found that one-quarter of absent teachers were incorrectly reported as present (Rogers, Lopez-Calix, Cordoba, Chaudhury, Hammer, Kremer, & Muralidharan, 2004). Even in hard times, Ecuador is making tremendous strides in providing special education services to students. To facilitate these advances, educators request not a handout, but the opportunity for more training (Stuecher & Suarez, 2000). Both in the US and abroad, the shortage of special educators and the need for educators who are trained in teaching diverse student populations might be curbed by the increased availability of specialized online resources.

Definitions of Key Terms and Abbreviations

The following definitions are useful to the understanding of my research. The terms are drawn from multiple sources and the citations are included.

- Asynchronous interaction refers to opportunities for learners and/or instructors to interact with each other via computer at different times (Clark & Mayer, 2003, p. 309).
- Bilingual-collaborative distance learning is specific to this study, course materials are available in Spanish and English; students are from UNT and UCG. The purpose is not to learn English or Spanish but the course material. Collaboration is encouraged through computer-mediated discussion postings.
- Case studies, as see in this evaluation study, analyze each course as a case or unit (Ruhe & Zumbo, 2009, p. 252)
- Constructivism refers to the guiding principles of constructivist learning environments are to pose problems of emerging relevance to students, structure learning around primary concepts, seek and value students' points of view, adapt curriculum to address students' suppositions, and assess student learning in the context of teaching (Vygotskiĭ, Rieber, & Carton, 1987).
- Content analysis is a term used for any qualitative data reduction and sense making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings (Patton, 2002, p. 453). My content analyses followed Patton's (2002) suggested stages of identifying, coding, categorizing, classifying, and labeling the primary patterns in the data.
- Course management system refers to a software program that contains a number of integrated instructional functions; e.g. BlackBoard or WebCT (Ko & Rossen, 2008, p. 295).

- Courseware formative evaluation is the evaluation of courseware based on learner responses (test results or feedback) during the development and initial trials of the courseware (Clark & Mayer, 2003, p. 312).
- Distance education is a term used for any form of learning that does not involve the traditional classroom setting in which students and instructor are in the same location at the same time. Examples range from correspondence courses to video conferencing to online classes (Ko & Rossen, 2008, p. 295).
- Electronic bulletin Board refers to a software program that permits the participant to "post" messages online (similar to posting a message on a corkboard with a tack) and allows others to reply to the posting with one of their own; also known as a discussion board, forum, conference area, or threaded discussion area (Ko & Rossen, 2008, p. 296).
- Inclusive education is the philosophy that schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This should include disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities and children from other disadvantaged or marginalized areas or groups (The Salamanca Statement as cited in UNESCO, 2003, p. 4)
- Multicultural awareness is used in this dissertation very broadly. Multicultural awareness is a teacher's understanding, appreciation, and use of culturally relevant pedagogy (Irvine, 2003) to help all students reach their full potential; also it will be used as global awareness, intercultural studies, ethnic education, cultural studies, diversity awareness, multicultural education (Grant & Ladson-Billings, 1997).
- Stakeholder refers to a person associated with or affected by a program, whether or not

they have a say in its future (e.g. school administrators, teachers, parents, students, community groups) (Weiss, 1986 as cited in Ruhe & Zumbo, 2009, p. 257)

- Synchronous interaction refers to opportunities for learners and/or instructors to interact with each other via computer at the same time (Clark & Mayer, 2003, p. 316).
- The unfolding model is a dynamic framework based on Messick's (1989) four-faceted framework of validity for the evaluation of distance courses and e-learning that provides a comprehensive assessment of merit and worth that can be adapted for the next wave of technological development (Ruhe & Zumbo, 2009, p. 258).
- UCG is the abbreviation for the University of Casa Grande.
- UNT is the abbreviation for University of North Texas.

Organization of the Dissertation

This chapter served as a general introduction to my dissertation research. The organization for the remaining chapters includes Chapter 2, an explanation of relevant literature, Chapter 3, the design methodology, Chapter 4 comprises the findings from each case in the formative program evaluation, and in Chapter 5 the summary and discussion are presented.

In order to address the research questions, a review of the literature supporting special education teacher preparation and distance learning must be explored. The next chapter includes The Shortage of Special Educators, Training Special Educators Through Distance Learning, Multicultural Education and the Role of Teacher Education, Special Education Teacher Education Distance Learning and Evaluation, and the Literature Synopsis.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

My research objective was to conduct a formative program evaluation using the unfolding model to examine the first two bilingual distance-learning courses for special educators within a four-course sequence. The purpose of my study was not to develop a program evaluation model. Consequently, the five literature review sections following this introduction are: The Shortage of Special Educators, Training Special Educators Through Distance Learning, Multicultural Education and the Role of Teacher Education, Special Education Teacher Education Distance Learning and Evaluation, and the Literature Synopsis. These are the essential components to my study. Prior to beginning the first section of my literature review, I provide a brief snapshot of the state of special education in America and in Ecuador and my search results.

Snapshot of special education: United States. In the 50 states and the District of Columbia (including Bureau of Indian Education schools), some 6.7 million students ages 3-21 were served under the Individuals with Disabilities Education Act (IDEA), Part B during the 2006-2007 school year (US Department of Education, 2008). The number of students with disabilities has slowly risen since 1992; in particular, the growth of students receiving services for autism has sky rocketed, from around 10,000 students in 1992 to 65,000 students in 2001 (*25th Annual Reports to Congress,* 2005). During 2006, 95% of students' ages 6-21 were enrolled in regular school (National Center for Educational Statistics, 2006) and of the 396,857 students who exited, 56% graduated with a diploma, 15% received a certification of attendance, 1% reached maximum age, and 26% dropped out (Planty, Hussar, Snyder, Provasnik, Kena, Dinkes, KewalRamani, & Kemp, 2008b). Ongoing concerns in special education are the disproportionate

numbers of minority and limited language students identified as requiring services. In speaking about the excessive placement, Küpper & Rebhorn (2007) state that, ‘‘In the 1998–1999 school year, African-American children represented just 14.8% of the population aged 6 through 21, but comprised 20.2% of all children with disabilities.” Additional educational concerns are the call for the recruitment of culturally/linguistically diverse (CLD) special educators and the need to increase the participation of minorities in leadership roles (Küpper & Rebhorn, 2007).

Snapshot of special education: Ecuador. In 2004, there were more than 1.6 million people with disability in Ecuador, representing about 12.14% of the total population (Consejo Nacional de Discapapcidades, n.d.). Children and teenagers ages 0-18 with disabilities account for 265,825 (Consejo Nacional de Discapapcidades, n.d.) and of them, 17,778 attend specialized institutions, while 13,300 attend regular schools (Ministerio de Educación-Ecuador, n.d). Within regular schools, less than 4% of students have access to necessary special education services, and 2.2% have characteristics of giftedness. According to a report from Ecuador’s Ministry of Education (2005), 37.9% of the population with disabilities has not completed any level of education, leading 56.8% to be illiterate.

Multiple obstacles endanger children’s health and education. The most troubling issue facing Ecuadorian children are the disturbing rates of stunting from ongoing malnutrition. UNICEF (2007) reported that 26% of children under 5 are affected, and indigenous children are at a higher risk. The consequences of early stunting are associated with deficits in numeracy, literacy, and educational attainment at age 18 (Regional overview: Latin America and the Caribbean, 2009a). Second, schools lack basic operational facilities, such as either some or all of the following: “sufficient toilets, potable water, libraries, books and computer rooms.” (Regional overview: Latin America and the Caribbean, 2009a). As a side note, during 2005-2006 the US

gave $8 million in support for basic education aid to Ecuador, about $4 a child (Regional overview: Latin America and the Caribbean, 2009a). Even though public education is free, books and school materials must be purchased by the families due to limited school budgets. Consequently, financial strains hinder poor families from sending their children to school (UNICEF, 2007).

In addition, child labor interrupts the education of many students between the ages of 12-17. In the *2009 Regional Overview: Latin America and the Caribbean* publication, UNESCO (2009a) reported that, "The transition rate from elementary to secondary school is low at 78%" (p. 4). Finally, Ecuador's recruiting techniques for teachers in rural and remote areas may have contradictory results. The mandate requires new teachers' first teaching assignment to be in a rural or less-developed area, potentially pairing the least skilled teacher with students with the greatest needs (UNESCO, 2006a).

Search results. In general, I found more information about distance learning for special educators in the United States than in Ecuador. Besides a few government resources available online, I found little published information about special education students and teachers in Ecuador. For example, the most recent journal article about special education in Ecuador was written almost a decade ago (Stuecher & Suarez, 2000). The lack of information in this area created a noticeable gap in my review and reinforced the demand for this study.

I present the literature review in five sections. In the first section, I set the stage by discussing the acute shortage of special education teachers in the US and internationally. In the second section, I present how distance learning is a possible solution for offering training to special educators in all geographical locations. In the third section, I summarize multicultural education in teacher education and the necessity for teachers to be prepared to teach students

with diverse backgrounds. In the fourth section, I connect the call in the literature for quality control through program evaluation of distance learning for special educators. In addition, I describe the unfolding model (Ruhe & Zumbo, 2009). I conclude with my literature synopsis in the fifth section.

The Shortage of Special Educators

Introduction. Without a doubt, special educators are in short supply while the demand for such personnel continues to increase. Billingsley (2004) summarizes the need for special educators as severe, chronic, and pervasive. In this section, I discuss the impact of the Individuals with Disabilities Educational Act (IDEA) and its Ecuadorian counterpart, data about the shortage of special educators, and findings on attrition and retention. Government mandates are one of the driving forces for the demand of special educators. I conclude with possible solutions for retaining and increasing the pipeline of special educators.

NCLB and IDEA. In the US, Congress' passing IDEA and No Child Left Behind (NCLB) fuel the need to recruit and train more special educators. The 1997 amendments to IDEA articulated that a) students with disabilities be included in state reform efforts, b) the availability of special education classrooms be expanded, c) that data-based decision making for instructional and behavioral interventions be employed, and d) that quality professional development for special education personnel be supported (Katsiyannis, Zhang & Conroy, 2003). In 2004, the US Congress passed amendments to IDEA that required many small changes, but the new additions were the need for early intervening services and response to intervention (Küpper & Rebhorn, 2007). IDEA 2004 and NCLB both require that teachers meet the highly qualified teacher (HQT) standards. The HQT requirements are that a special educator a) has

obtained full state certification, 2) has not had special education certification or licensure requirements waived on an emergency basis, and 3) the teacher holds at least a bachelor's degree (Küpper & Rebhorn, 2007).

Ecuador's modelo de inclusion (model of inclusion). The US Department of Education and Ecuador's Ministry of Education have similarities and differences in caring for students with disabilities (Hazel, n.d). In fact, Ecuador's Ministry of Education's policies for special education, the Modelo de Inclusión Educative de Niño/as y Jóvenes con Necesidades Educatives Especiales al Sistema Educativo Ecuatoriano (Model of educational inclusion of children and youth with special education needs into Ecuador's educational system), is a basic translation of the United States' IDEA standards (Hazel, n.d.; Ministerio de Educación-Ecuador, 2008). The objectives of Ecuador's model are to:

1) Mejorar la atención educative de niño/as y jóvenes con necesidades educativas especiales incluidos en la escuela regular. (Improve attention to the education of children and youth with special education needs included in regular education)
2) Ampliar la cobertura de atención (Expand the coverage of attention)
3) Estructurar un modelo de Inclusión Educativa (Structure a model for inclusive education)
4) Estructurar una guía practica para los maestros (Structure a practical guide for teachers)
5) Estructurar una guia practica para padres de familia (Structure a practical guide for parents)
6) Estructurar una guía para estudiantes (Structure a guide for students)

7) Estructurar una guía para docentes de la zona de influencia (Structure a guide for faculty in the zone of influence) (Ministerio de Educación-Ecuador, 2008, p. 10, translation by author).

Ecuador's inclusion model further states that the Ministry of Education assumes the responsibility to provide every child with an education, recognizing it as a basic human right which should be extended to all citizens. With similar views on special education, one would think that the US and Ecuadorian departments operate comparably; however, it is in the implementation of special education laws that the countries differ (Hazel, n.d; Ministerio de Educación-Ecuador, 2008).

Similarities and differences. In the US, inclusion is a common practice and is required by law; in contrast, Ecuadorian students with disabilities usually attend separate specialized schools (Hazel, n.d.; Stuecher & Suarez, 2000). Ecuador has about 178-200 specialized schools and 16,215 standard schools (Ministerio de Educación-Ecuador, 2008). About 17,778 students attend specialized schools, while 13,300 students attend programs and services in mainstream education (Ministerio de Educación-Ecuador, 2008). While in Guayquil, Ecuador in 2008, I visited both types of schools and heard about the challenges school administrators faced to serve all students. Isabel Cuento de Guarderas, the director of FASINARM, a private, non-profit school for students and adults with special needs, explained the evaluation that takes place for each student in the program,

> We have been working with these 200 schools to integrate the children. The regular circuit offers very little opportunity for them. They have very crowded classes with very poor materials or none at all. And so, when you think of inclusion, you always think that the regular service is the better option. Here we have to ask ourselves every time, is this a

> better option?…We try to work as much as possible to integrate them and to have their time in FASINARM to be the shortest possible (Institute for the Integration of Technology into Teaching and Learning, n.d.).

I visited four Ecuadorian schools, and saw that they provided many opportunities for students, such as physical therapy, athletics, fine arts, and technology. Of particular interest was a school for the hearing impaired that had an entire room dedicated to learning the game of chess to aid in cognition. The school facilities were cheerful, clean, and provided an educationally stimulating environment for children to learn. Another difference in special education between the US and Ecuador is the use of individual education plans (IEP). Although both countries create an IEP for each student, in the US an IEP is a legal contract; conversely, in Ecuador an IEP is used as a guideline for the teacher and family (Hazel, n.d.).

The US government's mandates are the motivating factors for securing the quantity and quality of special educators that are needed (Center on Personnel Studies in Special Education, COPSSE, 2004). Even though the policies are meant to help, the overwhelming concern is that the pressure to produce more special educators has led to a greater number of alternative certified programs that could have an impact on quality (McLesky & Ross, 2004). Persistent shortages of special educators have further exacerbated the national policies' attempts to raise the bar for educating students with disabilities.

Special educator shortage. The literature is replete with research that special educators are in short supply in the US and around the globe (Boe & Cook, 2006; Brownell, Ross, Colón, & McCallum, 2005; Payne, 2005; UNESCO, 2006a). Shortages vary by location, job description, and diversity of personnel (COPSSE, 2004; McLeskey, Tyler, & Flippin, 2004). In addition, the issue of quality and the quantity of certified teachers is an overarching dilemma (Boe, 2006).

Unfortunately, the lack of special educators is not a new phenomenon (Boe, 2006; Katsiyannis, Zhang, & Conroy, 2003).

Reversing the shortage of special educators has been on the agenda for 20 years (Boe, 2006; US Department of Education, US DOE, 2009). Boe (2006) analyzed the long-term trends from 1987/1988 through 2002/2003 of the Office of Special Education Annual reports to Congress and found that the demand for special educators for students with disabilities aged 6-21 increased from 7.4% in 1987/1988 to 13.4% in 2002/2003 which is around 54,000 special educators. In the US, 98% of school districts reported shortages of special educators (COPSSE, 2005). Using data from the Schools and Staffing Surveys and the Data Analysis System, Boe and Cook (2006) compared the shortages among special educators and general educators in public education during the 1987-2000 school years. They reported that the need for special educators was 2-4% higher than the need for general education teachers. Boe and Cook's (2006) finding is further supported with research by McLeskey, Tyler, and Flippin (2004) that special education student growth is "almost three times greater than the growth rate of the entire school-age population" (p. 10).

Moreover, the need for special educators is not going away (McLeskey, Tyler, & Flippin, 2004). In 2005, COPSSE estimated that 135,000 more special educators would be needed by 2008 than were required in 1988. More specifically, the United States Department of Labor (2007) forecasts that the number of special educators is expected to grow by 15%, from 459,000 by 2006 to 530,000 in 2016. The Labor Department categorizes this increase as faster than average for an occupation. According to UNESCO's (2006a) worldwide report on education, the need for specialized teachers, those who can work with children with special needs or teach specific subjects, is the most problematic.

Shortages vary by state, areas of specialization, and the diversity of teaching personnel (McLeskey, Tyler, & Flippin, 2004). Reported numbers among the 50 states and D.C. in 2006 were that 11% (44,924) of special educators were uncertified (U.S. Department of Education, Office of Special Education Programs, Data Analysis System, 2008). The areas of greatest need are in rural districts (Katsiyannis, Zhang & Conroy, 2003; Ludlow, 1998; McLeskey, Tyler, & Flippin, 2004; Sundeen & Wienke, 2009) and high poverty locations (Carlson, Schroll, & Klein, 2002). IDEA data from 2006, indicates that that the number of uncertified special educators in rural states was 11% (312) in West Virginia, 22% (561) in Utah, and 13% (5,685) in New Mexico (U.S. Department of Education, Office of Special Education Programs, Data Analysis System, 2008). The Study of Personnel Needs in Special Education (SPeNSE) 1999-2000 report revealed that schools with 39%+ students in poverty have the greatest need for special educators in the areas of teaching children ages 3 to 5, students with emotional disturbance, and limited English proficiency (LEP) students (Westat, 2002). Overall, the SPeNSE 1999-2000 report and others agree that special educators are most needed in the area of emotional behavior disorders (Katsiyannis, Zhang, & Conroy, 2003; McLeskey, Tyler, & Flippin, 2004; Westat, 2002). In addition, scholars are concerned about the lack of CLD teachers (Brownell, Hirsch, & Seo, 2004; COPSSE, 2004; McLeskey, Tyler, & Flippin, 2004). Based on U.S. Department of Education data from 2000, McLeskey, Tyler, and Flippin (2004) reported that 38% of the students with disabilities in the US are CLD, while only 14% of special educators have diverse backgrounds. Moreover, the number of CLD teachers is declining (Olsen, 2000; Shipp, 1999) and continues to worsen according to the SPeNSE 1999-2000 report, which states that around 70% of districts have no special methods to recruit minority special educators (Westat, 2002b). This begs the question, why is there a shortage of special educators?

Special educator attrition and retention. Studies are plentiful with findings about special educator retention, attrition, and the consequences associated with the shortfall (Billingsley, 2004; Boe 2006; Boe & Cook, 2006; McLeskey & Billingsley, 2008). There are four main categories for attrition and retention. Teachers can: 1) stay in their current position, 2) transfer within the district, 3) transfer to general education, and 4) exit attrition (turnover) (Billingsley, 2004). A recent synthesis by Billingsley (2004) involved evaluating 20 attrition and retention studies on special educators from 1992-2004. Her findings revealed four themes that contribute to special educator attrition and retention: "a) teacher characteristics and personal factors, b) teacher qualifications, c) work environment, and, d) affective reactions to work" (p. 42). McLeskey, Tyler, and Flippin (2004) reported teachers' reasons for departing as: "employability, personal decisions, level of education, salary, mentoring, decision-making power, administration support, school climate, and job design" (p. 11-12). Boe (2006) reported that 37% of special educators leave to escape the profession. In addition to the research on the motivation for leaving, there are also findings on who is more likely to leave. Billingsley's (2004) thematic analysis identified situations in which special educators were more likely to leave: "1) younger than older, 2) uncertified than certified, 3) high test scorer versus low test scorer, and, 4) depending on personal circumstances" (p. 50). Katsiyannis, Zhang, and Conroy (2003) also found that young teachers are almost twice as likely as mature teachers to leave. In general, special educators are more likely to leave or transfer than general education teachers (Boe, Cook, Bobbitt, & Weber, 1998; Ingersoll, 2001; McLeskey, Tyler, & Flippin, 2004), and special educators are 10 times more likely to switch to general education than the reverse (Boe, Cook, Bobbitt, & Terhanian, 1998). Boe & Cook (2006) explain one reason for the switch is that 1 in 5 special educators' first degree is in general education.

Special educator attrition has many undesirable results. These include a reduction in teacher quality, interference with school reform and professional development efforts, and drained expenses (McLeskey & Billingsley, 2008). The primary concern is that attrition negatively affects services offered to students, which contributes to lower student achievement (Billingsley, 2004; Darling-Hammond & Sclan, 1996; McLeskey & Billingsley, 2008). Special educator turnover brings an economic cost. Darling-Hammond and Sykes (2003) and others suggest that the cost nationwide for teacher attrition is in the billions of dollars (Benner, 2000). The research is clear: special educators are scarce and are exiting, causing student achievement to suffer; solutions are needed to alleviate the downward spiral.

Solutions. Institutions are attempting various solutions to reverse the special educator dilemma; however, it is unknown which technique is most effective (McLeskey, Tyler, & Flippin, 2004). Scholars stress the importance of district induction programs to mentor first year teachers (Billingsley, 2005; Brownell, Hirsch, & Seo, 2004; COPSSE, 2005; Darling-Hammond & Skyes, 2003) and more professional development for veteran teachers (Ingersoll, 2001; Billingsley, 2004). Brownell, Smith, McNellis, and Lenk, (1994–1995) found that "stayers" emphasized the importance of university training to their professional development. Alternative certification routes could help alleviate the shortage; yet caution needs to be taken so that teacher quality is not sacrificed (Brownell, Hirsch, & Seo, 2004; Katsiyannis, Zhang, & Conroy, 2003). Recruiting more CLD teachers is an additional challenge. Institutions are employing unique recruiting efforts to attract CLD special educators within their borders (Sundeen & Wienke, 2009) and abroad. UNESCO (2006a) reported somewhat alarming news that in 2000 about 10,000 overseas teachers were recruited to leave less developed countries to work in developed countries.

Overall, many scholars believe statewide and national reform is needed to alleviate the deficit of special educators (Brownell, Hirsch, & Seo, 2004; COPSSE, 2004; Darling-Hammond & Sykes, 2003). Brownell, Hirsch, and Seo (2004) suggest that developing a solution requires collaboration between universities and school districts to design strategic plans to meet the shortage. In general, Boe (2006) suggests the following ways to enlarge the teacher supply:

> (a) increased transfer of qualified GETs to teaching positions in special education, (b) improved recruitment of qualified teachers entering from the reserve pool, (c) expansion of initiatives to upgrade the qualifications of unqualified employed SETs, and (d) expansion of teacher preparation programs in special education to increase the production of novice teachers (p.148).

In conclusion, policy mandates combined with the shortage of special educators have penalized the very students they were intended to protect. SPeNSE 1999-2000 reported that 83% of school administrators moderately or greatly believed that the shortage of qualified applicants is the greatest barrier to recruiting special educators (Westate, 2002c). The desperate need for special educators will not likely be curbed by a decrease in special education students (U.S. Department of Education, Office of Special Education and Rehabilitative Services, 2008); therefore, increasing the number of special educators requires innovative methods for providing training (Boe, 2006). Distance learning affords these possibilities (Knapczyk & Hew, 2007; Ludlow & Duff, 2002; O'Neal, 2007).

Training Special Educators Through Distance Learning

Introduction. The 2004 revision of IDEA, coupled with NCLB and the acute shortage of certified special educators, has created a demand for higher education institutions to offer more

special education distance learning courses (O'Neal, 2007). Many factors influence online learning; however, novelty is not one of them. Spooner, Spooner, Algozzine, and Jordan (1998) explain its origin as going back 300 years and being referenced as "home study, correspondence study, independent study, or external studies" (p. 122). The National Center for Educational Statistics (2008b) reported that in the 2006-2007 academic year, 89% of 4-year institutions offered online courses.

The National Center for Educational Statistics (2008b) results are consistent with the findings from the Sloan Consortium's survey responses from over 2,500 US colleges and universities, who estimated that there were 3.94 million online students during fall 2007 (Allen & Seaman, 2008). This finding was a 12.9% increase from the previous fall; in addition, at least 20% of students took an online course during fall 2007. In the last five years, since the beginning of the Sloan Online Learning Survey administration, the number of online learners has more than doubled. More findings from the Sloan report are that institutions overwhelming agree that distance education is important or very important, especially during the recent changes in the economy (Allen & Seaman, 2008). University personnel predict that the economic downturn, lay-offs, and rising fuel prices will cause more students turn to online learning. Even though almost three-quarters of institutions agree or strongly agree that the purpose of distance learning is to expand their geographical reach, the reality of the situation proves otherwise. The Sloan report found that 85% of students live within 50 miles of their institution, within the state or surrounding states; however, this could be changing (Allen & Seaman, 2008). In this section, I will discuss special education program offerings through distance learning, along with the benefits and concerns associated with online learning. Special education programs are harnessing distance learning to build capacity.

Potential of distance learning. Even with concerted efforts through traditional means to increase the supply of special educators, shortages persist (Spooner, Agran, Spooner, & Kiefer-O' Donnell, 2000); therefore, teacher preparation programs are turning to online education (Kurtts & Vallecorsa, 1999; Mohr, 2004). The increase of distance learning (Ludlow, 2001) is revolutionizing training for special educators, and its use could "systematically impact the shortage" (Spooner et al., 2000, p. 92). Literature suggests that distance learning in special education teacher preparation has the potential to meet and reduce the shortage needs (Bore, 2008; Campbell & Pierce, 2007; Johnson, 2004; Ludlow, 1994; Meyen, Aust, Bui, & Isaacson, 2002b; Meyen, Aust, Gauch, Hinton, Isaacson, Smith, & Tee, 2002c; O'Neal, Jones, Miller, Campbell & Pierce, 2007; Smith & Meyen, 2003; Spooner et al., 1998; Sun, Bender, & Fore, 2003) and provide the most up-to-date training, especially in rural and remote areas (e.g. Utah, West Virginia, Iowa, Kentucky, Ohio, New Mexico, Colorado) (Johnson, 2004; Jung, Galyon-Keramidas, Collins & Ludlow, 2006; Ludlow & Brannan, 1999; Ludlow & Duff, 2002; Ludlow et al., 2002; Ludlow, Foshay, Brannan, Duff, & Dennison, 2002; Spooner et al., 2000; Spooner, Jordan, Algozzine, & Spooner, 1999).

Scholars believe that distance education for special educators provides a new form of pedagogy (Meyen et al., 2002c; Smith & Meyen, 2003), offers "anytime, anywhere" access to professional development (Meyen, 2003, p. 84), increases special education certification enrollment (Bender & Fore, 2002), reaches a global audience (Sun et al., 2003), increases the enrollment of non-traditional students (O'Neal et al., 2007), and reduces stress and burn out (Ludlow et al., 2002; Sun et al., 2003). Other advantages of distance education include its allowance of effective strategies for field experiences (i.e. cybervision) (Binner/Falconer & Lignugaris/Kraft, 2002; Jung et al., 2006; Knapczyk & Hew, 2007) provision of opportunities

where none or few exist (Spooner et al., 1999), building collaboration among educators (Bore, 2008), and online mentoring capabilities (Knapczyk, Hew, Frey, & Wall-Marencik, 2005a).

Face-to-face vs. web-based instruction. Researchers have achieved consensus that web-based training for special educators is comparable to face-to-face instruction (Sun et al., 2003). Findings from Spooner et al.'s (1999) preliminary study pioneered the way by reporting that there was no difference in course means, and both settings had similar ratings for the course, instructor, teaching, and communication. Beattie, Spooner, Jordan, Algozzine, and Spooner (2002), reported comparable results for the overall ratings for the course and instructor despite the settings or delivery format. Caywood & Duckett (2003) and O'Neal et al. (2007) found no significant differences in the groups' achievement or student satisfaction between face-to-face and online instruction. In Ludlow et al.'s (2002) study employing a comparative evaluation form, students believed online instruction was the same as or better than face-to-face instruction and satellite instruction, and almost all participants responded that they would take another online course. Rowlison (2006) used student evaluation data to persuade hesitant faculty in New Mexico that online coursework was comparable to face-to-face. Along with those findings, Rowlison (2006) used state data from 2002-2005 that revealed the number of uncertified teachers went from 539 to 58 in the state. The Sloan Consortium's national data comparing learning outcomes in online education with face-to-face instruction supports these studies. Allen & Seaman (2006) reported that 62% of chief academic officers in institutions believed distance learning was on par or better than face-to-face instruction.

Resources for faculty. An abundance of materials for creating online courses exist for teacher preparation faculty of special educators. The success of distance learning in special education teacher preparation is contingent on the attitude of teacher educators. Ludow (2001)

recommends for teacher educators to use discernment when selecting technologies and to make sure they enhance instruction rather than detract from it. A few of the course resources that are available for faculty include materials on a quick start guide to selecting instructional materials (Ludlow & Spooner, 2001), planning and delivery (Collins, Schuster, Ludlow, & Duff, 2002; Schnorr, 1999), selecting technologies that will enhance instruction (Ludlow & Duff, 2001), program development and administration (Berdine, Burleson, Case, Liaupsin & Zabala, 2001), policies (Ludlow et al., 2002), and using e-learning pedagogy to integrate assessment through electronic portfolios (Meyen et al., 2002b).

Ready-made online instructional models are available for instructors and students as well. The Online Academy, funded for three years beginning in 1997, was one of the first national efforts supported by the U.S. Department of Education's Office of Special Education Programs (OSEP). The project resulted in the development of 22 online special education modules in the areas of reading, positive behavior supports, and technology across the curriculum. These modules were adopted by 170 institutions (Meyen, 2003).

Another Office of Special Education Programs funded example, the IRIS Center, is an online database of instructional materials currently in its eighth year of funding (Naomi Tyler, personal communication, July 15, 2009). The project website houses a wide range of modules for general education and special education teachers; it contains videos, case studies, small group activities and much more. The IRIS center modules address topics such as accommodations, assessment, behavior, collaboration, differentiated instruction, disability, diversity, learning strategies, math, reading, literacy, language arts, response to intervention, and school improvement (The Iris Center, n.d.). To date, the IRIS center has developed the only Spanish language modules available for teacher preparation. Website hit data from May 2008-April 2009

indicated that IRIS materials were access by individuals in the Spanish speaking countries of Mexico, Spain and Chile (Zina Yzquierdo, personal communication, June 25, 2009). On separate occasions, The Universidad de Puerto Rico and The University of North Texas have integrated these modules into coursework (Zina Yzquierdo, personal communication, June 25, 2009). Special education teacher educators must utilize the distance learning resources and practice the new technologies to serve not only the teachers but also, ultimately, the students in their classrooms (Spooner et al., 2000). Using distance learning to meet the critical shortage of special educators is a growing trend.

Distance education programs for special educators. Online learning programs for special educators are abundant. Ludlow and Branhann (1999) reviewed the literature from 1985 through 1999 and found 32 references to online learning for special educators in rural areas. The U.S. Office of Special Education and Rehabilitative Services (US DOE, 2009) funded several projects that incorporated online training for special educators; they granted eight projects in 2005, five projects in 2006 and six projects in 2007. In this section, I present a review of online programs for special educators organized by course offerings, intended audience, technologies, and geographical reach.

Course offerings. In the literature that focuses on training special educators through distance learning, courses have been offered on functional behavioral assessment skills (Pindiprolu, Peck/Petersen, Rule, & Lignugaris/Kraft, 2002), classroom behavior management (Caywood & Duckett, 2003; Knapczyk & Hew, 2007), learning disabilities (Beattie et al., 2002; Knapczyk, Chapman, Rodes, & Chung, 2001), severe disabilities (Grisham-Brown & Collins, 2002; Jameson & McDonnell, 2007; Spooner et al., 1999; 2000;), emotional disabilities (Knapczyk et al., 2005a), general special education (Bore, 2008), and assessment (Huai, Braden,

White, & Elliott, 2006). Other courses include training on supervising para educators (Forbush & Morgan, 2004; Steckelberg, Vasa, Kemp, Arthaud, Asselin, Swain, & Eennick, 2007), mild mental handicaps and emotional handicaps (Knapczyk et al., 2001), evaluation assessment of competence in achievement testing (Forbush, Stenhoff, Iff, Furzland, Alexander, & Stein, 2007), low incidence disabilities (Ludlow, Conner, & Schechter, 2005), mild to moderate disabilities (Bargerhuff, Dunne, & Renick, 2007; Grisham-Brown & Collins, 2002), autism spectrum disorders (Ludlow, Keramidas, & Landers, 2007; Zahn & Buchanan, 2002), teaching exceptional children in the regular classroom (O'Neal et al., 2007), and receiving specialist qualifications to support children with visual impairment (McLinden, McCall, Hinton, & Weston, 2007). A literature review by Jung et al. (2006) found three completely online post baccalaureate certifications and graduate degrees.

Intended audience. Besides teaching students at the graduate level (Bargerhuff et al., 2007; Beattie et al., 2002; Bore, 2008; Caywood & Duckett, 2003; Grisham-Brown & Collins, 2002; Kelly & Schorger, 2003; Ludlow et al., 2007; Ryan, 1999; Spooner et al., 1999; 2000; Sun et al., 2003) and undergraduate level (Binner/Falconer & Lignugaris/Kraft, 2002; Canter, Voytecki & Rodriguez, 2007; Forbush et al., 2007; Gruenhagen, McCracken, & True, 1999; Spooner et al., 2000; Steckelberg et al., 2007; Stenhoff , Menlove, Davey, & Alexander, 2001), universities are using distance learning to train special educators in all stages. The categories of special educators include those on limited license (Knapczyk et al., 2005a; Knapczyk & Hew, 2007), practicing but uncertified (Ludlow & Duff, 2002; Rowlison, 2006), general education teachers taking special education courses (Huai et al., 2006; O'Neal et al., 2007), emergency license (Knapczyk & Hew, 2007), post-baccalaureate (Gerent, 2009; Ludlow et al., 2007) and post masters (Steckelberg et al., 2007). Distance learning professional development opportunities

include inservice preparation for teachers (Forbush & Morgan, 2004; Ludlow et al., 2002; Ryan, 1999; Spooner et al., 2000; Zahn & Buchanan, 2002;) and paraprofessionals (Forbush & Morgan, 2004).

Technologies. The technologies employed in distance learning for special educator preparation include web-mediated experiential case strategies (Pindiprolu et al. 2002), two-way interactive television (Spooner et al., 2000), video conferencing (Jameson & McDonnell, 2007; Spooner et al., 2000), interactive audio teleconferencing (Stenhoff et al., 2001), asynchronous online mentoring (Knapczyk et al., 2005a), WebCT and Blackboard (Bore, 2008; O'Neal et al, 2007). More online learning technologies include a teleconferencing system (Forbush et al., 2007), web conferencing (Knapczyk, Frey & Wall-Marencik, 2005b), online problem-based learning (McLinden et al., 2007), two-way audio/video conferencing (Binner/Falconer & Lignugaris/Kraft, 2002 ; Ludlow et al., 2002; Menlove & Lignugaris/Kraft, 2004) and satellite broadcasts (Grisham-Brown & Collins, 2002), using video to support practica at a distance (Gruenhagen et al., 1999; Jung et al., 2006; Ludlow et al., 2007; Pemberton, Cereijo, Tyler-Wood, & Rademacher, 2004).

Still other technologies used in distance education involve simulcasting (Bargerhuff et al., 2007), video conferencing (Israel, Knowlton, Griswold, & Rowland, 2009; Knowlton, 2009; Puckett & Maldonado, 2009), desktop audio conferencing (Ludlow et al., 2007), video portfolios (Zahn & Buchanan, 2002), interactive video (Grisham-Brown & Collins, 2002), webcasting (Ludlow & Duff 2002), a hybrid model (Hargrave & Slye, 2009), live internet-based real-time video and audio courses (Forbush & Morgan, 2004), a combination of Live Classroom, Blackboard, and iWebfolio (Ludlow & Duff, 2009), and Live Classroom (e.g. Forum activities, webcasting, video and/or audio streaming and slide presentation) (St. Patrick's College, 2009).

Prior findings. These findings from several studies, specifically related with online education for special educators, served to support my research. Knapczyk et al. (2005a) reported positive results from practicum teachers and mentors using online mentoring. Bore (2008) surveyed students after their online course and found that students favorably viewed taking another online class. Huai et al. (2006) failed to confirm that the level of prior Internet competencies impact gains in online learning. Steckelberg et al. (2007) developed one online model and successfully shared the resources with six other university sites, suggesting that outside programs can be implemented effectively in other institutions. Sharing Steckelberg et al.'s views, Smith and Meyen (2003) explained how some online teacher preparation programs are teaming up to share courses or Reusable Learning Objects (RLO). RLO implementation provides a much greater volume of resources than an individual faculty member could develop alone. Jameson and McDonnell (2007) encourage universities to have students complete programs as a cohort and provide an initial orientation training to help students feel comfortable with the online system. Menlove & Lignugaris/Kraft (2004) also suggest that orientation training to WebCT may lead to lower attrition. Knapczyk et al.'s (2001) CTEP program produced a cooperation and collaboration among students that lasted past the program period. Rowlison (2006) reported that students' most frequent comment was that they liked being able to work at their own pace. Ryan (1999) found retention of personnel in rural Alaska.

Geographical reach. The service area of most distance learning programs is limited to the state of the university or one particular region; there are a few programs at the national and international level. Projects at the state level are Project TREK in Kentucky (Grisham-Brown & Collins, 2002), Project ATTAIN at the University of Wyoming (Zahn & Buchanan, 2002), Project CTEP in Indiana (Knapczyk, Rodes, Chung, & Chapman, 1999) and Project GSAMS at

North Georgia College and State University to supervise field experiences (Gruenhagen et al., 1999). More statewide online programs include Project ASPIRE at Arizona State University to recruit CLD would-be special educators from the communities in which they will serve (Puckett & Maldonado, 2009), a university in Indiana which employed video conferencing to reach urban, surburban, and rural communities throughout the southern and central areas of the state (Knapczyk et al., 2005b), and Project DTEP at the University of Utah trains teachers in rural areas (Jameson & McDonnell, 2007).

Regional online learning programs are Project Assessing One and All, which encompases teachers from Arizona, South Carolina, and Wisconsin (Haui et al., 2006), and Project Impact*Net, which trains teachers in Idaho, Pennsylvania, and Utah (Forbush & Morgan, 2004). Also, the University of Nebraska-Lincoln implemented a project at six university sites including Virginia Polytechnic Institute and State University, Southwest Missouri State University, Southern Illinois University at Edwardsville, Widner University, University of Nebraska-Omaha, and University of Nebraska-Lincoln (Steckelberg et al., 2007). A few country specific programs exist at the University of Birmingham in the UK (McLinden, 2007) and at St. Patrick's College Drumcondra, Dublin, Ireland (St. Patrick's College, 2009).

Distance learning programs for special educators worldwide is fairly new on the scene. Ludlow and Brannan (1999) reviewed programs from 1985 to 1999 and found no references to international program offerings. The first global initiative was Project STARS in 2002 at West Virginia University (Ludlow & Duff, 2002). In the same program in 2009, Ludlow and Duff reported enrolling 10 students from around the nation, as well as six individuals living abroad from Japan, Guam, Saipan, Iceland and Costa Rica (Ludlow & Duff, 2009). The STARS program is only offered in English (Ludlow & Duff, 2009). In another program, Project

ACCESS, two professors on the Greek island of Cyprus delivered courses to students in New Mexico and Colorado (Kelly & Schorger, 2003). Finally, there are the courses that are the focus of this research. The University of North Texas and Universidad Casa Grande in Ecuador formed a collaborative partnership to allow full-time teachers in both countries to take online courses together. Coursework is offered in English and Spanish (Tyler-Wood, Barrio, & Peak, 2009). Along the same vein, two other universities have expressed interest in beginning new partnerships in Ecuador, but no online courses are currently offered (H. Bessette, personal communication, July 15, 2009; Y. RB-Banks, personal communication, July 15, 2009). Other institutions have travel abroad programs in Ecuador.

Onsite projects in Ecuador hosted through the University of Denver allow students to participate in a 3-week international service learning project and teach children with disabilities in rural schools in Chaco and Borja (Office of Internationalization, 2009). At Kennesaw State University, students are offered three options for completing their student teaching in Ecuador (Kennesaw State University, 2008). Volunteer organizations are also active in Ecuador. World Endeavors, a nonprofit that focuses on helping children, arranges for individuals to serve from 2 to 12 weeks in a local school for students with mental disabilities or specializing in deaf education (World Endeavors, 2003). Global Volunteers arranges two-week trips for volunteers to assist with children with disabilities in Calderon (Global Volunteers, 2002). Next, I discuss the benefits and concerns of using distance learning in special education teacher education.

Benefits and concerns of online learning for special educators. Preparing special educators through distance learning has advantages and disadvantages. Ludlow (2001) lovingly refers to the challenges of online technologies as being either "saviors or demons" (p.153). Scholars suggest that the benefits of online learning are its flexibility (Smith & Meyen, 2003;

Spooner et al., 1999; Sun et al., 2003), especially for adult learners who have restraints on time, family commitments, and job demands (Johnson, 2004; Kelly & Pearl, 2004; Schnorr, 1999; Spooner et al., 1998), many of whom might have to seek other employment if not for online learning (Grisham-Brown & Collins, 2002; Knapczyk et al., 2005b). The flexibility of distance learning promotes more discussion and collaboration (Huai et al., 2006), an increase in course enrollment (Knapczyk, 2005b), and it also enhances the university's image (Spooner et al., 1998). Online education offers the convenience of "place and time" of attending class (Bore, 2009, p.9), the possibility for rapid dissemination of research to special educators and alleviating the research-to-practice-gap (Spooner et al., 2000). Distance education provides an inexpensive way for institutions to increase course offerings (Forbush et al., 2007; Spooner et al., 1999); on the other hand, O'Neal et al. (2007) assert that research on the costs of distance education versus face-to-face instruction has mixed results. Ludlow et al. (2002) suggest five advantages of distance learning:

> 1) It covers a broad geographical area, 2) It eliminates the time and cost of travel, 3) It provides opportunity for ongoing staff development and long term mentoring, 4) It forms communities of practice, and 5) It enhances special educators' technology skills (p. 11).

Along with the benefits, scholars have a few concerns about the infrastructure and pedagogical shift distance learning requires. The literature overwhelmingly agrees that technology glitches are the most disruptive factor to distance education (Bore, 2008; Binner/Falconer & Lignugaris/Kraft, 2002; Knapczyk & Hew, 2007). Researchers warn that instructors must maintain the quality of online courses by shifting from making technology decisions to making instructional decisions (Johnson, 2004; Ludlow, 2001). Beattie et al. (2002) advise instructors that online learning will not succeed if the same instructional strategies used in

face-to-face instruction are only translated to an online course; therefore, different approaches are required for online instruction. When instructors fail to utilize alternative approaches for distance learning, Johnson (2004) cautions that at its worst it is "no better than reading a textbook" (p.14). Ludlow et al. (2002) suggest five disadvantages of distance learning:

> 1) The large amount of expense upfront to purchase technology, 2) The design and production of online materials requires expertise and is labor-intensive, 3) Participants may not be skilled to use the technology required in the course, 4) Both instructors and learners may need orientation to the online system and continued assistance, 5) Technology problems may cause stress and frustration (p.11).

Even with these challenges, the positives of distance learning for special educators outweigh the negatives considering the desperate shortages; its innovativeness has the potential to transform special educator preparation worldwide.

Multicultural Education and the Role of Teacher Education

Multiculturalism, the educational theory that celebrates the diverse cultures within a society, has not escaped criticism from those on either the left or the right (Pinar, Reynolds, Slattery, & Taubman, 2004). To complicate matters, even within the two groups, there are subgroups that contradict each other (Barry, 2001; Buras, 2008). Cummins (2000) explained the reason for the controversial nature of multiculturalism "…because it insists that awareness of issues of social justice and power relations in our society, past and present, are crucially relevant to the future of our society and the priorities and values of the next generation" (p. xv). The purpose of this critique is to present alternative perspectives about multicultural education regarding foundational beliefs and curriculum efforts. In addition, the critical role of teacher

education programs in preparing teachers for classrooms with diverse learners is discussed. Despite the increased attention to multicultural education, curriculum theorists continue to wrestle with the questions: 1) What knowledge is of most worth? and 2) Who decides when it comes to writing about history, social studies, and multicultural education? (Banks, 1996; Buras, 2008; Cornbleth, 2000; Hirsch, 1996). Arriving at the answers to these questions has produced what scholars call a "culture war" (Buras, 2008; Gitlin, 1996; Schlesinger, 1992; 1998).

Triad of scholars. Banks (1996) outlines the three major groups of scholars in the dispute about multicultural education as western traditionalists, multiculturalists, and Afrocentrists. There is a wide range of perspectives among each group; indeed, even within memberships there are conflicting opinions. To illustrate the point, Grant and Ladson-Billings (1997) define five approaches to multicultural education alone. They are multicultural education as teaching the exceptional and culturally different, human relations, single group studies, multicultural education, and education that is multicultural and social reconstructionist. It is no wonder that educators are confused and need explanation (Banks, 1996). A closer examination of the general views of western traditionalists, multiculturalists, and Afrocentrists deserves merit.

Western traditionalists hold that Western history, literature, and culture should be the dominant perspective in education and are America's roots. They believe that assimilation and allegiance to the Western democratic tradition maintain America's fragile, united front (Bridges, 1991; Gray, 1991; Howe, 1991; Schlesinger, 1992; 1998; Siegel, 1991). In contrast, multiculturalism is the belief that the gender, ethnic, racial, and cultural diversity of a pluralistic society should be reflected in all areas of society. Multiculturalists assert that the curricula within all educational institutions should be reformed so that they reflect the perspectives of the diverse cultures in U.S. society (Banks 1993; 1994). At the same time, Afrocentrists insist that black

studies should be at the center of analysis involving African culture and behavior. Afrocentricity can imply an extreme view, Afrocentrism, which believes Africa and Egypt should move to the center of the curriculum as the birthplace of civilization (Asante, 1987; 1998; Banks, 1996).

Unfortunately, even with distinct differences among the groups, the literature generally reduces the discourse matrix into two viewpoints: the left and the right (Banks, 1994; 1996). The left includes multiculturalists and Afrocentrists, while the right represents western traditionalists. The two sides are not mutually exclusive (Barry, 2001; Kelly, 2002). The difference of philosophical framework is the most obvious dividing factor between the left and the right.

Philosophical differences. The pluralistic component of multiculturalism directly opposes the right's fundamental belief in the Western metanarrative; however, they do accept some forms of multiculturalism. Bridges' (1991) review from a conservative perspective acknowledges multiculturalism as three groups: global education, cultural pluralism in educational curriculum, and the more radical multiculturalism as a postmodern agenda. Bridges (1991) has a favorable view of the first two types of multiculturalism, but warns that they are a "slippery slope" to the third type (p. 3). Bridges (1991) posits that the postmodern agenda and ethnocentricism make multiculturalism problematic because they challenge the fundamental questions of "truth, meaning, justice, and freedom" and "its inevitable association with the agenda of postmodernism" (p.3). The right believes in a standard canon that glorifies Western-European philosophy, refuses multiplicity and difference, and creates one truth. This results in an either/or reality (Bridges, 1991).

Consequently, they oppose multiculturalism and multicultural education for embracing diversity, relativism, and exploring truth through methods other than their way, the positivist quantitative method (Bridges, 1991; Nieto, 1995; Schlesinger, 1992; 1998). Schlesinger (1998)

argues that without a standard canon, the door is open for all viewpoints to be taught as acceptable and valid, resulting in confusion and the infiltration of radical beliefs. The canon debate is the basis of the controversy of multicultural education (Banks, 1994).

Opponents and proponents of multicultural education. Multicultural education receives criticism from the entire spectrum. The three general complaints of the right are that multicultural education is divisive, naively accepting of non-mainstream cultures, and that it places the focus on groups rather than individuals (Bernstein, 1988; Hirsch, 1987; Nieto, 1995; Sacks & Theil, 1995). The left criticizes multicultural education for glossing over discussions of racism and other controversial issues, its assimilationist agenda, dilution, simplistic acceptance of multicultural perspectives, and division (Barry, 2001; Buras, 2008; Fuchs, 1990; Gleason, 1992; Higham & Guarneri, 2001; Nieto, 1995; Schlesinger, 1992; 1998). Unpacking the complaints of the left begins with the seminal book, *The Disuniting of America,* written by Arthur Schlesinger (1992; 1998).

In his book, Schlesinger (1992) first asked "What holds a nation together?," and then proceeded without restraint to scrutinize the major voices in the debate (p. 151). He criticized the left for dividing America and decentering Western philosophies, Afrocentrists for using black studies as group therapy for students of color, and faults all parties for "sanitizing" the history books (p. 164). Furthermore, Schlesinger (1998) asserted that ethnocentrism was attempting to divide the United States by promoting one's ethnic group as superior and favoring group rights over individual rights. With that said, he did believe some aspects of multicultural education were valuable.

Speaking to the left, Schlesinger (1998) claimed they had fragmented themselves with their "go-it-alone" attitude and political correctness initiatives. Not alone in his rebuke, Sleeper

(1997) charges the left for unintentionally promoting liberal racism through public policy, which patronizes non-whites; and Gitlin (1996) admonishes the left for preoccupation with petty issues and diverting precious energy away from what should be the main focus, pressing social problems. In addition, Barry (2001) charges that though multiculturalists have been successful at policy reform, their efforts are doing more harm than good for minority groups. The left's focus on difference has a reverse effect on the purpose of multiculturalism initiatives.

Likewise, Schlesinger (1992; 1998) blamed Afrocentric education and all parties (i.e. black Studies, multiculturalists, and monoculturalists) for sterilizing history. Also, he believed bilingual education was retarding students from entering the mainstream. He specifically charged Afrocentric education for promoting lower self-esteem in black students, preventing student's successful integration into the general population, using history as therapy, and questioned what students would think when they found they had been taught lies. In speaking about history, Schlesinger (1992; 1998) believed that past mistakes must be taught because they are a part of life and lead to transformation. Extremes on both ends are what divide America (Schlesinger, 1992; 1998).

The loudest and often most confusing attacks have been about preserving America's identity and maintaining the motto *E Pluribus Unum,* the "one of many" (Banks, 1994; Fuchs, 1990; Gleason, 1992; Higham & Guarneri, 2001; Schlesinger 1992; 1998). In this vein, critics on both sides have argued that multicultural education is both a hindrance and a help to maintaining American's cohesion. Banks' (1994; 2006), in response to the argument that multiculturalism is divisive, protests that in light of terrorism, racism, and sexism, opponents are sadly deceiving themselves to believe that America is united. Banks (1994) and other multicultural theorist

believe that multicultural education is that key to unity (Asante, 1998; Cummins 2000; Grant & Sleeter, 1989; Nieto, 2000a).

Schlesinger (1992) believed that there is a place for multicultural education, "Belief in one's own culture does not require disdain for the other cultures.... As we begin to master our own culture, then we can explore the world" (p. 136). He continues, "We don't have to believe that our values are absolutely better than the next fellow's or the next country…" (p.137). Although not usually paired together, Schlesinger and Banks share some common ground. Banks (1994) agrees that multicultural education is for all students, to bring people together and not to create divisions. To him it is "an inclusive and cementing movement, because it attempts to bring various groups that have been on the margins of society to the center of society. Rather than divisive, it's inclusive" (p. 90).

On the other hand, Salins (1997), son of an immigrant, represents a combination of views of multiculturalism. Drawing from his own upbringing in *Assimilation, American Style*, he suggests keeping connections with one's heritage while pledging full allegiance to the three essential institutions of assimilation: the English language, liberal democratic capitalism, and the Protestant work ethic. The consensus is that multicultural education should unify and not divide (Banks, 1994; 1996; Salins, 1997; Schlesinger, 1992; 1998). Multicultural education requires multicultural curriculum; pleasing all parties is challenging.

Multicultural curriculum turf wars. Diversity issues in curriculum and practice have been on the public agenda for the last 35 years (Nieto, 2000b). Attacks from both sides complicate multicultural education; they criticize curriculum for being all-inclusive or too exclusive, and all points in between (Barry, 2001). Even with recommended multicultural frameworks, some theorists suggest changing the name of multicultural education altogether.

As stated earlier, Schlesinger (1992, 1998) and other scholars believe that bilingual education has negatively affected students, and they also blame Afrocentric educators for outright lying to African American students about the past (Barry, 2001). Meanwhile, Afrocentrists are now part of a wave of curriculum efforts that seek to develop ethnic-specific studies (Schlesinger, 1992; 1998; Barry, 2001; Asante, 1998). These endeavors provoke the left's criticism of the dividing nature of multicultural education. Curriculum reform creates unrest.

In 1987, Stanford University's campus became the cultural battleground for curriculum reform over the required freshman course, Western Culture. Dissenters, led by Reverend Jesse Jackson, protested that the course was the study of dead, white, males (Bernstein, 1988; Sacks & Theil, 1995; Webster, 1997). Students' chants of "hey hey, ho ho, Western culture's got to go" have resonated throughout conservative literature and succeeded in pressuring Stanford's administration to rename the course and add more multicultural content (Bernstein, 1988; D'Souza, 1991; Sacks & Theil, 1995; Schlesinger, 1992; 1998). Conservatives warn that even though this seems incidental, there are "real stakes in the culture wars on our campuses" (D'Souza, 1991; Sacks & Theil, 1995, p. xiii). Similarly, D'Souza (1991) claims that due to the political restraints of diversity initiatives, university students are receiving an illiberal education, rather than, as it should be, liberal. Even purposefully inclusive multicultural curriculum is under attack.

The Core Knowledge Series curriculum by E.D. Hirsch (1987; 1996; 2006) was an attempt by conservatives to develop multicultural education. The curriculum was revised by almost 100 people of diverse backgrounds, including African Americans and women ("Questions about," n.d.). Notwithstanding, Buras (2008), speaking from the left, labels the Core Knowledge Series as rightist multiculturalism. She objects to its weak inclusion of social justice issues,

advocating of cultural assimilation, befriending of the Spanish speaking population through Spanish language materials, and exclusion of the subaltern voice (Apple & Buras, 2006). Rightist multiculturalism, Buras (2008) argues, is the emergence of the "…more 'successful' hegemonic strategy…" and a stealthy attack on society (p. 10). In his defense, Hirsch (2007) emphasizes that multiculturalists usually overlook the necessity of building background knowledge skills, and instead turn to the "cultural taking of sides" (p. 6). Still, Apple (2004) criticizes the contributions of minorities featured as add-ons to the curriculum by calling them "mentionings" (p. 178). Buras (2008) believes, for the most part, that despite multiculturalists' attempts to change curriculum, the dominant neoconservative forces will always have the power. However, not all multiculturalists are dissuaded.

Several multicultural theorists developed frameworks for multicultural education to guide the curriculum; they emphasize cultural understanding, cultural competence, cultural emancipation (Grant & Sleeter, 1989; Rushton, 1981). Banks (1996) posits that the curriculum needs to contain the study of five types of knowledge: personal/cultural; popular; mainstream academic; transformative academic; and school. Barry (2001) insightfully points out the perplexities of multicultural education: how can it be inclusive and yet exclusive? The multicultural curriculum debate will continue, as it should, constantly adapting to the needs of the culture. Still, others insist that the term multiculturalism needs rethinking.

The division, dilution and confusion of multicultural education have prompted suggestions for more encompassing curricula. One option is antiracist education (Apple, 2004; Pinar et al., 2004). Apple (2004) describes antiracist education as the realization that "this nation was built around racial exploitation and that it has a racial power structure" (p.179). Similarly, Hollinger (1995) is disillusioned by multiculturalists' professed all-inclusive mentality yet

resistance to American ideals reality. Hollinger (1995) urges Americans to move beyond multiculturalism, toward a viewpoint he calls, "postethnic America" (p. 3). The purpose of the postethnic perspective is to create an America proud of diversity, but still bound by common American ideals. Even so, Nieto (1995) proposes that students engage in "arrogance reduction" curriculum; she explains it as, "…taking stock of our own arrogance, be it based on race, gender, class, or other categories…and actively confronting it" (p.195). UNESCO (2006b), also realizing that multicultural education does not teach students how to live and interact in the real world, uses the term "intercultural education" to describe the intercultural dialogue that needs to take place among young people. According to UNESCO (2006b), the challenge in intercultural education is maintaining a balance between two topics of tension, universalism and cultural pluralism, and difference and diversity. The overall goal of intercultural education is to help students learn how to live together (UNESCO, 2006b). In summary, discussions of reinventing multicultural education will persist and are healthy for America's growth. Ultimately, the decision to integrate multicultural content depends on the teacher (Banks, 1994; 1996). With that said, a major component of teacher education should be that of training teachers to work with diverse learners

Diverse classrooms. Classrooms are diverse; they vary by students' race/ethnicity, social economic status, language, culture, exceptionality and a variety of other aspects (Planty et al., 2008a; 2008b). This is particularly true for special educators due to the documented over representation of ethnic and linguistic minority groups in special education (Brownell, Ross, Colon, & McCallum, 2003; Coutinho & Oswald, 2000), the call for more culturally and linguistically diverse special educators (Tyler et al., 2004), and need for diversity infused pedagogical strategies in bilingual special education (Cummins, 1989). In this section, I review

multicultural education strategies in teacher preparation and discuss etnoeducación and interculturalidad in Ecuador. This section is included, because it relates with my research questions about the overall goal for the UNT courses to enhance teachers' multicultural awareness attitudes. I was interested in how technology assisted the UNT and UCG educators in crossing cultural and digital divides. I also examined if the courses made a difference in the teachers' classroom interactions with their students. Special educators need to be prepared to work with students of diverse backgrounds and to help students of all backgrounds reach their full potential.

For this review, "diverse classrooms" refers to the student-teacher difference, such as race/ethnicity, home and community conditions, socioeconomic status, first or home language, religion, and academic ability/motivation, as well as the inclusion of students with mental or physical disabilities (Cornbleth, 2008; Darling-Hammond, 2006). According to Ecuador's Ministry of Education, every student is unique, and diversity can be social, cultural, generational, and psychological. They believe that the educational system performs a disservice to students if it attempts to homogenize groups of students (Ministerio de Educación- Ecuador, 2008).

Teacher education. Multicultural education content integration in the classroom hinges on the assumption that the teacher views it as relevant; therefore, diversity preparation must begin at the teacher education level (Banks, 1994; Darling-Hammond, 2006). According to Ladson-Billings' (1999a; 1999b) synthesis of the historical progression of diversity education in teacher education, preparing teachers for culturally diverse classrooms was not a primary concern of teacher education programs until 1979 when the National Council for Accreditation of Teacher Education (NCATE) made it a requirement for institution accreditation. NCATE's mandate came several years after the American Association of Colleges of Teacher Education

endorsed the widely disseminated policy statement about multicultural education, *No One Model American*, in 1973 (Nieto, 2000b; Pinar, Reynolds, Slattery, & Taubman, 2004). Current literature urgently calls for preparing teachers to teach diverse classrooms in light of the rapidly changing global community (Banks, 1991; 2007a; 2007b; Cornbleth, 2008; Darling-Hammond, 2006; Haberman & Post, 1992; Ladson-Billings, 2005; Nieto, 2000a; Sleeter, 2001; Zeichner, 1993).

Typically, teacher education programs have relied on required multicultural education courses to train teachers for diverse classrooms; this approach receives mixed reviews. Ladson-Billings (1999a) examined diversity in teacher education through critical race theory and concluded that teacher education programs must integrate diversity dialogue into every course, not just those labeled "multicultural." Nieto (2000b) also urges the de-compartmentalization of "multicultural education" courses and the program-wide infusion of teaching strategies for learners with diverse backgrounds.

Nieto (2000a; 2000b) believes that multicultural education is a social justice and equity issue. Educational institutions must take a firm stand on social justice, and teach students how to critically evaluate why and how societal issues are unjust. Teachers must be taught to accept and embrace their own identities, to continue on a journey to become more multilingual and multicultural throughout their teaching career, and to truly care about their students (Banks, 2007a; 2007b). To help teachers along in the process of developing positive interracial attitudes, prejudice reduction activities may assist them in their journey. Alport's (1954) *contact hypothesis* provides recommendations for overcoming stereotyping and discrimination through intergroup contact characterized by: 1) acknowledgement of equal status, 2) cooperation rather than competition, 3) personal interaction to work towards a common goal, and 4)

acknowledgement of social norms. Based on Alport's (1954) theory, I expect the online interactions between the UNT and UCG teachers will aid in attitudinal changes that in turn are transferred into their classroom interactions with students. Teacher education faculty must be diverse in order to model diversity.

Sleeter (2001) reviewed 80 data-based research studies on pre-service teacher preparation for multicultural schools. She asserted that the lack of diversity in teacher education programs is a cyclical issue— usually teaching candidates are white, monolingual, females taught by professors with similar backgrounds (who were also taught by professors with similar backgrounds). Ladson-Billings (2005) would add to the mix that the white teachers then teach children of differing backgrounds or ethnicities who fail to succeed academically and lose the chance of pursuing higher education and possibly becoming a teacher. She called attention to the lack of minority students in doctoral programs, the current enrollment being less than 10%.

Ladson-Billings (2005) posits that there is a disconnect taking place between and among students, families, and communities and teachers, as well as teacher educators, that stems from race, class, cultural background, and socioeconomic status. To combat this divide in the classroom, Banks (1994; 1997; 2001; 2005) argues for the importance of developing a new kind of citizenship for P-12 students called "multicultural citizenship," meaning that students can keep ties with their ethnic roots but can still be completely patriotic. The path to developing diversity is laid out in several frameworks.

Diversity frameworks by Banks (1991) and Bennett (1986) define the journey of a person becoming more appreciative of people with different backgrounds. Banks' (1991) four approaches to integrating multicultural content into the curriculum explain the progression of diversity as: contributive, additive, transformative, and socially active. Bennett's developmental

model of intercultural sensitivity (1986) uses a six-stage format to access diversity: denial, defense, minimization, acceptance, adaptation, and integration. I drew from these frameworks in conducting my thematic analyses. In Banks' own classroom, he assigns selected readings and assignments that require his students to critically analyze U.S. history's metanarrative of race, culture, and citizenship (2001). Teacher education is responsible for preparing teachers to help all students reach their full potential.

Unfortunately, unlike in other professions where the most skilled would take on the most challenging task, in education the least skilled (or newest) teacher is normally placed in the most demanding classroom (Darling-Hammond, 2006). Darling-Hammond (2006) sums up what teacher education and diversity training is all about.

> This is one way in which quality of teacher education matters most: if the goal is to teach all children to high standards, the need for differential teaching strategies carefully chosen for their appropriateness to specific needs becomes critical. This is what distinguishes a professional teacher from a craftsperson who has a single set of techniques, or an assembly line worker who mindlessly plows through the book, so to speak, without regarding to learning (p 258).

Cornbleth (2008) would agree, saying there is no one size fits all or one best way to teach in twenty-first century America; each learning opportunity should be custom-designed for individual student needs. McLaren (1993) answers that educators need to create a welcoming atmosphere, "…and assume a narrative space where conditions may be created where students can speak their own stories, listen loudly to the stories of others, and dream the dream of liberation" (p.142). The basic human necessity of acceptance transcends national boundaries.

Etnoeducación and interculturalidad in Ecuador. The call for Ecuadorian teachers to be prepared for classrooms with diverse learners is a high priority, due to the persistent racial conflicts (Ministerio de Educación-Ecuador, 2009; Organización de los Estados Americanos, n.d.). The Ecuador Review (2007) reported that the ethnic groups in Ecuador are distributed as 65% *mestizo* (the mixture of Native American and white), 25% Indigenous, 7% Spanish and other, and 3% African descent. It has been recommended by some that Ecuador's proclaimed *país pulrinacional* (a multinational country) aims to become the ultimate melting pot. In other words, diversity is not celebrated; rather, there is a higher value placed on being *mestizaje* (the mixture of Indian and white). As a result, Indigenous and African Americans remain on the fringes of society (Handlesman, 2000; Johnson, 2007; Robinson, 2002; Whitten, 2003). The disproportionate distribution of wealth and power to the *mestizo* population further deepens the divide between the cultures (Ecuador Review, 2007). The focus on sameness has produced a prejudiced society; therefore, issues of discrimination have led to instances of social unrest (Johnson, 2007; Pineo, 2007; Saavedra, 2006). Recognizing the urgency of the situation, Ecuador's Ministry of Education, through the National Office of Intercultural and Bilingual Education, has made a concerted effort to foster an appreciation of cultural and linguistic diversity called etnoeducación and interculturalidad (Ministerio de Educación, 2009, p. 7).

Ecuador's Ministry of Education is taking steps to improve racial and ethnic attitudes in school curriculum; however, they have a lot of catching up to do. The official website for the National Office of Intercultural and Bilingual Education contains an intercultural magazine (Revista Pedagógica Bimensual de Educación Intercultural), a child-friendly map recognizing 35 Indigenous nationalities and their various locations around the country, software for learning indigenous languages, and an online dictionary. Ecuador's curriculum standards require that

cultural studies be an integral component in the country's curriculum rather than an "add on" to the curriculum (Ministerio de Educación – DINEIB, n.d.). Ecuador's foundation for multicultural education is expressed in two terms: *etnoeducación* (ethnic education) and *interculturalidad* (interculturality). The elements of *etnoeducación* are:

- El respeto cultural (Respect of culture)
- La tolerancia cultural (Tolerance of culture)
- El diálogo cultural (Cultural dialogue)
- El enriquecimiento mutuo (Mutual enrichment) (Ministerio de Educación-Ecuador, 2009, p. 6)

The dimensions of *interculturalidad* are:

- Comunicación cotidiana respetuosa y en condiciones de igualdad entre las personas (Respectful communication and conditions of equality between people)
- Actitudes de cooperación y solidaridad sin diferenciación de etnia o cultura (Cooperative attitudes and unity regardless of ethnic or cultural group differences)
- Uso normal y positivo de las lenguas involucradas en los distintos ámbitos socioculturales (The regular and non-condescending use of languages in distinct social environments)
- Actitudes corporales (kinésicas y proxémicas) que no discriminan el origen de las personas (Nondiscriminatory attitudes against a person's origin) (Ministerio de Educación-Ecuador, 2009, p. 7)

I believe Ecuador's Ministry of Education is moving in the right direction by increasing the number of national standards for inclusive classroom environments and multicultural education; however, its impact on actual classroom instruction is unclear.

Johnson (2007) conducted a qualitative study in Ecuador about education and national identities in the Esmeraldas, an area where the majority of the population is of African descent; he suggests the curriculum is biased. Johnson (2007) interviewed students, parents, teachers, observed classrooms, and performed document analyses of social studies textbooks. His findings portrayed Ecuadorian students wanting desperately to be White or to move toward Whiteness. An interesting discovery was that when he asked students to identify their race and then to identify the races of other students, 4 of 17 students who identified themselves as *metizo/a* were identified by others as African American. In several interviews, one student told Johnson (2007) that her father preferred she not have a romantic relationship with someone darker than her for fear of damaging the race. Another mother sadly admitted that her daughter applied powder to her skin to appear lighter. Findings from Johnson's (2007) classroom observations revealed teachers openly mocked other races in class discussion without contest from students. In another classroom interview, a student explained to Johnson (2007) that the teacher discusses African American contributions to Ecuador when regular class activities are finished.

Johnson's (2007) examination of the tenth, eleventh, and twelfth grade textbooks published in 2000 and 2001 revealed few references to the significance of African Americans and an absence of their contribution in the historical period that led up to Ecuador becoming a nation. These textbooks were designed to be used in all public high schools throughout the country. Remarkably, 26 years earlier, Stutzman (1981) also surveyed Ecuadorian textbooks and had similar findings. When asked about the contributions of African American, Johnson (2007) found that most students (and parents) only knew that African Americans had been slaves and now they were not. Johnson (2007) concluded that the efforts to marginalize African American contributions in Ecuador's history in the national curriculum have been fairly effective.

Similarly, the United States faces the same challenges in textbook curriculum. Banks (2007b) admonishes the social studies textbook curriculum status quo of focusing on the mainstream history; rather, he argues for teaching students to view history critically, from multiple perspectives. He gives the example of a typical history unit called, "The Westward Movement," and how, if looked at from the Native American perspective, it could be viewed as, "The Invasion from the East" (p. 249). Banks (2007b) suggests the central questions are, "Whose history should be taught and from whose perspective?" (p. 249). Banks and others agree that it is not an easy task to develop a social studies curriculum that reflects Western, European, and global cultures. However, the benefits outweigh the challenges because students are enabled to understand America's intricacy, how cultures are interconnected and should be valued (Banks, 2007b; Grant & Ladson-Billings, 1997; Takaki, 1993).

On the other hand, Schroder's (2006) interview with a young Ecuadorian Native American teacher about multicultural attitudes in education portrays another perspective. The teacher responded that multicultural education is a sharing process, "With intercultural education, *mestizos* (non-Indians) learn from us as well as we from them." She continued, the ideas of "multiculturalism" and "cross-cultural" are combined to produce interculturality, which emphasizes an exchange of knowledge (Schroder, 2006, p. 310-311). Overall, it is difficult to pinpoint where the Ecuadorian curriculum is in the process of their level of cultural integration. From the mixed reviews, it appears to vary by geographical area, school, and ultimately, the desires of the teacher. Clearly there is more work to do.

In conclusion, many have written convincingly about the benefits and shortcomings of multicultural education. Proponents of multicultural education say it is an issue of knowledge, culture, power, reform and social justice (Banks, 2007a; 2007b; Buras, 2008; Nieto, 1995; 2009);

opponents proclaim its division, pluralism, focus on group memberships, and the decentering of Western culture (Barry, 2001; D'Souza, 1991; Fuchs, 1990; Gleason, 1992; Higham & Guarneri, 2001; Schlesinger 1992; 1998). Discussions about issues of multicultural education and diversity are intense and will continue to be (Banks, 1994). Still, the increasing diversity of today's classrooms requires that all teachers be culturally sensitive in relating with students and parents. Teacher education programs must develop teachers who are prepared to help all students learn and reach their full potential (Banks, 2007a; 2007b; Organización de los Estados Americanos, n.d; Nieto, 1995). Never losing track of the goal of education, empowering all students to learn supersedes all multicultural education debates (Nieto, 1995).

Special Education Teacher Education Distance Learning and Evaluation

Introduction. Attention to quality in evaluation is paramount in order to assess what improvements are needed to the distance learning courses delivered to the UNT and UCG special educators. The parameters of this section are to briefly explain program theory in distance learning evaluation, the unfolding model framework and to discuss previous evaluation methods that have been employed to assess online learning courses for special educators. I conclude with rationale for how my research builds on and extends previous studies.

Need for program evaluation. Program evaluation is fundamental to promote continuous improvement (Simonson, 2007a). In the spirit of innovation, people always want to know when they try something new: Was it better than before? Was it better than other options? What are the lessons learned? What could be improved to take it to the next level? (Davidson, 2005). The literature is replete with various approaches to program evaluation (Cronbach, 1982; Fitzpatrick, Sanders, & Worthen, 2004; Kellaghan & Stufflebeam, 2003; Patton, 1978; Popham, 1988;

Scriven, 2007), building consensus that assessment is mandatory (Kirkpatrick, 1998; Rutman & Mowbray, 1983). The theory of program evaluation in distance learning is influenced by the theory of program evaluation (Ruhe & Zumbo, 2009).

Online course design is a continuous process of reflection, evaluation, and redesign (Ruhe & Zumbo, 2009). Within the field of distance learning, there are various approaches to evaluation. Horton (2001) suggests evaluating e-learning "to justify investments in training, make better decisions about training, hold participants accountable, demonstrate financial responsibility, improve training quality, and encourage learning" (p. 2). The Sloan Consortium's five pillars of quality online instruction are learning effectiveness, cost effectiveness, access, faculty satisfaction and student satisfaction (Lorenzo & Moore, 2002). In a synthesis of distance education evaluation models, Ruhe and Zumbo (2009) identified 17 models.

Additional information about evaluating an online course can be found on suggested guidelines (Collis & Moonen, 2001; Heaton, Pauley, & Childress, 2002; O'Neil, 2005; Rossett, 2002), approaches (Fortune & Keith, 1992), case studies (Childress, Heaton & Pauley, 2002; Gilbert & Driscoll, 2002; Howell & Hricko, 2006), standards (Baker, 2003; Ciavarelli, 2003; Leh & Jobin, 2002; Lezberg, 1998; Moore & Anderson, 2003; North American Council for Online Learning, 2007a; 2007b; Seok, 2007), return on investment (Simonson, 2007b; Taylor, Vasu, Vasu, & Steelman, 2002), and other various recommendations (Burge, & Haughey, 2001; Chute, Thompson, & Hancock, 1999; Davidson-Shivers & Rasmussen, 2006; Discenza, Howard, & Schenk, 2002; Harroff & Valentine, 2006; Judd, 1998; Lau, 2000; Mauldin, 2001; Meyer, 2002; Monolescu, Schifter, & Greenwood, 2004; Moore & Anderson, 2003; Rovai, 2003; Simonson, Smaldino, Albright, & Zvacek, 2003; Vandervert, Shavinina, & Cornell, 2001).

Purpose of program evaluation. Ruhe and Zumbo (2009) define program evaluation as "The systematic investigation of the merit and worth of social or educational services" (p.23). Two main types of program evaluations are formative and summative, and three types of methodologies are qualitative, quantitative, or mixed methods (Patton, 2002). Mehrotra, Hoolister, & McGahey (2001) describe formative evaluation as "facilitating program modification and enhancing the achievement of extended outcomes," and summative as "providing information to support a judgment about the program's worth, so that a decision can be made about the merit of its continuation" (p. 174). According to Patton (2002), the evaluator's decision for using quantitative or qualitative methods or a combination depends on the goals of the research. Patton (2002) contends, "Quantitative measures can parsimoniously capture snapshots or pre and post states, even some interim steps, but qualitative methods are more appropriate for capturing evolutionary and transformational developmental dynamics" (p.168). He further states that research is not about being "antinumbers," rather it is about being "*pro-meaningfulness*" by selecting the strengths of both methods to best enhance the evaluation objectives (Patton, 2002, p.573).

Deciding on the type of evaluation model or method is essential, yet it can be complicated. According to Horton (2001), a good evaluation model is "flexible, simple, reliable and economical" (p.3). Not everything must be evaluated; the bottom-line is how the evaluator defines the predictors of an effective or successful course (Peak & Berge, 2006). In fact, Stufflebeam & Shinkfield (2007) emphasize that there is no "one size fits all" approach to evaluating a program, and Gunawardena (2001) echoes that the complexity of online learning should not be limited to only one question or method. Mehrotra et al. (2001) caution researchers about pledging sole allegiance to one model; rather, "Merit lies not in the form of inquiry but in

the relevance the information has in answering the questions that the evaluation was designed to address" (p.191). After examining 17 distance education program evaluation models, I chose the unfolding model in my formative program evaluation of the first two online courses delivered by UNT. The unfolding model is based on four interconnected areas (Ruhe & Zumbo, 2009).

The unfolding model framework. The qualities that made the unfolding model appropriate for this formative program evaluation, as opposed to the other models, are the model's capability to provide structure, to capture the perspectives of a wider audience, and to allow for overlapping data (Ruhe & Zumbo, 2009). Ruhe and Zumbo's (2009) unfolding model can be used for formative or summative evaluations of online learning programs. The two requirements for the proper use of the unfolding model are that the researcher collects some data from *all* of the four components of the unfolding model and that quantitative and qualitative methods are used equally and are mutually supportive. The framework allows ample latitude of data sources within each facet. That said, researchers can tailor the model to the specific attributes of the course under analysis. When Ruhe and Zumbo (2009) *unfold* their unfolding model the list of data sources includes (p. 105):

Scientific evidence
Surveys and interviews re: learner satisfaction
- Tutor
- Online discussion group
- Course package
- Textbook
- Course webpages
- CMX

Outcomes
Grades
Completion rates
Checklists
Feedback
Webpage evaluation
Instructor competencies
Course management data

Progress tracking statistics
Relevance/Cost-benefit
    Relevance
        - Alignment between the course and needs of society
        - Meaningfulness of course to learners
        - Transfer of learning to authentic contexts
    Cost-Benefit
        - Costs to the university
        - Costs to learners
Underlying values
- Course goals and objectives
- Rhetoric (e.g., "world-class," "innovative")
- Theory (e.g., schema theory, distributed coginition)
- Ideology (e.g., open access)
- Stakeholder roles and influence

Unintended consequences
- Instructional
- Social
- Course implementation
- Fit across the four facets of value
- Negative or positive

The benefit of the unfolding model is that data are regarded as overlapping and interconnected variables within the four facets; that is, data are analyzed based on the whole picture rather than the individual parts. I chose this model for its flexibility, interconnectedness, and use of mixed-methods (Ruhe, 2002). The four facets of the unfolding model guided my research questions, survey items, semi-structured interview questions, analyses and discussion. I held to Ruhe and Zumbo's (2009) beliefs about program evaluation: "We are not trying to prove that this course is either good or bad but rather to show how good or how bad based on multiple sources of evidence, the presentation and weighing of multiple underlying values, and full disclosure of any and all unintended consequences" (p. 90). Since this is a relatively new framework for evaluating online courses, I found only a handful of published research. Ruhe (2002) used the model to evaluate several courses for her dissertation and Ruhe and Zumbo (2009) provide two authentic case study examples in their book. I contacted the authors to

confirm if there were other studies available. Ruhe replied that due to the very recent publishing, there are very few studies at this time. Using Messick's validity model (1989), which is the basis for the unfolding model, Bunderson (2003) reviewed four frameworks for blended learning programs and found that the validity model's allowance for overlapping data was useful. Chapelle, Jamieson, and Hegelheimer (2003) employed Messick's model (1989) to test the validity of a low-stakes web-based ESL (English as a second language) assessment and concluded that the model adequately provided for empirical evidence and theoretical rationales.

The call for quality in distance education. In my research area, evaluation criteria for distance learning courses for special educators, I found that institutions have employed a wide range of evaluation methods. In my review of the literature, many authors described part or all of their evaluation and analysis components, which included qualitative, quantitative and mixed methods. Next, I will explain the instrumentation, statistical analyses, and validity issues for each study I reviewed. Some of the pieces of information were not available for every study. My purpose in this section is to explain the previous methods used in evaluation studies and what the next steps should be.

Beginning with the only qualitative study, the researchers evaluated a practicum teacher-training program using the university supervisor's field notes, the opinions of students, and cooperating teachers as data sources (Binner/Falconer & Lignugaris/Kraft, 2002). Next, concerning quantitative studies, six projects involved a Likert type survey that ranged from 9 items to 11 pages. Some researchers mentioned the specific categories of the surveys. Stenhoff et al. (2001) assessed students' rankings of teacher-student and student-technology interactions; McLinden et al. (2007) surveyed students' participation in online problem-based learning and gathered feedback on case studies, while O'Neal et al. (2007) gathered pre-post student

achievement data and student satisfaction data. Knapczyk et al. (2005b) asked questions about satisfaction with groups and team size, learning activities, the instructor's role, feedback from classmates and instructor, building community, and technical support. Grisham-Brown and Collins (2002) asked students in-depth questions about:

> (a) demographic information; (b) degree, teaching rank, certification, and employment position prior to and following enrollment in distance education courses; (c) rating of usefulness of each course taken; (d) suggestions for changing course content; (e) the effectiveness of each type of delivery system (i.e., on-site, satellite, interactive video); (f) suggestions for changing the method of delivery; (g) preference for method of delivery; (h) advantages and disadvantages of each method of delivery; (i) funding sources for tuition; (j) use of best educational practices before and after taking distance education course(s); (k) number of children affected by implementation of best practices; (1) number of adults with whom the student shared information about best practices; (m) summary of systematic change resulting from taking distance learning course; and (n) personal experiences with the distance education program (p. 1).

Quantitative analyses differed; several only performed single item analyses (Knapczyk et al., 2005b; McLinden et al., 2007; O'Neal et al., 2007; Stenhoff et al., 2001) and only one reported performing a factor analysis with means, standard deviations and *t*-tests (Spooner et al., 1999). Some of the validity issues were that no reliabilities were reported (Knapczyk et al., 2005b; McLinden et al., 2007; Stenhoff et al., 2001) or the survey was not validated (Stenhoff et al., 2001). On the other hand, several researchers applied methods to strengthen studies. Spooner et al. (1999) conducted a factor analysis and reported reliability scores, and Grisham-Brown and Collins (2002) and O'Neal et al. (2007) had their surveys items reviewed by field experts.

Last, I found nine mixed-methods studies. Most studies included a combination of a course survey, open-ended questions and interviews (Bore, 2008; Knapczyk et al., 2001; Meyen, 2003; Ryan, 1999). In addition, some unique data gathering measures to note were online observations of learners (Knapczyk et al., 2005a; Ludlow et al., 2002), collecting journal responses from participants (Haui et al, 2006; Knapczyk et al., 2005a), conducting focus groups (Haui et al., 2006; Ludlow et al., 2002), developing an assessment rubric for each objective (Knapczyk & Hew, 2007), administering a follow-up questionnaire eight months after the course concluded (Ludlow et al., 2002), and gathering data on program costs (Steckelberg et al., 2007).

Mixed-methods analyses included document analysis and descriptive statistics (Knapczyk et al., 2005a; Knapczyk & Hew, 2007), repeated measures MANOVA (Haui et al., 2006) and content analysis (Ludlow et al., 2002). Challenges that weaken the validity of the studies were single item analyses (Knapczyk et al., 2005a; Knapczyk & Hew, 2007) and the failure to report reliabilities (Knapczyk et al., 2005a; Knapczyk & Hew, 2007; Steckelberg et al., 2007). In contrast, the validity of the studies were strengthened through performing a pilot test and having the survey reviewed by experts (Bore, 2008), reporting reliabilities (Bore, 2008; Haui et al., 2006), including a comparison group (Haui et al., 2006), having a juror rescore a sample and randomly placing participants into four groups (Knapczyk & Hew, 2007), surveying several points in time and keeping an audit trail (Ludlow et al., 2002), and employing beta testing and juror reviews (Meyen, 2003). I conclude with a synthesis of how my research builds on the previous work and extends the literature.

Literature Synopsis

Calls in the literature and the gap in research. The literature calls for more research in the area of distance learning in special educator preparation that examines how learners use their

new knowledge with their students (Jameson & McDonnell, 2007; Ludlow et al., 2002), how to best structure course offerings and maximize student involvement (Spooner et al., 2000), critical cost factors (Spooner et al., 1999), fostering effective online interaction among classmates (Knapczyk & Hew, 2007), and global expansion (Ludlow & Duff, 2009). McLeskey, Tyler, and Flippin (2003) ask critical unanswered questions, "How do we attract more teachers into special education?" and "How do we attract more CLD individuals into special education?" (p.7). Bore (2008) noted that even with the rapid growth of the online preparation of special educators, disparities in effective practices remain, and further research is needed.

Scholars suggest transforming teacher education to better meet the needs of our changing school population (e.g. Cornbleth, 2008; Ladson-Billings, 1999a; 1999b; Nieto, 2000a; 2000b; Sleeter, 2001), and, according to Cornbleth (2008), "with too little evidence of impact to date" (p. 142). Cornbleth (2008) continues writing that radical change is needed. "Most calls for reform call for changes *within* the system, not changes *to* the system itself" (p. 141). Previous multicultural education studies in teacher education have explored requiring student teaching to be carried out in an urban school, or requiring a stand-alone multicultural education course, cross-cultural immersion projects, or community-based learning experiences (Banks, 1991; Cornbleth, 2008; Sleeter, 2001). Likewise, Irvine's (2003) CULTURES Program involved 40 hours of diversity training. Students in the program were required to visit and interview teachers at CLD schools, participate in cultural immersion projects, microteaching, and attend training on designing culturally responsive lessons. Irvine (2003) concluded that the cultural immersion projects were the most successful out of all the CULTURES program activities.

In Ecuador, attempts are being made to provide curriculum resources for teachers about multicultural education. One example of this took place during 2000-2003 through the

Organización de los Estados Americanos (n.d.), which created diversity modules about inclusion and integrating culture studies for teachers in five Latin American countries. Currently, Ecuador's Ministry of Education website contains pertinent multicultural education information on the subjects of inclusive classrooms, intercultural information that can be integrated into math and science, and intercultural and bilingual pedagogy.

Critical unanswered questions in the literature are: How will the Internet be employed in special educator preparation, not only in the US, but abroad? (Ludlow & Duff, 2009) How can multicultural awareness attitudes be developed in future and current educators? (Nieto, 2009) How can distance-learning programs for special educators be evaluated to promote continuous improvement? (Bore, 2008) In addition, information was lacking on the use of online cross-cultural collaboration to prepare more globally aware special educators, research on special educators in Ecuador and the current climate in special education, and concerted efforts of US institutions to provide training to meet the global special educator shortages.

In a limited way, my work addresses these needs. At this time, I found only UNT's four-course sequence following a bilingual online model for special educators. An email correspondence with one of the researchers at the IRIS center adds credibility to the distinctiveness of the four-course sequence,

> Unfortunately I do not know of other universities that are using both the English and Spanish modules in the same course. Obviously, there must be situations in which Spanish-speaking students are enrolled in English-speaking courses and are allowed to use either the English or Spanish versions of the module. However, I do not know of any courses that set up this scenario purposefully (except for UNT)" (Zina Yzquierdo, personal communication, June 25, 2009).

To date, I found information on English-only courses open to individuals living internationally (Ludlow et al., 2009), and one-time endeavors in Ecuador, such as volunteering abroad (Global Volunteers, 2002; World Endeavors, 2003) or student teaching (Kennesaw State University, 2008; Office of Internationalization, 2009).

My research accounted for earlier distance learning research on special educator preparation; however, it distinguished itself and extended the literature by evaluating a collaborative bilingual online course for special educators, filtered through the lens of enhancing educators' multicultural awareness and developing culturally relevant coursework. I evaluated two collaborative distance education courses involving two culturally different groups of classroom special educators in the context of regular university coursework not specifically titled "multicultural." The aim of my research was to use a model of formative program evaluation to identify improvements for the beginning courses, while the courses were still capable of being modified, in the hopes of improving the quality of the courses prior to offering the courses to a wider audience. I chose to examine the strengths and weaknesses of one of the course goals, enhancing multicultural awareness, from two perspectives, the first being how UNT integrated the multicultural course content, and the second, concerning UNT's own cultural sensitivity in adapting the courses for the South American students at UCG.

The findings from this research project will further the development and refinement of online education for special educators by evaluating a pioneering effort to prepare teachers to live in a globally connected world. Once thought an aspiration for the future, international sharing of special education programs must become a reality if institutions are to meet the acute global shortage of special educators. Meyen (2003) drives home the urgency, asserting that assessing the effectiveness of online courses and making improvements is vital before worldwide

distribution. Also, this study can serve as the foundation for a model for evaluating international teacher collaboration and communication. In the future, moreover, the model can be replicated in school districts and universities around the world. Being cognizant of how the use of distance education in special educator preparation is currently influencing educational practices and how it may do so over time is extremely important in visualizing what special educator training might be in the future.

CHAPTER 3

MATERIALS AND METHODS

Introduction

In Chapters 1 and 2, I explained the objective of my research and the relevant literature. Chapter 3 is composed of these sections: the introduction, overview of design, participants, procedures for data collection, procedures for data analysis, and applying the framework to the data using a mixed methodology.

Research questions. This mixed-methods formative program evaluation was guided by the following research questions and sub questions:

Question 1. Scientific evidence

1) What is the evidence of multicultural awareness in these two special education courses?

a. What were the course materials related with multicultural awareness?

b. How did students make sense of course goals related to multicultural awareness?

Question 2. Cost-benefit

2) What is the cost-benefit analysis of the course for the institutions?

a. What is the cost-benefit ratio for the bilingual delivery mode?

b. What is the viability of continuing the courses?

c. How satisfied were stakeholders with the course?

d. How satisfied were students with collaborating with an international university?

Question 3. Underlying values

3) How was the underlying course goal of enhancing students' multicultural awareness implemented in the course?

a. How were the courses adapted to reflect the different professional and cultural needs of the students from the United States and Ecuador?

b. How were the courses designed to promote cross-cultural communication among the students?

c. How did discussions about multicultural awareness materialize within student-student and student-instructor interactions?

Question 4. Unintended consequences

4) What are the unintended positive or negative consequences of the course design and implementation?

a. Was there a disconnection between the proposed course expectations for enhancing student's multicultural awareness and the actual course implementation?

b. What did students and stakeholders view as course benefits/drawbacks?

c. What are recommendations for course redesign or improvement?

5710 Special Education Programs and Practices Course Description

The program. 5710 Special Education Programs and Practices was a 3 credit hour, 100% online course at the UNT Denton campus. It was required as one of the three core courses in the degree requirements for the master of education in special education granted through the department of educational psychology. The program required that students take nine hours of core courses and then choose an area of specialization (i.e. Autism Intervention, EC - 12 Generalist-Special Education, Educational Diagnostician, Emotional/Behavioral Disorders, Gifted and Talented Education, Transition, and Traumatic Brain Injury). Students took 30 hours in their area of specialization (University of North Texas, n.d.). At the time, UCG did not have a

masters in special education program and they were very interested in the possibility of participating in one (Stakeholder_55, personal communication). UCG agreed to collaborate with UNT for 5710, 5560 and two future courses.

Course delivery history. This course has undergone considerable transition. Almost four years ago, 5710 Special Education Programs and Practices was offered to UNT students as a face-to-face course or through video conferencing. Once the course was put online, the enrollment for the traditional courses dwindled. Due to low enrollment, UNT discontinued offering face-to-face sections and moved entirely to online distribution (Stakeholder_15, personal communication). The course was already offered in English, but not in Spanish.

The course developer oversaw the translation of the English course materials into Spanish and hired a bilingual graduate research assistant to work on the project. The graduate research assistant relied on her own language skills to convert the materials and referenced a Spanish-English dictionary when needed. No software was used in the translation. The graduate research assistant sent the translations to UCG for review and UCG sent back some revisions with adaptations to the Ecuadorian language (Stakeholder_28, personal communication).

The first bilingual offering was the 10-week summer session of 2008. Implementing the courses was a collaborative effort between the universities. Students registered for the courses through their home institution (i.e. Denton, TX or Guayaquil, Ecuador), then UCG enrolled their students in the UNT courses. The flexible and user-friendly instructional design allowed all students to participate within the same WebCT interface. The discussion board was an open forum and students were able to post and reply to messages in both languages.

Official course description. The official course description explains that 5710 was an introductory course. It states, **"**5710. Special Education Programs and Practices. 3 hours.

Presentation of special education roles, placement alternatives, legal implications, current status and trends in special education. Analysis of categories of exceptionality, characteristics and terminology" (University of North Texas Graduate Catalog, 2009). In order to enroll, UNT students completed the general admission requirements. There were no prerequisites for 5710. Several sections of the course were usually offered during the fall and spring semesters, however, UNT only offered one 10-week section during the summer of 2008. UNT and UCG students who were enrolled in the courses understood that they were part of a pilot study.

Course requirements. The course requirements for UNT and UCG students varied slightly in order to accommodate for the availability of Spanish language resources; otherwise, the course was the same. UNT students bought the course textbook *Exceptional Lives: Special Education in Today's Schools* (5th ed.) by Turnbull, R., Turnbull, A., Shank, M., Smith, S., and Leal, D., (2007). This textbook or one comparable was not available in Spanish. Instead of having a textbook, UCG students referenced online Spanish materials developed by the IRIS center at Vanderbilt University (http://iris.peabody.vanderbilt.edu/indexspan.html).

Both sets of students received all the course materials online through a learning management system called WebCT. The WebCT interface was set up like a website and housed hyperlinks to the assignments, discussion board, email, assignment turn-in, grades, feedback, and course materials (e.g. articles, special links, and course videos). Here the course information was available in English and Spanish side-by-side on the same web page. Usually the page would be designed with the Spanish version underneath the English (see Appendix A). According to the syllabus, the instructor expected that students complete the readings, monitor the discussion board, and turn in assignments on time. This was the same for UNT and UCG students.

The purpose of the discussion board was to provide a virtual place for students to meet together to discuss a variety of topics such as inclusion, promoting diversity and multiculturalism, and to explore similarities and differences in educational practices in their country and schools. The goal was to begin open dialogue between the international group of special education teachers about professional topics. Instructors posed questions as opened-ended inquiry that was flexible enough to allow students to express their thoughts.

Neither group of students was required to attend regular meetings on campus, although there were two exceptions. UNT students had an extra credit opportunity to participate in a simulation training at UNT and UCG students attended a mandatory face-to-face orientation workshop to WebCT led by the UNT faculty and staff over two evenings. Any meetings beyond those were student initiated. Next, I discuss a broad overview of UNT and UCG assignments followed by a more detailed look at specific assignments.

General assignments. While, the assignments for UNT and UCG students differed somewhat, both were based on a 100 point scale. The UNT students had to complete two article abstracts (10 points) as well as the course assignments for 16 chapter questions (i.e. video links and self-assessment) (10 points), and took two tests (80 points). The UCG students were required to complete two article abstracts (10 points), an interview (10 points), an essay (5 points), and 15 volunteer hours and an essay about their experience (5 points). They were to complete the evaluation exercises for six modules from the IRIS website (3 points each) and to read the 16 translated chapter PowerPoints. UCG students also took two exams worth 20 points each.

Specific assignments. The similarities and differences of the specific course requirements for the two groups of students are as follows. Both UNT and UCG students completed two article summaries. For the article summaries, students were to choose articles (one research and

one informational) about individuals with exceptionalities, dated 1990 or later. All students took two exams. The English course materials involved 16 chapter PowerPoints with voice narration that corresponded with the textbook, along with the Turnball textbook companion website. The companion website featured supplemental materials such as videos, reflection questions, self-assessments, external references, and more (http://wps.prenhall.com/chet_turnbull_exceptional_5).

The Spanish course materials included the same 16 chapter PowerPoints, although not all had voice narration. Since the Turnball textbook companion online resources were not available in Spanish, the course developers substituted six modules created by the IRIS Center at Vanderbilt University into the course (http://iris.peabody.vanderbilt.edu/indexspan.html). The modules were based on the STAR Legacy Model which leads users through the cycle of 1) Challenge, 2) Thoughts, 3) Perspectives and Resources, 4) Assessment, and 5) Wrap up. UCG students were to complete the six modules and turn in their responses to the questions at the end of the module. In addition, UCG students completed three activities listed on the IRIS center website. For activity one, they were to interview a friend about their perceptions about disabilities and write up their interview. Activity two required that they write an essay about what it would be like to have a disability and respond to several questions. Finally, in activity three, students had to volunteer 15 hours at a school with students with special needs and write an essay about their experience. Students completed these assignments and submitted them using the WebCT assignment turn-in feature.

5560 Assistive Technology Course Description

The program. During the fall of 2008, UNT offered 5560 Assistive Technology as a 3-

hour, 100% online course at the Denton campus. It was required as one of the 10 concentrate courses for the degree requirements for the Master of Education in Special Education with a specialization in Educational Diagnostics (University of North Texas, n.d.). 5710 was the prerequisite for this course. UNT has always offered 5560 online. UCG did not have a master's program at the time and collaborated with UNT to complete the course. The same bilingual graduate research assistant translated 5710 and 5560. Like 5710, this was the first time UNT offered 5560 in a bilingual setting.

Official course description. 5560 Assistive Technology focused on training educators how to effectively assess, locate, and implement assistive technology devices for students. The official course description was: "5560. Assistive Technology. 3 hours. Review of recent legislation governing the need and use for assistive technology for individuals with IEP or 504 plans. Issues concerning assessment, ownership, costs and availability are reviewed. Prerequisite(s): EDSP 5710" (University of North Texas Graduate Catalog, 2009). This course usually has one or two sections during the fall or spring semester.

Course requirements. As with 5710, the course requirements for UNT and UCG students varied slightly in order to accommodate for the availability of Spanish language resources, otherwise, the course was the same. There was no textbook listed for 5560; instead, the instructor posted a variety of articles within the course for students to read. The Spanish articles focused on assistive technology, but were not direct translations of the English articles.

Both sets of students received all the course materials online through a learning management system called WebCT. The WebCT interface was set up like a website and housed hyperlinks to the assignments, discussion board, email, assignment turn-in, grades, feedback, and course materials (e.g. articles, special links, and course videos). Here the course information was

available in English and Spanish side-by-side on the same web page. Usually the page would be designed with the Spanish version underneath the English. According to the syllabus, the instructor expected that students post to the discussion board, submit work by December 1, 2008, turn in professionally written assignments and, use APA formatting.

The purpose of the discussion board was to provide a virtual place for students to meet together to discuss a variety of topics such as inclusion, promoting diversity and multiculturalism, and to explore similarities and differences in educational practices in their country and schools. The goal was to begin open dialogue between the international group of special education teachers about professional topics. Instructors posed questions as opened-ended inquiry that was flexible enough to allow students to express their thoughts. With the goal of increased collaboration, the teaching assistant in EDSP 5560 translated some of the electronic postings to help students feel connected. Neither group of students was required to attend on campus meetings. Next, I discuss a broad overview of UNT and UCG assignments followed by a more detailed look at specific assignments.

General assignments. Overall, the UNT and UCG assignments were identical except for one assignment. Based on a 100-point scale, all students took three quizzes (10 points each) and completed a case study (22 points for UNT and 30 points for UCG). The singular difference was the number of assignments. UNT completed six assignments (8 points each) while UCG completed 5 (8 points each). The instructor provided students with a detailed grading rubric for each assignment in English and Spanish. Students completed these assignments and submitted them through the WebCT turn-in feature.

Specific assignments. Specifically, the UNT and UCG assignments 1-5 consisted of watching a video scenario or reading an article and writing a brief one-to three-page reflection on

the material. Several assignments required that students post comments to the discussion board. The case study assignment required that students choose a scenario from an in-class example or create their own from a real life experience. Then, students created an assistive technology plan for the student including how they would implement it. The one assignment that differed was that UCG's assignment five required that students create a PowerPoint of no more than 20 slides about assistive technology. The syllabus provided students with detailed instructions in English and Spanish for each class day. Here is an example of one day.

9/15/08 UNT

1. View video 1 – Assistive Technology – under Course Videos/Lectures. Be sure to take notes.
2. Review related AT links: Voice Recognition, General Links, and Video Demonstrations of Assistive Tools
3. Order copy of the Assistive Technology device wheel (available at UNT bookstore)
4. Read Article 4 – Electronic Organizers
5. Post your thoughts so far about AT on the discussion board under "Early Thoughts"

9/15/08 UCG

1. Leer el articulo sobre Alimentacion por Tecnologia Asistencial
2. Leer el Glosario y relacionarse con las palabras
3. Ver la Presentacion 1 (Tecnologias Asistencial)
4. Platicar y Discutir sus primeros pensamientos e ideas sobre la Tecnologias Asistencial en el tablero de discusiones (discussion board).

Overview of Design

My dissertation research was a formative program evaluation of the first two bilingual online courses within a four-course sequence. My research took place at the midpoint of the four-course program, while the final two courses were underway. I employed both quantitative and qualitative measures through a framework called the unfolding model (Ruhe & Zumbo, 2009), which is based on Messick's (1989) work on validity. I chose this model because of its advantage over using single methods alone: it provides structure, captures the perspectives of a wider audience, and allows for overlapping data (Patton, 2002; Ruhe & Zumbo, 2009). My research data included: archived documents, survey results, and semi-structured interviews with stakeholders.

My research is a formative program evaluation for several reasons supported by the literature. First, I was able to use archived data that was collected as a part of normal coursework during the first two courses and I gathered my remaining data within the time frame of the four-course sequence. For this reason, my research is formative because it took place during the intervention. Next, the purpose of my study was to identify the strengths and weaknesses of the multicultural awareness units and culturally relevant coursework within the two courses in an effort to improve them. In contrast, the purpose of a summative evaluation is to determine the effectiveness of an intervention. Last, the UNT course developer has not finalized the coursework, consequently making it possible to incorporate my findings into the courses before a second offering (Mehrotra, Hoolister, & McGahey 2001; Patton, 2002; Ruhe & Zumbo, 2009).

The unfolding model guided my formative evaluation. I applied the model to my data through a process of "cycling through" the framework, as Ruhe (2002, p. 101) coined it. By holding up the unfolding model framework against my data like an overlay transparency and through a continual process of sense making, I decided where and how to place the data within

the four components. The framework served as preliminary coding categories and allowed the flexibility of adding categories as they emerged. Based on the unfolding model, I developed a research matrix that organized my research questions, data, and analyses (see Appendix G for matrix).

Ruhe and Zumbo (2009) recommend analyzing each courseas a case or unit of analysis. I treated the two courses, EDSP 5710 and EDSP 5560, as individual cases by performing an in-depth study of the components of each course, which I described earlier in this chapter. Also, I present the findings and discussion of the courses in separate sections within Chapters 4 and 5. My handling of the courses as cases was in accordance with examples given by Ruhe and Zumbo (2009).

Ethical issues. The University of North Texas Institutional Review Board (IRB) oversaw the research for this study. I did not exclude any participant from this research and I received consent from all respondents (see Appendix E). I maintained student and stakeholder confidentiality in this publication through the use of pseudonyms. To obtain the archived university end-of-course survey data, I received permission from the UCG administration. Since this was a program evaluation, I was diligent to minimize stakeholder influence in order to present well-balanced research (Ruhe & Zumbo, 2009). I stored all data in a secure location in my home office. I sought permission from the appropriate individual/s for other information as needed.

Validity issues in evaluation research. I blended methods to employ credibility-building strategies to strengthen my findings. For quantitative data, I performed exploratory factor and hierarchical cluster analyses as well as reported Cronbach's alpha reliabilities. I sent participants several follow-up email reminders to increase my survey response rate. I included the surveys for

review in the appendix of my dissertation (Ruhe & Zumbo, 2009). Regarding qualitative data, my dissertation committee served as an expert audit review. I sought to control my own biases through memoing and keeping sound audit trails (Ruhe & Zumbo, 2009). I used the triangulation of multiple data sources, multiple methods, and multiple perspectives (Patton, 2002). In triangulation, I tested for consistency among and between the data sources. In fact, my most critical measure for cultivating credibility was to remain transparent about data collection, analyses, my own biases, and to keep the findings in the context of the study (Patton, 2002). The convergence of results from different participants and multiple methods enhanced the credibility of my findings beyond what could be accomplished with a single method (Ruhe & Zumbo, 2009). The goal of this formative evaluation was to achieve the purposes set forth by Patton (2002) to "1) confirm what we know that is supported by data, 2) disabuse use of misconceptions, and 3) illuminate important things that we didn't know but should know" (p. 480).

Participants

Description of the participants from 5710. Sixty students were enrolled in the course, 34 from UNT and 26 from UCG. Of those 60 students, 20 (39%) responded to the online learning survey. Nine participants were from UNT and 11 were from UCG. All participants were female. Nine of the respondents rated their teaching-related technology skills as intermediate, 5 as advanced, 3 as beginner, 1 as expert, and one did not respond to the question. With regard to prior experience with distance learning, a majority of respondents (6 each) reported none or moderate; of the remaining respondents 4 indicated very little, 3 recorded extensive, and one did not respond to the question. Six of the respondents were in the largest age bracket of 26-30; 4

were 51-55; 3 were 21-25; 3 were 41-45; 2 were 36-40, 1 was 46-50, and 1 was 56-60. The primary language of respondents was evenly divided between English and Spanish. The highest level of education attained by the respondents was also an even split, as 50% of the students had completed a bachelor's degree and the other 50% had achieved a master's degree. Eleven of participants identified their ethnicity as Hispanic; 8 as European American; and 1 as African American. Seven reported that they live more than 90 miles from UNT campus; 3 live less than 30; 3 live 30-50 miles; 2 live 50-60 miles and 4 did not respond. Four had taught two years or less; four responded that teaching was not applicable; 3 had taught 11-15 years; 3 had taught 21 or more years; 2 had taught 3-5 years; 2 had taught 6-10 years; and 2 did not respond. Fifteen students attend classes part-time; 4 attend full-time, and 1 did not respond to this question.

Description of the participants from 5560. Thirty-six students were enrolled in the course, 11 from UNT and 25 from UCG. Of those 36 students, 15 (41%) responded to the online learning survey. Four participants were from UNT and 11 from UCG. All participants were female. Nine of the respondents rated their teaching-related technology skills as intermediate; 4 as advanced; and 2 as beginner. Six of the respondents recorded their prior experience with distance learning as moderate; 4 as none; 3 as very little; and 2 as extensive. Four of the respondents were in the largest age bracket of 26-30; 3 were 41-45; 2 were 36-40; 2 were 46-50; 2 were 51-55; 1 was 21-25; and 1 was 56-60. Ten of the respondents claimed Spanish as their first language and five selected English. Nine of the respondents had a bachelor's degree and six had a master's degree. Eleven of the respondents identified their ethnicity as Hispanic; 3 as European American; and 1 did not respond to the question. Seven reported that they live more than 90 miles from UNT campus; 2 live 30-50 miles, 1 lives less than 30, 1 lives 50-60 miles; and 4 did not respond to the question. Five had taught 3-5 years; 2 had taught 6-10 years; 2 had

taught 11-15 years; 2 had taught 21 or more; 1 had taught 2 years or less; 1 responded the question was not applicable; and 2 did not respond to the question. Fourteen of the respondents were part-time students and one did not respond to the question.

Description of the semi-structured interview respondents. As recommended by Patton (2002), I conducted follow-up interviews with a purposeful sample of stakeholders to "provide meaningful additional detail to make sense out of and interpret survey results" (p.193). My selection of interviewees was based on which respondents would be the most informative to the research. For this reason, I conducted six interviews. To capture the UNT voice, I interviewed the four-course sequence course developer, the 5560 course instructor, and the 5710 and 5560 teaching assistants. To satisfy the UCG perspective, I interviewed the UCG Dean of the College of Education and the UCG program coordinator for the collaborative initiative. Below, I describe each of their roles within the courses.

The four-course sequence course developer was responsible for all aspects of the course offerings. The course developer's many duties,included seeking funds, developing the courses, overseeing the course translation, managing the courses, serving as a contact for UCG, and leading the face-to-face WebCT introductory training sessions for the UCG students in Guayquil, Ecuador.

The 5560 course instructor served as the instructor of record and implemented the course content. The course instructor performed the normal duties that accompanied the position (e.g. grading, communicating with students, and providing feedback to the course developer). The 5560 course instructor did not grade the UCG students' work because she is not bilingual.

The 5710 teaching assistant is bilingual and was responsible for translating and

modifying the four-course sequence, under the guidance of the course developer. During the first course, the teaching assistant filled several roles as a moderator, course designer, teaching assistant, grader, and primary contact with UCG and students. During the second course the teaching assistant aided with the course design and website management.

The 5560 teaching assistant is bilingual and was responsible for assisting the course instructor, grading the assignments of the UCG students, and translating the messages on the discussion board.

The UCG Dean of the College of Education served to foster the relationship with UNT, offer support, and oversee the four-course sequence on site in Ecuador. Her additional responsibilities were that she served as the main contact with UNT and assisted with the logistics of offering the collaborative initiative.

The UCG program coordinator was on faculty at UCG and was responsible for keeping the pulse of the UCG students. The program coordinator promoted the four-course program at UCG, served as an onsite support to UCG students, kept students informed on the program, and served as a liaison between the UCG students and the UNT and UCG faculty. Additionally, she organized the UCG assistive technology forum that took place during the fall of 2008.

Procedures for Data Collection

As a part of normal coursework, during the fall and summer of 2008, UNT and UCG collected the UCG end-of-course survey and discussion board postings. I collected the remaining data, the online learning survey, archived documents and semi-structured interviews with stakeholders, during the fall of 2009. Next, I describe the reliability and validity of each

instrument, along with my procedures for data collection. The complete list of my data collection is available in Appendix B.

UCG end-of-course survey instrument validity. The UCG survey was composed of 23 Likert and short answer questions. Questions 1-7 were short answer demographic questions, Questions 8-22 were Likert items, and Question 23 was a space for students to leave a comment about the course. The survey was available in Spanish and students took it online at the end of each course. It is included in Appendix D.

I performed an exploratory factor analysis and a hierarchical cluster analysis (Figure 2) and found two factors: (1) university communication and support, and (2) quality of course content. I found the subscale alphas .75 for university communication and support, .71 for quality of course content, and .76 for the entire scale. According to DeVellis (2003), all alphas fell into the "respectable" range. Table 1 presents the items that composed each construct.

My rationale for including Item 15, even with its low factor loading, is based on the evidence that this item made the construct's reliability stronger (increased from .71 to .75). Also, I believe that the question wording was misleading because it instructed students to skip if it was not applicable (12 missing responses), and my hierarchical cluster analysis grouped Item 15 with Items 17, 18, 22, and 21. I omitted Items 9, 10, 13, 14, 16, 19_R, and 20 due to low factor loadings or that their removal increased Cronbach's alpha.

UCG end-of-course survey data collection. UNT and UCG collected the end-of-course survey from UCG students during the final weeks of each course through the WebCT online survey feature. The institutions requested that all UCG students complete the survey, but it was not required. The UCG end-of-course survey response rate for summer 2008 was 69% (n = 18) and it was 84% (n = 21) for fall 2008.

Table 1

UCG End-of-Course Survey Likert-Type Items by Construct

Item	Loading	University Communication and Support Cronbach's alpha= .75 (n = 25)
(17)	.878	The communication of the coordinator of the University of Casa Grande…
(18)	.737	The support of the coordinator of the UCG…
(22)	.703	The support of the coordinator of the University of North Texas…
(21)	.680	The communication of the coordinator of the UNT…
(15)	-.109	If you had problems (skip if it does not apply)
(11)	. 739	The dynamics of the program in your orientation to learning about students (were)…
(8)	.684	The contents of the programs were…
(12)	.639	The different tools and materials of learning (were)…

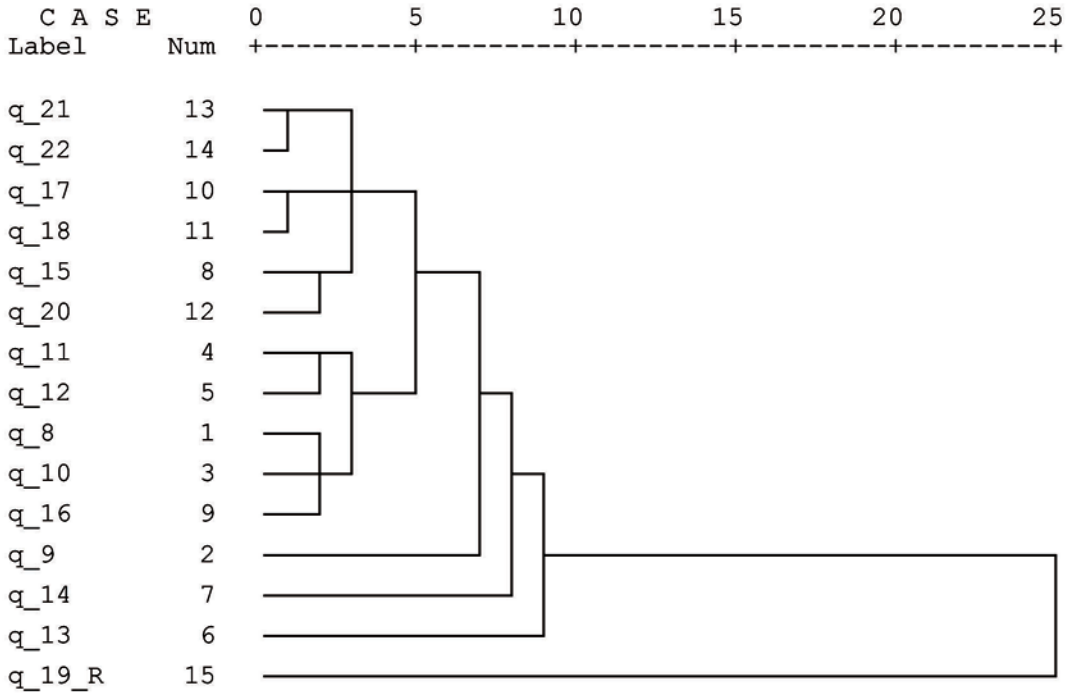


Figure 2. UCG end-of-course survey hierarchical cluster analysis.

Online Learning Survey instrument validity. This survey was adapted from Ruhe's dissertation (2002), which was originally constructed by a committee of project associates from the University of British Columbia based on Bates's (1995) ACTION framework. It was pilot-tested and revised. Ruhe (2002) used 90 quantitative items and 6 short answer questions in her dissertation. For my research, I used 35 questions, 29 quantitative items and 6 open ended questions. In addition, I created 8 questions about international computer-mediated communication. The questionnaire items are from Ruhe (2002) unless indicated otherwise and measure technology skills (adapted from Gold, 1997), course access, benefits, communication (researcher created), and multicultural awareness (adapted from Guyton & Wesche, 2005). Questions 1-14 were demographic questions, Questions 15-20 and 24-32 were Likert items, and Questions 21-23 and 33-35 were open-ended questions. To ensure the integrity of the survey translation from English to Spanish, I submitted the survey to a double review process. First, I had the instrument professionally translated; then, I had a UCG stakeholder review the translation and make corrections. The instrument was available online in English and Spanish (see Appendix E).

I performed an exploratory factor analysis and a hierarchical cluster analysis (Figure 3) and found three factors: student openness to international partnerships, students' value of communication with the partner university, and technology skills. I found the subscale alphas .90 for student openness to international partnerships, .70 for students' value of communication with the partner university, .74 for technology skills, and .81 for the entire scale. According to DeVellis (2003), all alphas fell into the *respectable* to *very good* range. Table 2 presents the items that composed each construct. I omitted Item 32 due to low factor loading.

Table 2

Online Learning Survey Likert-Type Items by Construct

Item	Loading	Students' value of communication with the partner university Cronbach's alpha= .70 (n=22)
(26)	.950	I communicated on a regular basis with students from the partner university.
(24)	.837	I made an attempt to communicate with the students enrolled in the course(s) that were from the partner university (e.g., discussion board postings or email).
Item	Loading	Student openness to international partnerships Cronbach's alpha= .90 (*n* = 22)
(30)	.830	I wish more courses had international partner universities.
(29)	.820	Having students from another country in my course, increased my multicultural awareness.
(31)	.803	I would take another course with an international partner university.
(27)	.726	If I could have communicated with the partner university, I would have.
(28)	.713	I thought it was beneficial to have students from the partner university within the same WebCT course.
Item	Loading	Technology skills Cronbach's alpha= .74 (*n* = 22)
(16)	. 904	The amount of my prior experience with distance learning is…
(15)	.864	My knowledge/competency of the following technologies prior to this online course was…

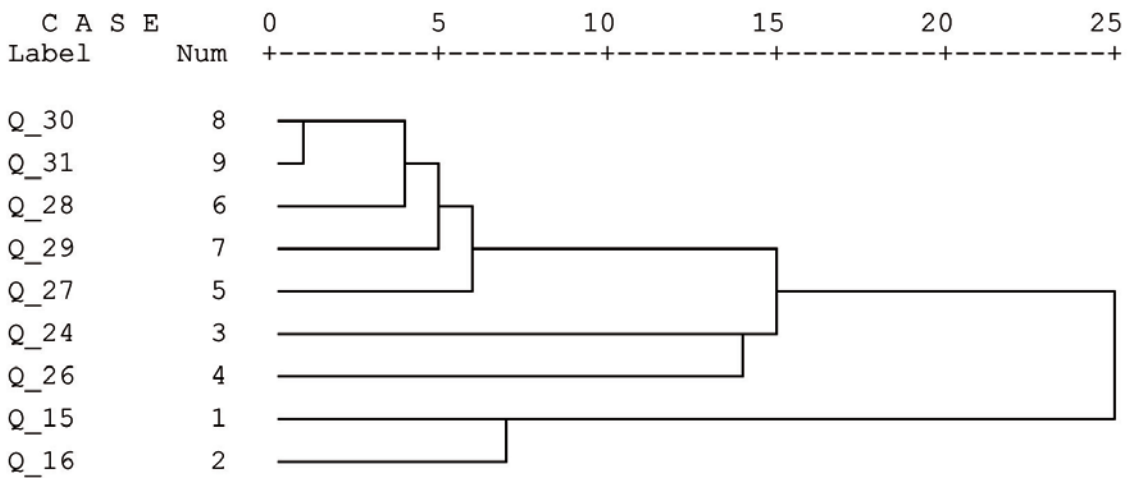


Figure 3. Online Learning Survey hierarchical cluster analysis.

Online Learning Survey data collection. I collected the data for the online learning survey during the fall of 2009. I sent an email to students requesting their participation in my study. I asked the former students from the two courses to complete the survey online through Survey Monkey (http://www.surveymonkey.com/) and they could volunteer for an interview at that time. Contacting the UCG students was simplified through their enrollment in the final two WebCT courses, so I emailed them through the online course. Locating the UNT students was more challenging. As contacts were attempted a year after the course, some students had completed their degrees or were not enrolled at UNT anymore. For the 5710 course, I found contact information for 25 out of 34 students. On the other hand, for 5560, I found email addresses for all the students. To boost my survey response rate, I sent several email follow-up reminders to non-responsive students to encourage them to participate (Ruhe & Zumbo, 2009). In an extra effort to locate respondents, I searched for the names of the the students within a social networking website and emailed those I found. My online learning survey response rate for 5710 was 39% (n = 20) and for 5560 it was 41% (n = 15).

Semi-structured interviews. As recommended by Patton (2002), I conducted follow-up interviews with a purposeful sample of stakeholders to "provide meaningful additional detail to make sense out of and interpret survey results" (p. 193). No students were available for interviews. I contacted the course stakeholders for a semi-structured interview by email and gave them the opportunity to respond with their preferred method of interview (i.e. face-to-face, instant messaging, or email). I conducted 6 interviews: 2 face-to-face interviews, 2 through instant messaging, and 2 over email. The questions were available in English. A copy of the stakeholder interview protocol is in Appendix F.

I followed this process to conduct each type of interview. To begin with, I gathered the face-to-face interviews from the UNT four-course sequence course developer and the UNT 5560 course instructor. I emailed my semi-structured interview protocol to the respondents several days before our scheduled interview to give them time to review the questions. Next, I interviewed both respondents, one at a time, in their offices at UNT. The interviews took place on the same day. During the interview, I followed my semi-structured interview protocol yet remained open to related topics. I took notes and I used a digital voice recorder to document our conversations. In total, I collected 74 minutes of face-to-face interview recordings. Last, I worked over the next few weeks making the transcriptions of the recorded conversations using a computer program called f4 (http://www.audiotranskription.de/english; Patton, 2002).

I collected the interview responses from the 5710 and 5560 teaching assistants through instant messaging. First, I emailed each respondent and we arranged a time and day to meet in a social networking website. I sent them the interview questions in advance. On the day of the interview, the respondent and I both logged into our social networking accounts and began a private chat session. I used Hine (2005) as a reference for performing the online interviews. I

began the interview by greeting the respondent and then proceeded with asking the interview questions one at a time. I usually asked the question, gave the respondent a chance to answer, and then I would comment or ask a follow up question as needed. I always inquired if the respondent had finished typing before I moved to the next question. In total, I collected 2.5 hours of instant messaging data. Last, I copied and pasted the conversations into qualitative software for analysis.

I carried out the interviews with the UCG dean of the College of Education and the UCG program coordinator through email. First, I sent the interview questions to the respondents in a word processing document with a brief greeting, instructions for completion, and a word of appreciation for their time. Then, the respondents typed their feedback into the document and emailed it back to me. I conducted the email interviews in English, but gave respondents the option of replying in English or Spanish. I received responses in English and Spanish. For those answering in Spanish, I used my own language skills, an online translator, or checked with a colleague who is fluent in Spanish and English to understand the feedback. Also, I emailed follow-up questions to the participant to clarify my understanding. The time between sending and receiving the respondents' feedback was a few weeks.The total amount of email interview data I collected was10 pages. Last, I copied and pasted the conversations into qualitative software for analysis.

Archived documents. I collected the archived documents by requesting permission from the IRB, the course instructors, and other university personnel as needed, as well as using online databases. Archived data from 2008 included the syllabi, conference papers, and presentations, WebCT discussion postings, grant proposal, course averages by groups, course assignments, quiz and exam items, completion rates, and the UCG end-of-course survey.

Procedures for Data Analysis

Quantitative data. I analyzed the quantitative data (i.e. UCG end-of-course survey and online learning survey) using the statistical software, SPSS. I followed this process to evaluate the online learning survey. First, I ran descriptive analyses on the demographic data. Second, I performed an exploratory factor analysis and hierarchical cluster analysis. Also, I checked that I had sufficient data points to yield valid factor loadings and Cronbach's alpha reliabilities (DeVellis, 2003) on the entire instrument and the individual subscales. I reported the items that composed the three subscales and their factor loadings. Third, I created the scaled scores and reported the results for each factor.

Multiple steps were involved in interpreting the UCG end-of-course survey. First, I ran descriptive analyses on the demographic data. Second, I performed an exploratory factor analysis and hierarchical cluster analysis. Also, I checked that I had sufficient data points to yield valid factor loadings and Cronbach's alpha reliabilities (DeVellis, 2003) on the entire instrument and the individual subscales. I reported the items that compose the two subscales and their factor loadings. Last, I created the scaled scores and reported the results for each factor.

Qualitative data. A critical piece to the research design was to rely not only on automatically collected survey responses, but to use qualitative data to "put flesh on the bones of quantitative results" by making a personal connection with respondents through semi-structured interviews (Patton, 2002, p. 193). Specifically, I analyzed my qualitative data using content analysis to determine the significant themes (Patton, 2002; Ruhe & Zumbo, 2009). Patton's (2002) general definition of content analysis is "any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings" (p. 453). Ruhe and Zumbo (2009) emphasize that content analysis is a "systematic

way of listening to and understanding the interviewee's perspectives" in order to discern generalizable themes from individual preferences (p. 108).

My qualitative analyses began deductively, as I used the categories of the unfolding model (i.e. scientific evidence, cost-benefit, underlying values, and unintended consequences) as a priori coding categories. After I had sorted the bulk of the data, I moved to inductive analysis. In this stage of the analysis, I remained open and flexible to themes as they emerged from the data within and among the categories. My content analyses followed Patton's (2002) suggested stages of identifying, coding, categorizing, classifying, and labeling the primary patterns in the data. This process required me to continually check the data against my own perspectives in order to make sense of the evidence. As recommended by Ruhe and Zumbo (2009), I selected direct quotations from interviewees to enhance my findings with thick/rich description. I used the qualitative software, MAXQDA 2007, to organize and assist with the specific units of my analysis.

I derived my specific coding units for multicultural awareness from my review of Banks and other multicultural education scholars. In my interview transcripts, I coded text as multicultural awareness based on the inclusion of keywords such as multicultural, global, and cultural awareness, text that referenced learning about other cultures or people different from oneself, and assignments that required students to explore personal biases and to think creatively about serving the diverse needs of students.

I examined the the discussion board data as my source for student-to-student interaction and student-to-instructor interaction. My three criteria for coding diversity infused correspondence were that: 1) the student/instructor reached out to the partner university, 2) the

student/instructor posted in English and Spanish, or 3) that the student asked other student/s for advice about materials that would benefit their own students with special needs.

For all other data, (i.e. short answer survey questions, grant proposal, the course textbook, assignments, exams, and the national standards), my multicultural awareness criteria were that the text referenced how to meet the diverse needs of students, encouragement for teachers to develop creative solutions to meet the varied cultural needs of students, and the practical implementation of new methods in the student's own school. I conducted these searches by hand and then confirmed with the lexical search features within the MAXQDA 2007 software. The purpose for gathering each type of data and its placement within the overarching unfolding model for online learning program evaluation will be discussed.

Applying the Framework to the Data Using a Mixed Methodology

Using the unfolding model as a "road map," I employed the four facets as coding categories for all data (Ruhe & Zumbo, 2009). Again, the four facets are: 1) scientific evidence, 2) cost-benefit, 3) underlying values, and 4) unintended consequences. Scientific evidence and cost-benefit are the scientific basis while the underlying values and untended consequences are the consequential basis. In addition, it is important to point out that Ruhe and Zumbo (2009) do not define *science* as controlled experiments but as a rigorous examination of how social realities emerge, function, and affect individuals and organizations.

I discussed the unfolding model in detail in Chapter 2 and I defined my coding units in the previous section; now, my purpose is to explain the breakdown of how the quantitative and qualitative data apply to the research questions and the unfolding model. To keep organized, I

created a research matrix to explain the connections between the unfolding model, research questions, data, and data analyses (see Appendix G).

Scientific evidence. Question 1- What is the evidence of multicultural awareness?

I collected data about multicultural awareness through the archived documents, semi-structured interviews, and Likert and open-ended questions from the online learning and UCG end-of-course surveys.

Relevance/cost-benefit. Question 2- What is the cost-benefit analysis of the course for the institutions?

I gathered cost-benefit data through the online learning survey, UCG end-of-course survey and semi-structured interviews. I organized relevant data into five categories: (1) cost to UNT, (2) benefit to UNT, (3) cost to UCG, (4) benefit to UCG, and (5) course satisfaction. For the purpose of my study, I decided that a summary of benefits would suffice because the full extents of the benefits were unknown. For example, I did not have information at this time on how many students each teacher will affect over his or her teaching career. I chose to set this boundary on the research because neither Horton (2001) nor Ruhe and Zumbo (2009) mandate that all costs or benefits are quantified.

Underlying values. Question 3- How was the underlying course goal of enhancing students' multicultural awareness implemented in the course?

I collected data about the underlying values of multicultural awareness through the archived documents, WebCT discussion board postings, semi-structured interviews, and open-ended questions from the online learning survey.

Unintended consequences. Question 4- What are the unintended positive or negative consequences of the course design and implementation?

I analyzed the quantitative data (i.e. UCG end-of-course survey and online learning survey) and the qualitative data (i.e. archived data and semi-structured interviews) by searching for gaps between the ideal and the real; that is, the difference between what course instructors hoped would happen and what actually happened. Specifically, I examined whether there are conflicting viewpoints between the underlying value of multicultural awareness and actual course implementation (Ruhe & Zumbo, 2009). To do this, first, I analyzed the data and compared all the coded archived documents, open-ended survey responses, and Likert survey subscales. Second, I examined the coded semi-structured interview transcripts of respondents. My goal was to use all of the data to see how the course worked as a system in order to determine how well the course operated. Ruhe and Zumbo (2009) refer to this as determining the goodness of "fit" within the unfolding model framework (p. 195). I analyzed the data for "fit": between the multicultural components and the course (Ruhe & Zumbo, 2009, p. 196).

CHAPTER 4

RESULTS

Overview

In chapter 3, I discussed the mixed-method approach that I employed in my formative evaluation of two online bilingual courses. Again, my research purpose is to improve an intervention by focusing on the strengths and weaknesses of the inclusion of multicultural awareness elements within the first two courses of the four-course sequence. I conducted my research at the halfway point of the four-course sequence, while the courses could still be modified. Here, I present my quantitative and qualitative findings side-by-side in the order of the posed research questions. As recommended by Ruhe and Zumbo (2009), I present the findings from the courses individually; however, since the same grant funded both courses some information is identical. At the end of the chapter, I summarize all the findings.

Findings for 5710 Special Education Programs and Practices

Question 1. Scientific evidence.

1) What is the evidence of multicultural awareness in this special education course?

a. What were the course materials related with multicultural awareness?

Here, I present the multicultural awareness related information found in the grant proposal, the course textbook, assignments, exams, and the national standards. My interviews with the course stakeholders are also included to support my multicultural awareness findings within the course. I found eight references to multicultural awareness in the grant proposal which I categorized into three themes: develop modules/units on cultural awareness, develop a program that reflects best practices for special educators across cultures, and develop global awareness

through cultural exchange/collaboration. From the list of Council for Exceptional Children (CEC) standards, I identified 10 statements related to multicultural awareness.

In the textbook materials, I identified 22 references to multicultural awareness in the online companion site quiz questions and case studies. The textbook contains multiple references to multicultural awareness and includes a chapter titled "Today's multicultural, bilingual, and diverse school." In my hand and keyword searches of the textbook index, I found 35 pages referencing multicultural awareness. The index categories included cultural responsiveness, multicultural considerations, diversity theories, inclusion, disproportionate representation, culturally responsive teaching, multiculturalism and gifted education, limited English proficiency, race/ethnicity and language as a multicultural consideration.

I distinguished 14 multicultural awareness references in the course assignment. This course assignment is an example of how the course developers integrated multicultural awareness topics into the course. UCG students completed this assignment from the IRIS website.

Disability: Attitudes

Estimated Time: 4 hours

Learning Objective

To understand how different worldviews towards disabilities affects attitudes.

Overview

Attitudes about disabilities vary from person to person. Knowledge about the different beliefs and orientation can help educators work with students with disabilities during the development of the individualized education plan through the implementation of the student's educational program.

Activity

Interview three of your closest friends and ask them to offer a definition of "disability" and what it means to have one. Next, interview three acquaintances and ask the same questions. Summarize your responses to the following questions in a two-page paper:

- How were the responses you were given different? How were they the same?
- Was it easy for people to discuss this topic? Explain.
- Do you find it easier to discuss disabilities with friends or acquaintances? Elaborate on your answer.
- What conclusions did you draw from this experience? (IRIS Center, n.d.)

This assignment required students to examine the biases of their close friends and acquaintances regarding their views on diversity. As a result, students not only learned about the beliefs of those interviewed, but were challenged to examine their own personal beliefs about diversity as well. As demonstrated through the course textbook, assignments, standards and other course materials, multicultural awareness references and objectives were woven throughout this course.

b. How did students make sense of course goals related to multicultural awareness?

I gathered and coded this data from Questions 33, 34, and 35 from the online learning survey I administered as part of this research. Students responded to three open-ended questions about multicultural awareness. Students most frequently indicated that multicultural education is about acquiring a different perspective. This is reflected in Student C_34's statement that multicultural education is "Inviting students from other cultures to help our understanding of the subject matter." Also, in Student C_52's reflection that "El intercambio de culturas, nuevas formas de percibir otra cultura, isentiva la tolerancia y el respeto a las diferencias." Students

referenced the exchange of information as a component of multicultural awareness. This is seen in the response from Student C_3.

> In the context of having a partner university in Ecuador, I think the term multicultural education would relate to students from both US and Ecuador exchanging information pertaining to their own culture's attitudes toward education. This would include subjects such as expectations of teachers and administrators, parents attitudes toward education, funding available for SPED programs, gender biases in recommended curriculum, incorporation of cultural diversity studies into lessons taught...I could go on forever.

Students were evenly divided on whether they viewed the course materials as enhancing their multicultural awareness. Those in favor mostly just responded with "yes"; however, the response from Student C_20 described that the course allowed her to know the US perspective. "Si, porque me permitieron conocer qué se hace en EE en otro ´país, su normativa, etc." On the other hand, Student C_3 reflected the opposite point of view, "Cultural diversity has been an underlying theme in most of my courses. As I stated before, I did not communicate directly with any of the Ecuadorian students so I did not gain any specific awareness of their culture."

Over half of students responded that the course had made a difference or influenced their lesson design. Student C_12 reflected this thought about being more creative in her lesson design. "Sí ha influenciado en ser más creativa pero orientado a involucrar varias culturas no relacionadas con lo étnico, sino con grupos sociales, por ejemplo: grupos de maestros, grupos de estudiantes jóvenes, grupos de estudiantes mayores." Student C_3 emphasizes that the course affected her beliefs about the importance of valuing other cultures.

> I feel it is critical to include studies of different cultures throughout the student's educational process. I feel 'Americans' have become quite arrogant and forgetful of their

multi-cultural backgrounds. Cultural sensitivity applies to different sectors of the US population as well as those who reside in different countries.

In contrast, Student C_29 was an example of those who felt that, for a variety of reasons (e.g. translation issues, lack of contact with student/instructor, or the course adaptations) the course did not influence their multicultural awareness.

> No siento que el curso ha tenido impacto en una mirada cultural diferente para mí, puesto que no hemos tenido contacto con otros estudiantes. En cuanto a lo intecultural del intercambio con los profesores, lo unico que me ha afectado hace referencia a la calidad de las traducciones y de alguna manera a los contenidos, pusto que estaba completamente realizado para público y realidad de USA.

Question 2. Cost-benefit.

2) What is the cost-benefit analysis of the course for the institutions?

a. What is the cost-benefit ratio for the bilingual delivery mode?

Since 5710 and 5560 were created through the same grant, their costs were not itemized; however, I do differentiate between the benefits in both courses. I present my cost-benefit results in the order of UNT cost-benefit and UCG cost-benefit. In addition, I include meaningful quotes to support each institution's benefits.

UNT cost-benefit. The University of North Texas Global Initiatives Grant for $18,000 funded the four-course sequence of which 5710 and 5560 were the first two courses. The grant provided for the travel expenses for UNT faculty and staff to conduct the face-to-face training in Guayaquil, Ecuador, the translation and development of the two courses, and a bilingual grader for each course. The UNT coordinator donated her time to the project and UNT's CLEAR department, in charge of overseeing WebCT, waived the online learning student fees for the

UCG students. UNT dropped the fee because the UCG students provided a service by piloting the course materials and submitting feedback. UNT did not charge UCG for the courses. UNT students paid regular tuition (Stakeholder_15, personal communication).

UNT benefited by strengthening an international partnership and developing bilingual courses to offer to other Spanish-speaking universities. A few statements that reflect the positive aspects of online learning are from Stakeholder_45 and Stakeholder_15. Stakeholder_45 emphasizes the easiness of online learning saying, "I love online teaching as it provides so much flexibility…" During my interview, Stakeholder_15 acknowledged the additional advantage that as the world shrinks due to online learning, bilingual course offerings will become more prevalent.

> But I think it is a good movement. I think it is something we're going to have to look at in the future as far as languages go. I think that whose day is about to really shine on us and we're going to need to consider this.

UCG cost-benefit. UCG students paid tuition to UCG. Also, UCG paid $150 per course to the UCG program coordinator (Stakeholder_55, personal communication). UCG benefited from the courses by receiving the courses at no cost from UNT. Stakeholder_55 reflects UCG's desire to collaborate with international institutions and its benefit to UCG. "La UCG busca siempre favorecer el intercambio con otras instituciones educativas y en estos cursos concretamente el propósito era también que los profesores conozcan el estado del arte de la educación especial a nivel internacional." Also, after the conclusion of the four-course sequence, UCG is in the process of developing its own masters program. Stakeholder_33 explains the good things that are happening: "UCG is planning to present a project for a Masters Degree in *Special Education and Inclusion* to the CONESUP, which is the government agency responsible for

approving new masters. Some students of the Program have commented that they are interested in such an option."

b. What is the viability of continuing the courses?

Currently, UNT and UCG do not have any specific plans for future courses; still, both institutions will be staying in touch and will continue to look for opportunities to collaborate on similar projects. UNT is interested in offering the four-course sequence to other Spanish-speaking universities and has advertised at an international conference. Stakeholder_15 reported that the next courses would probably involve costs for the receiving institution; however, payment would need to be negotiated and deemed equitable. The Stakeholder_15 recognized that the courses would require minor adjustments for use in other Spanish-speaking countries.

According to Stakeholder_33, UCG, will soon be applying to begin a masters degree in Special Education in Ecuador. In general, one economic factor that could influence the continuation of online learning in the area is the Ecuadorian governments' rationing of electricity. In November 2009, the government turned off the electricity three hours in the morning and three hours in the evening, forcing students to study late at night (Stakeholder_33, personal communication). Although this did not affect the courses in this research, energy rationing is an issue that needs to be taken into consideration when deciding about future online offerings in Ecuador.

c. How satisfied were stakeholders with the course?

I identified 9 themes using my semi-structured interview data from stakeholders. For this question, I focused on the positive remarks; I discuss the drawbacks in Question 4. Overall, the stakeholder consensus was that the courses went well, also, a number of respondents selected "Good Course Contents" and "Appreciated grader support."

The statement from Stakeholder_28 expresses the positive experience, “I think the courses went well, especially the first one.” Likewise, UCG Stakeholder_55 demonstrates how the course content, although good, still was not completely relevant. “De acuerdo a lo manifestado por los estudiantes, los contenidos y desarrollo de los cursos fueron pertinentes y buenos aunque hay que adaptarlos a la realidad de nuestro medio.”

Stakeholders and students viewed the June 2008 face-to-face training as an integral component to the course because students were able to become familiar with Blackboard and it provided a chance to put faces with the names of those involved. The face-to-face meeting served several purposes as communicated by Stakeholder_15.

> No, I think that was a key component. Because I think that if you know the people that you are working with and they are not just names and numbers and they become real people then you are a lot more likely to work through some of the difficult times together. But if you don't know who you are working with that is a hard, hard connection to make and a hard relationship to keep up and going.

d. How satisfied were students with collaborating with an international university?

For this question, I analyzed data from the fall 2008 UCG end-of-course survey and data from my online learning survey.

Table 3 displays the results.The responses for the five items that compose Factor 1 related with how students perceived the university communication and support. This was based on a three-point scale: 1 being *very good*, 2 being *average*, and 3 being *poor*. Participant’s mean score was 1.14 which was very good.

Table 3

5710 Response to UCG End-of-Course Survey Factor 1- UNT and UCG University Communication and Support

n	alpha	items	M	SD	Skew	Kurtosis
10	.75	5	1.14	.16465	.687	-1.043

In addition to the Likert items, UCG students responded to two open-ended questions about the institutions as well. Overall, a high level of support was received by the students at each institution as indicated by the response to these questions.

Online Learning Survey

The responses for the five items that compose Factor 1 related to how students perceived their openness to international partnerships. It was based on a six-point scale. As seen in Table 4, participants mean score was 3.88, which falls into the range of "neither agree nor disagree" and "agree."

Table 4

Response to Factor 1- Student Openness to International Partnerships

n	alpha	items	M	SD	Skew	Kurtosis
21	.90	5	3.88	1.08	.298	-.755

Question 3. Underlying values

3) How was the underlying course goal of enhancing students' multicultural awareness implemented in the course?

a. How were the courses adapted to reflect the different professional and cultural needs of the students from the United States and Ecuador?

I found that in general UNT did make a conscious effort to adapt the courses. For 5710, course developers shortened the amount of US legislation that the UCG students were required to learn and substituted three assignments to include hands-on activities. The UNT respondent's most frequent response was that they provided the UCG materials according to what English course had and made adjustments as needed. However, the UCG respondent's most frequent response was that they would have preferred that the courses were more adapted to the Latin American culture.

Stakeholder_28's response shed light on the course development process in converting the English version into Spanish and making adjustments.

> The courses were adapted accordingly to what UCG Dean and other officials asked to see, then by the students. So we gathered courses that we already had at UNT and translated them. The course content that was in place for the UNT students had everything to do with the State of Texas and CEC [Council for Exceptional Children] laws and objectives. The UCG was mostly on what they needed and what they were looking for. So the content was not totally different, but it was more specific for the UCG students.

Even so, UCG called for more cultural sensitivity as reflected in Stakeholder_55's response.

> La adaptación de los materiales a la cultura latina, como se había planteado, no se dio, solo se realizó una traducción (no adecuada) de los materiales al español. En la forma como los cursos se desarrollaron, los estudiantes no percibieron que estos se hayan adaptado a su cultura, a sus valores y a su realidad de país latinoamericano.

b. How were the courses designed to promote cross-cultural communication among the students?

The expectation that UNT and UCG students should communicate was clearly stated in several ways. First, the instructor wrote in the 5710 syllabus, "Each student is expected to monitor the class discussion board," although, it was not required for a grade. Second, the instructor and teaching assistant posted several messages to the discussion board introducing UCG to UNT, explained where to find online translators, and provided general encouragement for students to collaborate.

> [5710 Instructor] "Welcome to EDSP 5710.....US and Ecuador!! You read right!! We have students from Ecuador joining us this summer semester. We are thrilled and look forward to collaborating with these students."
>
> [5710 Teaching Assistant] As you know, we will have some guest graduate students from a university in Ecuador. Dr. H and myself will be visiting them in Ecuador next week. We are encouraging you to communicate with them so everyone could learn more about each other's experiences in education, especially in other countries. I know that the language barrier might be there, but you can always use a free translation website (www.freetranslations.com). I will be the T.A. for both UNT and Ecuador students, so if you have any questions, feel free to e-mail me. Also, this summer I will start translating our second special education course for our Ecuador students (5710 was our first one) which hopefully will be done by the end of August. Feel free to e-mail me any questions, concerns, or comments. From the 7th to the 16 of June I will be in Ecuador so I won't be able to check my e-mail very often.
>
> [5710 Instructor] "Please do respond to our Ecuador students on the discussion board. You can use any of the free translators. I typically include the English and Spanish

translations. Our varying perceptions are interesting. Thanks, Dr. R"

c. How did discussions about multicultural awareness materialize within student-student and student-instructor interactions?

In this course, the teaching assistant was not assigned to translate course postings. As a result, the UNT students mainly posted to other UNT students and the UCG students did the same. Periodically, the instructor or teaching assistant would attempt to bridge the discussion board gap with a bilingual post. The discussion board topics were titled main (principal) and conversations about special education in Ecuador. The overall statistics for the discussion board postings are presented in Table 5.

Table 5

5710 Discussion Board Frequency

Participant	*n*	%
Students	118	55%
Instructors/TA	96	44%
Total	214	

I coded 13 discussion board postings as diversity-infused communication. Regarding intercultural collaboration, I found four introduction messages posted by UCG to UNT and one message posted by UNT to UCG (in Spanish). The most frequent theme, "sharing a story or insight," emerged from multiple passages in which students related the experiences of an acquaintance who was living life with special needs. Student C_81's post illustrates this theme.

Creo que desde el punto de vista de la sociedad son más las desventajas que las ventajas.

Hace poco trabaje con un niño que tenía paralisis cerebral por lo tanto un retraso mental y

todo su desarrollo. Se comenzó a trabajar con él y se iba viendo avances. Claro en él sus avances eran lentos pero había. Como el seguro no cubría las terapias los padres lo sacarón del centro. Se habían hecho reducciones en los labores que los padres tenían que pagar porque se había tomado en cuenta que era el cuarto hijo y la situación era dificil.

Also, I found several instances of UCG students introducing themselves to UNT. Student C_78 is an example of this reaching out. “hola, yo puedo entender leyendo un poco inglés. Me alegra que tengas buenos recuerdos de Ecuador. Me puedes contar tu experiencia en discapacidades, educación, en USA.”

The instructor put forth a lot of effort to welcome student to the class after he/she had posted an introductory post. [5710 Instructor] “Hola Delia!! Su Englis is muy bien. Mi Espanol no es tan bueno. Trato. Dr. R” Even though the instructor was not bilingual, she did not shy away from communicating with UCG students. [5710 Instructor] “Hi Haley!! I hope you learn much in this course and find it beneficial. I’m thrilled you are with us. rmk”

A few multicultural awareness messages appeared on the discussion board. One example from the theme “posting with diversity content” that emerged from these passages is a post from the instructor encouraging students to broaden their definition of diversity.

[5710 instructor] En segundo lugar, tengo muchos pensamientos en la diversidad. Enseñando a estudiantes, debemos ampliar nuestra definición de la diversidad. Es más que pertenencia étnica, raza, cultura, discapacidad y tal. La diversidad es una verdadera cosa que tenemos en común. Diviértase cada día y aprenda de nuestros estudiantes. Ellos tienen tanto para recordarnos y enseñarnos.

Grandes comentarios,

Dr. R

Table 6 presents the results from the online learning survey regarding Factor two about communication. The findings indicate that students' amount of communication with the partner university was neutral, in essence, that students did express a need to communicate or to abstain from communication.

Table 6

5710 Response to Online Learning Survey Factor 2- Students' Value of Communication with the Partner University

n	Alpha	Items	*M*	*SD*	Skew	Kurtosis
19	.70	2	3.18	1.69	.316	-.832

Question 4. Unintended consequences

4) What are the unintended positive or negative consequences of the course design and implementation?

a. Was there a disconnection between the proposed course expectations for enhancing student's multicultural awareness and the actual course implementation?

Other than students' limited intercultural communication, the inclusion of multicultural awareness appears to have taken place in all areas of the course materials, which would suggest that the course goals and implementation aligned. When students were asked to describe their own view of multicultural education, they appeared to have a grasp of the definition of the word, and were equally divided about whether 5710 increased their multicultural awareness. Over half responded that 5710 had influenced their creativity for including various cultures in lesson design. In contrast to the grant's goal of enhancing teachers' multicultural awareness, the incidents of intercultural communication on the discussion board were few.

In addition, I think Stakeholder_15 summarized the multicultural awareness goals of the course nicely. [Q] "What did you hope they [students] would walk away with after this was all over?"

> [A] I wanted them to become what I consider, global educators. Educators that don't necessarily understand all that components and aspects of every single culture on the face of the world, but at least understand that there are people out there that are very similar yet different from us and have very special needs. And understand and address those needs when they are dealing with children.

b. What did students and stakeholders view as course benefits/drawbacks?

The data I used for this question encompasses all the groups involved in the course. I arranged the results according to the form of data collection. According to the interview responses, my analysis revealed that translation issues for both courses were a top priority. Stakeholder_55 shared that the problems with the translation stem from sentence structure, vocabulary, and confusing passages. "Los problemas de traducción más mencionados son:

- Estructuras de las oraciones que conservan la estructura original del ingles.
- Palabras no comúnmente utilizadas en el léxico profesional en América Latina.
- Redacción confuse."

Specific issues concerning 5710 were that UCG students, being new to online learning, required extra support from the UNT faculty and staff. Stakeholder_28 enjoyed the entire experience, but had this to say about the high-energy situation. "Another big challenge was that the UCG students were not used to learning online, so that was hard. They were a bit needy at

times and they wanted responses back after at the most an hour, so that was really hard… They kept me on my toes"

Students most frequently responded that flexibility and limited driving were the greatest benefits of online learning. Student C_18 emphasized that thought and wrote, "Scheduling-fits my times of availability." Also, Student C_25 reflected the feeling that staying home is wonderful, "el hecho de uno organizar el tiempo para estudiar, y el de hacerlo desde casa."

Students' responses indicate a difficulty in accessing Blackboard, as is reflected in Student C_78's brief description, "Por dificultades con el Blackboard." And in Student C_20's feedback on her technical difficulties with submitting assignments, "para el envío de tareas, no podía enviar las tareas como adjunto y tenía que hacerlo como texto."

Students appeared not to have had any major unexpected issues with the course. Besides responding with "No," "translation issues" were the next highest concern. Student C_29 illustrates the situation, "…contenidos, traduccion. Pienso que tuvimos grandes dificultades con la traducción que dificultaron captar los contenidos."

The responses for the three items that composed Factor 2 related to how students perceived the course content and was based on a four-point scale: 1 being *very good*, 2 being *good*, 3 being *average*, and 4 being *poor*. Table 7 displays that participant's mean score was 1.77 which falls into the range of *good* to *very good*.

Table 7

Response to 5710 UCG End-of-Course Survey Factor 2-Quality of Course Content

n	Alpha	Items	*M*	*SD*	Skew	Kurtosis
18	.71	3	1.77	.36155	-.761	-.463

In addition to Likert items, UCG gathered an open-ended response about course content as well. UCG students response that the course went well is apparent in Student C_43's statement,"buenasimo pero extenso." Students' views of the course being suitable are expressed by Student C_28, "suficiente, interesante, ligero de leer y estudiar." Even so, suggestions for improvement revolved around completing the course materials. Student C_13 explained how the course felt like pieces were missing, "fue, bueno, aunque en los capitulos senti que falto un poco mas de contenido."

Interestingly, students acknowledged that learning online is both flexible and challenging. Student C_92 described the flexibility as convenient and rigorous, "Tambien tener acceso a poder estudiar a distancia en un horario mucho mas flexible, pero asi mismo con un compromiso serio." In contrast, Student C_13 explained how online learning is challenging because it differs from traditional instruction, "un reto, ya que no acostumbro a estudiar de esa manera."

c. What are recommendations for course redesign or improvement?

Throughout all my data, I consistently found UCG offering thanks and gratitude to UNT. This theme is echoed in the discussion postings also. Student C_23 explained her appreciation as, "Ante todo muchas gracias por compartir con nosotros todos estos conocimientos y experiencias han sido muy enriquecedores, tambien gracias por el apoyo brindado." Student C_92 added to that "Gracias a las profesoras, asistentes y coordinadoras por el extensivo y buen trabajo. Excited to go to the next one!!!" Also, students were pleased as Student C_13 described, **"**me gusto mucho el curso, ha sido de gran ayuda para mi carrera."

The UNT stakeholders focused on recommending improvements with the logistics of course delivery such as enrollment and conducting onsite meetings while the UCG stakeholders

recommended improving the translation through a double-review process and including more instructor feedback.

Findings for 5560 Assistive Technology

Question 1. Scientific evidence.

1) What is the evidence of multicultural awareness?

a. What were the course materials related with multicultural awareness in this special education course?

Here, I present the multicultural awareness related information found in the grant proposal, the course textbook, assignments, exams, and the national standards. My interviews with the course stakeholders are also included to support my multicultural awareness findings within the course. I found eight references to multicultural awareness in the grant proposal which I categorized into three themes: develop modules/units on cultural awareness, develop a program that reflects best practices for special educators across cultures, and develop global awareness through cultural exchange/collaboration. I identified four statements related to multicultural awareness from the list of CEC standards.

I distinguished 9 multicultural awareness references in the course assignment. This assignment is an example of how the course developers integrated multicultural awareness topics into the course.

> For the case study assignment, begin with one of these scenarios and add any details necessary to develop the student's character and provide for a more comprehensive assistive technology plan.

Assignment Submission: Module IV-Assignment 3

Instructions:

Write a short paper (1-3 pages) concerning issues with mobility and communication that might be difficult for students enrolled in our course.

Identify two different disabilities (1 communication; 1 mobility).

What assistive devices could assist the students you identified meet with success in this course? Upload your file as an attachment in the Assignment Drop-Box under Module II-Assignment One.

b. How did students make sense of course goals related to multicultural awareness?

I gathered and coded this data from Questions 33, 34, and 35 from the online learning survey I administered as part of this research. Students responded to three open-ended questions about multicultural awareness. Students most frequently referenced that multicultural education is about acquiring a different perspective. This is reflected in Student C_24's statement that multicultural awareness is "Learning about the different ways that students from different cultures learn. What they learn, their experiences, etc." Also, it is seen in Student C_92's response "Cambio de experiencias desde las culturas personales, que no necesariamente se dan por estar en diferentes paises, pues dentro del mismo pais, ciudad o barrio se puede dar."

The majority viewed the course materials as enhancing their multicultural awareness. Those in favor, mostly just responded with "yes;" however, the response from Student C_10 describes in more detail how the course influenced her awareness. "Si la aumento, porque yo conocía poco y porque en nuestro pais no hay todos los materiales que he conocido a través del curso." In contrast, Student C_29 shed light on the translation issue, "Creo que no tener buena traducción impide un buen aprendizaje."

More than half of students responded that the course made a difference or influenced their lesson design. Student C_10 expressed this thought about the difference the course made, "Porsupuesto que si, y esto me ha dado buenos resultados tanto para mi como para los estudiantes." In addition, Student C_92 explained how experiencing the actual bilingual presentation of the course was informative. "De cierta manera si, pues trabajo en un colegio bilingue: espanol/ingles y siempre tenemos que estar investigando sobre estrategias bilingues."

Question 2. Cost-benefit.

2) What is the cost-benefit analysis of the course for the institutions?

a. What is the cost-benefit ratio for the bilingual delivery mode?

Since 5710 and 5560 were created through the same grant, their costs were the same; however, I do differentiate between the benefits in both courses. I present my cost-benefit results in the order of UNT cost-benefit and UCG cost-benefit. In addition, I include meaningful quotes to support each institution's benefits.

UNT cost-benefit. The University of North Texas Global Initiatives Grant for $18,000 funded the four-course sequence of which 5710 and 5560 were the first two courses. The grant provided for the travel expenses for UNT faculty and staff to conduct the face-to-face training in Guayaquil, Ecuador, the translation and development of the two courses, and a bilingual grader for each course. The UNT coordinator donated her time to the project and UNT's CLEAR department, in charge of overseeing WebCT, waived the online learning student fees for the UCG students. UNT dropped the fee because the UCG students provided a service by piloting the course materials and submitting feedback. UNT did not charge UCG for the courses. UNT students paid regular tuition (Stakeholder_15, personal communication).

UNT benefited by strengthening an international partnership and developing bilingual

courses to offer to other Spanish speaking universities. A few statements that reflect the positive aspects of online learning are from Stakeholder_54 and Stakeholder_15. Stakeholder_54 emphasized some of the benefits UNT students received.

> And it was very helpful for the US students to learn about some of the 'low-tech' inventions that the Ecuadorian teachers regularly came up with the assist their students especially in creating AT in areas that do not have access to high-dollar devices.

During my interview, Stakeholder_15 acknowledged the additional advantage that as the world shrinks due to online learning, bilingual course offerings will become more prevalent:

> But I think it is a good movement. I think it is something we're going to have to look at in the future as far as languages go. I think that whose day is about to really shine on us and we're going to need to consider this.

UCG cost-benefit. UCG students paid tuition to UCG. Also, UCG paid $150 per course to the UCG program coordinator (Stakeholder_55, personal communication).

One of the most advantageous unintended positive outcomes of 5560 was that during the first few weeks into the course a UCG student was inspired to organize and host an assistive technology forum at UCG. Here is Student C_12's account of the forum.

> We had a Local AT Forum, from 1 day on November 2008. The objectives were to show students and public that AT is a possibility and a right in our country. In the AT course we found that a group of students thought that AT was far from us, expensive and not available. I spoke with 2 persons with disabilities in Guayaquil, that had worked with AT (high level) for themselves and for others, and I asked them to participate in a Forum and share their experiences. They accepted very pleasant! Aditionaly [*sic*] I spoke with the representative from Future Kids in Guayaquil, who had participated in FASINARM, a

> foundation for children with intelectual dishabilities [*sic*], and so I organized the Forum. It had 2 parts: an exhibition of hardware and software available and used in our city, and a Mesa Redonda… We had almost 100 people. The public was: the students from the Program with UNT, people with dishabilities [*sic*], their families, other students from UCG, other persons from NGO's, etc.

Moreover, the success of the fall 2008 conference led to UCG hosting a larger assistive technology conference during the spring of 2009 that lasted four days. The course inspired personal transformation as seen in the response from Student C_15. She explained in the discussion board that because of what she learned in the course, she was assisting with a school-wide assistive technology assessment for each student at her school. "Con el equipo de [school name] hemos decidido revisar , en un sesión de trabajo, todos los programas, niño por niño, pensando en este tema."

b. What is the viability of continuing the courses?

Currently, UNT and UCG do not have any specific plans for future courses; still, both institutions will be staying in touch and will continue to look for opportunities to collaborate on similar projects. UNT is interested in offering the four-course sequence to other Spanish-speaking universities and has advertised at an international conference. Stakeholder_15 reported that the next courses would probably involve costs for the receiving institution; however, payment would need to be negotiated and deemed equitable. The Stakeholder_15 recognized that the courses would require minor adjustments for use in other Spanish-speaking countries.

According to Stakeholder_33, UCG will soon be applying to begin a masters degree in special education in Ecuador. In general, one economic factor that could influence the continuation of online learning in the area is the Ecuadorian governments rationing of electricity.

In November 2009, the government turned off the electricity three hours in the morning and three hours in the evening, forcing students to study late at night (Stakeholder_33, personal communication). Although this did not affect the courses in this research, energy rationing is an issue that needs to be taken into consideration when deciding about future online offerings.

c. How satisfied were stakeholders with the course?

I identified 9 themes using my semi-structured interview data from stakeholders. For this question, I focused on the positive remarks; I discuss the drawbacks in Question 4. Overall, the stakeholder consensus was that the courses went well, in addition, a number of respondents selected "There was group of students that welcomed assistive technology" and "Instructor gained from the experience." The statement from Stakeholder_28 expresses the positive experience, "I love the courses, I love how they turned out and I loved being a part of it. It was an awesome project and I wish to do more things like this in the near future." According to UCG Stakeholder_33, she was able to see two groups form, one which embraced assistive technology and another that thought it was out of reach.

> Sin embargo a lo largo del curso, podemos decir que se vio dos grupos: aquellos que acogieron positivamente la propuesta de la tecnología asistencial como algo posible e importante de promover, y aquellos que vieron que la tecnología asistencial es algo distante y caro para nosotros.

d. How satisfied were students with collaborating with an international university?

For this question, I analyzed data from the fall 2008 UCG end-of-course survey and data from my online learning survey. The responses for the five items that compose Factor 1 related to how students perceived the university communication and support are displayed in

Table 8. This was based on a three-point scale: 1 being *very good*, 2 being *average*, and 3 being *poor*. Participant's mean score was 1.38 which falls into the very good to average range.

Table 8

5560 Response to UCG End-Of-Courses Survey Factor 1- UNT and UCG University Communication and Support

n	Alpha	Items	*M*	*SD*	Skew	Kurtosis
21	.75	5	1.38	.53701	1.104	-.066

In addition to the Likert items, UCG students responded to two open-ended questions about the institutions as well. Overall, the most frequent theme for UCG support was that student's received sufficient assistance, in addition, they appreciated the local presence. Concerning UNT support, students responded that the courses offered a new source of information and that UNT was attentive to students.

Online Learning Survey. The responses for the five items that compose Factor 1 related with how students perceived their openness to international partnerships are displayed in Table 9. It was based on a six-point scale. Participants mean score was 4.26, which falls into the *agree* to *strongly agree* range.

Table 9

5560 Response to Online Learning Survey Factor 1- Student Openness to International Partnerships

n	Alpha	Items	*M*	*SD*	Skew	Kurtosis
21	.90	5	4.26	.665	.420	-1.052

3) How was the underlying course goal of enhancing students' multicultural awareness implemented in the course?

a. How were the courses adapted to reflect the different professional and cultural needs of the students from the United States and Ecuador?

I found that in general UNT did make a concerted effort to adapt the courses. Stakeholder_28's response shed light on the course development process in converting the English version into Spanish and making adjustments.

> The courses were adapted accordingly to what UCG Dean and other officials asked to see, then by the students. So we gathered courses that we already had at UNT and translated them. The course content that was in place for the UNT students had everything to do with the State of Texas and CEC laws and objectives. The UCG was mostly on what they needed and what they were looking for. So the content was not totally different, but it was more specific for the UCG students.

Even so, UCG called for more cultural sensitivity as reflected in Stakeholder_55's response

> La adaptación de los materiales a la cultura latina, como se había planteado, no se dio, solo se realizó una traducción (no adecuada) de los materiales al español. En la forma como los cursos se desarrollaron, los estudiantes no percibieron que estos se hayan adaptado a su cultura, a sus valores y a su realidad de país latinoamericano.

For 5560, course developers shortened the amount of exam questions specific to US legislation, and school district policies that the UCG students were required to learn and replaced them with questions based on the Spanish course readings. UNT course developers substituted Spanish articles for the four English articles that were required for course assignments. In addition, UNT was intentional in switching the names of the case study students to reflect the

Ecuadorian culture. For example, in the UCG case study assignment, Sandra Spencer was changed to Sandra Solis, and Sherry Armstrong to Amelia Cazares.

b. How were the courses designed to promote cross-cultural communication among the students?

The expectation that UNT and UCG students should communicate was clearly stated in several ways. First, the instructor wrote in the 5560 syllabus, that the discussion board postings were required as components of two course assignments. Also, the instructor included specific instructions in the rubric on writing an appropriate post. Students were to write one inital post and one response to a post on the discussion board for two assignments. Second, the instructor incorporated nine stimulating discussion board prompts in English and Spanish. The instructor's goal was to create a welcoming atmosphere within the course.

> We tried to make it very friendly. Hola. Welcome. We're glad you're here. We're excited to be working with you. Here are the assignments, in addition you will be asked to post to our discussion board. We appreciate your contributions to the class discussion…. [In the] Course postings, we would talk about the way things are done in Ecuador as opposed to the way things are done in the United States. That's when they got excited too about the law in Ecuador.
>
> Some of the main discussion threads were: 1) Welcome-Bienvenida, 2) Assistive Technology Supports for Reading-Tecnologia Asistencial y Apoyo a la Lectura, 3) Early Thoughts-Primeros Pensamientos, 4) Prompt: Share specific comments regarding the knowledge you learned, thoughts that were provoked, or feelings generated by the video.-Apunte: Comparta comentarios especificos sobre lo que ha aprendido, ideas o pensamientos que le fueron provocados, o emociones generadas por este video., 5) General Discussions-Discusion General, 6) Trabajos- Este es un espacio para compartir

> trabajos despues de haberlos entregado y haya pasado el dia de entrega!! No se puede compartir antes. Tambien pueden compartir ideas, ejemplos, etc. Este es su espacio. Recuerden que deben de platicar con estudiantes de la UNT y esto sera parte de su calificacion., 7) Who says AT has to be expensive?- Quien dice que la TA es cara?, 8) From what you've learned so far, what is your biggest ah-ha about AT?- De lo que ha visto hasta ahora, cual a sido su gran descubrimiento sobre TA?, 9) Share the nuggets you discover...- Comparta sus descubrimientos

Third, the instructor asked the teaching assistant to serve as a translator for the discussion board in order to assist with bridging the gap between students. The teaching assistant translated several lengthy student messages from Spanish to English and vice versa. Student_C31 was very appreciative of his work and posted on the discussion board "…also thanks to [teaching assistant] for translating the discussions.....very interesting to have the perspective from another culture and country." Finally, the course promoted cross-cultural discussion through general encouragement from the UNT faculty and staff as seen in the discussion board text from Stakeholder_28.

> Hello everyone, I was just stopping by to say hello and I was hoping everything was going great for all of you. With less than a month away from finishing this course I wanted to congratulate you and thank you for the great collaboration you have been doing with our Ecuador students and within yourselves (here at UNT). Also, thank you to Andrew for the great translations and all of those students trying their Spanish in the discussion postings. I believe you all have build [*sic*] a great virtual community where you have been able to share and give ideas, opinions, and resources about AT. I am very proud of all of you and I hope everything continues to go well. GOOD LUCK!

c. How did discussions about multicultural awareness materialize within student-student and student-instructor interactions?

In this course, the teaching assistant was assigned to translate course postings. As a result, the UNT students communicated more frequently. Periodically, the teaching assistant would translate a lengthy post from one of the students to enhance communication between the groups. As mentioned earlier, the nine discussion board topics facilitated thought provoking discussion. The overall statistics for the discussion board postings are presented in Table 10.

Table 10

5560 Discussion Board Frequency

Participant	*n*	%
Students	65	91%
Instructors/TA	6	8%
Total	71	

According to the student-to-student discussion board postings, in some ways, 5560 opened up a whole new world for the UCG students, and they were excited about the possibilities. Student C_92's interaction posted to UCG and UNT demonstrates this thought.

> Dear Friends:
>
> How interesting are all your comments, wow, there is a lot out there about TA.
>
> But OOPS, I don't know nothing about them. All the comments that I read, make me feel lost in this new world of TA. I am just beginning to discover all the devices and software to support the learning process and enhace [*sic*] it. But now, I am so curious that I started to find information in the internet, and my first thought was: Which program would be

the best for phonics, or reading comprehension, or math? Another concern that I have is, How do all this devices work? I know the names, but I would like to see, touch and practice with them.

For sure, I will find soon a place to do that.

Thanks for sharing your experience

In addition, UCG students shared several bilingual posts. Student C_12 illustrates the friendship that formed between the students.

Hi everybody. Hola amigos todos. Una mini reseña del foro. Here you can see some photos from the foro. Our proposal is to organize an international Foro in April. You are all invited!! :) Quiero agradecer por esta buenísima experiencia de haber compartido entre estudiantes de Ecuador y de Estados Unidos.

I want to say thank you for this excelent [*sic*] experience sharing with students from US and Ecuador.

Also, UCG students shared resources related with diversity and began to form their own informal professional learning groups. Student_C12 posted this message.

Hola a todos:

Quiero compartir con ustedes que en mi Actividad 3 del Curso Introductorio, cuando tuve que leer un libro, elegí "Nada sobre Nosotros sin Nosotros", del Dr. David Werner. Él es un hombre con una discapacidad motriz que la ha sobrellevado desde niño. Ha aprendido de sus propias experiencias, sentimientos y sensaciones para crear las ayudas necesarias para vivir mejor. Y ha compartido y aprendido de miles de personas con discapacidad para mejorar sus vidas. En ese libro podemos ver cómo la Tecnología Asistencial puede ser barata. Es un gran libro.

> And now I will try it in English: I want to share with you about the book that I read when I had to do the 3º Activity in the Introductory Couse: [*sic*] "Nothing about Us without Us", from Dr. David Werner. He is a man with a physical disabilitiy, [*sic*] since he was a child. Through his life he has learned from his own experiences, feelings and sensations to creat [*sic*] assistive technology to improve his own life. And he has shared and learned from thousand of persons with disabilities to improve their lifes [*sic*]. In that book we can see how AT can be cheap. A great book.

Again, the teaching assistant translated some discussion board postings to enhance communication between the groups. This message illustrated how he encouraged the UNT students to read UCG posts. “Hi all, I found this post by Mimi Ramirez to be particularly interesting and thought-provoking. Check it out. Mimi--gracias por tu impactante historia.” After the assistive technology forum at UCG. Student_C 12 posted a message to the instructor summarizing what took place and the instructor responded enthusiastically.

> [Student C_12] Hi Dr. M. Hola a todos. Bueno amigas, el trabajo valió la pena para tener contacto real y no solo virtual con las tecnologías asistenciales. Las tres personas que nos acompañaron nos dieron información y nos dieron lecciones de vida y de entusiasmo. Tenemos la gran responsabilidad de trabajar con las nuevas herramientas que estamos aprendiendo, desde usar un power point hasta saber cómo se siente un ciego frente a una computadora, etc, etc, etc...
>
> [5560 Instructor] (Student C_12)...I wish I'd been there! :)

Table 11 presents the results from the online learning survey regarding Factor two about communication. The findings indicate that students’ rated the amount of communication with the partner university between the neutral to agree range.

Table 11

Response to Online Learning Survey Factor 2- Students' Amount of Communicating with the Partner University

n	Alpha	Items	*M*	*SD*	Skew	Kurtosis
15	.70	2	3.75	1.54	.055	-.504

Question 4. Unintended consequences.

4) What are the unintended positive or negative consequences of the course design and implementation?

a. Was there a disconnection between the proposed course expectations for enhancing student's multicultural awareness and the actual course implementation?

The inclusion of multicultural awareness appears to have taken place in all areas of the course materials, which would suggest that the course goals and implementation aligned. When students were asked to describe their own view of multicultural education, they appeared to understand the meaning of the word and a large majority viewed 5560 as increasing their multicultural awareness. The data suggest that for some students, 5560 did increase their multicultural awareness and influenced their inclusion of various cultures in the classroom. In addition, the frequent instances of intercultural communication on the discussion board aligned with the grant's goal of enhancing teachers' multicultural awareness. In my interview, the 5560 instructor conveyed the multicultural awareness theme as well.

> First of all, I wanted them to know about assistive technology and be able to implement it in their classrooms, all the kids, the Americans as well as the Ecuadorian students. That was the primary thing... Anything in addition to that in terms of multicultural awareness,

appreciation for the systems of other countries, that's kind of like icing on the cake. That was, just that much better, that much more.

b. What did students and stakeholders view as course benefits/drawbacks?

The data I used for this question encompasses all the groups involved in the course. I arranged the results according to the form of data collection. According to my interview responses, my analysis revealed that translation issues for both courses were a top priority. Stakeholder_55 shared that the problems with the translation stem from sentence structure, vocabulary, and confusing passages.

Los problemas de traducción más mencionados son:

Estructuras de las oraciones que conservan la estructura original del ingles.

Palabras no comúnmente utilizadas en el léxico profesional en América Latina.

Redacción confuse.

Specific issues concerning 5560 were that the language barrier emerged as a concern from both UNT and UCG. With UCG, the theme manifested itself as appearing that the instructor gave little feedback. Meanwhile at UNT, the instructor felt the same distress as she attempted to respond yet lacked the skills.

So they (UCG) would write me, but I was of no help really because I'm not bilingual. What I would do is I would paste their comments into one of these google translators, babelfish, or something to figure out exactly what it is that they were saying and then I would try to answer them to the best of my knowledge.

Students most frequently responded that flexibility and limited driving were the greatest benefits of online learning. Student C_34 emphasized that thought and wrote “Was able to do it on my time.” Also, Student C_ 26 responded that being able to work at home benefits her by

"not having to go to campus." Students' responses that they had difficulty accessing Blackboard are reflected in Student C_78's brief description, "Acceso inmediato a Blackboard." And in Student C_ 32's feedback on her technical difficulties submitting assignments."Los deberes no siempre se mandaban, blackboard tuvo muchas fallas." Students appeared not to have any major unexpected issues with course. Besides responding with "No," "Translation issues" were the next highest concern. Student C_33 described that the issues with the translations involved, "la forma de traduccion de ciertos documentos."

The responses for the three items that composed Factor 2 related to how students perceived the course content and was based on a four-point scale: 1 being *very good*, 2 being *good*, 3 being *average*, and 4 being *poor*. Table 12 displays that participant's mean score was 1.92 which is closest to the *good* range.

Table 12

Response to 5560 UCG End-of-Course Survey Factor 2- 5560 Quality of Course Content

n	Alpha	Items	*M*	*SD*	Skew	Kurtosis
21	.71	3	1.92	.48195	.460	.273

In addition to Likert items, UCG gathered an open-ended response about course content as well. UCG students' responses that the course went well is evident in Student C_4's statement, "Apropiada para el tiempo de duracion, muy buena." Students' views of the courses being suitable are expressed by Student C_29. "Este curso tuvo una cantidad adecuada de material." Even so, suggestions for improving the course revolved around expanding the course materials. Student C_10 explained how she felt that some course topics needed more explanation, "Buena, pero podria ser un poco mas profundos los temas." Interestingly, students

acknowledged that learning online opened up a new resource for learning. Student C_4 described the phenomena as, “Una nueva forma de aprender, con tecnologia de avanzada, desde mi casa y sin descuidar mi trabajo y familia.” While Student C_16 explained how online learning is a valuable tool to continue to discover. “Una gran herramienta, un facilitador de estudios, una magnifica fuente de informacion.”

c. What are recommendations for course redesign or improvement?

UCG students most frequently referenced improving professor/TA feedback as their highest recommendation to develop the course. Student C_84 expressed that, on a few occasions, instructor/TA delayed in responding. “En algunas ocasiones tardaron en dar respuesta a mis inquietudes con respecto a tareas y contenidos.” Again, this connects with my findings in Question 3 about the appearance of little instructor feedback due in the language barrier. Throughout all my data, I consistently found UCG offering thanks and gratitude to UNT. This theme is echoed in the discussion postings also. Student C_10 explained her appreciation as,

> Gracias a Uds. por compartir con nosotros sus conocimientos en el curso. Gracias por su paciencia y apoyo en las necesidades. Me encanto hacer este curso y me ha sido de mucha ayuda en el campo profesional. Un abrazo para todo el Equipo Humano de U.N.T y Feliz Navidad.

The UNT stakeholders focused on recommending improvements with the logistics of course delivery such as enrollment and conducting onsite meetings while the UCG stakeholders recommended improving the translation through a double-review process and including more instructor feedback. The repondents’ recommended that the framework be strengthened for instructors and students to be able to communicate. One suggestion from Stakeholder_20 is to

involve more than one translator. Also, Stakeholder_54 proposed incorporating more background information on Ecuador for UNT students to facilitate their understanding.

Summary of Findings

The evidence resulting from my four central questions revealed these findings for each course.

5710 and 5560 findings.

1. What is the evidence of multicultural awareness in these two special education courses?

As demonstrated through the course textbook, assignments, standards, and other course materials, multicultural awareness references and objectives were woven throughout this course. Data from the online learning survey revealed several findings. Students most frequently referenced that multicultural education is about acquiring a different perspective. Students were evenly divided on whether they viewed the course materials as enhancing their multicultural awareness. Over half of students responded that the course had influenced their lesson design regarding the inclusion of various cultures. Findings from the UCG end-of-course survey suggested that students perceived the support from the universities as "very good." That thought was also echoed in the open-ended responses.

For 5560, I distinguished nine multicultural awareness references in the course assignments. Data from the online learning survey revealed several findings. Students most frequently referenced multicultural education as acquiring a different perspective. The majority of students viewed the course materials as enhancing their multicultural awareness. More than half of students responded that the course made a difference in or influenced their lesson design. Student-perceived openness to international partnerships was found to be between the range of

agree to *strongly agree*. Findings from the UCG end-of -course survey suggested that students perceived the support from the university as *average* to *very good*. Overall, the most frequent theme for UCG support was that students received sufficient assistance. Concerning UNT support, students responded that the courses offered a new source of information.

2. What is the cost-benefit analysis of the course for the institutions?

The University of North Texas Global Initiatives Grant for $18,000 funded the four-course sequence of which 5710 and 5560 were the first two courses. The grant provided for the travel expenses for UNT faculty and staff to conduct the face-to-face training in Guayaquil, Ecuador, the translation and development of the two courses, and a bilingual grader for each course. UNT benefited by strengthening an international partnership and developing bilingual courses to offer to other Spanish speaking universities. UCG's cost was that they paid $150 per course to the UCG program coordinator. UCG benefited from the courses by receiving the courses at no cost from UNT. Experience gained from this partnership has led UCG to begin plans to develop its own master's degree in special education.

Currently, UNT and UCG do not have any specific plans for future courses; still, both institutions will be staying in touch and will continue to look for opportunities to collaborate on similar projects. Overall, the stakeholder consensus was that the courses went well.

For 5560, the UNT and UCG cost and benefits were the same as the first course except that UCG had an additional benefit. The most advantageous unintended positive outcome of 5560 was that during the first weeks into the course a UCG student was inspired to organize and host an assistive technology forum at UCG. Moreover, the success of the fall 2008 assistive technology conference led to UCG hosting a larger conference during the spring of 2009.

Experience gained from this partnership has led UCG to begin plans to develop its own master's degree in special education.

Currently, UNT and UCG do not have any specific plans for future courses; still, both institutions will be staying in touch and will continue to look for opportunities to collaborate on similar projects. Overall, the stakeholder consensus was that the courses went well.

3. How was the underlying course goal of enhancing students' multicultural awareness implemented in the course?

In general, UNT did make a conscious effort to adapt the courses. The instructor clearly stated the expectation that UNT and UCG students should communicate in several ways. First, the syllabus listed that students should post to the discussion board. Second, the instructor and teaching assistant posted several messages to the discussion board introducing UCG to UNT and explained where to find online translators. They also provided general encouragement for students to collaborate. In this course, the teaching assistant was not assigned to translate course postings. As a result, the UNT students mainly posted to other UNT students and the UCG students did the same, although a few students did reach across international lines. Periodically, the instructor or teaching assistant would attempt to bridge the discussion board divide with a bilingual post. The instructor was diligent to welcome students to the class after they had posted an introductory message; as a result, some of the students' replies indicated that they perceived themselves as valuable contributors to the class. Some multicultural awareness messages frequented the discussion board.

For 5560, In general, UNT did make a concerted effort to adapt the courses. The expectation that UNT and UCG students should communicate was clearly stated in several ways. First, the instructor wrote in the 5560 syllabus, that the discussion board postings were required as components of two course assignments. Also, the instructor included specific instructions in

the rubric on writing an appropriate post. Students were to write one initial post and one response to a post on the discussion board for two assignments. Second, the instructor incorporated nine discussion board prompts in English and Spanish. The instructor's goal was to create a welcoming atmosphere within the course. Third, the instructor asked the teaching assistant to serve as a translator for the discussion board in order to assist with bridging the language barrier between students. As a result, the UNT and UCG students communicated more frequently. Periodically, the teaching assistant would translate a lengthy post from one of the students to enhance communication between the groups. In some ways, 5560 opened up a completely new world for the UCG students and they were excited about the possibilities of assistive technology within their own schools.

4. What are the unintended positive or negative consequences of the course design and implementation?

Students appeared not to have any major unexpected issues with the course. The inclusion of multicultural awareness appears to have taken place in all areas of the course materials, which would suggest that the course goals and implementation aligned. Students appeared to have a grasp of the definition of multicultural education but were equally divided about whether 5710 increased their multicultural awareness. On the other hand, over half responded that 5710 had influenced their creativity for including various cultures in lesson design. I found mixed results whether 5710 enhanced students' personal views about multicultural awareness, but it seemed to have influenced their lesson design and made a difference in other areas. Students most frequently responded that flexibility and limited driving were the greatest benefits of online learning. In contrast to the grant's goal of enhancing

teachers' multicultural awareness, the number of intercultural communication on the discussion board were few.

According to the UCG end-of-course survey, students rated the quality of the course content as *good* to *very good*. Specific issues concerning 5710 were that UCG students, being new to online learning, required extra support from the UNT faculty and staff. Throughout all my data, I consistently found UCG offering thanks and gratitude to UNT. This theme was echoed in the discussion board postings also. My analysis revealed that translation issues for both courses were a top priority.

For 5560, students appeared not to have any major unexpected issues with the course. The inclusion of multicultural awareness appears to have taken place in all areas of the course materials, which would suggest that the course goals and implementation aligned. Students appeared to understand the meaning of multicultural education and a large majority viewed 5560 as increasing their multicultural awareness. In addition, more students responded that 5560 influenced their creativity in lesson design or made a difference in other ways. The data suggested that for some students, 5560 did increase their multicultural awareness and influenced their inclusion of various cultures in the classroom. Students most frequently responded that flexibility and limited driving were the greatest benefits of online learning.

My analysis revealed that translation issues for both courses were a major challenge. The language barrier emerged as a concern with both UNT and UCG stakeholders. For UCG students, it appeared that the instructor gave little feedback. Meanwhile at UNT, the instructor referenced the same concern yet lacked the language skills to communicate as she desired. According to the UCG end-of-course survey, students rated the quality of the course content as "good." This finding was consistent with the open-ended responses. Specific issues concerning

5560 were that UCG students frequently referenced improving the professor/teaching assistant feedback as their highest recommendation to improve the course.

Throughout all my data, I consistently found UCG offering thanks and gratitude to UNT. The UNT stakeholders focused on recommending improvements with the logistics of course delivery, while the UCG stakeholders made suggestions for improving the translation and instructor feedback. The stakeholders' recommended that the framework be strengthened for non-bilingual instructors and students to be able to communicate more freely.

In conclusion, both 5710 and 5560 took an innovative approach to bridging the digital divide between two culturally different groups. My findings suggest that the courses had many strengths, as well as a few weaknesses. I present the discussion of those components next.

CHAPTER 5

SUMMARY AND DISCUSSION

Introduction

In this chapter, I provide the discussion of the results, recommendations for further research, and conclusions. Even with concerted efforts through traditional means to increase the supply of special educators, shortages persist (Spooner, Agran, Spooner & Kiefer-O' Donnell, 2000); therefore, teacher preparation programs are turning to online education (Kurtts & Vallecorsa, 1999; Mohr, 2004). The increase of distance learning (Ludlow, 2001) is revolutionizing training for special educators, and its use could "systematically impact the shortage" (Spooner et al., 2000, p. 92). Literature suggests that distance learning in special education teacher preparation has the potential not only to reduce the shortage (Johnson, 2004; Spooner et al., 1998; Smith & Meyen, 2003; Meyen, Aust, Gauch, Hinton, Isaacson, Smith & Tee, 2002c; Sun, Bender & Fore, 2003; O'Neal, Jones, Miller, Campbell & Pierce, 2007; Bore, 2008; Meyen, Aust, Bui & Isaacson, 2002b; Ludlow, 1994), but also to provide the most up-to-date training, especially in rural and remote areas (e.g. Utah, West Virginia, Iowa, Kentucky, Ohio, New Mexico, Colorado) (Johnson, 2004; Ludlow, Foshay, Brannan, Duff & Dennison, 2002; Ludlow et al., 2002; Ludlow & Brannan, 1999; Ludlow & Duff, 2002; Jung, Galyon-Keramidas, Collins & Ludlow, 2006; Spooner et al., 2000; Spooner, Jordan, Algozzine & Spooner, 1999).

Researchers have conducted program evaluations of distance learning programs in the US; still, very little research exists on the evaluation of international online special education programs. Moreover, I found no studies involving bilingual, online special education courses. Although one study does not provide all the answers, my findings contribute to the literature by

evaluating two bilingual, online special education courses, when previous research was limited or nonexistent.

Discussion of the Results

My findings suggest that the courses had multiple strengths and also a few weaknesses. I include the results from several studies, specifically related with online education for special educators, to support my findings. Again, I examined multicultural awareness from two perspectives: first, UNT's integration of multicultural course content; and second, UNT's own cultural sensitivity in adapting the courses for the South American students at UCG.

5710 strengths. The strengths of 5710 were that the course developers did integrate multicultural awareness units within the course and that UNT made some cultural adaptations of the course materials for the UCG students. The few instances of multicultural awareness dialogue on the discussion board between instructors and students indicate a practical application of this goal. Grouping the UCG students as a cohort and providing the face-to-face UCG WebCT training was culturally appropriate and positively affected the course implementation. Findings from the literature support UNT's approach to implementing the UCG online program. Jameson and McDonnell (2007) encourage universities to have students complete programs as a cohort to increase the completion rates for degree programs. Jameson and McDonnell (2007) and Menlove and Lignugaris/Kraft (2004) suggest that providing an initial orientation training to help students feel comfortable with the online system may lead to lower attrition.

5710 weaknesses and recommendations. Even with the inclusion of multicultural awareness units and the cultural adaptations made to course materials, UCG students needed more. For example, the findings from Question 4 suggest that UCG stakeholders and students

have requested more focus on their own Ecuadorian policy in the region. The need for a greater effort to foster communication between the two groups on the discussion board postings became evident. My suggestion for promoting more cross-cultural communication is that the number of discussion board prompts be increased. The prompts should be purposefully written to spark conversations comparing and contrasting topics related with cultural diversity in the US and Ecuador. In addition, students' participation on the discussion board should be a grade requirement. Some of these ideas to address UCG student and stakeholder concerns have already been integrated into 5560.

Based on the findings from Question 3 that the amount of intercultural communication was very limited, I suggest that several bilingual translators be provided to assist with the cross-cultural communication and possibly that students be assigned a project that requires them to work together across international lines. One example for an exchange assignment would be to require students to work in pairs with a partner from the international university to develop a unit on multicultural education that both master's students could teach to their own K-12 students. The master's students could communicate in English and Spanish through their personal language abilities, free online translating websites, and the bilingual personnel available in the course. The multicultural education unit would be required to include multicultural education objectives and activities, and preferably a K-12 student collaboration component, where students from each school could share their responses. The collaboration component could be implemented through electronic pen pals or video conferencing. The master's students would join together on the creation of the unit; however, they could each tailor the multicultural education material to their own classroom needs. As the master's students discuss with their partners why and how they adapted the multicultural unit to their own K-12 students, the

multicultural awareness learning objective of this assignment will be fulfilled. An additional benefit of this assignment is that the emphasis on multicultural awareness would have an impact on both teachers and students.

5560 strengths. The strengths of 5560, as I noted with 5710, were that the course developers did integrate multicultural awareness units within the course and that UNT made some cultural adaptations of the course materials for the UCG students. Among the strengths specific to 5560 were the teaching assistants' translations of discussion board postings. These translations, along with the structured discussion board prompts, may have led to the increased number of multicultural awareness discussion board messages between and among students. Also, discussion board participation was required for a grade.

Within one semester, UCG students modified their perceptions of online learning. During 5710, UCG students most frequently responded that online learning was "flexible" yet "challenging." In contrast, the following fall, 5560 UCG students most frequently responded that online learning "had opened up a new resource for learning for them" and had become "a valuable tool." The word "challenge" had moved to the bottom in the list of responses. These findings about flexibility and students' positive view of online learning are consistent with research from the following studies. Rowlison (2006) reported that students' most frequent comment was that they liked being able to work at their own pace. Similiarly, Bore (2008) surveyed students after their online course and found that students favorably viewed taking another online class because of the scheduling flexibility. A major strength for UCG was that students took the initiative to organize and host their own Assistive Technology forum at the university. Finally, my findings suggest that creating a more stringent translation process at the

institution level might help prevent miscommunication and provide for more culturally relevant discussion.

5560 weaknesses and recommendations. However, as I stated with 5710, even with the inclusion of multicultural awareness units and the cultural adaptations made to the course materials, UCG students needed more. For example, UCG stakeholders and students have requested more focus on their own Ecuadorian policy in the region and assistive technology that is available in their country. Additionally, to address UCG students' concerns about the lack or delay of instructor and teaching assistant feedback, I suggest that more bilingual personnel be in place to assist instructors. I estimate the extra expense for hiring more bilingual personnel to be approximately $7,000 for the additional salary for each teaching assistant.

Evaluation of the unfolding model and general recommendations. The unfolding model was appropriate for this research because it provided structure, captured the perspectives of a wider audience, and allowed for overlapping data. Within the unfolding model, the unintended consequences component provided the richest information to me in conducting my research. The unintended consequences element allowed me to analyze the data by searching for the gaps between the course goals and the actual course implementation. My goal was to use all of the data to see how the course worked as a system in order to determine how well the course operated.

Ruhe and Zumbo (2009) also consider the unintended consequences component to be one of the most useful elements of the model. The authors explain their findings for unintended consequences in two case study examples in their book. In a professional writing course, Ruhe and Zumbo (2009) found positive unintended consequences in quality assurance for keeping graders' comments consistent in tone and focus among the courses with multiple graders. In the

second course, Computing Science, the authors present the unintended consequences of the course as "fit with employment needs, access and flexibility, adding lectures, frequent updates of curriculum and tests, lower cost savings, continuous enrollment" (p. 221).

In my own study, unintended consequences revealed that most of the drawbacks mentioned by stakeholders and students: translation issues with course materials, UCG requesting more of the South American perspective, requesting more information on the Ecuadorian special education laws, lack of Spanish resources, the feedback issues from UNT staff, the appropriateness of course content (for example with assistive technology- the UCG students did not have the same equipment available to them as the UNT students) converged around the central theme of the importance of language and culture. My research implies that the translation and adaptation of the international online courses are not enough; rather, courses must be modified to reflect the language (translating meaning rather than simply words) and culture of the international students. After reviewing my recommendations, the UCG Dean of the College of Education agreed with the importance of the inclusion of language and culture to promote the success of distance learning and that the face-to-face meetings improved communication between instructors and students. Along that vein, the UNT course developer had these comments about changes that will be made to the course because of my research findings.

> Dr. E and I are looking at options for offering the online classes to other Spanish speaking countries. Dr. S is offering his support for his providing the courses to other South American countries. We will take your suggestions and update the classes before they are offered again. The review of the classes has helped us to better understand the needs of the UCG students. UCG students require more direct instruction from the instructor. In the future we will staff the classes with instructors who have better skills in

> Spanish. The face-to-face meeting time was important. We will attempt in increase face-to-face meetings in the future. (Stakeholder_15, personal communication)

These findings in the literature suggest that the continuous development of this four-course sequence is worth pursuing as more institutions are sharing online resources. Steckelberg et al. (2007) developed one online model and successfully shared the resources with six other university sites, suggesting that outside programs can be implemented effectively in other institutions. Sharing Steckelberg et al.'s views, Smith and Meyen (2003) explained how some online teacher preparation programs are teaming up to share courses or Reusable Learning Objects (RLO). RLO implementation provides a much greater volume of resources than an individual faculty member could develop alone. To date, I found information on English-only courses open to individuals living internationally (Ludlow et al., 2009), and one-time endeavors in Ecuador, such as volunteering abroad (Global Volunteers, 2002; World Endeavors, 2003) or student teaching (Kennesaw State University, 2008; Office of Internationalization, 2009).

Recommendations for Further Research

My recommendation for further research is that course developers conduct a formative evaluation of the final two courses in the four-course sequence with UCG and adjust the courses as needed. In addition, I suggest that the course developers implement the courses at other Spanish-speaking universities, complete another formative evaluation on the four-course sequence, and make modifications to the courses based on the findings. After several rounds of formative evaluations, I recommend that the course developers conduct a summative evaluation of the four-course program to determine the program's merit and worth.

Conclusion

The internationalization of distance learning in special education is at a pivotal point in expansion. As mentioned earlier, with the global need for more special educators, many institutions are turning to distance learning to increase the offering of special education resources. One concern is that institutions may prematurely expand their courses internationally before the proper bilingual framework is in place. The broader implications of my research apply to the development of international distance education programs. My findings reveal that institutions need to take several issues into consideration while developing an online, bilingual special education program.

First, institutions need to survey the availability of course materials in the language of the receiving country and consider these questions: Where will the course developers find the materials? How will the course developers adapt the materials? Is there a digital divide? Second, the course development team must establish a support system for the international students. Institutions can do this by conducting face-to-face training sessions, providing an onsite liaison, and staying in close contact with the receiving university to monitor the students' needs. This may require that the US instructors modify their own teaching style to meet the needs of the international students. Third, institutions should encourage intercultural dialogue and provide an avenue for all students to feel connected in the course, even if they do not speak the same language. This means that an institution needs to provide multiple translators and, ideally, instructors with a working knowledge of the language.

Last, the course translation should reflect the language and culture of the receiving international group. Converting the course from language one (L1) to language two (L2) is one of the most challenging aspects of course development because direct translation does not exist

for all words and meaning can be relative to a geographical location. Institutions can improve the translation by treating the L2 coursework as a completely separate course, instead of as only a twin of the L1 course. The L2 coursework should be customized to the learning needs, culture, and language of the L2 students. Extra care should be taken to accurately translate high priority items such as quizzes and exams due to the sensitive nature of students' grades. Developing an international course is labor intensive and requires several drafts before implementation. Institutions should conduct a double-review process in which a native speaker from the area reviews the translation before the course is finalized. Even with a stringent review process, both institutions need to understand that translation issues will arise and institutions need a protocol for correcting the errors.

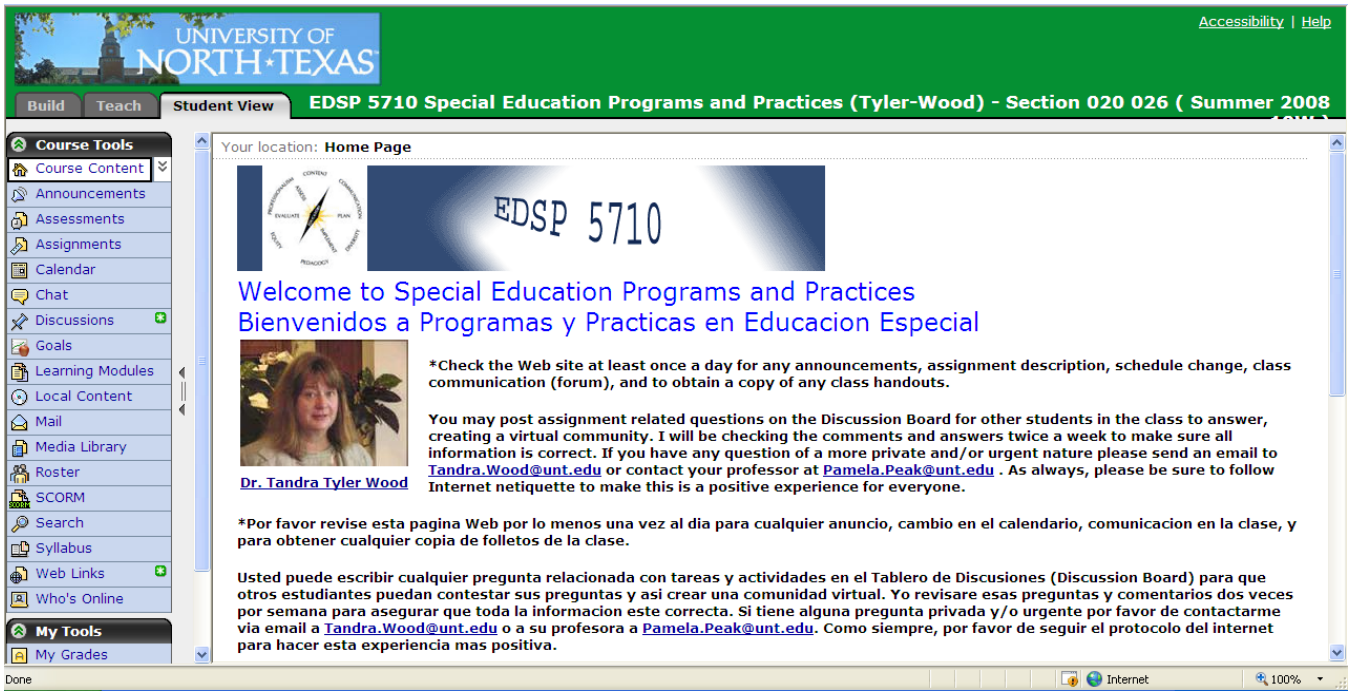
Diverse cultures can be integrated by investigating ways that international students can make learning personal by putting it in their own context. What is deemed an appropriate time frame for receiving feedback for questions and graded assignments, for example, can vary by culture. Institutions will benefit by clarifying student and instructor expectations in this regard. If the hosting institution makes a concerted effort to collaborate with the receiving institution, then even when cultural differences emerge, the institutions will be able to work through the difficulty. Above all, the receiving institution will appreciate any efforts to offer an international course, even if the courses are not perfect.

In sum, before embarking on an international special education distance learning program, institutions would be wise to consider what resources are available in the language, what type of student support system to put in place, how to enhance intercultural dialogue, and how to translate the courses to reflect the international students' language and culture. If implemented correctly, more international special educators will receive much-needed training

that is relevant and meaningful. Once thought an aspiration for the future, international sharing of special education programs must become a reality if institutions are to meet the acute global shortage of special educators. International collaboration is vital in visualizing special educator training in the future.

APPENDIX A

WEBCT INTERFACE


UNIVERSITY OF NORTH TEXAS
Accessibility | Help
Build
Teach
Student View
EDSP 5710 Special Education Programs and Practices (Tyler-Wood) - Section 020 026 (Summer 2008
Course Tools
Course Content
Announcements
Assessments
Assignments
Calendar
Chat
Discussions
Goals
Learning Modules
Local Content
Mail
Media Library
Roster
SCORM
Search
Syllabus
Web Links
Who's Online
My Tools
My Grades
Your location: Home Page
EDSP 5710
Welcome to Special Education Programs and Practices
Bienvenidos a Programas y Practicas en Educacion Especial
Dr. Tandra Tyler Wood
*Check the Web site at least once a day for any announcements, assignment description, schedule change, class communication (forum), and to obtain a copy of any class handouts.
You may post assignment related questions on the Discussion Board for other students in the class to answer, creating a virtual community. I will be checking the comments and answers twice a week to make sure all information is correct. If you have any question of a more private and/or urgent nature please send an email to Tandra.Wood@unt.edu or contact your professor at Pamela.Peak@unt.edu . As always, please be sure to follow Internet netiquette to make this is a positive experience for everyone.
*Por favor revise esta pagina Web por lo menos una vez al dia para cualquier anuncio, cambio en el calendario, comunicacion en la clase, y para obtener cualquier copia de folletos de la clase.
Usted puede escribir cualquier pregunta relacionada con tareas y actividades en el Tablero de Discusiones (Discussion Board) para que otros estudiantes puedan contestar sus preguntas y asi crear una comunidad virtual. Yo revisare esas preguntas y comentarios dos veces por semana para asegurar que toda la informacion este correcta. Si tiene alguna pregunta privada y/o urgente por favor de contactarme via email a Tandra.Wood@unt.edu o a su profesora a Pamela.Peak@unt.edu. Como siempre, por favor de seguir el protocolo del internet para hacer esta experiencia mas positiva.
Done
Internet
100%

APPENDIX B

DATA COLLECTION MATRIX

EDSP 5710	Aug-08	UCG End-of-course survey	18
	Nov-09	Online Learning Survey	20
	Nov-09	Archived document (Conference papers, course syllabi, grant proposal, modules, PPTs, Assignments, number of test, & exam questions related with multicultural awareness, discussion postings- student-student interaction & student-instructor interaction)	All respondents
Both Courses	Nov-09	Semi-structured interview questions with UNT course developer	Stakeholder_15
	Nov-09	Semi-structured interview questions with 5710 teaching assistant	Stakeholder_28
	Nov-09	Semi-structured interview questions with UCG Dean of the College of Education	Stakeholder_55
	Nov-09	Semi-structured interview questions with UCG program coordinator	Stakeholder_33
EDSP 5560	Dec-08	UCG End-of-course survey	21
	Nov-09	Online Learning Survey	15
	Nov-09	Archived document (Conference papers, course syllabi, grant proposal, modules, PPTs, Assignments, number of test, & exam questions related with multicultural awareness, discussion postings- student-student interaction & student-instructor interaction)	All respondents
	Nov-09	Semi-structured interview questions with 5560 professor	Stakeholder_54
	Nov-09	Semi-structured interview questions with 5560 teaching assistant	Stakeholder_20

APPENDIX C

PARTICIPANT PERMISSION STATEMENT

University of North Texas Institutional Review Board

Informed Consent Notice

The purpose of this research study is to evaluate what improvements should be made to two online courses. You are being asked to complete a survey that will take about 20 minutes. Although this study is not expected to be of any direct benefit to you, we hope to learn more about online training for special educators. Answering the questions in the survey involves no foreseeable risks. Participation is voluntary and you may stop at any time without penalty. By completing the survey you are giving consent to participate and confirming that you are at least 18 years old. Your answers will remain confidential/anonymous and will be protected by using pseudonyms in reports. I will be the only one with access to the identifiable data. The confidentiality of your individual information will be maintained in any publications or presentations regarding this study. Results of the survey will be reported only on a group basis.

If you have any questions regarding this study, please contact Rebekah McPherson at telephone number or the faculty advisor, Dr. Kelley King, UNT Department of Teacher Education and Administration, at telephone number. This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects. You may print this Notice for your records.

APPENDIX D

UNIVERSIDAD CASA GRANDE END OF COURSE SURVEY

1. Mi mayor interes era aprender sobre... (Short answer)
2. La cantidad del contenido del curso fue... (Short answer)
3. El titulo que me interesa obtener es... (Short answer)
4. Aprendiendo en el internet ahora significa para mi... (Short answer)
5. Durante el programa, la UCG (Short answer)
6. Durante el Programa, la UNT... (Short answer)
7. Ya que el programa esta finalizando, mi interes particular (profesional, de formacion) es... (Short answer)
8. Los contenidos del programa fueron..

A. Han Rebasado mis expectativas de manera favorable

B. Estuvieron a la altura de lo que yo esperaba

C. No han llegado a responder a mis expectativas

9. La cantidad de contenidos fueron...

A. Ofrecieron mucha informacion en concordancia con un Programa de este nivel

B. Fueron suficientes

C. Fueron excesivos

D. No fueron suficientes

10. La naturaleza de los contenidos

A. fue muy pertinentes

B. fue buena pero tenemos que adaptarla a nuestra realidad

C. fue buena pero no corresponde con nuestra realidad

11. La dinamica del Programa en su orientacion al aprendizaje de los alumnos

A. fue excelente

B. fue buena

C. fue regular

12. Las diferentes herramientas y materiales de aprendizaje

A. fueron excelentes y muy utiles

B. fueron buenas

C. No fueron todas necesarias

D. No puedo opinar. No las conozco

13. El manejo del Blackboard

A. Me encanto

B. Lo aprendi y me manejo bien

C. Se me hizo dificil pero lo maneje lo suficiente

D. Aun me da dificultades

14. El Taller de dos dias con el equipo de North Texas

A. Me perimitio conocer y familiarizarme con el Blackboard

B. Conoci el Blackboard pero no me ayudo mucho a manejarme con el

C. Ya conocia el Blackboard u otras plataformas y no lo necesitaba

D. Fue insuficiente. Yo necesitaba mas tiempo de practica.

15. Si tuve problemas (no contestas si no aplica)

A. Pedi ayuda y me la dieron

B. Pedi ayuda y me la dieron pero no pude superar el problema

C. Pedi ayuda pero no me la dieron

16. Las diferentes opciones y herramientas

A. Las use todas

B. Use algunas

C. Solo use lo basico para cumplir con las tareas

17. Las comunicaciones de la Coordinadora de la Universidad Casa Grande

A. Nos mantuvieron al tanto de las cosas importantes

B. Fueron suficientes

C. Fueron escasas. Necesito mas comunicacion y contacto

18. El apoyo de la Coordinadora de la UCG

A. Fue muy bueno, lo tuve cuando lo solicite

B. No lo tuve ni lo necesite

C. Cuando lo solicite, no fue efectivo o llego con tardanza

19 Los momentos de encuentro generados por la Coordinadora (como la reunion taller)

A. Son muy importantes y se deben mantener

B. Son buenos y podrian ser utiles

C. No los necesito. Me basta con la comunicacion online.

20. El contacto con las docentes de la UNT en el Taller Inicial

A. fue muy bueno, pudimos conocerlas e interactuar con ellas

B. fue bueno

C. fue escaso, limitado a cuestiones tecnicas

21. Las comunicaciones de la Coordinadora de la UNT

A. Nos mantuvieron al tanto de las cosas importantes

B. Fueron suficientes

C. Fueron escasas. Necesito mas comunicacion y contacto

22. El apoyo de la Coordinadora de la Universidad de North Texas

A. Fue muy bueno, lo tuve cuando lo solicite

B. No lo tuve ni lo necesite

C. Cuando lo solicite, no fue efectivo o llego con tardanza

23. Este espacio es para comentarios (anonimos) para mejorar el curso y nuestros servicios como Profesoras y asistentes. Gracias por todo!! (Short Answer)

APPENDIX E

ONLINE LEARNING SURVEY

Please fill in this survey to the best of your ability. Not all questions will apply to your situation, depending on which class or institution you are in. If a question does not apply, please enter N/A (not applicable) as your response. If there are any questions you feel uncomfortable with, just skip them and move on to the next item. We estimate this questionnaire will take approximately 10 minutes to complete.

By completing this survey, you will influence the quality of future courses you may take and how technology is used in those courses. Your cooperation is important and greatly appreciated.

TO THE PARTICIPANT: The demographic information requested below is necessary for the research process. Please be assured that this information and all your responses on this survey will be kept strictly confidential. Data will be reported in such a way that identification of individuals will be impossible./

Favor de llenar este cuestionario lo mejor que pueda. No todas las preguntas aplicarán a su situación, dependiendo de la clase de institución en que se encuentre. Si una pregunta no aplica, por favor escriba N/A (no aplicable) como respuesta. Si se siente incómodo con alguna de las preguntas, solo sáltela y continúe con la siguiente. Calculamos que le tomará aproximadamente 10 minutos completar este cuestionario.

Al llenar este cuestionario, usted contribuirá a la calidad de los futuros cursos que tome y en el uso de la tecnología en los mismos. Su cooperación es importante y altamente apreciada.

PARA LOS PARTICIPANTES: La información demográfica que se solicita a continuación es necesaria para el proceso de investigación. Tenga la plena seguridad de que la información que nos proporcione con sus respuestas a este cuestionario será estrictamente confidencial. La información se dará a conocer de tal forma que no sea posible la identificación de las personas.

1. Demographics/Datos demográficos
   Please provide the following information./Favor (de) indicar su información.

   Name/Nombre:
   City/Cuidad:
   State/Estado:
   Country/País:

2. I took the courses (select all that apply)/Tomé los cursos (seleccione todos los que apliquen)
   a. 5710 Special Education Programs and Practices b. 5560 Assistive Technology

3. My institution/Mi institución a) University of North Texas b) Universidad Casa Grande
4. Please contact me for a short interview/Favor (de) ponerse en contacto conmigo para una corta entrevista Yes No
5. Gender/Género Male/Masculino Female/Femenino
6. Your Age/ Edad
   18-20
   21-25
   26-30
   31-35
   36-40
   41-45
   46-50
   51-55
   56-60
   61-65
   0ver 65

7. My first language is/Mi primera lengua es: English/Ingles Spanish/Español other/otro

8. Other languages I speak well enough to attend a university/Otros idiomas que domino lo suficiente como para poder asistir a la universidad: English/Ingles Spanish/Español other/otro

9. Please indicate your highest level of education/Favor indicar su nivel más alto de educación
   High school/Escuela secundaria
   Bachelor's degree/Licenciatura
   Master's degree/Maestria
   Doctorate/Doctorado

10. Racial/ Ethnic Background (check box(es) most appropriate)/ Antecedentes raciales/étnicos (marque la(s) casilla(s) más apropiadas)
   American Indian/Indio americano
   European-American/Europeo-Americano
   Asian/Asiático
   African American/Afroamericano
   Hispanic/Hispánico
   Other (please specify)/Otro (Favor de anotarlo)

11. I live ____ miles from the UNT campus./Vivo ____millas del Campus de UNT.
   Less than 30/menos que 30
   30-50
   50-60

70-90
More than 90/más de 90

12. My current teaching assignment (Check one or more if teaching a combination class)/Mi experiencia docente actual (marque una o más si está impartiendo clases combinadas)

Kindergarten/Jardín de Infantes
First Grade/primer grado
Second Grade/segundo grado
Third Grade/tercer grado
Fourth Grade/cuarto grado
Fifth Grade/quinto grado
Sixth Grade/sexto grado
Seventh Grade/Séptimo grado
Eighth Grade/
High School/ Secundaria
Elementary Principal/Director de primaria
Middle School Principal
High School Principal/Director de secundaria
Basic skills teacher/Maestro de conocimientos básicos
Librarian/Bibliotecario
School Psychologist/Psicopedagogo
Occupational Therapist/Terapeuta ocupacional
Resource Room Teacher/Maestro especializado
Counselor/Consejero
Learning Center Teacher/Maestro de centro de aprendizaje
ESL teacher/Maestro de inglés como segundo idioma
Special Ed/Self Contained/Educación especial/independiente
Special Ed/Physical Therapist/Educación especial/terapeuta físico
Music Teacher/Maestro de música
Communication Disorder Specialist/Especialista en trastornos de la comunicación

Physical Education
Specialist/Especialista en educación
física
Title 1 Teacher/Título 1 Maestro
Gifted Program Teacher/Maestro
del programa para superdotados
Art Teacher/Maestro de arte
School Nurse/Enfermera escolar
Special Ed/Behaviorally
Disturbed/Educación
especial/trastornos del
comportamiento
Specific Language Disability
Teacher/Maestro de trastornos
específicos del lenguaje
Other (please specify)/Otro (Favor anotarlo)

13. How many years have you been a K-12 teacher?/¿Cuantos años ha sido
maestro K-12?
2 years or less/2 años o menos
3-5
6-10
11-15
16-20
21-25 or more/o más
N/A

14. What is your student status?/¿Cuál es su condición como estudiante?
Part-time/Medio tiempo
Full-time/ Tiempo complete

15. Technology Skills/Habilidades en tecnología
Please rate your overall skill with using technology in support of your work as a teacher?/Favor de calificar en general su habilidad en el uso de la tecnología de apoyo en su trabajo como maestro

Non-User/No usuario
Beginner/Principiante
Intermediate/Intermedio
Advanced/Avanzado
Expert/Experto

16. The amount of my prior experience with distance learning is/El total de mi experiencia previa con el aprendizaje a distancia es

Non-User/No usuario
Beginner/Principiante

Intermediate/Intermedio
Advanced/Avanzado
Expert/Experto

17. My knowledge/competency of the following technologies prior to this online course was/Mi conocimiento/aptitud de las siguientes tecnologías antes de este programa eran:

Computers None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa
E-Mail None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa
Internet None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa
Email Attachments None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa
Posting to Discussion Boards None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa
Presentation Software (e.g. MS PPT) None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa
Word Processing Software (e.g. MS Word) None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa

18. My knowledge/competency of the following technologies after this online course was/Mi conocimiento/aptitud de las siguientes tecnologías despues de este programa eran:

Computers None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa
E-Mail None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa
Internet None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa
Email Attachments None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa
Posting to Discussion Boards None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa
Presentation Software (e.g. MS PPT) None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa
Word Processing Software (e.g. MS Word) None/Niguna Very Little/Muy poca Moderate/Moderada Extensive/Extensa

Please use the following scale:
1= Strongly Disagree/Totalmente en desacuerdo
2= Disagree/En desacuerdo
3=Neither Agree nor Disagree/B\Ni de acuerdo ni en desacuerdo
4= Agree/De acuerdo
5= Strongly Disagree/Totalmente de acuerdo
N/A= Not Applicable/No aplica

19. Course Access/Acceso del Curso
For these online courses, please select the location(s) where you use a computer for this course. (Please select all that apply)/Para estos cursos en línea, favor de marcar la(s) ubicación(es) donde utiliza la computadora para este curso. (Favor de marcar todos los que correspondan)

Home 1) 2) 3) 4) 5) NA

Workplace/Work Office 1) 2) 3) 4) 5) NA
On-campus 1) 2) 3) 4) 5) NA
Community 1) 2) 3) 4) 5) NA
Other (please specify) _____

20. Did you have any problems accessing the course(s)?/ ¿Tuvo problemas para acceder al curso? Yes/Sí No
If yes, please be specific about the problem and its impact/De ser así, favor de especificar el problema y sus
consecuencias

21. What are the most important benefits of this delivery method for you?/¿Cuáles son los beneficios más importantes de este método de envío para usted?

22. What drawbacks, if any, are there?/¿Qué inconvenientes existen, si los hubiera?

23. Was there anything about the course that did not work the way you expected? Explain…/¿Hay algo, acerca del curso, que no funcionó de la forma que usted esperaba? Describa…

Please use the following scale:
1= Strongly Disagree/Totalmente en desacuerdo
2= Disagree/En desacuerdo
3=Neither Agree nor Disagree/B\Ni de acuerdo ni en desacuerdo
4= Agree/De acuerdo
5= Strongly Disagree/Totalmente de acuerdo
N/A= Not Applicable/No aplica

24. Communication/Comunicación
I made an attempted to communicate with the students enrolled in the course(s) that were from the partner university (e.g., discussion board postings or email)./Intenté comunicarme con los estudiantes inscritos en el curso, que eran de la universidad asociada (ej.: publicaciones en foros de debate o correo electrónico).
1) 2) 3) 4) 5) NA

25. I used these resources to help me communicate/Utilicé estos recursos como ayuda para comunicarme:

Online translator website/Traductor en línea
Bilingual Friend/Amigo bilingüe
Speak both English and Spanish, no resources needed/Hablo ambos idiomas, inglés y español, no necesité los recursos
Course translator/Traductor de curso
Other (please specify)/Otro (favor de especificar)

26. I communicated on a regular basis with students from the partner university./Me he comunicado periódicamente con estudiantes de la universidad asociada
1) 2) 3) 4) 5) NA

27. If I could have communicated with the partner university, I would have./ Si hubiera podido comunicarme con la universidad asociada, lo habría hecho.
1) 2) 3) 4) 5) NA

28. I thought it was beneficial to have students from the partner university within the same WebCT course./Pensé que era provechoso que habían estudiantes de la universidad asociada en el mismo curso WebCT.
1) 2) 3) 4) 5) NA

29. Having students from another country in my course, increased my multicultural awareness./ Tener estudiantes de otro país en mi curso, incrementó mi conocimiento multicultural.
1) 2) 3) 4) 5) NA

30. I wish more courses had international partner universities./Desearía que más cursos tuvieran universidades asociadas internacionales
1) 2) 3) 4) 5) NA

31. I would take another course with an international partner university./Tomaría otro curso con una universidad internacional asociada.
1) 2) 3) 4) 5) NA

32. I would not take another course using this delivery mode/No tomaría otro curso utilizando este método de envío
5710 Special Education Programs and Practices (summer 2008)/verano 2008
1) 2) 3) 4) 5) N/A

5560 Assistive Technology (fall 2008)/otoño 2008
1) 2) 3) 4) 5) N/A

Multicultural Awareness/Conocimiento Multicultural

33. What does multicultural education mean to you?/¿Que significa interculturalidad y ethnoeducación a usted?

34. Did the course materials increase your multicultural awareness? If so, how?/¿Se mejoran los materiales del curso su interculturalidad? Como?

35. Has this course influenced your own lesson preparation in regard to thinking creatively about how to involve various cultures?/¿Porque de este curso, ha cambiado su manera de enseñar en relación con interculturalidad y la inclusión de culturas diferentes?

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APPENDIX F

SEMI-STRUCTURED STAKEHOLDER INTERVIEW PROTOCOL

Semi-structured Stakeholder Interview: Sample Questions Protocol

Note: The participants will be asked about general questions related with background of the course, course satisfaction, underlying values related with multicultural awareness, relevance/cost-benefit, and unintended consequences. Below are a few examples of the content of the questions; however, the semi-structured interview will not be limited to only these questions. The researcher will allow participants flexibility to answer questions or skip questions and follow-up questions will be asked to clarify responses.

Course Background:

1) Describe the development of the course design and delivery for this particular course. Why was it created? How was it developed? Who helped with the development and in what capacity? What were the designers skilled in? Content? Multimedia?
2) What are the various roles of the instructors? Teaching assistants? Both at UNT and UCG. Who are all the people involved that got the course up and running and keep it running?
3) How many students completed the course? Any withdrawals? Failures?
4) How well did the two groups of students do? Course averages by group?
5) What were the challenges/benefits of teaching students from two different countries and languages?

Satisfaction

6) How do you think the courses went? What would you change for next time?
7) What type of feedback did you receive from students that you wouldn't mind sharing?
8) How do you think the face-to-face training went for the UCG students? What improvements could be made?

Underlying Values (Multicultural Awareness)

9) What does multicultural education mean to you? Were there any particular multicultural theorists that influenced the content?
10) How were multicultural awareness concepts integrated in the course (can be formal or informal)?
11) What was the hope for including multicultural awareness as one of the underlying values of the course? What did you want students to come away with?

Cost-benefit

12) How was the course content designed to be relevant to both groups of students even though they were in two different countries with different experiences? How did you know what would be relevant to students in Ecuador and students in the US?
13) What could be done to improve relevance?
14) What benefits does this course offer that would not be provided by a face-to-face course?
15) What is the source of funding for development, source of funding for delivery? What is the breakdown of which institution receives tuition money from which students?

Unintended Consequences

16) Do you feel that this course is a high-quality course? Why?
17) If you could change anything about this course, what would it be?
18) Was there anything about the course that didn't work the way you expected? Explain
19) Was your role as the instructor different from what you expected? If so, how?
20) Was the learner's role different from what you expected? Explain.
21) Did you encounter any unexpected social or cultural issues in this course?

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APPENDIX G

RESEARCH MATRIX

The Unfolding Model	Research Questions	Research Sub-Questions	Quantitative Data
Question 1. Scientific evidence	1) What is the evidence of multicultural awareness?	a. What were the course materials related with multicultural awareness?	
		b. How did students make sense of course goals related with multicultural awareness?	
Question 2. Cost-benefit	2) What is the cost-benefit analysis of the course for the institutions?	a. What is the cost-benefit ratio for the bilingual delivery mode?	
		b. What is the viability of continuing the courses?	
		c. How satisfied were stakeholders with the course?	• UCG End of Course Survey (#14 face-to-face)
		d. How satisfied were students with collaborating with an international university?	• UCG End-of-Course Survey (Factor 1- University Support) • Online Learning Survey (Factor 1- Openness)
Question 3. Underlying values	3) How was the underlying course goal of enhancing students' multicultural awareness implemented in the course?	a. How was the course adapted to reflect the different professional & cultural needs of the students from the United States & Ecuador?	
		b. How were the courses designed to promote cross-cultural communication among the students?	
		c. How did discussions about multicultural awareness materialize within student-student and student-instructor interactions?	• Online Learning Survey (Factor 2- Value of communication) Tally of discussion board posts
Question 4. Unintended consequences	4) What are the unintended positive or negative consequences of the course design and implementation?	a. Was there a disconnection between the proposed course expectations for enhancing student's multicultural awareness and the actual course implementation?	
		b. What did students and stakeholders view as course benefits/drawbacks?	• UCG End of Course Survey (factor 2- quality of course content)
		c. What are recommendations for course redesign or improvement?	

Quantitative Data Analyses	Qualitative Data	Qualitative Data Analyses
	• Archived documents from each course (Conference papers, course syllabi, grant proposal, modules, PPTs, National Teaching Standards, Assignments, # of test, & exam questions related with multicultural	Content analysis coding and emerging themes, convergence/divergence of multiple data sources (Patton, 2002).
	• Online Learner Survey (#33, #34, #35)	Content analysis coding and emerging themes, convergence/divergence of multiple data sources (Patton, 2002).
	• Semi-structured interview questions with stakeholders (UCG cost-benefit & UNT cost-benefit)	Content analysis coding and emerging themes, convergence/divergence of multiple data sources (Patton, 2002).
	• Semi-structured interview questions with stakeholders (UCG viability & UNT viability)	Content analysis coding and emerging themes, convergence/divergence of multiple data sources (Patton, 2002).
Descriptives-Frequencies	• Semi-structured interview questions with stakeholders (course satisfaction) • Student discussion board postings	Content analysis coding and emerging themes, convergence/divergence of multiple data sources (Patton, 2002).
Factor analysis, Reliabilities, Descriptives	• UCG End of Course Survey (#5 & #6)	Content analysis coding and emerging themes, convergence/divergence of multiple data sources (Patton, 2002).
	• Semi-structured interview questions with stakeholders (course adaptation) • Archived course documents (syllabus, discussion board, exams, & assignments)	Content analysis coding and emerging themes, convergence/divergence of multiple data sources (Patton, 2002).
	• Semi-structured interview questions with stakeholders (promote cross-cultural communication) • Archived documents (course syllabus & discussion board posts)	Content analysis coding and emerging themes, convergence/divergence of multiple data sources (Patton, 2002).
Factor analysis, Reliabilities, Descriptives Frequencies	• Archived document (discussion postings-student-student interaction & student-instructor interaction)	Content analysis coding and emerging themes, convergence/divergence of multiple data sources (Patton, 2002).
	• Online Learning Survey (#33, #34, #35) • Archived document (Conference papers, course syllabi, grant proposal, modules, PPTs, Assignments, # of test, & exam questions related with multicultural awareness) • Semi-Structured interview question (Hoped that students came away with)	Content analysis coding and emerging themes, convergence/divergence of multiple data sources (Patton, 2002).
Factor analysis, Reliabilities, Descriptives	• Online Learning Survey (#21, #22, #23) • Multiple data sources [Interviews, discussion board] (Unintended Positive or Negative Consequences, Challenges) • UCG End of Course Survey (#2, #4)	Content analysis coding and emerging themes, convergence/divergence of multiple data sources (Patton, 2002).
	• Semi-Structured interview questions (Didn't work as expected, UCG recommendations & UNT recommendations, Change for next time) • UCG End of Course Survey (#23)	Content analysis coding and emerging themes, convergence/divergence of multiple data sources (Patton, 2002).

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