

A COMPARATIVE ANALYSIS OF CULTURAL DIVERSITY SATISFACTION SCORES OF
UNDERGRADUATE STUDENTS IN AN ONLINE LEARNING ENVIRONMENT

by

Orlando Lobaina

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

The purpose of this quantitative, causal-comparative study was to analyze the differences of perceived overall satisfaction scores (organizational structure, technology usage, and curriculum design) between Caucasian, Latino-American, and African-American undergraduate students enrolled in an online program, as measured by the Cultural Diversity Satisfaction Survey (CDSS) instrument. This study compared the differences between three distinct diverse groups for overall satisfaction in an undergraduate online general elective course. The study participants were undergraduate students enrolled in an online general elective course in Virginia, $n = 433$. The study utilized a one-way ANOVA to determine if there was a statistically significant difference in means between the dependent variables, (a) organizational structure of the course, (b) learner's understanding and usage of technology, and (c) curriculum design and the independent variable, the student's ethnicity. It was found that there was a statistically significant difference in the satisfaction scores between two ethnic groups (African-American and Caucasians) in the design scores. Results also showed no statistical difference in the other two dependable variables between all three ethnic groups. It was concluded that two ethnic groups, African-American and Hispanics, view communication with faculty and peers very highly in an online course. Since it is expected that the Asian community in the U.S. may surpass Hispanics by the year 2065, it will be helpful to conduct a similar study comparing the satisfaction scores of all four ethnic groups in an online course.

KeyWords: online retention, student satisfaction, cultural diversity, online learning, and student engagement.

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Copyright Page

Dedication

This dissertation is dedicated to my three daughters: Rebecca, Hannah, and Sofia. I am very blessed to be given the opportunity to be called your dad. I am very proud of what you have been able to achieve so far in your lives, and I look forward to see your aspirations and goals come true. Trusting God and perseverance is the key. I love you!

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List of Abbreviations

Analysis of Variance (ANOVA)

Cultural Diversity Satisfaction Survey (CDSS)

Institutional Review Board (IRB)

Statistical Package for the Social Sciences (SPSS)

CHAPTER ONE: INTRODUCTION

Background

Online education is here to stay. More institutions of higher education are adopting some form of online education on their campuses and into their academic programs. According to Kaupp (2012), adoption of the Internet has led to explosive growth in college online offerings, with total post-secondary online enrollment growing from 9.7% in 2002 to 19.6% in 2006. More universities in the United States are developing online programs in order to build enrollment growth and financial stability for their institutions. The fastest growing use of the Internet in all educational systems is distance learning, with its growth exceeding the growth in overall higher education enrollment (Ness & Lin, 2013). According to the most recent Sloan Consortium Report, there are 6.7 million students currently enrolled in an online course, with adult learners making up the majority of this number (Allen & Seaman, 2013).

One of the challenges that academic institutions are facing today with the growth of online learning is to increase the graduation rates of Latino-American and African-American students, who still have low college completion rates compared to Caucasian students (McGlynn, 2015). Online education is not immune to low graduation rates by these two groups of students. In general, online programs have an average retention rate of 62% compared to 84% in residential programs. That 22% gap is something that many colleges are attempting to shrink by increasing retention for online programs. According to Meister (2002), 70% of adult learners who enrolled in an online program did not complete it. Although this study showed no comparable data to measure the percentage of Hispanics and African-American students who did not complete an online course, the data does show that 47% of Hispanics never go to college and 22% of those who enroll in some sort of post-secondary program drop from their face-to-face

classes before earning a two-year degree (Francesca, 2010). It is expected that this number may be higher for online courses. Universities should not only consider the retention of Hispanic students a success; they should also measure success by how many Hispanic students are graduating from their institutions. According to Fry (2002), Hispanic-Americans lag behind every other group in earning a college degree, especially at the bachelor's level.

The population of African-American students is also increasing in higher education. According to Ashong and Commander (2012), many universities in the U.S. are striving for better retention and greater progress toward graduation. However when it comes to university students' online perception, African-American students are one group largely missing in available research studies. There is a need for more literature on online learning within culturally diverse groups of students. Boyette (2008) stresses that the voices of African-American students have been underrepresented. In a recent report published by the National Center for Educational Statistics (Snyder, 2012), the percentage of African-American students in universities in the U.S. rose from 11% to 14% between 2000-2009, the percentage of Hispanic students rose from 10%-12%, and the percentage of Asian students rose from 6%-7%. These enrollment increases in minority students in the U.S. shows the need for institutions to continue efforts in understanding student satisfaction and retention in online programs.

Due to the increasing number of African-American students enrolling in higher education in general, the number of African-American students participating in online courses has also seen a corresponding increase (Ashong & Commander, 2012). Unfortunately, according to Rovai and Gallien (2005) and Rovai and Ponton (2005), the achievement gap between African-American and Caucasian students that exists in the traditional classroom in universities in the U.S. also exists in the online environment. In addition, Okwumabua, T., Walker, K., Hu, X., & Watson, A.

(2011) found that African-American students report negative attitudes toward online learning, with the majority claiming that they do not enjoy using computers for school-related work.

Cost has often been cited as a primary reason for African-Americans' initial reluctance to accept and fully utilize computer-mediated communication and e-learning (Rockbridge, 2013). Fewer African-Americans, when compared to the general population, have access to computers and Internet service in their homes, although they may have access in public settings (Raine, 2012). In 2009, 65% of White Americans and 46% of African-Americans had home broadband (Pew Research Center, 2014). By 2013, 74% of White Americans and 62% of African-Americans had broadband access at home (Pew Research Center, 2014). Extensive governmental and private efforts have been made to close the digital divide for underrepresented groups in the U.S. According to Okwumabua et al. (2011), the digital divide that once existed no longer exists.

Colleges and universities in the U.S. must focus on online academic programs at all levels and understand the opportunities involved in the education of Hispanics and African-American students. The increase of Hispanics and African-American students in online programs will impact many economic and social aspects of this country, as institutions help these group of students to position themselves for advancements and leadership roles in non-profit and for-profit organizations. According to Fry (2011), 59% of all U.S. workers have at least some college degree. In the current U.S. economy, a high school degree is not a sufficient credential for successful employment. Fry (2011), the road to economic success for Hispanics and African-American students is through a college degree.

There is an abundance of studies available on the subject of online education that support curriculum development, faculty presence, student satisfaction, and retention. As online education continues to grow and change with the introduction of new technologies, it is

important to conduct research that measures the type of satisfaction and engagement rates of minority students in the online classroom. According to Mayadas, Bourne, & Bacsich (2009), “Online education is already providing better access to education for many, and many more will benefit from this increased access in the coming years.” (p. 85) One of the minority groups currently benefiting from online education is Hispanics living in the U.S. – a population of more than 55 million. As they acclimate to the culture, and as opportunities for employment become available, Hispanic students often find that online education is more affordable, convenient, and flexible than traditional classroom learning. As Mayadas, Bourne, & Bacsich (2009), commented, “Online education is established, growing, and here to stay.” (p. 86)

As online education becomes increasingly accepted by Hispanic adults, there seems to be a desire and a need for those who have already completed a bachelor’s degree to reengage with higher education by pursuing more specific academic training through online education. Kuong (2009) stresses the importance of understanding online retention and student satisfaction in order to effectively provide the best academic curriculum and training for online students. Those who are tasked with facilitating, creating, and developing online curriculum welcome studies in the areas of student engagement, because it provides them with information to help them develop effective online learning experiences that will ultimately help students persist in courses.

According to Olivares (2011), one major factor that researchers have established as a predictor of success is students' persistence of online learning. Studies on students' persistence have also shown that online students seem to have a higher withdrawal rate than those who are enrolled in face-to-face courses. Some authors report that online learning requires autonomy and self-direction, and students must be able to perform independently (Artino, 2007).

Hispanic students still possess one of the lowest college graduation rates of any ethnic group. According to Lopez (2009), 80% of Hispanics between the ages of 18-24, who were born abroad and now reside in the United States, are not enrolled in high school or college. The success rate of Hispanic students in higher education is important for the prosperity of the nation as a whole.

Just like traditional education, online education is providing opportunities for students of different cultures and nationalities to enroll in graduate programs. According to Angiello (2010), Hispanics currently represent 21.6% of traditional enrollment but only 14.1% of enrollment in online education. The online classroom has potential to grow faster and larger than the traditional classroom with Hispanic students in the next 10-20 years. According to Angiello (2010), one of the factors affecting the current growth of Hispanic students in online programs is the “digital divide.” As Hispanic students continue to catch up with language and computer skills, the “digital divide” will shrink and more will be comfortable with online education. According to Olivares (2011), this growth in higher education diversity brings great opportunity to individuals, the job market, and the country. However, lack of academic persistence from Hispanics is hurting their chances for a better future. Research studies are being implemented to better understand the factors that prevent Hispanic students from completing college degrees, but research on how Hispanics are succeeding in the online classroom is still limited.

Also, current literature states that there continues to be an achievement gap in the United States between ethnic groups. Much of the postsecondary reform agenda, promoted by major foundations and the U.S. Department of Education, is focused explicitly on improving the probability of success of students after they first enroll in higher education institutions (U.S. Department of Education, 2010). According to Hinojosa (2004), Hispanic-Americans are

currently at the bottom of the educational attainment ladder. Recent studies show that only 10% of Hispanic adults have attained a bachelor's degree, and less than 4% have achieved an advanced degree (Hinojosa, 2005). Such statistics provide a glimpse of the current lack of higher education levels found in Hispanic adults in the United States. For institutions of higher learning, the attrition of Hispanic and African-American students in higher education programs will be a priority.

Problem Statement

The U.S. Department of Education has clearly defined the need and goal of the present administration to see more diverse students have access to complete post-secondary studies. In 2009, President Barack Obama's 2009 stimulus package included the creation of a \$2.5-billion grant program to help states improve college-completion rates. President Obama has set two ambitious goals: for all adults in America to pursue at least one year of higher education or career training, and for America to regain its role as the world leader in college attainment (United States Department of Education, 2015). These goals span across all student groups. In order to achieve the goal of having the highest proportion of college graduates in the world, education must be accessible and affordable for the millions of adults who have not earned a college degree.

Research indicates that during the last two decades, online education has been more accessible and available to college students (Rovai & Ponton, 2005; Tabs, Waits & Lewis, 2003). The growth in online education worldwide means that the online classroom is becoming more and more diverse in terms of nationalities, backgrounds, and culture (Wang & Reeves, 2007). Previous research has examined ethnicity both across cultures (Bauer, Berkhout, Chang, Chin, Glasson, & Tauber, 1999) and within the same culture (Rovai & Ponton, 2005), and the results

from these studies showed that there is a current growth of diverse students enrolling in online learning environments.

There is a lack of research studies looking at the questions of culture in online education among domestically diverse cultures (Uzuner, 2009; Ke & Kwak, 2013). According to Uzuner (2009), there is a gap in the literature, specifically in the experiences of African-American, Hispanic-American, and/or Asian American students taking online courses in the United States. The author adds that most research studies that have been conducted to understand how students from different cultural backgrounds adapt to online learning tend to surround Asian learners (Uzuner, 2009). It is important to note that there have been studies that have provided information on how Caucasian and African-American students compare in their satisfaction with online education (Flowers, Moore & Flowers, 2008), but there is still limited knowledge on how Hispanic-Americans differ from these two domestic diverse groups in their satisfaction and engagement with online learning. As online education becomes more accessible and affordable to students from diverse cultural backgrounds (Allen & Seaman, 2013), it is important to investigate what differences in student satisfaction with online learning exist between domestic students whose cultural backgrounds differ in the online classroom. Research indicates that the challenges that diversity presents for effective online delivery have not been properly documented (Hannon & D'Netto, 2007).

As seen in current literature, there is still limited knowledge related to how U.S. domestic students from different cultures adapt to online learning programs (Uzuner, 2009). As the online classroom becomes more diverse in the United States (Allen & Seaman 2013), it is important to understand what effects the student's culture has on his or her satisfaction with online learning environments, specifically within organizational, technological, and pedagogical structures of

online courses. The problem is that current research available does not address how these three ethnic groups (Caucasians, Hispanic-Americans, and African-Americans) differ in their satisfaction with the online learning environment, in particular, at a religious university. A need exists to study these three groups due to their rapid growth and participation in higher education online learning environments.

Purpose Statement

The purpose of this quantitative causal comparative study was to determine whether there was a significant statistical difference in the cultural diversity satisfaction scores between three different ethnic domestic student groups (Caucasians, Hispanic-Americans, and African-Americans) in a required undergraduate general studies online course. According to Galy, Downey, Johnson (2011), it is important for researchers to understand the characteristics of students participating in online learning and how these characteristics may influence the learning outcomes that are achieved. Recent research by Allen & Seaman (2013) indicates increased enrollment from minority students in the United States in online education. The decision to focus on the perceived differences between Caucasian, Hispanic-American, and African-American students was fueled by the dearth of research done on students' satisfaction in online programs by these three ethnic groups and by a desire to add value to the important role that culture and diversity plays in the online higher education learning environment. Asian and Native-American populations were left out of this study because of their lower percentage in enrollment in online programs compared to the three groups chosen for this study.

In order to understand culturally diverse student satisfaction in an online learning environment, the researcher identified the independent variable as ethnicity, (Caucasian, Hispanic American, and African-American) and the dependent variable was defined as course

satisfaction (organization of the course, the learner's understanding and usage of technology, and course design). The sample population consisted of 2,835 undergraduate students in a religious university offering online courses. The comparison groups for the proposed study were online undergraduate students taking classes at a private institution in Virginia. Students were enrolled in a general education course during the 2015 fall semester. Through the survey provided, the researcher captured students' demographic data in order to identify and compare each group being studied.

Significance of the Study

This study will add to the limited existing body of research regarding student diversity and online education. The focus of this research study was on student diversity and how students engage with current online courses. According to Ashong and Commander (2012), current research in the U.S. has found that differences exist between ethnic groups. This study may make a significant contribution to the limited body of research on diversity in higher education and provide insight on how students from different cultural backgrounds experience online learning environments (Uzuner, 2009).

Second, the results and data from this study could provide academic administrators, faculty, and course designers, information on how online courses are perceived by culturally diverse students who are currently enrolled in their online programs. Research shows that cultural factors influence the way in which individuals use or perceive information technology, as well as the interpretation they give to the message transmitted through information technology channels (Gefen & Straub, 1997). The results of this study could assist faculty in developing courses and programs that will ensure inclusion and engagement from diverse students, while striving to create a quality online learning environment conducive to maximum student

achievement. According to Tapor and Dinu (2014), educators must take into account the fact that the e-learning process involves the culture of one student encountering the cultures of other students, and all of those are encountering the teacher's culture.

Institutions of higher education are investing resources trying to recruit, maintain, and graduate more minority students (Griffin, Muniz & Espinosa, 2012). The affordability and accessibility of online education has given these institutions an opportunity to attract students who otherwise would not be able to enroll in residential programs. Current higher education enrollment trends show that a large percentage of minority students are enrolling in online education (Ashong & Commander, 2012). It is important for institutions of higher education that are providing online programs to understand how students from diverse cultural backgrounds are adapting to the online learning environment. Understanding the satisfaction of these students with the current online environment will allow administrators to make necessary adjustments to their online programs in order to maximize the academic achievement of these students. Online learning research indicates that the e-learning market has a growth of 35.6% (Sun, Tsai, Finger, Chen, & Yeh, 2008). However, little is known about why some users terminate online learning after their initial experience. According to Sun et al. (2008), instructors must understand how diversity affects satisfaction with e-learning implementation. Information system research clearly shows that user satisfaction is one of the most important factors in assessing the success of system implementation (Delon & Mclean, 1992).

Thirdly, the findings of this study may help culturally diverse students better understand online education and potentially increase graduation rates from online courses. These students are finding that online education can provide the gateway to better jobs and income. Many of these students come from homes where the highest academic attainment may only be secondary

education and they are setting themselves up to become the first generation in the family to earn a college degree (Teranishi, Suarez-Orozco & Suarez-Orozco, 2011). The fact that higher education has become accessible through technology is giving many adult students the opportunity to begin or complete a college degree. Learning about the experiences of others may help these students make their transition to online education easier.

Research Question

The research question for this study was:

RQ1: Is there a difference among the cultural diversity sub-scores (organizational, design and technological) of Caucasian, African-American, and Latino-American students taking online courses at a religious institution?

Null Hypotheses

The null hypotheses identified for this study included the following:

H₀1: There is no significant difference among the *organizational* scores (as measured by the cultural diversity instrument) of Caucasian, African-American, and Latino students taking online courses at a religious institution.

H₀2: There is no significant difference among the *technology* scores (as measured by the cultural diversity instrument) of Caucasian, African-American, and Latino students taking online courses at a religious institution.

H₀3: There is no significant difference among the *design* scores (as measured by the cultural diversity instrument) of Caucasian, African-American, and Latino students taking online courses at a religious institution.

Definitions

In order to clarify the meaning of terms associated with this study, the following definitions will be provided:

1. *Ethnicity* is the ethnic background of the student derived from the 2010 United States Census definition and the student's voluntary selection on a college entrance form questionnaire (U.S. Census Bureau, 2010). The U.S. government defines Hispanic as an ethnicity, not a race (Pew Research Center, 2015).
2. *Diversity* is defined as "one's identity frames [or] how one experiences the world" that can be connected to language, culture, ethnicity, race, sexual orientation, religion, disabilities, socioeconomic status, and other "social and human differences" (Nieto & Bode, 2012, p. 5).
3. *White/Caucasian* refers to a person having origins in any of the original peoples of Europe, the Middle East, or North Africa (U.S. Census Bureau, 2010). The term *Caucasian* is often used interchangeably with *White*.
4. *African-American* is a person descended from any of the Black racial groups of Africa (U.S. Census Bureau, 2005).
5. *Latino/Hispanic* refers to an individual who self-reported as a descendent of a Spanish-speaking heritage. The researcher recognizes that a debate surrounds the use of the term Hispanic or Latino to represent a diverse body of individuals who may or may not have descended from a Spanish speaking heritage (Fox, 1996). For the purposes of this study, the term Hispanic may be used interchangeably with the term Latino.
6. *Online Learning* may be defined as instruction delivered electronically via the Internet, an intranet, or multimedia platforms such as CD-ROM or DVD (Smart & Cappel, 2006).

7. *Student satisfaction* is the student's perception pertaining to the course experience and the perceived value of the education received while attending the educational institution (Astin, 1993; Bollinger & Martindale, 2004). Based on this definition, online student satisfaction comprises two dimensions: perceived satisfaction with individual courses, and an overall satisfaction with web-based distance education (Ke & Kwak, 2013).
8. *Asynchronous learning* is the instruction that occurs in delayed time and does not require the simultaneous participation of students and teachers (Pritchett, 2009).
9. *Culture*: "Culture refers to the habits and values of a specific group of people who live together" (Ness & Lin, 2013, p. 11). Culture is a constellation of ideological, political, economic, social, religious, dynamic, and interactive processes of engagement in which groups share similar methods in making meaning of the world (Gunawardena, Wilson, & Nolla, 2003).

CHAPTER TWO: LITERATURE REVIEW

Introduction

Garrison and Shale (1987) wrote that the distinguishing feature of distance education was that it could “extend access to education to those who might otherwise be excluded from an educational experience” (p. 10).

The purpose of this proposed quantitative causal comparative study is to determine whether there is a significant statistical difference in the cultural diversity satisfaction scores between three different ethnic domestic student groups (Caucasians, Hispanic-Americans, and African-Americans) in a required undergraduate general studies online course. It is to contribute to the current limited knowledge base about designing effective online courses and the importance of applying cultural teaching mediations in an online setting. The study focused on how students from different cultural and linguistic backgrounds encounter online learning environments and to assess how the student’s ethnicity may impact student engagement with the organizational, pedagogical, technological, and Christian worldview structure of the online course.

Review of the Literature

Framing a theory for this research provides many insights into the lack or abundance of information found in the literature about the academic satisfaction of culturally diverse students in online courses. The approach for this study is based on “framework for e-learning” (Conole, 2004) and the experiences of culturally diverse students with the organizational, technological, and pedagogical aspects of online learning (Hannon & D’Netto, 2007), based on the “Cultural Diversity Satisfaction Survey.”

The goal for this particular review of the literature was to discover the walls surrounding the current theories on culturally diverse student engagement in the online learning environment

and developing a better understanding of the subject in order to clearly deal with the problem. Also, it is important to look at the research findings available on how well students from diverse cultures perform in online courses and how their cultural background may affect their engagement in online courses.

Theoretical Framework

In order to understand diversity in the context of online education, it is important to investigate and make mention of emerging theories in this field of educational research. For this study, the researcher has chosen to base research on the “e-learning framework” established by Conole (2004). The rapid implementation of technology in the college classroom has given Universities all across the world opportunities to expand their offerings to individuals who otherwise would not be able to attend the traditional classroom. Groups of diverse students are finding online education very affordable, accessible, and beneficial in advancing their careers by seeking new knowledge or adding to their current experiences. Conole (2004) makes a good point in her analysis of online education by noting that many institutions still see technology as just a “content repository” and not as a tool that can facilitate and bring true learning for individuals. Conole’s (2004) research in the area of technology and how it applies to e-learning is “just the beginning” of a desire to increase research on this topic that is rapidly expanding as more institutions of higher learning are welcoming online education on their campuses.

One of Conole’s (2004) main focuses is to understand how technologies can be used to enhance learning. Based on this exploratory idea, Conole (2004) was able to group a large investigative topic into three main themes, “pedagogical, technical, and organizational issues” (p. 2). It is important to note that there has been an increased desire for e-learning research by

researchers from other disciplines such as education, computer science, and psychology (Conole, Cook, and Ingraham, 2003).

According to Conole (2004), the impact of the Internet has expanded the research from not just the usage of technology, but its potential to diversify the classroom. Learning technologies can support communication and collaboration between individuals in the online classroom, allowing for easy exchange of ideas and knowledge. Further research based on the three themes connoted by Conole (2004) needs to be applied in this context: pedagogical, technical, and organizational.

Based on Conole's theory that e-learning can be studied and grouped into three researchable theme areas, new research studies have emerged adding validity to the theory and adding resources to the literature review (Hannon & D'Netto, 2007). One of those research studies that has added value to the current literature review and to the current lack of understanding in the area of diversity in the online classroom is the research study conducted by Dr.'s Hannon and D'Netto at the Business School at the University of Australia in 2007. Hannon and D'Netto (2007) used Conole's theory to provide additional research on how each theme was perceived by students who were enrolled in online courses at the University of Australia, but were from different cultural and linguistic backgrounds.

It is important to mention that Hannon and D'Netto (2007) based their study on Conole's "framework for e-learning," in particular the gap in the intended and actual usage of technology in the context of socio-cultural differences and diversity. The implementation of online education has seen rapid growth and expansion in many academic institutions in Australia, including the University of Australia, where both Hannon and D'Netto currently work. It is at their institution that they studied how the three themes grouped by Conole (2004) affected how their online

diverse students experienced technology and its usage for educational purposes. Since there was no instrument created to measure the diverse students' satisfaction with online technologies, Hannon and D'Netto (2007) created and validated the "Cultural Diversity Survey." Based on Conole's framework for e-learning and the three themes she felt were very important in order to provide additional research in this area, Hannon and D'Netto (2007) put together a survey divided into the three different benchmarks (organizational structure, usage of technology, and course design). This survey was created, psychometrically evaluated, and applied to a group of 213 students from culturally diverse backgrounds.

There continues to be a need in the United States to better understand how students from diverse cultural backgrounds experience online education (Uzuner, 2009). Applying the "framework for e-learning" connoted by Conole (2004) and applying the instrument created by Hannon and D'Netto in order to understand diverse students' satisfaction with online learning is the theoretical framework that will be used in this research, which seeks to compare the scores of three diverse groups at a religious university in the United States.

Distance and Online Education in the United States

Current literature has an abundance of studies available on the subject of online education that support curriculum development, faculty presence, student satisfaction, and retention. As online education continues to grow and change due to new technologies, it is important to conduct research that measures the type of satisfaction and engagement rates of minority students in the online classroom. According to Bacsich (2009), "online education is already providing better access to education for many, and many more will benefit from this increased access in the coming years." One of the minority groups currently benefiting from online education is the 55 million Hispanics living in the U.S. As they acclimate to the culture and

opportunities for employment become available, Hispanic students will find that online education is more affordable, convenient, and flexible than traditional classroom learning.

“Online education is established, growing, and here to stay” (Bourne, 2009).

Many journal articles and studies have shown a continuing trend of growth toward online education. According to a recent survey report by Allen and Seaman (2013), there were 6.7 million students taking at least one online course in the fall of 2013 in the United States.

Ambient Insight Research (2009) reported that 44% of graduate program students in the United States took some or all of their courses online, and they projected this number would increase to 81% by 2014. As more students see the benefit and convenience of taking a course online, a potential enrollment growth of students from diverse cultures should be expected. More universities and colleges are streaming their academic programs online. In the U.S., institutions of higher education may offer different online models in order to engage their students. Some institutions may offer a blended version of online and residential formats, while others may offer their programs completely online. As noted, many institutions of higher education today are more open to online learning and are using a variation of e-learning in their institutions.

According to Allen and Seaman (2013), far larger portions of higher education institutions have moved from offering online courses to providing complete online programs. They add that only 13.5% of colleges and universities reported not having online offerings.

This growth of online education is becoming a global opportunity for many students around the world who want to pursue a degree in order to meet the job demands in their own countries. According to Rovai and Downey (2010), the economic potential of online education and academic globalization has attracted numerous higher education providers, many of which operate on a for-profit basis. Some researchers are calling the next period of online education as

the globalization of online learning (Yang, Olesova, & Richardson, 2010). While international students still prefer a face-to-face education in the U.S., many cannot afford to travel or take on the expense of relocating to pursue a degree. For such reasons, many international students are researching institutions overseas that offer the programs they want and can afford. With the availability of private and public universities now offering a variety of programs completely online, international students can choose from a variety of academic program options in the U.S.

Considering the domestic U.S., the growth of online education is benefiting the adult learner who is currently working, has a family, and finds the expense of relocating prohibitive. The same can be said about international students who are currently enrolling in online programs in the U.S. However, online learning is also becoming helpful to those international students who are pursuing a degree at a brick and mortar institution that also offer online classes.

It is important to note that, in the globalization of online learning, the majority of academic programs are being delivered in the English language. While this may have been a challenge for many students in years past, education in English continues to be the norm for online education. According to Danet and Herring (2007), the Internet has facilitated interaction among participants in multilingual regions and nations, and many people from around the world who employ English as a language of wider communication. In addition, it seems likely that the Internet is accelerating the spread of English across the world. For the most part, international students who are enrolling in online programs are able to read and listen to lectures in English, while their English written skills continue to be a challenge. For some, taking courses online only becomes a challenge when having to discuss or turn in written assignments. For that reason, many will make use of tutors to help them look over written assignments and correct any mistakes made. The fact that online education does not provide a face-to-face component allows

them to build some sort of confidence in the fact that they will not be judged by their accent or would not have to answer or discuss questions in front of others.

The globalization of online learning is also a welcome sign for institutions of higher education offering academic programs through e-learning platforms as they see more direct competition from other institutions who are also offering online courses and see domestic outreach becoming smaller and smaller. The potential to enroll international students in online programs is greater today with the global expansion of the Internet and the e-learning tools available to students all around the world. Applying, logging in, and completing a course online is an easy process and institutions are investing more resources in making it simpler for students. In addition, institutions of higher learning understand that global barriers that once stood between them and reaching out to a global market no longer exist. According to Tan, Nabb, Aagard, and Kim (2010), English as a second language (ESL) students are more frequently encouraged or required to take online courses to complete their programs of study. Despite frequent clamor in the U.S. for more diversity and diversity sensitivity in institutions of higher education, little research exists regarding how cultural differences and student perceptions affect online learning (Wang & Reeves 2007). Education at the highest level in the U.S. now has the potential through online learning to become more diverse and benefit from the exchange of ideas and knowledge that students will bring to the virtual classroom environment. Students and teachers are benefiting from the interaction and the connections they can make through virtual classrooms. There is the potential and dimension of inter-culturalism that can only be acquired through online education by engaging with students from different backgrounds and cultures.

Cultural Differences in Online Learning

Current literature has plentiful information and relevant research on the topic of online education (Allen & Seaman, 2013), but the cultural differences of students are rarely investigated. Just like traditional education, the online classroom is providing opportunities for students of different cultures and nationalities to enroll in a graduate program. There is a growing interest in ethnicity, culture, and student engagement in online environments (Boyette, 2008; Ashong & Commander, 2012). According to Angiello (2010), Hispanics currently represent 21.6% of traditional enrollment but only 14.1% of enrollment in online education. The online classroom has an even greater potential to grow faster and larger with Hispanic students in the next 10-20 years. According to Angiello (2010), one of the factors affecting the current growth of Hispanic students in online programs is the “digital divide.” As Hispanic students continue to catch up with language and computer skills, the “digital divide” will shrink and more will be comfortable with online education. According to Olivares (2011), this growth in higher education diversity brings great opportunity to the job market, individuals, and the country. However, their lack in academic persistence is hurting Hispanics’ chances for a better future. Current research studies are being implemented to better understand the factors that prevent Hispanic students from completing college degrees, but research on how Hispanics are succeeding in the online classroom is still limited at best.

In the last 10 years, with the birth of the Internet, the world has found a medium to communicate and expand globalization. Recent studies have shown that globalization has increased interconnectedness across different cultures via electronic media (Harnnertz, 1996; Holton, 2000). The Internet has opened doors for businesses, organizations, government, and educational institutions to share ideas, products, and build their brands. The rapid expansion of

the Internet is creating opportunities for individuals all across the world to communicate and share information with people from other cultures. Researchers have worked to define the “native language” of the Internet. Because the Internet had its origin in the West, its common language is English. According to Danet and Herring (2007), in 2003, roughly two thirds of users were not native speakers of English, and in only 4 of the 5 top countries online in 2004 (United States, United Kingdom, Canada and Australia) was English the official or dominant language. Language is an important issue, and English dominates most, if not all Western online delivery of courses (Smith & Ayers, 2006; Thompson & Ku, 2005; Wang, 2007).

Advancing technology and the common availability to communicate via the Internet is allowing quick dissemination of information and knowledge across continental borders. With such rapid growth in technology, institutions of higher education have seen the potential the Internet has in providing education not just in the United States but also across the world. Currently, there is a growing desire by institutions of higher learning in the United States to expand their program offerings overseas. However, there continues to be issues for many universities offering online education regarding the choice to provide programs in English or in the local native language. The amount of research on how universities are developing programs in multiple languages is very minimal and even less on how these programs are benefiting non-English speakers. One area that continues to be expanded in current literature is effective ways to implement culture in online courses, just as it is done in the face-to-face classroom. According to Bates (2001), technology adds complexity to education, particularly in distance-learning situations. Technology is just a tool that can either enhance (Liu, 2007; Thompson & Ku, 2005) or hinder (Smith & Ayers, 2006) learning and understanding. For that reason, it is important to understand how technology can affect the delivery of academic knowledge to students whose

first language is not English, but who desire to enroll in online programs being offered by institutions of higher education in the U.S.

Studies have shown that culture has an effect on how students communicate in online courses. International students taking classes in countries different from their home countries often face learning situations compounded by lack of knowledge, understanding of the values and language of the teaching culture, and strong values, attitudes, and perceptions of their own (Eberle & Childress, 2007; Lanham & Zhou, 2003; Liu, 2007; Smith & Ayers, 2006; Wang, 2007). It is important to understand that student communication in online courses takes place through a computer-mediated online environment. Faculty and students exchange ideas, discuss topics, solve problems, and gather information through the use of technology. According to Gunawardena, Wilson, and Nolla (2003), computer-mediated communication is interactive and encourages involvement from students and faculty. There are times when, due to the traditional lack of face-to-face communication, students from other cultures may show lack of participation and ultimately disengage from the course because of their high-context cultural preference (Tingoy & Gullungluo, 2012). While most of the West relies on a low-context culture to communicate, many people in the East rely on high-context cultural communication. According to Ibarra (2001), low-context cultures make little use of non-verbal signals, value direct communication with explicit verbal messages, and depersonalize disagreement. High-context cultures rely extensively on non-verbal signals, and see communication as an art form in which indirect, implicit, and informal verbal messages are valued. Low-context cultures use language with great precision and economy. In contrast, high context cultures use language more loosely, since words have relatively less value. Understanding these differences provides a better comprehension on the struggles that students from other cultures may have in an online

environment. For example, many international students place high importance on teacher-student relation. Without reassuring communication from the professor in the online environment, students may lack the confidence to complete a task in the course. Students who feel that way may be fearful of writing the wrong thing and, according to Guanawardena, Wilson, and Nolla (2003), will withdraw to the perfect silence of a blank screen. By withdrawing to the perfect silence of a blank screen, ESL students will automatically find a temporary secure place where their fear of failure might be alleviated, but not completely removed. According to St. Amant (2007), online learning and training that involves learners from multiple cultures poses unique challenges for both instructors and learners because of cultural differences, which can be reflected in language, communication style, and social interaction style. It is important that teachers, students, and those providing support to online students are aware of cultural differences that can exist in the online learning classroom. These individuals should also consider the impact that cultural differences may have on the online classroom environment and ultimately on the student's learning. As mentioned before, not all cultures have the same approach to communicating in an online course. While westerners may place more value on speech, self-assertion, and informality, easterners may prefer silence, reservation, and formality. Previous research studies have shown that there are cultural differences in web-based conferences (Kim & Bonk, 2002; Liang & McQueen, 1999). For example, in one study, American learners were more action oriented and likely to give and seek feedback during online discussions, while Korean students tended to share more personal feelings or concerns related to the discussions (Kim & Bonk, 2002). Liang and McQueen (1999) reported that American learners are peer oriented and are more likely to interact with peers, while Asian students rely more on instructor's directions in an online environment.

In a global online classroom environment, it would be preferred that participants acknowledge the various cultures present and that there is some sort of flexibility in communication. According to Guanawardena, Wilson, and Nolla (2003), it is suggested that in intercultural online course environments there should be a course facilitator, students should avoid ambiguity, there should be clear expectations, proper feedback should be given by the teacher, teachers and faculty should be sensitive to textual nuances, and relationships should be built within the online community. The design of online curricula is not an easy task to perform. According to Eberle and Childress (2007), it requires not only knowledge of the subject matter, but of cultural awareness and a positive attitude toward diversity in the virtual classroom. The problem that exists is that those who are tasked in designing online courses may not be aware all the time of the current growth of diversity that exists in the online classroom. Even though there are increasing diversity awareness initiatives in face-to-face higher education, the lack of diversity awareness in online education still continues to be a matter of study and research. According to Tan, Nabb, Aagard, and Kim (2010), more course designers and teachers may be considering the diversity of students in creating online courses. Awareness that differences exist is not enough to ensure equity in the online educational setting, especially in western countries where college graduates have been found to be lacking in “skills associated with multicultural awareness” (Cienfuentes & Shih, 2001, p. 458).

Student Satisfaction with Online Learning

This study focuses on student’s satisfaction, specifically the satisfaction of culturally diverse learners in online education. The rapid implementation of online programs by institutions of higher education requires that academic administrators look into how their online programs are being perceived by the learner in order to evaluate learning outcomes. For this reason many

colleges and universities now make it a priority to evaluate the satisfaction of their students with the courses that are being taught online.

According to Kuo (2010), student satisfaction means the perceptions by learners of the value of a course and the experiences in the learning program. Thus, a student's satisfaction with an online course is based on his or her positive association between the course and the overall learning experience. Importance must be given to the experience of the student who is enrolled in an online course. Studies on distance education suggest that it is essential to investigate student's perceptions in order to create and deliver effective online education for students (Trinidad & Pearson, 2004). However, there is still a scarcity of research studies on student satisfaction in online learning (Roach & Lemasters, 2006).

Student satisfaction serves as a good indicator of the effectiveness of online courses and academic programs (Biner, Welsh, Barone, Summers, & Dean, 1997). It has been confirmed that high satisfaction with online courses will enhance a student's retention rate, as well as his or her commitment and motivation to persevere towards completing an academic program (Reinhart & Schneider, 2001). Students with high satisfaction rates are more engaged, motivated, and committed to complete a course, while dissatisfied students tend to be more negative and easily moved to withdraw from a course or the whole program. In addition, highly satisfied students maintain a positive attitude about their learning environment and their academic outcomes. For example, recent research conducted by Park and Choi (2009) shows that adult learners are less likely to drop out when they are satisfied with their courses. Similarly, other researches such as Keller (1983) and Koseke and Koseke (1991) also found that students with high levels of satisfaction towards their online programs are more likely to graduate.

There is no doubt that research studies on student satisfaction help course designers, educators, and administrators to work on areas that need improvements. The present and future of online programs will be impacted by student satisfaction because the highest percentage of enrollment in online programs comes from adult learners who are researching the vast array of academic programs that are available and will meet their academic needs. According to Yukselturk and Yildirim (2008) higher education institutions consider student satisfaction as one of the major elements in determining the quality of online programs in today's market. In addition, the adult online learner places a lot of thought into the financial investment being made. Such financial investment weighs heavily into satisfaction with the course or program. School administrators, course designers, and teachers should consider the satisfaction of their online students and the effectiveness of the online program (Sachs & Hale, 2003).

Student satisfaction in online programs has been studied in relation to a number of factors. It has been studied in relation to persistence (Allen and Seaman, 2013), retention (Koseke & Koseke, 1991), course quality (Moore, 2013), and student success (Keller, 1983). Other studies on the subject of student satisfaction have shown that there are additional factors affecting student satisfaction. For example, the student's unique personal traits and situations across diversified geographical locations have been found to impact perceptions of online courses (Artino, 2007). One such area that continues to provide limited information on student satisfaction and needs to be researched further is the relation that the online student's culture may have on student satisfaction.

The Achievement Gap

Current literature states that there continues to be an achievement gap in the United States between groups. According to Hinojosa (2005), Hispanic-Americans are currently at the bottom

of the educational attainment ladder. “Only 10% of Hispanic adults have attained a bachelor’s degree, and less than 4% have achieved an advanced degree.” (Hinojosa, 2005). Such statistics provide a glimpse of the current lack of higher education levels found in Hispanic adults in the United States. As the economy continues to recuperate and new jobs are created, more Hispanic adults will be seeking opportunities in new areas of employment. Educators, curriculum designers, and higher education administrators will be faced with the challenge in the next 10 years of providing and facilitating education that will allow this particular group of students to fill those jobs created by production increase, and those jobs vacated by retirements. For institutions of higher education, the attrition of Hispanic students in higher education programs will be a priority.

African-Americans in Higher Education

Universities in the U.S. are striving to create better retention and graduation rates for African-American students. According to a report published by National Center for Educational Statistics (Snyder, 2012), the growth of African-American students enrolling in a higher education program has increased from 11% in 2000 to 14% in 2009. The report also mentions that the percentage of American university students who are White has been decreasing, while the percentages of students from other ethnic groups have been increasing. Due to the increased growth of African-American students in post-secondary schools, colleges offering online education have also seen enrollment growth of African-American students in their online learning programs (Allen & Seaman, 2011). However, many institutions of higher learning that are offering online programs lack understanding on how African-American students perceive the online environment. According to Boyette (2008), a need exists to gain a better understanding of how the online learning environment in higher education is perceived by students of color.

Researchers have compared different ethnic groups and found differences in their perceptions of online learning. Chin, Chang, & Bauer, (1999) investigated the effects of cultural background on perceptions of web-based learning and found that Anglo-Saxon students felt more confident and had less difficulty than Asian students with this learning modality. Huffman (2005) found that Latina/Latino students in the U.S., when compared to their peers of other ethnicities, agreed with the provision of online learning as an alternative option to traditional courses, but preferred traditional in-person courses. While differences in perceptions were found between Latino-Americans and Whites, a recent research study conducted by Ashong and Commander (2012) shows that few differences were found between Whites and African-Americans in their perception with online learning. According to Ashong and Commander (2012), African-American students report a less positive perception than Whites with online courses. In their study, Ashong and Commander (2012) suggest that more research should be done to compare the perceptions of African-American students with other domestic diversity groups in the U.S.

Another area of interest for universities and colleges who offer online education is the retention of African-American students in online programs. The achievement gap that exists in the traditional classroom also exists in the online environment (Rovai & Gallien, 2005; Rovai & Ponton, 2005). According to Rovai (2002), online courses have an attrition rate that is 10-20% higher than traditional courses. This clearly shows that institutions of higher education will experience a higher drop-out rate from students who are enrolled in their online programs. A more recent study by Patterson and McFadden (2009) indicated that online students were six and a half times more likely to leave their program than students in campus-based programs. Such high drop-out rates from online programs are a problem for institutions of higher education that

want to see students persevere and complete their studies. Despite such a high attrition rate, the U.S. Department of Education found that online learning is more effective than traditional classroom learning (Means, Toyama, Murphy, Bakia, & Jones, 2009). Online education is an effective and flexible way to earn a degree for many people, including the large percentage of African-Americans who are enrolling in higher education programs. African-American students have not fared as well as Whites in overall academic achievement (Bennett, 2006). This achievement gap in higher education is amplified by differences in culture, communication, and learning style (Rovai, Gallien, & Wighting, 2005). In addition, numerous other factors have become a barrier for African-American students to earning a college degree, including education levels of parents, lack of access to quality preschool and K-12 education, poor study habits, negative peer influences, limited financial resources, and the absence of a sense of cultural community (Bennett, 2006). With drop-out rates already higher in online education than traditional settings, it is important to understand the engagement level of African-Americans with online learning in order to help increase their graduation rates from college.

The usage of technology to gain access to information and learning plays an important role in how students from different cultural backgrounds persevere in online learning. The computer ownership by African-American students continues to be lower compared to Whites, and confidence with computer experience among this group of students continues to be a barrier in completion of online programs. Gladieux and Swail (1999) have raised concerns that online learning could widen the postsecondary access gap between students of color and White students because of inequities in terms of at-home computer and Internet equipment. For example, in 2009, only 52% of African-Americans and 47% of Hispanics had high-speed Internet access at home (Rainie, 2010). Such disadvantages in terms of at-home technological infrastructure could

affect these students' ability to perform well in online courses. In addition, recent studies suggest that 67% of African-American students were not confident in the use of computers, and reported low levels of confidence working in an online environment (Okwumabua, Walker, Hu, & Watson, 2011). According to Boyette (2008), differences in computer skill levels or computer familiarity as well as cultural acclimation to technology may be creating an anxiety barrier to learning for online students who are less expert than their peers with computer use. Lack of competence in and confidence with online learning software is cited as a reason for attrition in online degree programs and for anxiety in university students with diverse ethnic backgrounds (McInerney, March, & McInerney, 1999).

It is important to understand that a large majority of African-Americans prefer traditional education versus online education. Merrills (2010) reported that African-American students preferred frequent oral communication with their classmates, preferably face-to-face instead of online. Additionally, African-American students prefer to have verbal contact with their online instructors, and preferred to work and learn in groups, which is hard to do in an online course (Merrills, 2010).

Online education is the most rapidly growing form of higher education in the U.S. According to Rockinson-Szapkiw, Dunn, and Holder (2010), there is a need to understand how to design and facilitate online courses to ensure quality and flexible online education for culturally diverse students, specifically African-American students, and to help close the academic achievement gap.

Latino-Americans in Higher Education

According to Lopez (2009), 80% of Hispanics between the ages of 18-24, who were born abroad and now reside in the United States, are not enrolled in high school or college. Latino-

Americans are the nation's largest minority group, making up more than 50 million people or about 16.5% of the U.S. population (Pew Research Center, 2012). Recent research shows that the number of Latino-Americans in the U.S. will reach 61 million by the year 2025 (U.S. Census Bureau, 2012). With this estimated population growth by Latinos in the U.S., it can be assumed that there will be a substantial growth of Latino students in institutions of higher education. This prediction was fulfilled in 2011, when Latino-Americans became the largest minority group on college campuses in the U.S. (Fry, 2011). According to the latest research done by the Pew Hispanic Center, Latinos made up one-quarter (25.2%) of 18-24 year olds enrolled in two-year colleges. There are 12.6 million Latino students enrolled in higher education. Between 2010 and 2011, the number of young Latinos enrolled in college grew by 15% or 265,000 students (Pew Hispanic Center, 2012). High school completion rates by Latino-Americans are at a new high, making more Latino students eligible to attend college. According to the Pew Hispanic analysis, 76.3% of all Latinos ages 18-24 had a high school diploma or a GED degree in 2011, up from 72.8% in 2010 (Pew Hispanic Center, 2012). The success rate of Hispanic students in higher education is important for the prosperity of the students and the nation as a whole.

In spite of the record number of Latino-American students currently enrolled in universities, they still possess one of the lowest college graduation rates of any ethnic group in the U.S. According to the latest Hispanic Pew Research, college degrees awarded to Latino-Americans continue to lag more than any other group in the U.S. (Pew Hispanic Center, 2012). This clearly shows that the achievement gap by Latino-Americans in the U.S. is larger than any other ethnic group. For example, in 2010, 1.2 million bachelor's degrees were awarded to Caucasian students, 165,000 to African-American students, and 112,000 to Latino-American students (Pew Hispanic Center, 2012). The achievement gap between Latino-Americans, Whites,

and African-Americans is translating into the online learning environment. However, there continues to be a shortage of research in this particular area. The online experiences of Latino, African-American, or Asian-American students have not been adequately explored in the literature (Uzuner, 2009).

Latino-Americans are considered to be the most rapidly growing minority group in the U.S. today, yet little is known concerning how this population learns in the online environment (Fox & Livingston, 2007). As online education becomes more accepted by Latino-American adults, there seems to be a desire and a need to reengage with higher education by pursuing more specific academic training through online education. The online classroom is providing opportunities for students of different cultures and nationalities to enroll in colleges and universities. According to Angiello (2010), Latino-American students currently represent 21.6% of traditional enrollment but only 14.1% of enrollment in online education. The online classroom has an even greater potential to grow faster and larger with Latino-American students in the next 10-20 years. According to Angiello (2010), one of the factors affecting the current growth of Hispanic students in online programs is the “digital divide.” As Hispanic students continue to catch up with language and computer skills, the digital divide will lessen and more will become comfortable with online education. Recent studies show that Latino-Americans are getting more comfortable with the use of technology. About 56% of the total adult Latino population uses online technology, compared to 71% Whites and 60% African-Americans (Fox & Livingston, 2007). Being comfortable with technology is allowing many Latino-Americans in the U.S. the opportunity to earn a college degree in a non-traditional manner, but there are still cultural issues and barriers that Latino-Americans have to overcome in online programs.

The Latino-American growth in higher education diversity brings great opportunity to the

job market, individuals, and the country (Olivares, 2011). However, it is important to mention that their lack in academic persistence is hurting their chances for a better future. Current research studies are being implemented to better understand the factors that prevent the Hispanic student from completing a college degree, but research on how Hispanics are succeeding in the online classroom is still limited at best.

Recent research has found that a student's lack of communication with faculty has become a factor when staying in or dropping from online courses. Murray (2001) cites communication problems as a major factor contributing to student drop-out rates from online programs. Problems that could be solved in just a few minutes in the classroom, or on the phone, can sometimes take hours or even days to solve via email. Murray (2001) finds that communication is even more important than program content. According to Jackson, Jones, and Rodriguez (2010), "the most important variable in the online classroom is the instructor's level of interaction with the students and the outside world" (p. 5). The lack of a traditional classroom setting increases the need for faculty to communicate with the student more and make sure that course expectations are clearly explained. Online students may feel more disconnected than residential students because of the lack of a physical presence from the online professor. To compensate for the lack of physical presence in the course, the online professor must find creative and technological ways to ensure that students know that he or she cares, and is available to answer questions and provide encouragement to finish the course on time. It is important to note that in the case of a Latino student, he or she tends to see the relationship with the instructor as highly influential in providing motivation to complete the course. In recent studies, Tanno (2003) emphasizes that personal interaction beyond the required weekly assignments was influential in the retention of a Hispanic student in a college degree course.

Communication and Cultural Differences

In the last twenty years, with the birth of the Internet, the world has gained a new medium to communicate and expand globalization. Recent studies have shown that globalization has increased interconnectedness across different cultures via electronic media (Harnnertz, 1996; Holton, 2000). The Internet has opened doors for businesses, organizations, government, and educational institutions to share ideas, products, and build brand awareness. The rapid expansion of the Internet is opening the doors for individuals all across the world to communicate and share information with people from other cultures. Researchers have worked to define the “native language” of the Internet. Because the Internet had its origin in the West, its common language is English. According to Danet and Herring (2007), in 2003, roughly two thirds of Internet users were not native speakers of English and in only 4 of the 5 top countries online in 2004 (United States, United Kingdom, Canada and Australia), was English the official or dominant language. Language is an important issue, and English dominates most if not all of Western online delivery of courses (Smith & Ayers, 2006; Thompson & Ku, 2005; Wang, 2007).

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extensively on non-verbal signals, see communication as an art form in which indirect, implicit, and informal verbal messages are valued, and personalize disagreements. Low-context cultures use language with great precision and economy. In contrast, high context cultures use language more loosely, since words have relatively less value. Understanding these differences provides a better comprehension on the struggles that students from other cultures may have in an online environment. For example, many international students place high importance on teacher-student relation. Without reassuring communication from the professor in the online environment, students may lack the confidence to complete a task in the course. Students who feel that way may be fearful of writing the wrong thing and, according to Guanawardena, Wilson, and Nolla (2003), will withdraw to the perfect silence of a blank screen. By withdrawing to the perfect silence of a blank screen, ESL students will automatically find a temporary, secure place where the fear of failure might be alleviated, but not completely removed. According to St. Amant (2007), online learning and training that involves learners from multiple cultures poses unique challenges for both instructors and learners because of cultural differences, which can be reflected in language, communication style, and social interaction style. It is important that teachers, students, and those providing support to online students are aware of cultural differences that can exist in the online learning classroom. These individuals should also consider the impact that cultural differences may have on the online classroom environment and ultimately, on the student's learning. As mentioned before, not all cultures may have the same approach to communicating in an online course. While westerners may place more value on speech, self-assertion, and informality, easterners may prefer silence, are more reserved, and prefer formality. Previous research studies have shown that there are cultural differences in web-based conferences (Kim & Bonk, 2002; Liang & McQueen, 1999). For example, in one study,

American learners were more action oriented and likely to give and seek feedback during online discussions, while Korean students tended to share more personal feelings or concerns related to the discussions (Kim & Bonk, 2002). Liang and McQueen (1999) reported that American learners are peer oriented and are more likely to interact with peers, while Asian students rely more on instructor's directions in an online environment.

In a global online classroom environment, it would be preferred that participants acknowledge the various cultures present and that there is some sort of flexibility in communication. According to Guanawardena, Wilson, and Nolla (2003), it is suggested that in intercultural online course environments there should be a course facilitator, students should avoid ambiguity, there should be clear expectations, proper feedback should be given by the teacher, and teachers and faculty should be sensitive to textual nuances and seek to build relationships within the online community. The design of online curricula is not an easy task to perform. It requires not only knowledge of the subject matter, but of cultural awareness and a positive attitude toward diversity in the virtual classroom (Eberle & Childress, 2007). The current problem that exists is that those who are tasked with designing online courses may not be aware of the current growth of diversity that exists in the online classroom. Even though there are increasing diversity awareness initiatives in face-to-face higher education, the lack of diversity awareness in online education still continues to be a new matter of study and research. According to Tan, Nabb, Aggard, and Kim (2010), more course designers and teachers may be considering the diversity of students in creating online courses. Awareness that differences exist is not enough to ensure equity in the online educational setting, especially in Western countries where college graduates have been found to be lacking in "skills associated with multicultural awareness" (Cienfuentes & Shih, 2001, p. 458).

Structural Issues in Online Learning

Online technologies, such as learning management systems (LMS), are allowing institutions of higher education to expand their programs, extend to new markets, lower their costs, and provide organizational efficiency. There are some organizational issues that have come to light recently in online learning, such as the proper implementation of curriculum into LMS in order to increase income and expedite student enrollment. Some have suggested that information communication technologies are used “in ways that do not enhance teaching and learning;” for example, “dumping” large amounts of text onto a website (Leask, 2004, p. 347). Suggestions such as those may bring up present conflicts found in the organizational structure of online courses. Many institutions of higher education contract and pay subject matter experts for the developing and creation of online courses. These subject matter experts use the learning technologies available through the institution to develop the courses they have been assigned. Subject matter experts make use of their own cultural and learning preference when designing online courses within the learning management system provided by the institution. For the most part, subject matter experts receive special training on how to incorporate the lesson plans, syllabi, and assignments within the course. As mentioned before, technology is just the medium to share academic knowledge. Subject matter experts should not just add information to the course, but the course must also follow a constructivist learning structure that will give the student the opportunity to interact and apply new knowledge.

According to Hannon and D’Netto (2007), learning management systems do have pedagogical capabilities for collaborative and interactive learning activities when designed around constructivist pedagogies. With better understanding of the usage and potential of LMS, there is potential to reach a better understanding of what constitutes an effective course design

that meets the needs of a globalized virtual classroom population. It is important to note that there are many generic ways to design and create online courses that may provide ineffective classroom teaching. However, such tension between what is ineffective and effective comes down to the value that the academic institutions place on the creation, development, and delivery of quality pedagogical courses. By designing courses around effective pedagogies, online programs may be able to better enroll, support, and provide quality instruction to international students.

In addition to studying how international students perceive the online structure of the course as it is delivered through online technologies, studies have also shown that the support system for students of other cultures is equally as important for student success in online classes (Sellinger, 2004). Students want to feel that help is available at any time during their learning experience. Many institutions of higher education are investing in the recruitment of students from other countries, but little investment is being made to ensure these students receive the proper help they need to successfully complete their programs. Recent studies have shown that international students enrolling in online programs need adequate support in understanding how the admissions process works and how to use the institution's current technology learning systems. Mason (1999) suggests that one of the five elements of global education properly supports structures for a global student body. Even though institutions of higher education provide support to every student enrolled in their online programs, at times support does not take into consideration time differences, language understanding, and technological deficiencies that students from other countries may be facing. For this reason, it is important to understand how international students respond to the organizational structure and arrangements that are built into online learning technologies.

Course Design Issues in Online Learning

Online courses are giving institutions of higher education the opportunity to reach out to groups of learners from different cultural backgrounds. In the U.S., the globalization of online education is more present today than it was in years past as colleges and universities are encouraging domestic and international student populations to take more courses online. Online course instructors and designers are faced with the challenge of providing quality education that can benefit diverse student groups. According to Dunn and Griggs (1995), instructors need to be aware of three critical factors; (1) universal principles of learning do exist, (2) culture influences both the learning process and its outcomes, and (3) each individual has unique learning style preferences that affect his or her potential for achievement. In the context of the western world and online education, it is important to note that distance learning technologies are dominated by Western culture and cater to its teaching style preferences, sometimes at the expense of students from non-Western cultures (Smith & Ayers, 2006). Further research to understand how course design affects diverse student outcomes in online learning can provide educators and course designers the information needed to maximize better student outcomes and make the online learning environment as culturally efficient as possible.

Recent studies have shown that diverse students see a knowledge gap between the instructors and peers on matters of cultural differences. In a recent study by Tan, Nabb, Aagard, and Kim (2010), participants of the study collectively perceived that online learning does not promote cultural understanding between international students, instructors, and peers. In addition, participants expressed the perception that online education does not promote cultural understanding as much as face-to-face learning.

With the globalization of online education, instructors and course designers have a greater responsibility to create and deliver courses that engage a global audience. According to Hannon and D'Netto (2007), the presence of a diverse student body in online courses has meant that the need for a culturally inclusive curriculum design has become a central issue for learning. Additionally, it appears that educational institutions are expanding online course delivery with very few changes to traditional methods of course design. Instructors usually fail to take into account cultural differences when designing and delivering courses.

Those who are tasked with designing online courses must be aware of the current growth of diverse learners who are enrolling in online programs and how ESL students perceive the curriculum design. The ultimate goal of teaching is that students learn and master the subject being taught by the instructor. Learning should be the ultimate outcome no matter if the learning is done face-to-face or online. As the globalization of online programs continues to expand, it is important to study and understand how diverse students are performing in online courses. Recent studies have commonly revealed that learning outcomes improve when learners are better engaged in learning, such as by establishing their own goals, exploring appropriate resources, and working with others in groups (Picciano 2002; Wang, 2007 & Fang, 2007). Wang and Kang (2007) note that students learn better when they are socially, cognitively, and emotively immersed in the learning process. Course design and delivery play a significant role in engaging students with content and learning. "The question is no longer whether online education is as good as face-to-face instruction, but rather how to prepare and support faculty in the online environment and ensure that students achieve important learning outcomes whether they study in online or face-to-face settings or both" (Moskal, Dziuban, Upchurch, Hartman, & Truman, 2006, p.26)

Many recent studies conducted on the topic of course design and how it affects students from other cultures tend to expand on areas of the communication tools used to engage the student with learning. Most typical online courses are designed to include asynchronous tools (discussion board, email, and blogging), while others may include synchronous tools (chat, webcast, instant messaging, video conferencing, and conference call). According to study results by Wang (2007), western students tend to prefer and enjoy more online communication, while students from China and Korea felt lost about how to interact online. Low-context cultures, such as the U.S., are individualistic cultures and prefer low-context communication. Students from China and Korea are still very influenced by the authority that the teacher has in their cultures, where the teacher is a respected authority that should not be interrupted with questions when they talk. For that reason, it is important that course designers and online instructors understand differences in student perception regarding course content, technology, and facilitation of courses (Wang, 2007). This means that high-context students prefer a synchronous approach in their courses. According to Speece (2012), high-context cultures prefer a synchronous course where non-verbal language, such as voice, posture, gesture, body language, facial expression, and periods of silence, play an important role in the engagement of the student with the course.

It is important to note that other studies conducted in the area of course design and diversity in online programs show that the student learning style has little impact on learning outcomes in online education. According to Speece (2012), students with different learning styles prefer different learning formats. International students prefer to enroll in online programs primarily for convenience and accessibility to their preferred programs. However, as online education becomes more and more available around the world, and as higher education institutions in the U.S. desire increased enrollment of international students in their online

programs, there will need to be an adaptation of the courses to fit a population of diverse students who expect their courses to be applicable to their specific academic needs. Currently, the majority of courses being offered in the U.S. have a Western foundation. It is expected that the competitiveness of online education will open doors to adapt courses to a more global audience.

According to Liu (2007), in order to design an effective curriculum that can be applied in a cross-cultural learning environment, both instructors and students need to be aware of diverse cultural value systems and their characteristics. It is important that students from different cultural backgrounds experience online programs as culturally inclusive in their engagement with the content, the teaching, and the learning environment. Beates (2010) mentioned that online learning is often strongly based on constructivist learning theories. However, not all learners have been raised in or even introduced to a constructivist-learning environment.

Technological Issues in Online Learning

The Internet has become an increasingly important medium for providing instruction in distance education (Simonson, Smaldino, Albright, & Zvacek, 2003). It is important to understand that learning technologies are just a platform used to deliver knowledge to the student. In and of themselves, technologies perform poorly in helping to design a course and guide students through the learning process. “There is often no clear view on how learning activities and information resources (content) are meant to relate” (Goodyear & Jones, 2003, p. 40). Scholars have written about the application of online learning. Miller, Rainer, and Corley (2003) mentioned that, although technology-led learning has tremendous potential, poor application can be detrimental to effective learning. Students who are taking courses online value communication that is informal and is delivered quickly, discussion of ideas, and frequent feedback from the instructor.

McLoughlin (1999) expressed that technologies are described as “cognitive tools,” which transform, augment, and support cognitive engagement among learners at primary, secondary, and postsecondary levels. Crooks (1996) stated that the use of technology evokes discussion at the micro level of classroom organization and influences participant’s structures. Instructors must work carefully to adapt cultural awareness to a technology-led curriculum design. Content and activities need to relate to all those enrolled in the course.

Student engagement is measured by how students find technology useful. Beates (2010) acknowledges that the technology equipment of students varies widely within the U.S. and certainly even more across the globe. Faculty training with online technologies is equally as important. According to Selinger (2004), some instructors can be unfamiliar with e-learning, making good teaching obsolete, and leaving the student alone to figure out the content and learning expectations.

According to Hannon and D’Netto (2007), there are cultural and language differences brought by international students when they engage with the technologies of online platforms. This is an area of concern for international students taking online courses and their interactions with discussion boards. Most online communication in technology-led courses is mediated through the use of discussion boards. Warner (2013) reported that course related concerns raised by the students included: lack of motivation for online discussions and participations, teachers not requiring students to use discussion boards, and lack of interest in discussion topics. Others have expressed that the poor implementation of education through online technology can lead to poor attendance, procrastination, feelings of isolation, and a general lack of structure in the course (Simonson, Smaldino, Albright, & Zvacek, 2003).

Summary

The body of literature examined gives considerable context to the proposed research study, and the theoretical framework presented lays a foundation that adds importance to a study that focuses on diverse domestic cultures in online programs. This particular study is based on three key benchmarks that will measure student satisfaction in the online environment: organizational structure of the course, technology understanding and usage, and course design. The study will add further information to the current limited research on how students from diverse cultures experience online education. The importance of diversity, current growth in online education, and student attrition affecting the online education environment present a clear case for the current needs for research in e-learning.

Chapter three will outline the research procedures and design used to investigate what effects cultures have on student satisfaction in online courses. The goal and purpose of this study is to contribute additional knowledge to the growing body of current literature and to build upon the framework already being researched in the field of online education and cultural diversity.

CHAPTER THREE: METHODS

Design

This study is a non-experimental quantitative study. A causal comparative design method for this study was used to determine if there were significant differences between students' cultural diversity scores based on ethnicity. This study will compare the responses from three different culturally diverse groups (Caucasians, Latin-Americans, and African-Americans). According to Gall et al. (2007), they refer, to causal comparative design as group comparison research. This design was chosen because it is suitable for making comparisons between one or more groups, is appropriate for hypothesis testing, and is designed to measure differences between variables (Ary, Jacobs, Razavieh, & Sorenson, 2006). To conduct quantitative research, the researcher decides what to study, asks specific, narrow questions, collects numeric data from participants, analyzes these numbers using statistics, and conducts the inquiry in an unbiased, objective manner (Creswell, 2005).

The independent variable in this study is ethnicity and the dependent variable is the perceived satisfaction scores of domestic culturally diverse students in three areas of the online course: the organizational structure, the student knowledge and usage of technology, and course design. Participants for this study were undergraduate students enrolled at a private religious university in Virginia.

Research Question

RQ1: Is there a difference among the cultural diversity sub-scores (organizational, design, and technological) of Caucasian, African-American, and Latino-American students taking online courses at a religious institution?

Null Hypotheses

H₀1: There is no significant difference among the *organizational* scores (as measured by the cultural diversity instrument) of Caucasian, African-American, and Latino-American students taking online courses at a religious institution.

H₀2: There is no significant difference among the *technology* scores (as measured by the cultural diversity instrument) of Caucasian, African-American, and Latino-American students taking online courses at a religious institution.

H₀3: There is no significant difference among the *design* scores (as measured by the cultural diversity instrument) of Caucasian, African-American, and Latino-American students taking online courses at a religious institution.

Participants and Setting

This study was conducted at a private Christian university in Virginia. The total student enrollment is 104,400. There are a total of 14,400 residential students and another 90,000 online students enrolled at this institution. The total undergraduate student population of this private university is 47,450. The online courses offered at this academic institution are in an eight-week sub-term format. There are two terms, or two eight-week offerings per semester period. All of the courses are conducted asynchronously so there are no specified meeting times. The institution uses Blackboard for the delivery of their course content.

The population identified for this study was comprised of undergraduate students enrolled in a general studies undergraduate freshman course (INFT 101) delivered via the Internet at a religious institution located in Virginia. There were a total of 2,835 students enrolled in INFT 101 during the fall 2015 semester, sub-term B. INFT 101 was chosen because it provided a large population of students where research data could be drawn from. The

populations were undergraduate students enrolled during the fall semester of 2015, sub-term B. The average age of the students was 35 years old. There were 448 students who responded to the Cultural Diversity Satisfaction Survey. The populations consisted of 332 Caucasian students, 88 African-American students, and 28 Latino-American students. The population included similar gender distribution of male students 131 and female students 317.

This causal comparative study required a convenience sample of participants. According to Gall, Gall, and Borg (2010), the research study requires a minimum sample size of 126 participants for a medium effect size at the .05 alpha level statistical power of .7. A population of 2,835 students was used because the sample of students selected was indicative of the students who represented the population of the research study (Creswell, 2015).

The researcher through the academic department (College of General Studies) posted two course announcements with the URL for SurveyMonkey in the INFT 101 to all students who had been enrolled in the INFT 101 course during the Fall 2015 B term session at a Christian University. The first announcement to complete the survey was sent to the students on Week 6. A second announcement was sent to all students registered in INFT 101 as a reminder on week 8. A total of 2,835 were enrolled in INFT 101 during the Fall B, eight-week term and were invited to participate in the study. Of this number, 448 valid surveys were returned for a response rate of 16%. The low response rate is not considered unusual with an online survey.

Caucasian Students

There were a total of 332 Caucasian students who responded to the survey; the gender distribution was 235 female students and 97 male students. English was the first language for 100% of those who responded. The mean age of the respondents was 33. There were 228 full-time students, while 104 were part-time students. For the majority of the students (226), this was

not their first experience with a college course after high school; 106 said this was their first college course after high school. 215 students were somewhat confident with the usage of a computer, while 117 were very confident.

African-American Students

There were a total of 88 African-American students who responded to the survey. The gender distribution was 62 female students and 26 male students. For 88 students, English was their first language; 1 student said Spanish was his/her first language. The mean age of the respondents was 36. There were 64 full-time students, while 24 were part-time students. For the majority of the students (72), this was not their first experience with a college course after high school; 16 said this was their first college course after high school. 59 students were somewhat confident with the usage of a computer, while 29 were very confident.

Latino-American Students

There were a total of 28 Latino-American students who responded to the survey. The gender distribution was 20 female students and 8 male students. For 27 students, English was their first language; 1 student said Spanish was his/her first language. The mean age of the respondents was 33. There were 19 full-time students, while 9 were part-time students. For the majority of the students (23), this was not their first experience with a college course after high school; 5 said this was their first college course after high school. 16 students were somewhat confident with the usage of a computer, while 12 were very confident.

Instrumentation

For this study the researcher used a psychometric evaluated and tested survey instrument called Cultural Diversity Satisfaction Survey (Hannon & D'Netto, 2007). This survey was created and conducted by Hannon and D'Netto at the International Graduate School of Business

at the University of South Australia in Adelaide, Australia and it is based on the “e-learning framework” connoted by Conole (2004). See appendix A for the survey. Survey research designs enable investigators to administer a survey to a sample or to the entire population of people in order to describe attitudes, opinions, behaviors, or characteristics of the population (Creswell, 2005).

The purpose of the Cultural Diversity Satisfaction Survey was to measure the satisfaction of culturally diverse students in online courses. The survey was divided into three sections measuring the student’s satisfaction with the organizational, pedagogical, and technological structure of the online course. Each part of the survey consisted of nine questions, taking 3-5 minutes to complete. The three sections of this survey were created, validated, and first used by Hannon and D’Netto and all 29 survey questions were adapted from Conole’s 2004 framework for e-learning. The first section of the survey dealt with organizational structure of the course. There were 9 questions on topics such as student support, language support, and communication with other students and faculty. The second section of the survey dealt with the student’s knowledge and usage of technology. There were 10 questions on topics such as how satisfied the student is with the course technology being used, whether or not it was difficult to communicate via the discussion board, and measuring whether or not the student had to email the professor frequently for instruction on how to use course tools. The third section of the survey dealt with course content. There were 10 questions on topics such as content relevance to the student’s world, whether or not the reading was practical and if it helped the student understand the subject, and whether or not the student received helpful feedback from the professor and, if so, whether or not it helped in his or her academic progress. Participants were asked to answer statements utilizing a five point Likert-type scale ranging from strongly disagree to strongly agree (strongly

agree, agree, neutral, disagree, and strongly disagree). Responses were as follows: strongly disagree = 1, disagree = 2, no opinion = 3, agree = 4 and strongly agree = 5. The overall

The survey questions were aligned in clusters by benchmark areas. The three-benchmark areas on the full survey were:

1. Organization and participation in the course – measures the level of participation of the student with the course and other students in the online course (Hannon & D’Netto, 2007). This measure required participants to indicate on a five point Likert scale, the extent to which they agree or disagreed with the statements. The number 5 was assigned to the answer “strongly agree”, the number 1 was assigned to the answer “strongly disagree”. Part A of the survey yielded a Cronbach alpha score of 0.56.
2. Use of technology in the course – measures the student experience with the technology used to share instruction and with the student support available (Hannon & D’Netto, 2007). This measure required participants to indicate on a five point Likert scale, the extent to which they agree or disagreed with the statements. The number 5 was assigned to the answer “strongly agree”, the number 1 was assigned to the answer “strongly disagree”. Part B of the survey yielded a Cronbach alpha score of 0.45.
3. Using the course content – measures the student satisfaction with the instruction received, feedback from faculty, and group discussions (Hannon & D’Netto, 2007). This measure required participants to indicate on a five point Likert scale, the extent to which they agree or disagreed with the statements. The number 5 was assigned to the answer “strongly agree”, the number 1 was

assigned to the answer “strongly disagree”. Part C of the survey yielded a Cronbach alpha score of 0.86.

Overall, the instrument has a Cronbach alpha score of 0.84, which suggest this survey to be psychometrically reliable as a whole.

The researcher contacted the original authors of the survey via email. Permissions to use the Cultural Diversity Satisfaction Survey were granted by authors (Hannon and D’Netto via email. See Appendix B for permission. Both authors requested that their permissions be included in the test and that results from the study be shared with them in order to contribute to the generalization of the current framework of study.

The survey was administered through SurveyMonkey, which is an online survey tool used to gather information and data. The survey was completed within a 15-minute time frame. All demographic and cultural background information was collected and obtained through the survey, which also includes an introductory letter explaining the purpose of the study. See Appendix C.

Procedures

After obtaining permission from the Institutional Review Board (See Appendix D), the researcher began the data collection process through the institution’s business intelligence office. The research consent letter (See Appendix C) and survey (See Appendix A) were uploaded to the survey tool SurveyMonkey to allow students access to complete the survey. SurveyMonkey is an online survey software and insight platform used to obtain research data collection. The research information letter included all components of a consent form, but did not require a signature. The return of the completed survey was evidence of their willingness to participate in the study.

The Cultural Diversity Satisfaction Survey was sent to participants during the first half of

the 2015 fall semester (Fall B Term). Participants were undergraduate students enrolled in the INFT 101 online course during the first sub-term of the semester. Students who were enrolled in the INFT 101 online course during the Fall B term received a course announcement from the professor that provided information on the study. In their course announcement they were given a link to the URL for the survey. The students were given a deadline date at which all data collection was considered complete. One week prior to the deadline, the researcher sent a follow-up email to all students. In this email, he thanked the students who had already completed and returned their surveys and asked those who had not taken the time to respond to complete the survey.

There was no monetary reward for completing this survey and the students were not asked to provide their names.

Data Analysis

The statistical analysis used for this study was the one-way analysis of variance (ANOVA) to analyze the mean differences between three ethnic groups in an online course (Caucasians, Latino-Americans and African-Americans). For the purpose of this study, the researcher defined the dependent variable as cultural diversity satisfaction scores and the independent variable as student ethnicity. Gall et al. (2003) indicates that a one-way ANOVA is used to examine significant differences between multiple independent variables.

After the data was collected and the results were received by the researcher, the researcher used SPSS version 22 to analyze and interpret the data. The mean scores of the three ethnic groups were compared (Caucasian, African-American and Latino-American) to determine if any difference existed between groups. In order to do this, an analysis of variance between groups was performed. The data analysis was divided into three sections. The first section used

frequency distributions and measures of central tendency and dispersion to provide a profile of the students who participated in the study. The second section of the data analysis used descriptive statistics to provide a baseline data on the scaled variables. The results of the inferential statistical analysis used to address the research questions were presented in a third section of the data analysis.

The researcher checked for normality in the data by creating a histogram and conducting a normality test, the Kolmogorov-Smirnov test. A one-way analysis of variance ANOVA was run at the 95% confidence level. Effect size was reported using partial eta squared.

CHAPTER FOUR: FINDINGS

Research Question

The research question identified for this study was:

RQ1: Is there a difference among the cultural diversity sub-scores (organizational, design, and technological) of Caucasian, African-American, and Latino-American students taking online courses at a religious institution?

Null Hypotheses

The null hypotheses that have been identified for this study are the following:

H₀₁: There is no significant difference among the *organizational* scores (as measured by the cultural diversity instrument) of Caucasian, African-American, and Latino-American students taking online courses at a religious institution.

H₀₂: There is no significant difference among the *technology* scores (as measured by the cultural diversity instrument) of Caucasian, African-American, and Latino-American students taking online courses at a religious institution.

H₀₃: There is no significant difference among the *design* scores (as measured by the cultural diversity instrument) of Caucasian, African-American, and Latino-American students taking online courses at a religious institution.

Descriptive Statistics

Means and standard deviations for the dependent variables (organizational issues, satisfaction with technology, and satisfaction with design) can be found in Table 1.

Table 1

Descriptive Statistics of Dependent Variables

Variables	<i>N</i>	Mean	<i>S.D.</i>
Satisfaction with Organizational Issues	448	3.72	0.45
Satisfaction with Technology	448	3.49	0.36
Satisfaction with Design	448	3.83	0.61

Means and standard deviations on the independent variable (Caucasian, African-American, and Hispanic) satisfaction with Organizational Issues can be found in Table 2.

Table 2

Descriptive Statistics Satisfaction with Organizational Issues

Variables	<i>N</i>	Mean	<i>S.D.</i>
Caucasian	332	3.71	0.44
African-American	88	3.77	0.46
Latino-American	28	3.77	0.50

Means and standard deviations on the independent variable, (Caucasian, African-American, and Hispanic) satisfaction with Technological Issues can be found in Table 3.

Table 3

Descriptive Statistics Satisfaction with Technology

Variables	<i>N</i>	Mean	<i>S.D.</i>
Caucasian	332	3.47	0.38
African-American	88	3.56	0.45
Latino-American	28	3.44	0.35

Means and standard deviations for the independent variable (Caucasian, African-American, and Hispanic) satisfaction with Pedagogical Issues can be found in Table 4.

Table 4

Descriptive Statistics Satisfaction with Design

Variables	<i>N</i>	Mean	<i>S.D.</i>
Caucasian	332	3.78	0.60
African-American	88	4.01	0.59
Latino-American	28	3.86	0.66

Results

Assumption Test

Prior to the analysis, the Kolmogorov-Smimov's normality test (Warner, 2013, p.153) was used to examine whether there were serious violations of the normality of each group, but significant violations were found (see Table 5). The assumption of normality was not tenable for the Caucasian group in all dependent variables and the African-American group in both Satisfaction with Organizational Issues and with Technology.

Table 5

Kolmogorov- Smirnov Test of Normality

Ethnicity	Scales	Statistics	<i>df</i>	Sig.
Caucasian	Satisfaction with Organizational Issues	0.083	332	0.000
	Satisfaction with Technology	0.093	332	0.000
	Satisfaction with Design	0.099	332	0.000
African-American	Satisfaction with Organizational Issues	0.113	88	0.008
	Satisfaction with Technology	0.095	88	0.050
	Satisfaction with Design	0.079	88	0.200
Latino-American	Satisfaction with Organizational Issues	0.112	28	0.200
	Satisfaction with Technology	0.142	28	0.154
	Satisfaction with Design	0.098	28	0.200

The final assumption was to test for equality of variance. The Levene's Test for Equality of Variance was run and the assumptions were met. See Table 6.

Table 6

Levene's Test of Homogeneity

Variables	Levene Statistics	<i>df</i> ₁	<i>df</i> ₂	Sig.
Satisfaction with Organizational Issues	1.08	2	445	0.34
Satisfaction with Technology	0.86	2	445	0.42
Satisfaction with Design	0.67	2	445	0.51

Result for Null H₀1

A One-Way ANOVA was used to test the first null hypothesis, measuring the differences in Organizational Issues among Caucasians, African-Americans, and Hispanic students. The researcher did not find a statistically significant difference in the sub-scores between all three ethnic groups. Therefore, the first null hypothesis was failed to be rejected at a 95% confidence

level were $F(2, 445) = .85, p = .43, \eta^2 = .004$. The effect size was small. See Table 7, Tests of Between-Subjects Effects.

Table 7

Tests of Between-Subjects Effects for Satisfaction with Organizational Issues

Source	Type III Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.	Partial Eta Squared
Ethnicity	0.34	2	0.17	0.85	0.43	0.004
Error	89.26	445	0.20			
Total	6297.44	448				

Result for Null H₀2

A One-Way ANOVA was used to test the first null hypothesis, measuring the differences in Technological Issues among Caucasians, African-Americans, and Hispanic students. The researcher did not find a statistically significant difference in the sub-scores between all three ethnic groups. Therefore, the first null hypothesis was failed to be rejected at a 95% confidence level were $F(2, 445) = 2.12, p = .12, \eta^2 = .009$. The effect size was small. See Table 8, Tests of Between-Subjects Effects.

Table 8

Tests of Between-Subjects Effects for Satisfaction with Technology

Source	Type III Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.	Partial Eta Squared
Ethnicity	0.66	2	0.33	2.12	0.12	0.009
Error	68.92	445	0.15			
Total	5515.66	448				

Result for Null H₀₃

A One-Way ANOVA was used to test the first null hypothesis, measuring the differences in Design Issues among Caucasians, African-Americans, and Hispanic students. The researcher did find a statistically significant difference in the sub-scores between all three ethnic groups. Therefore, the third null hypothesis was rejected at a 95% confidence level were $F(2, 445) = 4.99, p = .007, \eta^2 = .022$. However, even though the null was rejected it had a small effect. See Table 9, Tests of Between-Subjects Effects.

Table 9

Tests of Between-Subjects Effects for Satisfaction with Design

Source	Type III Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.	Partial Eta Squared
Ethnicity	3.70	2	1.82	4.99	0.007	0.022
Error	162.39	445	0.37			
Total	6738.15	448				

Because the null was rejected, post hoc analysis was conducted using a Tukey Test HSD. There was a significant difference between the *Satisfaction* scores of Caucasian ($M = 3.78, S.D. = .60$) and African-American ($M = 4.01, S.D. = .59$) online students ($p = .005$). The Caucasian group was less satisfied with the online course than the African American group. See Table 10 for Multiple Comparisons Groups.

Table 10
Multiple Comparisons
 Dependent: Satisfaction with Design
 Tukey
 HSD

(I) Ethnicity	(J) Ethnicity	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Caucasian	Latino- American	-0.08	0.12	0.76	-0.36	0.20
	African- American	-0.2278*	0.07	0.01	-0.40	-0.06
Latino-American	Caucasian	0.08	0.12	0.76	-0.20	0.36
	African- American	-0.14	0.13	0.52	-0.45	0.16

Based on observed means.

The error term is Mean Square (Error) =
 .365.

*. The mean difference is significant at the 0.05
 level.

Additional Analysis

The reliability of the instrument was checked with Cronbach Alpha's to measure the inter-correlation of test items. This would ensure the quality of this instrument to aid further item development. This additional analysis was conducted since the researcher could not find reliability scores for the instrument. SPSS® reliability analysis was used to calculate Cronbach's alphas for the CDSS instrument: Organization, $\alpha = .65$; Technology, $\alpha = .45$; and Design, $\alpha = .86$. The overall instrument's reliability was $\alpha = .84$. A Cronbach's alpha approaching 1 is indicative of high internal consistency. By convention, a Cronbach's alpha larger than .7 is considered reliable. Since Organization ($\alpha = .65$) and Technology ($\alpha = .45$) fell below .7, there is a need to revise or create items for those two particular scales. However, the overall Cronbach of .84

suggests that using the instrument, as a whole, is adequate to reliably measure overall satisfaction.

CHAPTER FIVE: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Discussion

The purpose of this quantitative causal comparative study was to determine whether there was a significant statistical difference in the cultural diversity satisfaction scores between three different ethnic domestic student groups (Caucasians, Hispanic-Americans, and African-Americans) in a required undergraduate general studies online course. The participants from this study were undergraduate students enrolled in a General Studies course (INFT 101). A total of 2,835 students took this course in the B term of the fall semester at a religious university in the southeast section of the United States. After approval by the IRB and with permission of the academic department, faculty members posted the “cultural diversity survey” link in week six, and sent a reminder in week eight of the course. A total of 533 students responded to the survey by the last day of the eight-week sub-term. Since the focus of the research hypothesis is on the three ethnic groups (White, Black or African-American, and Hispanic or Latino), the subsequent data analyses were conducted on 448 legitimate cases. Data from the survey was gathered, and then analyzed with the use of SPSS, and the results were shared in Chapter Four. The histogram showed a standard bell curve shape with few outliers, indicating a normal population distribution

For this study, the researcher chose to base his research on the “e-learning framework” established by Conole (2004). The rapid implementation of technology in the college classroom has given universities all across the United States opportunities to expand their offerings to individuals who otherwise would not be able to attend the traditional classroom.

Underrepresented groups of diverse students are finding online education very affordable, accessible, and beneficial in advancing their careers by seeking new knowledge or adding to their current experiences. Conole’s framework is described in three research themes evident in

online learning research; these are the pedagogical, organizational, and technological aspects of the online course. It is from Conoles's e-learning framework that other researchers have expanded the idea that student satisfaction in an online course can be researched in these three areas (Hannon & D'Netto, 2007).

As shared in Chapter Two, current literature shows an abundance of studies available on the subject of online education that support curriculum development, faculty presence, student satisfaction, and retention. As online education continues to grow and change with the introduction of new technologies, it is important to conduct research that measures the type of satisfaction and engagement rates of domestic minority students in the online classroom. According to Bacsich (2009), "online education is already providing better access to education for many, and many more will benefit from this increased access in the coming years." The U.S. Department of Education has clearly defined the need and goal of the present administration to see more diverse students have access to complete post-secondary studies. In 2009, President Barack Obama's 2009 stimulus package included, "the creation of a \$2.5-billion grant program to help states improve college-completion rates" (Field, 2009). President Obama has set two ambitious goals: for all adults in America to pursue at least one year of higher education or career training, and for America to regain its role as the world leader in college attainment (United States Department of Education, 2015). These goals span across all student groups.

As seen in current literature, there is still limited knowledge related to how U.S. domestic students from different cultures adapt to online learning programs (Uzuner, 2009). As the online classroom becomes more diverse in the United States (Allen & Seaman 2013), it is important to understand what effects the student's culture has on his or her satisfaction with online learning environments, specifically within organizational, technological, and pedagogical structures of

online courses. According to Hannon and D'Netto (2007), cultural differences present several challenges to online delivery. Research indicates that the challenges that diversity presents for effective online delivery have not been properly documented. The researcher's purpose was to examine these challenges by focusing on the organizational, technological, and pedagogical aspects depicted in Conole's (2004) "framework for e-learning."

Null Hypothesis One

The first hypotheses examined student satisfaction with organizational issues. It sought to determine whether or not students from three different cultural backgrounds responded differently to organizational rules and arrangements, which are built into online courses. The analysis conducted for the first hypotheses did not show cultural differences between all three ethnic groups with the organizational aspect of the course. This hypothesis failed to be rejected. All three ethnic groups showed very close positive satisfaction scores with how the course was arranged and with the help provided by the institution and faculty. The results were consistent with other studies that showed students in online programs tend to engage better and feel more satisfied when they have support from teachers and the institution within the online course. It has been confirmed that high satisfaction with online courses will enhance a student's retention rate, as well as his or her commitment and motivation to persevere towards completing an academic program (Reinhart & Schneider, 2001).

It is important to mention that all three groups of students showed high satisfaction scores with technical and support help available in the course. This result showed that students are satisfied with the online learning experience when they feel help is easily and quickly available. According to Sellinger (2004), students want to feel that help is available at any time during their learning experience. The results of this study showed that a high percentage of students were

satisfied with the technical help provided by faculty and staff of the institution. This result also validates the importance of providing effective training to those who will be creating and delivering course content via an online platform. Research has shown that well trained faculty, especially those tasked with developing course content for online delivery, understand the need to provide the student with additional help during the course. In many cases, this additional help comes in the form of extra emails, video conferencing, and/or phone conferencing. Instructors, facilitators, and mentors will influence the community's success (Vesper & Herrington, 2012).

It has already been said that the growth in online education means that the community of learners is becoming more and more diverse in terms of nationalities, backgrounds, and culture. Researchers have noted the importance of well-designed online courses. According to (Vesper & Herrington, 2012), designers, developers, and facilitators of instruction need to be sensitive and aware of the potential issues of culturalism: "e-learning courses are cultural artifacts, embedded with cultural values, preferences, characteristics, and nuances of the culture that designed them, and inherently creating challenges for learners from other cultures" (Edmundson, 2009). In the case of this study, three domestic cultures in the U.S. were compared, and all three groups showed they were very satisfied with the guidance and advice they received from their course instructor during their eight-week online course. Comments by students were very positive in this area, from finding the course "well-structured" to "the faculty being on top of issues and providing solutions quickly". A few students commented, "how accessible and approachable the instructor was through their course", which made their engagement with their course easier.

The results also showed an overall positive level of satisfaction by the students when asked if the program delivered what it promised. Such results tell us that all three groups felt the expectations and instruction given within the online course were clear, allowing them to easily

transition into their online course. Recent studies have confirmed that high satisfaction with online courses will enhance a student's retention rate, as well as his or her commitment and motivation to persevere towards completing an academic program (Reinhart & Schneider, 2001). Since online education has been seen by many adults as an opportunity to reinvent their careers or to seek a better job, making an easy transition to reengage with academic courses is important. In the case of this study, the majority of students felt it did not take them a lot of time to figure out the course on their own, by independently engaging with the course. This is good news and may help show, that no matter their ethnicity, having clear instructions and expectations within the online course may help online adult students make a smooth transition into an online program and feel that they are able to complete their courses.

Null Hypothesis Two

The second hypotheses focused on student satisfaction with technological issues. The researcher hypothesized that students from three different cultural backgrounds will show no cultural difference in their ability to work with online technologies. This hypothesis also failed to be rejected. All three ethnic groups (Caucasian, African-American, and Latino-American) showed positive levels of satisfaction with technological issues in their online course. The results of this study showed that overall satisfaction with technology was high. This also confirms the results from other similar studies that showed a lesser satisfaction with technological issues by culturally diverse students in the course (Hannon & D'Netto, 2007). In their study, (Hannon & D'Netto, 2007) mentioned that satisfaction with technology had the lowest mean score of the three aspects of online learning included in this study also. Similar to the study by (Hannon & D'Netto, 2007), a high percentage of students showed no problem with using online technology. Perhaps the digital divide for culturally diverse students is shrinking in the United States. The

expansion of wireless technology and computer usage is helping build confidence in students to pursue a less traditional format to earn a college degree. For example, previous studies have shown that African-American students have shown anxiety and lack of confidence during their e-learning experiences Okwumabua, Walker, Hu, & Watson, (2011). Online education has also been a far reach for Hispanic students in the United States due to language and socio-economical barriers. However, as stated before, recent studies show that Latino-Americans are getting more comfortable with the use of technology (Fox & Livingston, 2007). In the present study, both cultural groups showed high satisfaction levels with using online technology, providing good news that these students in particular are making great strides toward shrinking the digital divide that once kept many from enrolling in an online course. The positive comments made by students in this area may provide helpful information as to how these students may have scored higher than expected. Students felt that the course tutorials were very helpful in helping them navigate the course. Many felt the faculty were knowledgeable and provided quick help when needed throughout their course. Students seem to be satisfied with the tools and the resources available to them. Some students felt there is an advantage in having access to tools such as Microsoft Word, Excel and Power Point for free through the institution and Microsoft online.

It seems that differences in culture had no impact on the student's view of online discussion. This research study produced a different outcome than the study conducted by (Hannon & D'Netto, 2007) with how students view the importance and relevance of online discussion in the course. While (Hannon & D'Netto, 2007) research study showed a lesser view by the students with online discussion, the results of this study showed that students viewed their online discussion as relevant and useful. The results were totally reversed. All three culturally diverse groups expressed a positive view of their online discussion. It is important to note that in

the case of (Hannon & D'Netto, 2007), their study was conducted with a specific population of undergraduate and graduate students in a business program and was conducted nine years ago. This present study was conducted with only undergraduate students, and was their first course in their academic program. The research data also indicated that in all three diverse student groups, familiarity with computers appeared to have a positive impact on how satisfied students felt with how the course was arranged and how online discussion rules and expectations were explained. All three culturally diverse student groups showed positive levels of satisfaction with their discussion board expectations. As a matter of fact, this question received the highest positive score of all ten questions. This may explain why the students in the current study saw their discussion board as relevant and useful. The clearer the expectations and rules for their online discussion assignments, the more satisfied the students felt when engaging with others in online discussion. Some students commented how helpful the course tutorials were in helping navigate through the course. It is important to note that half of the students saw themselves writing long posts to online discussions.

It is interesting to note that all three groups had a positive view of their online communication with their instructor and other students. They perceived communication in the course as a friendly experience and not a lonely one. Some students commented on how easy it was to communicate with professors, noting how friendly and helpful they were. Other studies confirm how communication between students and professors in online courses positively impacts student satisfaction and retention. According to Park and Choi (2009), students need to receive adequate and ongoing support from the online instructor. This impacts student retention in the course. For example, many international students place high importance on the teacher-student relationship (Guanawardena, Wilson, & Nolla, 2003). In this category, the Hispanic

students satisfaction scores were lower than the other two groups. Even though this was not statistically significant this is not surprising, as Hispanic students place a great deal of value on relationships. It is important to note that in the case of a Latino student, he or she tends to see the relationship with the instructor as highly influential in providing motivation to complete the course. In a recent study, Tanno (2003) emphasized that personal interaction beyond the required weekly assignments was influential in the retention of Hispanic students in college courses.

Null Hypothesis Three

The third hypotheses focused on pedagogical issues. The researcher had hypothesized that students from three different cultural ethnic backgrounds (Caucasians, African-Americans, and Latino-Americans) would show no cultural differences in their satisfaction scores with both engagement with content and with the teaching and learning environment. This hypothesis was rejected. The results showed that there was a statistical difference between the satisfaction scores of Caucasians and African-Americans students. The major difference between Caucasian and African-American satisfaction scores with design issues was narrowed down to a couple of questions found in part 3 of the survey (questions 3 and 10). The purpose of the questions were to understand student satisfaction when working with other students in the course. Caucasian students scored lower than African-American students when asked if they enjoyed working with other students to solve problems or compare different points of view. This result confirms that cultural differences exist within a non-traditional classroom. Studies have shown that African-American and Hispanic students have a high preference than Caucasian students to communicate with the professor and other students in a more traditional way. Huffman and Leyva (2005) found that Latino students in the United States, when compared to their peers of other ethnicities, agreed with the provision of online learning as an alternative to traditional courses, but preferred

traditional in-person courses. Tanno (2003) emphasized that personal interaction beyond the required weekly assignments was influential in the retention of Hispanic students in a college course. Merrills (2010) reported that African-American students preferred frequent oral communication with their classmates, preferably face-to-face instead of online. Additionally, African-American students preferred to have verbal contact with their online instructors, and preferred to work and learn in groups, which is hard to accomplish in an online course. This study showed that African-American and Latino-American online students were more satisfied with their online interaction than Caucasian online students, which contradicts previous findings that African-American online students were less satisfied with online education than traditional face to face education (Fox & Livingston, 2007; Boyette, 2008). Both of these groups showed higher satisfaction scores than Caucasians in this area. The researcher reasons that the high satisfaction scores by these two groups in this area may be as a result of the institution's purposeful and intentional efforts to engage their online students in meaningful relationships. For this institution, the researcher has concluded that online instructors view online education not only as a means to disseminate knowledge, but also as a way to show each individual student how much they care.

Instructor feedback to students in a timely manner received a high score by all three groups. All three groups felt the instructor provided helpful feedback throughout the course, and helped them understand and progress through their studies. Studies have shown that when online instructors provide feedback in a timely manner, the online students tend to stay engaged with the course. According to Sun et al. (2008), when learners face problems in an online course, timely assistance from the instructor encourages learners to continue their learning. This course was the first online course for the majority of these students. A few students commented on how

their instructor's weekly, and sometimes daily, responses to their questions helped them stay engaged with their course responsibilities. A couple of students commented how the instructor's engagement with them in the course helped them not to withdraw from the course; "the professor was influential in me continuing on with my studies and not withdrawing". Recent research conducted by Park and Choi (2009) shows that adult learners are less likely to drop out when they are satisfied with their courses. Some students suggested the use of Skype and texting as additional ways to stay in touch with their instructor.

A high percentage of students who took the survey felt that the reading and case studies found within the course content was relevant to them. This score was also similar to their positive view on how the course had many practical applications to their world. These findings corroborate what others studies have concluded on the topic of effectively designing an online course for adult students. Studies have commonly revealed that learning outcomes improve when learners are better engaged in learning, such as by establishing their own goals, exploring appropriate resources, and working with others in groups (Picciano 2002; Reis, 2003; Simon, 2003; Wang, 2007 & Fang, 2007).

Interaction between students in online discussion, especially when having to work with others students to solve problems, received the lowest score. Some students, those who enjoy discussion boards, felt there were no intimate discussions, mostly superficial. Others did not like the idea of working in groups to solve problems; they would rather prefer to do it in a traditional classroom.

Conclusions

Online education has grown rapidly in the United States. Institutions of higher education are delivering virtual academic experiences by overcoming location barriers, student time constraints, and other limitations that have historically prevented adult learners from achieving

their academic dreams. Students from diverse backgrounds are finding the convenience and accessibility of education through online delivery. Academic administrators, instructors, and course designers who want to attract such populations of diverse students must try to understand how culturally diverse groups are adapting to non-traditional delivery methods, such as online education. Underrepresented student groups in the U.S., such African-American and Latino-American students, are finding that online education may be their opportunity to advance in their careers and be more competitive. In years past both of these groups have shown anxiety and hesitancy to enroll in computer-based programs, while still being more comfortable with traditional education. That may not be the case anymore; the enrollment of minority groups in online education is growing. Supporting these students to be successful in online programs is becoming a priority for institutions of Higher Education. Literature has shown that high levels of student satisfaction with online courses produce better student engagement and, ultimately, higher retention rates (Reinhart & Schneider, 2001).

Throughout this study the researcher sought to find out if there was a difference among the cultural diversity sub-scores (organizational, technological, and design) of Caucasian, African-American, and Latino-American students taking online courses at a religious institution. The framework for this study was based on Conole's "framework for e-learning" (Conole, 2004), which looks at the students with an online course in three areas: organization of the course, the technology usage, and course design.

The findings in this research study showed that the satisfaction scores of two student groups (Caucasians and African-Americans) were statistically different with the pedagogical aspects of the online course. It was a small difference, but very important for academic administrators, instructors, and course designers to understand in order to effectively develop

online courses that meet the needs of culturally diverse students in the United States. Studies have shown that in order to engage the student with meaningful learning and prevent student isolation, online courses must include ways for students to interact with one another and the professor (Boyette, 2008). According to the results from this study, African-American students place a high value on their personal interaction with the instructor and working with others in a course. They felt slightly more satisfied with the course than Caucasians when there were opportunities to interact with other students in the online classroom. Latino-American students were also more satisfied than Caucasians, but the difference was not as significant as with the African-American students. In the case of this study it seems that those tasked with creating the courses understood the value of communication in an online course. The study showed that providing students with opportunities to interact with each other in the course through discussion boards was viewed more positively by African-American students. Minority groups in the United States see communication with the instructor and other students as positive in their engagement with the course. Online instructors and subject matter experts can benefit from understanding that African-American and Hispanic online students have a highly positive view of frequent communication with professors and other students. These students perceived online discussion boards with other students positively, and had a higher satisfaction rate than Caucasian students. Frequent communication with professors and peer students was important to students' engagement with the course. When students feel connected with other students and the instructor in the online course, their engagement and retention is higher, thus helping universities bridge the achievement gap in the African-American and Hispanic communities. The findings also showed that all three ethnic groups (Caucasians, African-Americans, and Hispanics) shared a positive view of organizational and technological issues in the online course. The results showed

positive levels of satisfaction between all three ethnic groups in these two areas. The “digital divide” or technological gap between Caucasians, African-Americans, and Hispanics was not present when considering technology and how comfortable students felt in engaging with the course. All three groups felt similarly comfortable using a computer and interacting with the learning platform. This shows that underrepresented groups in the U.S. are demonstrating improvement in their use of technology, and displaying an increased confidence using technology to pursue academic goals. The potential for more underrepresented student groups to enroll in online courses will continue to increase in years to come. Academic administrators should see this as an opportunity to increase student diversity, as well as increase graduation rates for African-American and Hispanic students in their institutions.

Institutions of higher education should continue to invest in resources that support and enhance student success in online courses. As previously discussed, all three culturally diverse groups showed positive levels of satisfaction with the institution’s support with technology. All student groups felt that they received adequate help from the institution’s support center and faculty. This shows that institutions should continue to invest resources in training staff and faculty to support the technological needs of online students in order to see them complete online courses and academic programs.

Implications

There is a continued need in the United States to better understand how students from diverse cultural backgrounds experience online education (Uzuner, 2009). There are lack of research studies considering questions of culture in online education among domestically diverse student groups (Uzuner, 2009; Ke & Kwak, 2013). According to Uzuner (2009), there is a gap in

available literature, specifically in the experiences of African-American, Hispanic, and Asian-American students taking online courses in the U.S.

Institutions of higher education are placing high importance on the recruitment and graduation rates of underrepresented minority groups. Online education will continue to expand and provide the academic benefit that these students need in order to compete for current and future jobs. Understanding student satisfaction in the areas of online course design and delivery will help institutions of higher education identify strengths and weaknesses that may be impacting culturally diverse student groups in their degree programs. Online instructors must understand that the potential for greater classroom diversification is imminent. Instructors and course designers have the potential to share knowledge with a larger, more culturally diverse student audience through online learning. This presents an opportunity to effectively engage with diverse students by understanding how these groups perceive and interact with online education.

Limitations

Educational research studies have limitations that may affect the credibility and reliability of the research study. Limitations need to be considered in educational research.

This research study has a few limitations. First, the study is restricted to students in a large religious university in the United States. Online delivery, class size, and student support may vary between different colleges and universities that offer online education. This study does not capture such differences; it was not the intention of the researcher to do so. Secondly, the survey used in this study was only sent to students in the department of General Studies at the institution. Thirdly, this study was limited to one general elective course. Fourthly, even though the instrument showed an overall Cronbach alpha score of .84, two scales fell below .7, Organization and Technology. There is a need to revise or create items for those two particular

scales in order to provide stronger, more reliable results in future studies. Finally, the course chosen for this study was the first online course taken by the students. Students had limited experience with online courses.

Recommendations for Future Research

The following are recommendations for future research:

(a) Conduct a follow up study with a different course. For example, consider selecting a higher academic level course (i.e. 300 or 400 level). It would be interesting to compare results using a higher-level course where students may have had more experience with an online course.

(b) It is recommended that future studies observe differences in levels of satisfaction with online courses between four ethnic groups: Caucasian, African-American, Hispanic, and Asian. The Asian population in the United States is rapidly growing, and is expected to surpass the Hispanic population by the year 2050. The literature already provides comparison studies between Caucasians and Asians; however, the researcher could not find a study where all four groups were studied.

(c) Future research should replicate this study across other institutions of higher education and across different countries. This will aid in the generalization of the study. Since this study was conducted at a private university in the United States, it is recommended that other researchers consider conducting the study at community colleges in larger metropolitan cities where diversity in the student body may be greater.

(d) Expansion of the study with other variables that may impact online education is also recommended. For example, the student socio-economic status should be studied to determine whether or not it might impact the satisfaction scores of culturally diverse online students.

Studies have shown that lack of financial resources affect minority student's engagement and retention in college. It would be interesting to see if the same has any effect on online programs.

(e) Other research should look at the need to obtain equal sample size for each ethnic group to better isolate the magnitude of the effect in satisfaction scores.

(f) Additional research should look at the similarities that exist between Caucasians and Latino-American similarities in an online course.

REFERENCES

- Allen, I. E., & Seaman, J. (2013). *Changing course: Ten years of tracking online education in the United States*. Newburyport, MA; Sloan Consortium.
- Angiello, R. (2004, Mar. 08). Hispanic students and online courses; Professor shares results of study. *The Hispanic Outlook in Higher Education*, 14, 20.
- Angiello, R. (2010, Jan 04). Hispanic students and online courses. *The Hispanic Outlook in Higher Education*, 20, 68-70.
- Ambient Insight Research. (2009). US self-paced e-learning. Market Monroe, WA: Ambient Insight Research.
- Artino, A. R. (2007). Online military training: Using a social cognitive view of motivation and self-regulation to understand students' satisfaction, perceived learning, and choice. *Quarterly Review of Distance Education*, 8(3), 191-202.
- Ary, D., Jacobs, L. C., Razavieh, A., & Sorenson, C. (2006). *Introduction to Research in Education* (Belmont, CA, Thomson Wadsworth).
- Ashong, C. Y., & Commander, N. E. (2012). Ethnicity, gender, and perceptions of online learning in higher education. *Journal of Online Learning and Teaching*, 8(2), 98.
- Bacsich, P., Bourne, J., & Mayadas, A. F. (2009). Online education today. *Journal of Asynchronous Learning Networks*, 13(2), 49+.
- Mayadas, A. F., Bourne, J., & Bacsich, P. (2009). Online education today. *Science*, 323(5910), 85-89.
- Bates, T. (2001). International distance education: Cultural and ethical issues. *Distance Education*, 22(1), 122-136.

- Bauer, C., Berkhout, J., Chang, V., Chin, K. L., Glasson, B., & Tauber, J. (1999). Exploring online education: A research framework. *Teaching in the disciplines/Learning in context*, 28-34.
- Beates, B. (2010). Affirming diversity in an online course. *Campus-Wide Information Systems*, 27(5), 293 - 302
- Bennett, Jr., M. D. (2006). Culture and context: A study of neighborhood effects on racial socialization and ethnic identity content in a sample of African American adolescents. *Journal of Black Psychology*, 32(4), 479-500.
- Biner, P. M., Welsh, K. D., Barone, N. M., Summers, M., & Dean, R. S. (1997). The impact of remote-site group size on student satisfaction and relative performance in interactive telecourses. *American Journal of Distance Education*, 11(1), 23-33.
- Boyette, M. A. (2008). *An investigation of the online learning environment in higher education through the observations and perceptions of students of color*. (Doctoral Dissertation) Retrieved from ProQuest Central. (Order No. 3347315)
- Chin, K. L., Chang, V., & Bauer, C. (1999). The impact of cultural differences on web-based learning. In *CAL'99 Conference, London, UK*.
- Cifuentes, L., & Shih, Y. C. D. (2001). Teaching and learning online: A collaboration between US and Taiwanese students. *Journal of Research on Computing in Education*, 33(4), 456-474.
- Conole, G. (2004). E-learning: The hype and the reality. *Journal of Interactive Media in Education*, 11.
- Conole, G., Cook, J., & Ingraham, B. (2003). Learning technology as a community of practice. Retrieved from <http://leads.ac.uk>

- Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.) Upper Saddle River, NJ: Pearson.
- Crook, C. (1996). *Computers and the collaborative experience of learning*. Psychology Press.
- Danet, B., & Herring, S. C. (Eds.). (2007). *The multilingual internet: Language, culture, and communication online*. Oxford: Oxford University Press.
- Delon, W., & Mclean, E. (1992). Information systems success: The quest for the dependent variable. *Information Systems Research*, 3(1), 60–95.
- Dunn, R., & Griggs, S. A. (1995). *Multiculturalism and learning style: Teaching and counseling adolescents*. Westport, CT: Praeger.
- Eberle, J., & Childress, M. (2007). Heutagogy: It isn't your mothers pedagogy any more. New Science Association, Available: www.nssa.us/journals/2007-8-1/2007-28-1.04.htm. Accessed 4th May.
- Edmundson, A. (2009). *Culturally Accessible E-learning: An Overdue Global Business Imperative*. *T+D*, 63(4), 40-45.
- Flowers, L. A., Moore III, J. A., & Flowers, L. O. (2008). African American students' satisfaction with distance education courses. *Student Affairs On-Line*, 9(3).
- Fox, J. (1996). How does civil society thicken? The political construction of social capital in rural Mexico. *World development*, 24(6), 1089-1103.
- Fox, S., & Livingston, G. (2007). Latinos Online: Hispanics with Lower Levels of Education and English Proficiency Remain Largely Disconnected from the internet. *Pew Hispanic Center*. <http://www.pewhispanic.org/files/reports/73.pdf>

- Lopez, F. (2010). Identity and Motivation Among Hispanic ELLs. *Education policy analysis archives, 18*, 16.
- Fang, L. (2007). Perceiving the useful, enjoyable, and effective: A case study of the e-learning experience of tertiary students in Singapore. *Educational Media International, 44*(3), 237-253.
- Fry, R. (2002). Latinos in higher education: Many enroll, too few graduate. Washington, DC: Pew Hispanic Center. (ED 468 848)
- Fry, R. (2011). *Hispanic college enrollment spikes, narrowing gaps with other groups*. <http://www.pewhispanic.org>
- Galy, E., Downey, C., & Johnson, J. (2011). The effect of using e-learning tools in online and campus-based classrooms on student performance. *Journal of Information Technology Education, 10*(1), 210-230.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2003). Educational research: An introduction. Boston: Allyn and Bacon.
- Gall, M.D., Gall, J.P. & Borg, W.R. (2010). Applying Educational Research. Boston, MA: Pearson Publishers
- Garrison, D. R., & Shale, D. (1987). Mapping the boundaries of distance education: Problems in defining the field. *American Journal of Distance Education, 1*(1), 7-13.
- Gefen, D., & Straub, D. W. (1997). Gender differences in the perception and use of e-mail: An extension to the technology acceptance model. *MIS quarterly, 389-400*.
- Gladieux, L. E., & Swail, W. S. (1999). *The virtual university & educational opportunity: Issues of equity and access for the next generation*. <http://www.collegeboard.com>

- Goodyear, P., & Jones, C. (2003). Implicit theories of learning and change: Their role in the development of e-learning environments in higher education. *Learning and teaching with technology: Principles and practice*, 29-41.
- Griffin, K. A., Muniz, M. M., & Espinosa, L. (2012). The influence of campus racial climate on diversity in graduate education. *The Review of Higher Education*, 35(4), 535-566.
- Gunawardena, C. N., Nolla, A., & Wilson, P. (2003). Culture and online education. In M. G. Moore & W. G. Anderson (Eds.), *Handbook of distance education* (pp.753- 775). Mahwah, NJ: Lawrence Erlbaum Associates.
- Hannon, J., & D'Netto, B. (2007). Cultural diversity online: student engagement with learning technologies. *International Journal of Educational Management*, 21(5), 418-432.
- Hannerz, U. (1996). *Transnational connections: Culture, people, places*. Taylor & Francis US.
- Hinojosa, R. (2004). Hispanics in graduate education: advancing the next generation. *Harvard Journal of Hispanic Policy*, 17, 97+. Retrieved from <http://worldscholar.tu.galegroup.com/tinyurl/7vV92> Learning Technologies, *International Journal of Educational Management*, 21 (5).
- Holton, R. (2000). Globalization's cultural consequences. *The Annals of the American Academy of Political and Social Science*, 570(1), 140-152.
- Huffman Leyva, L. R. (2005). A Description Of The Perceptions and Attitudes of Students and Instructors Regarding Latinas in Online Instruction at Three Northern California Community Colleges. Retrieved March, 1, 2014.
- Ibarra, R. A. (2001). *Beyond affirmative action: Reframing the context of higher education* University of Wisconsin Press, c/o Chicago Distribution Center.

- Jackson, L. A., Ervin, K. S., Gardner, P. D. & Schmitt, N. (2001). The racial digital divide: Motivational, affective, and cognitive correlates of Internet use. *Journal of Applied Social Psychology*, 31, 2019–2046.
- Jackson, L. C., Jones, S. J., & Rodriguez, R. C. (2010). Faculty actions that result in student satisfaction in online courses. *Journal of Asynchronous Learning Networks*, 14(4), 78+.
- Ke, F., & Kwak, D. (2013). Online learning across ethnicity and age: A study on learning interaction participation, perception, and learning satisfaction. *Computers & education*, 61, 43-51.
- Keller, J. M. (1983). Motivational design of instruction. In C. Reigeluth (Ed.), *Instructional design theories and models: An overview of their current status* (pp. 386-434). Hillsdale, NJ: Erlbaum.
- Kaupp, R. (2012). Online penalty: The impact of online instruction on the latino-white achievement gap. *Journal of Applied Research in the Community College*, 19(2), 8-16.
- Kim, K. J., & Bonk, C. J. (2002). Cross-cultural comparisons of online collaboration. *Journal of Computer-Mediated Communication*, 8(1), 0-0.
- Koseke, G. F., & Koseke, R. D. (1991). Student burnout as a mediator of the stress-outcome relationship. *Research in Higher Education*, 32(4), 415-431.
- Kuong, H. C. (2009). *An exploratory case study of students' perceptions of online graduate education*. (Doctoral Dissertation) Retrieved from ProQuest Dissertations and Theses. (Order No. 3392896)
- Kuo, Y. (2010). *Interaction, internet self-efficacy, and self-regulated learning as predictors of student satisfaction in distance education courses* (Unpublished doctoral dissertation). Utah State University, Logan, Utah

- Lanham, E., & Zhou, W. (2003). Cultural Issues in Online Learning—Is Blended Learning a Possible Solution?. *International Journal of Computer Processing of Oriental Languages*, 16(04), 275-292.
- Leask, B. (2004). Internationalisation Outcomes for All Students Using Information and Communication Technologies (ICTs). *Journal Of Studies In International Education*, 8(4), 336-351.
- Liang, A., & McQueen, R. J. (1999). Computer assisted adult interactive learning in a multi-cultural environment. *Adult Learning*, 11(1), 26-29.
- Liu, Y. (2007). Designing quality online education to promote cross-cultural understanding. *Globalized e-learning cultural challenges*, Hershey, PA: IGI Global, 35-59.
- Lopez, M. H. (2009). *Latinos and education: Explaining the attainment gap*. Washington, DC: Pew Hispanic Center.
- Mason, R. (1998). *Globalising education: Trends and applications*. Psychology Press.
- Mayadas, A. F., Bourne, J., & Bacsich, P.. (2009). Online Education Today. *Science*, 323(5910), 85–89.
- McGlynn, A. P. (2015). Black males and Latinos: Aspiration, achievement, and equity. *Education Digest*, 80(5), 57-60.
- McInerney, V., March, H., McInerney, D. (1999). The designing of the computer anxiety and learning measure (CALM): Validation of scores on a multidimensional measure of anxiety and conditions relating to adult learning of computing skill using structural equation modeling. *Educational and Psychological Measurement*, 59, (3) 451-470.
- McLoughlin, C. (1999). *Culturally responsive technology use: Developing an on-line community of learners*. *British Journal of Educational Technology*, 30(3), 231.

- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. *US Department of Education*.
- Meister, J. (2002). Pillars of e-learning success. *New York: Corporate University Exchange*.
- Merrills, J. (2010). Factors Affecting Nontraditional African American Students' Participation in Online World Literature Classes. ProQuest LLC. 789 East Eisenhower Parkway, PO Box 1346, Ann Arbor, MI 48106.
- Miller, M. D., Ranier, R. K., & Corley, J. K. (2003). Predictors of engagement and participation in an on-line course. *Online Journal of Distance Learning Administration*, 6(1).
- Moore, M. G. (Ed.). (2013). *Handbook of distance education*. New York: Routledge.
- Moskal, P., Dziuban, C., Upchurch, R., Hartman, J., & Truman, B. (2006). Assessing online learning: What one university learned about student success, persistence, and satisfaction. *Peer Review*, 8(4), 26.
- Murray, B. (2001). What makes students stay. Retrieved December 1, 2012, from <http://elearnmag.acm.org/archive.cfm?aid=566901>
- Ness, D. & Lin, C. (2013). *International education: An encyclopedia of contemporary issues and systems*. Armonk, New York: M.E. Sharpe.
- Nieto, S., & Bode, P. (2012). Affirming diversity: The sociopolitical context of multicultural education (6th ed.). Boston, MA: Allyn and Bacon.
- Okwumabua, T. M., Walker, K. M., Hu, X., & Watson, A. (2011). An Exploration of African American Students' Attitudes Toward Online Learning. *Urban Education*, 46(2), 241-250.

- Olivares, R. R. (2011). *Exploring variables predictive of bachelor degree completion among hispanics: A focus on persistence, perseverance, and prosperity*. Retrieved from ProQuest Dissertations and Theses. (Order No. 3459710)
- Park, J. H., & Choi, H. J. (2009). Factors influencing adult learners' decision to drop out or persist in online learning. *Educational Technology & Society*, 12(4), 207–217.
- Patterson, B., & McFadden, C. (2009). Attrition in online and campus degree programs. *Online Journal of Distance Learning Administration*, 12(2). Retrieved from <http://www.westga.edu/~distance/ojdla/summer122/patterson112.html>
- Pew Research Center (2012) *Hispanic Student Enrollments Reach New Highs in 2011*. Retrieved from <http://www.pewhispanic.org/2012/08/20/hispanic-student-enrollments-reach-new-highs-in-2011/>
- Pew Research Center (2014). Broadband technology fact sheet. Retrieved from <http://www.pewinternet.org/fact-sheets/broadband-technology-fact-sheet/2014>.
- Pew Research Center (2015). *Is being Hispanic a matter of race, ethnicity or both?* Retrieved from www.pewresearch.org
- Picciano, A. G. (2002). Beyond student perceptions: Issues of interaction, presence, and performance in an online course. *Journal of Asynchronous learning networks*, 6(1), 21-40.
- Pincas, A. (2001). Culture, cognition and communication in global education. *Distance Education*, 22, 1.
- Pritchett, M. (2009). *Community college online courses: Student retention*. (Order No. 3344307, Wayne State University). *ProQuest Dissertations and Theses*, , 143. Retrieved from <http://search.proquest.com/docview/305023138?accountid=12085>. (305023138).

- Raine, L. (2012). Internet access at libraries. Washington, D.C: Pew Internet and American Life Project. Retrieved from: <http://libraries.pewinternet.org>
- Rainie, L. (2010). Internet, broadband, and cell phone statistics. *Pew Internet & American Life Project*, 5.
- Reinhart, J., & Schneider, P. (2001). Student satisfaction, self-efficacy, and the perception of the two-way audio/video distance learning environment: A preliminary examination. *Quarterly Review of Distance Education*, 2(4), 357-365.
- Roach, V., & Lemasters, L. (2006). Satisfaction with online learning: A comparative descriptive study. *Journal of Interactive Online Learning*, 5(3), 317-332.
- Rockbridge (2013). The role of culture in technology adoption in the U.S.: Results of the African American –Latino technology readiness survey. White Papers. Great Falls, VA: Rockbridge Associates, Inc.
- Rockinson-Szapkiw, A., Dunn, R., & Holder, D. (2010). Technologies that Assist in Closing the Achievement Gap: A Comparison African American and Caucasian Students' Learning and Community in the Online Classroom. *Society for Information Technology & Teacher Education International Conference 2010* (1), 804-809.
- Rovai, A. P. (2002a). Development of an instrument to measure classroom community. *The Internet and Higher Education*, 5(3), 197–211. doi:10.1016/S1096- 7516(02)00102-1
- Rovai, A. (2002b). Building a sense of community at a distance. *International Review of Research in Open and Distant Learning*, 3(1), 116.
- Rovai, A. P., & Ponton, M. K. (2005). An examination of sense of classroom community and learning among African American and Caucasian graduate students. *Journal of Asynchronous Learning Networks*, 9(3), 77-92.

- Rovai, A. P., Gallien, L. B., & Wighting, M. (2005). Cultural and interpersonal factors affecting African American academic performance in higher education: A review and synthesis of the research literature. *Journal of Negro Education*, 74(4), 359–370.
- Rovai, A. P., & Gallien, L., Jr. (2005). Learning and sense of community: A comparative analysis of African American and caucasian online graduate students. *The Journal of Negro Education*, 74(1), 53-62.
- Rovai, A. P., & Downey, J. R. (2010). Why some distance education programs fail while others succeed in a global environment. *The Internet and Higher Education*, 13(3), 141-147.
- Sachs, D., & Hale, N. (2003). Pace university's focus on student satisfaction with student services in online education. *Journal of Asynchronous Learning Networks*, 7(2), 36-42.
- Selinger, M. (2004). Cultural and pedagogical implications of a global e-learning programme. *Cambridge Journal of Education*, 34(2), 223-239.
- Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2003). Teaching and learning at a distance. Columbus: Pearson Education.
- Smart, K. L., & Cappel, J. J. (2006). Students' perceptions of online learning: A comparative study. *Journal of Information Technology Education*, 5(1), 20119.
- Smith, D. R., & Ayers, D. F. (2006). Culturally responsive pedagogy and online learning: Implications for the globalized community college. *Community College Journal of Research and Practice*, 30(5-6), 401-415.
- Snyder, T. D., Dillow, S. A., & Hoffman, C. M. (2009). *Digest of education statistics 2008*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, Institute of Education Sciences. Retrieved April 2, 2013

- Speece, M. (2012). Learning Style, Culture and Delivery Mode in Online Distance Education. *Online Submission*.
- St Amant, K. (Ed.). (2007). Handbook of Research on Open Source Software: Technological, Economic, and Social Perspectives: Technological, Economic, and Social Perspectives. IGI Global.
- Sun, P. C., Tsai, R. J., Finger, G., Chen, Y. Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & education*, 50(4), 1183-1202.
- Tan, F., Nabb, L., Aagard, S., & Kim, K. (2010). International ESL Graduate Student Perceptions of Online Learning in the Context of Second Language Acquisition and Culturally Responsive Facilitation. *Adult Learning*, 21, 9-14.
- Tabb, E. D., Waits, T., & Lewis, L. (2003). *Distance education at degree-granting postsecondary institutions: 2000-2001*. Washington, DC: US Department of Education.
- Tanno, D. (2003). *When Education, Media, and Technology Converge, What Do Latino/a Students Gain?*. *Journal Of Latinos & Education*, 2(1), 39.
- Teranishi, R. T., Suárez-Orozco, C., & Suárez-Orozco, M. (2011). Immigrants in community colleges. *The Future of Children*, 21(1), 153-169.
- Tingoy, O.; & Gulluoglu, S.S., "Effects of culture on distance learning in higher education in the light of digital divide and multicultural: Curriculum and design strategies," *Problems of Cybernetics and Informatics (PCI)*, 2012 IV International Conference , vol., no., pp.1,3, 12-14 Sept. 2012

- Trinidad, S., & Pearson, J. (2004). Implementing and evaluating e-learning environments. In *Australian Society for Computers in Learning in Tertiary Education 2004 Conference, Perth, Australia*.
- Thompson, L., & Ku, H. (2005). Chinese graduate students' experiences and attitudes toward online learning. *Educational media international*, 42(1), 33-47.
- Wang, M. (2007) Designing online courses that effectively engage learners from diverse cultural backgrounds. *British Journal of Educational Technology*, 38(2), 294-311.
- Wang, C. M., & Reeves, T. C. (2007). The meaning of culture in online education: Implications for teaching. *Globalized e-Learning cultural challenges*, 1-17.
- Warner, R. M. (2013). *Applied statistics: From bivariate through multivariate techniques (2nd ed.)*. University of New Hampshire: SAGE Publishing.
- U.S. Census Bureau. (2005). *Computer and Internet use in the United States: 2003*. Retrieved from <http://www.census.gov>
- U.S. Census Bureau, Population Division. (2008). "Projected Population by Single Year of Age, Sex, Race, and Hispanic Origin for the United States: July 1, 2000 to July 1, 2050." Washington, D.C.: August. <http://www.census.gov>
- U.S. Census Bureau. (2010). *2010 Census questionnaire reference book* (No. D-1210). Retrieved from http://2010.census.gov/partners/pdf/langfiles/qrb_English.pdf
- United States Department of Education. (2015). *College Affordability and Completion: Ensuring a Pathway to Opportunity*. Retrieved from <http://nces.ed.gov/fastfacts/>
- Uzuner, S. (2009). Questions of culture in distance learning: A research review. *The International Review of Research in Open and Distributed Learning*, 10(3).

Vesper, J., & Herrington, J. (2012). Considering communities of learners when creating an e-learning course.

Yang, D., Olesova, L., & Richardson, J. C. (2010). Impact of Cultural Differences on Students' Participation, Communication, and Learning in an Online Environment. *Journal Of Educational Computing Research*, 43(2), 165-182.

Yukselturk, E., & Yildirim, Z. (2008). Investigation of interaction, online support, course structure and flexibility as the contributing factors to students' satisfaction in an online certificate program. *Educational Technology & Society*, 11(4), 51-65.

APPENDIX A

Permission To Use Instrument

On Sep 22, 2014, at 10:27 PM, John Hannon <J.Hannon@latrobe.edu.au> wrote:

Hi Orlando

You are welcome to use the Survey Instrument from our study, with the normal academic attributions and reference

Kind regards

John

Dr John Hannon

Senior Lecturer | Educational Development, Online and Flexible Learning

La Trobe Learning & Teaching | HU2, Room 108

Ph: 03 9479 1533 | Email: J.Hannon@latrobe.edu.au

This survey is to be used with the permission of the authors, with the following attribution and citation:

Hannon, J. and D'Netto, B. (2007) Cultural Diversity Online: Student Engagement with Learning Technologies, in *International Journal of Educational Management*, 21 (5).

APPENDIX B

Consent Form

A COMPARATIVE ANALYSIS OF CULTURAL DIVERSITY SATISFACTION SCORES OF
UNDERGRADUATE STUDENTS IN ONLINE LEARNING
ENVIRONMENT

Orlando Lobaina
Liberty University
School of Education

You are invited to be in a research study of cultural diversity satisfaction in online learning environment. You were selected as a possible participant because you are currently enrolled in an online course. I ask that you read this form and ask any questions you may have before agreeing to be in the study.

Orlando Lobaina, a student/doctoral candidate in the School of Education at Liberty University, is conducting this study.

Background Information:

The purpose of this study is to determine whether there is a significant statistical difference in the cultural diversity satisfaction scores between three different ethnic domestic student groups in a required undergraduate general studies online course.

Procedures:

If you agree to be in this study, I would ask you to do the following things:

- 1.) Please complete the Cultural Diversity Survey. It will take you 5-10 minutes to complete.
- 2.) Please complete the background information at the end of the survey.
- 3.) Please note that participation is completely anonymous.

Risks and Benefits of being in the Study:

The risks involved in this study are no more than the risk you will encounter in everyday life.

The benefits to participation are:

1. Provide University administration quantitative data on the level of student's satisfaction
2. Provide course designers vital information on the student's satisfaction with curriculum design.
3. Help your academic institution understand their online diverse population and how to better support them academically.

The benefits mentioned above are benefits to society and not direct benefits to participants.

Compensation:

You will not receive compensation for taking part in this study.

Confidentiality:

The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely and only the researcher will have access to the records.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is Orlando Lobaina. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at olobaina@liberty.edu. You may also contact the research's faculty advisor, Dr. Beth Ackerman, at mackerman@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd, Carter 134, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information to keep for your records.

APPENDIX C

IRB Approval

Dear Orlando,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Please retain this letter for your records. Also, if you are conducting research as part of the requirements for a master's thesis or doctoral dissertation, this approval letter should be included as an appendix to your completed thesis or dissertation.

Your IRB-approved, stamped consent form is also attached. This form should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document should be made available without alteration.

Please note that this exemption only applies to your current research application, and any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.