

**TEACHER PRESENCE AND COURSE COMPLETION  
IN ONLINE LEARNING**

Doctoral Dissertation Research

Submitted to the  
Faculty of Argosy University, Inland Empire  
College of Education

In Partial Fulfillment of  
the Requirements for the Degree of

Doctor of Education

by

Frank Houlihan

February, 2014

**TEACHER PRESENCE AND COURSE COMPLETION  
IN ONLINE LEARNING**

Copyright ©2014

Frank Houlihan

All rights reserved

**TEACHER PRESENCE AND COURSE COMPLETION  
IN ONLINE LEARNING**

Doctoral Dissertation Research

Submitted to the  
Faculty of Argosy University, Inland Empire  
College of Education

In Partial Fulfillment of  
the Requirements for the Degree of

Doctor of Education

by

Frank Houlihan

Argosy University, Inland Empire

February, 2014

Dissertation Committee Approval:

\_\_\_\_\_  
Jeanmarie Hamilton-Boone, PhD.  
Committee Chair

\_\_\_\_\_  
Date

\_\_\_\_\_  
Dr. Dale Jones, Ed.D.  
Committee Member

\_\_\_\_\_  
Akin Merino, Ed.D.  
Program Chair, School of Education

**TEACHER PRESENCE AND COURSE COMPLETION  
IN ONLINE LEARNING**

Abstract of Doctoral Dissertation Research

Submitted to the  
Faculty of Argosy University, Inland Empire  
College of Education

In Partial Fulfillment of  
the Requirements for the Degree of

Doctor of Education

by

Frank Houlihan

Argosy University, Inland Empire

February, 2014

Jeanmarie Hamilton-Boone, PhD

Dale Jones, Ed.D.

Department: College of Education

## ABSTRACT

This research involved an examination of the effect of teacher presence on student success and completion in online learning at two Southern California postsecondary institutions. The population sample included students attending both a for-profit and not-for-profit college for the purpose of comparison. The purpose of this study was to explore the significance and efficacy of teacher-interaction (i.e., role and presence) as a contributing factor to students' satisfaction and course completion in the virtual online asynchronous learning environment. A further purpose was to compare the importance of teacher interaction in public and for-profit private institutions. The theoretical framework of the community of inquiry (COI) by Garrison, Anderson, and Archer (2001) was used to examine and evaluate the teacher's role in overlapping social, cognitive, and teaching aspects of the educational experience. The analysis of data demonstrated a statistically significant correlation between the role of the facilitator and the success of student completion. The implications for administrative planners, teachers, students and other cohorts is dramatic in evaluating the efficacy of meeting learning outcomes in online education, course completion and student success in achieving degree goals.

## ACKNOWLEDGEMENTS

This dissertation would not be possible without the support and guidance of my committee chair, Dr. Jeanmarie Hamilton-Boone, and committee member, Dr. Dale Jones. They were extremely conscientious in their encouragement and persistent direction, and I am very grateful for their efforts. I also would like to acknowledge the excellent advice and assistance of Dr. John Opara in guiding me through the IRB process and Dr. Ray Briggs with Dr. Shinichi Hirokawa, who helped me with the research methodology, to evaluate and understand the statistical analysis necessary in forming appropriate conclusions. Further acknowledgements go to the administrator's faculty and staff who supported me throughout this long arduous process. Especially Dr. Al-Hassan, Dr. Merino, Dr. Last, and Dr. Domingo. Special thanks go to Dr. James Smith, Dr. Luka Mbewe, Dr. Cammie Hsu, and last but certainly not least, my esteemed colleague and good friend, Dr. Captain Rupert Francis.

## **DEDICATION**

This dissertation is dedicated to my family. My mother, Lugarda, especially encouraged me to further my education as a life-long learner. My brother, Thomas, who recently passed was very supportive of the long journey and all the effort it took to fulfill the completion requirements. My hope is that my sons, Sean and James, will see me as a positive example of the importance of furthering their education as they complete their baccalaureate degrees and go on to fulfilling enriching educational and professional challenges. Thank God for the blessings of my family and my wife, Tatiana, in supporting me in this endeavor.

## TABLE OF CONTENTS

	<b>Page</b>
TABLE OF FIGURES .....	x
TABLE OF APPENDICES .....	xi
<b>CHAPTER ONE: THE PROBLEM</b> .....	<b>1</b>
Background of the Problem .....	4
Factors that Influence Student Success: Technology.....	5
Asynchronous Class Elements .....	8
Purpose of the Study .....	13
Limitations and Delimitations.....	13
Research Questions and Hypotheses .....	14
Significance of the Study .....	16
<b>CHAPTER TWO: LITERATURE REVIEW</b> .....	<b>17</b>
Technology .....	18
Course Completion / Persistence .....	19
The COI Theoretical Framework for Evaluating Student Experience.....	21
Teacher Presence .....	22
Social Presence .....	23
Cognitive Presence.....	27
COI Model and Student Satisfaction .....	31
<b>CHAPTER THREE: METHODOLOGY</b> .....	<b>33</b>
Research Design.....	33
Research Questions and Hypotheses .....	35
Sampling .....	37
Participants.....	37
Instruments.....	38
Interviews.....	38
Survey .....	38
Variables .....	39
Procedures.....	39
Data Analysis .....	40
Statistical Tests .....	41
Data Analysis Procedures .....	43
Summary of Research Methodology .....	44
<b>CHAPTER FOUR: FINDINGS AND ANALYSIS</b> .....	<b>46</b>
Sample Characteristics.....	47
Instructor Presence / Significance.....	52
Instructor Role and Presence .....	60
Statistical Comparison by Research Question .....	58
Summary of Findings.....	61



CHAPTER FIVE: SUMMARY, CONCLUSION, AND RECOMMENDATIONS.....63  
Recommendations .....65  
REFERENCES .....67

## TABLE OF FIGURES

<b>Figure</b>	<b>Page</b>
1. Number of for-profit vs. public surveys returned. ....	48
2. Department / discipline. ....	48
3. Course level. ....	49
4. Number of online courses. ....	49
5. Number of online courses taken. ....	50
6. Gender. ....	50
7. Ethnic background. ....	50
8. Student academic status. ....	51
9. Academic length of enrollment. ....	51
10. Student age. ....	52
11. Importance of level of interaction, student satisfaction, and successful completion. ..	52
12. Students' perceptions of importance of teacher interaction. ....	57
13. How teacher interaction affects completion. ....	58
14. Students' perceptions of the importance of teacher presence. ....	59
15. Satisfaction of instructor participation. ....	59
16. Satisfaction with instructor interaction and completion. ....	60
17. Instructor interaction (i.e., role and presence). ....	61
18. Regression analysis showing passive versus active presence. ....	64

**TABLE OF APPENDICES**

<b>Appendix</b>	<b>Page</b>
A. Qualitative Interview Questions .....	78
B. Sample Survey Instrument .....	80
C. Informed Consent.....	86
D. Databases and Keywords for Dissertation .....	84
E. Statistics for Sample Question 12 of Section B .....	86
F. Statistics for Sample Question 13 of Section B .....	88
G. Statistics for Sample Question 14 of Section B .....	90
H. Statistical Summary .....	89
I. Statistical Summary Z Test.....	92
J. Statistical Summary ANOVA.....	94
K. Statistical Summary <i>t</i> -test .....	96
L. Statistical Summary Output .....	98

## CHAPTER ONE: THE PROBLEM

The effects of online education currently and increasingly in the future of education are monumental. Leaders of postsecondary institutions are scrambling to supplement curricula with interactive online materials. Currently, approximately one-third of postsecondary students are taking online courses, which accounts for an approximate annual enrollment of five to six million students (Picciano, 2012). The incredible promises visualized for the future of web-based education are not without negative aspects, however. Attrition rates for online programs are significantly higher than in face-to-face programs (Boston et al., 2010). In fact, Patterson and McFadden (2009) found dropout rates to be six to seven times higher in online programs.

Volumes have been written and numerous studies have been conducted regarding interactive online content delivery and definable learning outcomes. The interactive educational community that is developing is rapidly changing. Face-to-face meetings are increasingly being replaced in the academic arena with the less direct methods such as text messaging, discussion board postings, and e-mail. There is little doubt that computer technology offers incredible opportunity, resources, and increasing potential to postsecondary educators and learners. The remarkable growth and financial benefits of online instruction are combined with questions about the efficacy of program outcomes. An important measure of a program's effectiveness is its completion rate. Understanding how to positively influence the persistence of students who stay on track to reach their goal of a postsecondary degree is an ongoing challenge for educators and administrators. Retention rates directly affect administrative funding and are an essential part of academic planning and evaluation. Leaders at many institutions have identified

persistence and student retention in finishing classes as critically important issues in their long-term strategies for growth and survival (Allen & Seaman, 2008). Though some studies have shown an equivocal relationship between traditional and online learning outcomes (Russell, 2001), there is evidence to suggest a significant decrease in persistence by online students (Bos & Shami, 2006; Diaz & Cartnal, 2006; Rovai, 2003; Willging & Johnson, 2004).

A number of critical issues and factors influence persistence in interactive online (i.e., web-based) content delivery. Identifying these issues and factors through research will assist forward-looking education planning. An identifiable interactive online factor that may increase negative persistence (Tinto, 2002) is the possible disconnect some incoming freshmen experience with faculty, staff, or *campus chemistry*, which can be defined as the ethereal commodity unique to each school that creates a sense of belonging in the college population. Identifiable behaviors associated with belonging include enhanced positive student academic achievement due to pride in and identification with a collegiate environment. Tinto (1975) argued there is a direct correlation between face-to-face social integration and persistence, particularly regarding first year students.

The interactive classroom is changing and now includes virtual environments where students and faculty are only present through computer interchange. Because interaction between student and teacher is directly related to student retention, it is important to examine how this relationship is changing in the online classrooms. The perceptions and attitudes of first year college students taking primarily virtual interactive online classes may be very different from those of their cohorts physically sitting in a

room together. How online students perceive their interactions with instructors may shed light on the factors that enhance student retention.

The comfort level of incoming students with technology may provide significant insight. Toporski (2004) stated that “historically, distance education experience high attrition rates due to possible lack of motivation, lack of community, frustration and sense of belongingness” (p. #). Though there has been explosive growth in online education over the last 10 years possibly coupled with high interactive online dropout rates, no current research study yet exists to substantiate this supposition (Berge & Huang, 2004; Park, Boman, Care, Edwards, & Perry, 2009). Established thinking within educational communities is that students in traditional classrooms reach the highest levels of pedagogic pyramids through the presence of talented teachers who create live real-time active learning environments. In answer to the challenges faced in contemporary education, significant research into developing practices that bring successful virtual systems to distance education is warranted and relevant going forward. The rapid expansion of distance learning programs will force educators to conduct a formative review of traditional pedagogical strategies. Such a review must find ways to appropriately integrate technology, curriculum, community, and learning in a manner that successfully supports meeting learning outcomes, student completion, and satisfaction in virtual learning environments. There are many components to the issues surrounding teacher presence and online course completion, including technology, the interactive online classroom environment, and the development of a community of learning.

## Background of the Problem

The theoretical framework of the learning community has become accepted as a pervasive and rapidly growing national paradigm in postsecondary education (Brook & Oliver, 2003). Learning communities started as an exploratory approach in the 1920s with the Experimental College at the University of Wisconsin (Smith, 2001). Though short lived, the program, started by Alexander Meiklejohn, addressed many issues that are at the root of evaluating learning effectiveness today. Meiklejohn felt the more “democratic” and relevant the curriculum, the more effective the learning would be. The role of the instructor became that of advisor and facilitator of learning rather than an authoritarian handing down “supposed wisdom” while orating. Classes stressed active learning with assignments that forced students to implement theory into practical solutions. During the 1960s the Learning Community Framework was implemented in California and New York. The University of California, Berkeley, San Jose State College, and State University of New York at Stonybrook created versions of learning communities with the lofty goals of democratic curriculum and learning that served to scaffold students to a higher level learning. Dr. Benjamin Bloom (1956) described a taxonomy across learning domains with the highest level creativity achieved through collaborative synthesis. At the root of the learning framework is *atomism*, a theory that any significant processes arise from the acts, interests, and values of individuals; therefore, students and faculty constitute a significant area for relevant research and analysis. As a result, an area that has received considerable consideration in educational research over the last 10 years is the theoretical concept that virtual classrooms are

learning communities. Shea, Swan, Li, and Pickett (2006) argued there are three main areas of inquiry that converge in a learning community:

- Good learning environments are learner-centered, knowledge-centered, assessment-centered, and community-centered (Bransford, Brown, & Cocking, 1999). This classroom construct allows students to “own” their learning in conceptually engaging and investigating topics that feed their passion for understanding.
- Good learning environments promote high levels of interaction between faculty and students, prompt feedback, active roles for learners, time on task, student cooperation over competitiveness, and respect for diversity in learning (Chickering & Gamson, 1987).
- Good learning environments create a social environment that promotes supportive discourse and sets a collegiate climate of positive interaction. Students feel they are part of a community of learners.

A successful community of learners develops as a result of the combined work of students and instructors (Garrison, Anderson, & Archer, 2000). The learning community environment affects how cohorts interact and are engaged in their education.

### **Factors that Influence Student Success: Technology**

The ability of technology to drive online teaching modalities will obviously affect the future of education. The ubiquitous and pervasive explosion of technology has radically impacted interaction and learning over the past 20 years and has accelerated in the past 5 years (Davis, 2012). The demanding skills required in today’s computer and technology enriched environment are influencing the decision of many students to return



to higher education to acquire the new knowledge-based education required; as a result, students are upgrading their technology skills.

The influx of student population combined with increased financial problems cause leaders at educational institutions to attempt find viable solutions to meet the demand. The number of students attending college was up 9% in the 1990s, 38% since 1999 and 45% projected to 2018 (National Center for Education Statistics, 2011). Unfortunately, completion rates have not matched the increase in the student population. Secretary of Education, Arne Duncan, in a 2010 interview with PBS stated, “there is a 25% dropout rate in this country . . . in one generation, we have fallen from first to ninth in the world in college graduations.” Gentiles (2012) indicated student satisfaction with technology may increase student success. Allen and Seaman (2008) stated students’ perceptions of classes using technology (hybrid and online) are 80% more favorable than face-to-face due to the capacity of students to work at their own pace and the “always on” functionality of the Internet. There was a growth rate of 10% for student online enrollment in the year 2011 with only a 1% student enrollment growth, and 65% of all postsecondary schools include distance learning as a critical part of their strategic plans (Allen & Seamans, 2011).

Hundreds of educational experts agree that asynchronous education and emerging technologies will have a dramatic effect on the future of postsecondary education (Johnson, Adams, Cummins, & Estrada, 2012). Educational administrative planners are attempting to meet fiscal pressures by expanding the number of web classes that focus on the retention of existing students. Internet-based classes do not require expensive classroom facilities, usually have larger class sizes, and are not usually held at a specific

time (i.e., asynchronous mode), making them more cost effective. It should be noted that increases in technology such as larger bandwidth capabilities are making synchronous e-learning, where students are able to witness a live classroom presentation and engage in real-time interaction with instructors, more feasible and popular. Because traditional classroom hours are not the measurable units, e-learning can be more accomplishment based. Outcome metrics of student performance such as completing an essay, posting responses to a discussion question, or uploading a finished project are evaluation indicators that define the student's progress. E-learning environments frequently use professional learning management systems such as Blackboard, Click to Learn, and eCollege. Added to the mix are collaborated learning environments such as Sakai and Moodle. These are usually open source, meaning they are user modifiable. Although these are fully customizable in creating content management systems or virtual learning environments, student grading is somewhat problematic due to FERPA rules, which clearly state that only students and no others will have access to grading. Because the nature of web-based delivery is separated or "parsed" into small building blocks, a real advantage is in the "always on" availability of instruction and reuse of learning material in secure educational local area networks, cloud computing, or even the public domain. Instructors use learning management systems to deliver and track the learning objectives, facilitate student interaction with the instructor as well as other cohort members, and provide access to course materials.

There are many obvious and some less noticeable factors to consider in comparing the traditional and virtual delivery mechanisms of learning content. The accepted list might include students' satisfaction with technology, connection to the

school, connection to the course, ease of use, and desire to achieve a high grade. Some less conspicuous factors are the connection to the instructor, connection to cohorts, sense of community, and social interaction.

Arbaugh (2005) argued the perceived ease of use and usefulness (i.e., relevance) of the content delivery in web-based classes directly affect student satisfaction. Marks, Sibley, and Arbaugh (2005) claimed the role of the instructor through interactions with students online is the most salient factor in explaining student dissatisfaction with an online course. The students' overall attitudes toward the course are directly related to the social relationship created with the instructor and the social community created in the online learning environment. The interaction between the instructor and a student in a traditional setting is more active and the cues for participation and motivation are much more obvious. In an online environment the response is less direct and more passive, especially with asynchronous content delivery. For example, in an asynchronous virtual online discussion the instructor may take a day or two to respond to the student. Students find the issues of education and experience important in evaluating an instructor in a traditional setting—these issues are less important to distance education students as how quickly the instructor responds is more instrumental to their success.

### **Asynchronous Class Elements**

The asynchronous distance learning milieu is a different landscape from that of the traditional face-to-face classroom. The online learning environment provided by a learning management system such as Blackboard or E-College usually provides some, if not all, of the following elements that affect student behavior and ultimately their success or failure: virtual libraries, online textbooks (e-books), document sharing, drop boxes,

presentations, graphics, audio and video files, e-mail, and discussion boards. Frequently, these elements are augmented with social networking and wikis or other collaborative areas such as class blogs.

- Virtual libraries are compilations of articles (normally in pdf) that make research accessible to students.
- Online textbooks prevent the students from having to purchase and transport expensive paper volumes and normally have an interactive table of contents with search functions that increase ease of use.
- Document sharing areas allow students to upload files for collaboration with other classmates or enable the instructor to disseminate specific items for class work.
- Drop boxes are a secure method for students to upload assignments directly and privately to the instructor.
- Presentations are electronic slide shows used to demonstrate learning content. They are either proprietary (i.e., Microsoft PowerPoint) or open source, such as Google docs or Picasa.
- Graphics, audio, and video files can enhance the content delivery. Interactive flash presentations or Java script can create engaging and compelling experiences. Video files can be embedded and accessed as “streaming” to preclude long downloads of larger files.
- E-mail is an essential part of the communication used in distance learning. E-mail allows private and permanent correspondence about class activities as

well as verifiable documentation of specific outcomes. Faculty are usually advised about FERPA requirements regarding confidentiality.

- Discussion boards and online journals are frequently used to create a collaborative interchange between students and instructors. Threaded discussions are generally kept on point through teacher interaction in responding, asking poignant questions, and providing additional resources. Frequently, students are required to make posts that become evaluation content for grading.

Fisher and Baird (2005) stated the use of new technology (such as the elements delineated) is a binding part of the distance education learning environment. The key is to have support mechanisms in place that promote motivation, successful learning outcomes, and retention. Student participation in a distance education classroom is directly influenced by the course design of projects, activities, and social environment that allows the learners to fulfill their roles as cohorts and individual learners. The instructor as facilitator is mostly responsible for providing these support mechanisms. According to Gaide (2004), students find a higher comfort level and greater satisfaction in virtual classrooms where they develop a connection or sense of community with their cohorts. The sharing and social interactions among cohorts are enhanced through threaded discussion groups, online journals, blogs, social networking, e-mailing, and instant messaging. A positive sense of belonging is critically important to student success and academic persistence.

The community of inquiry (COI), developed by Garrison et al. (2001), has become an accepted framework for analysis of the educational community. This structure allows

for an analysis of students' learning experiences in three areas: the cognitive presence, the social presence, and the teaching presence. The instructor of the online class is responsible for the design and organization of the material, direct instruction, and facilitating discourse. Indicators of success or failure in these areas might be revealed in how comfortable the students are in the community and their ultimate success in meeting the learning outcomes. The teacher sets the curriculum and methods for learning as well as focuses the discussion and increases learning through the sharing of personal meaning in the discourse subject. Succinctly the teacher's responsibility is primarily design, facilitation, and direct instruction. In traditional classrooms, instructors can readily gauge student participation through posture, facial expression, and active personal involvement. The issue of evaluating such student involvement is not as obvious in the online environment; however, some common sense good practices need to be adapted from the face-to-face classroom community. For example, a teacher will frequently question a student who may be distracted, shy, or not engaged. This technique works in the online community if one requires e-mail or even a telephone conversation. Successful teachers in a traditional environment add a personal touch to their presentation the very first day of class by introducing themselves and demonstrating why the material is important and exciting. This good practice can be adapted to the e-learning environment with preliminary introductory videos, e-mail, or telephone calls in advance of the class startup. A simple e-mail to remind students that a class is about to start with expectations is far superior to just posting the class syllabus. The virtual instructor is separated from the student in time and space but can develop a classroom community through the same

enthusiasm that defines a good traditional teacher. Superior teacher presence is defined by frequent and effective interactions with students.

Anderson, Rourke, Garrison, and Archer (2001) defined *teaching presence* as “the design, facilitation, and direction of cognitive and social processes for the realization of personally meaningful and educationally worthwhile learning outcomes” (p. 5). The design and facilitation of an online course include the following areas: (a) easy navigation, (b) clear goal outcomes, (c) challenging content, (d) organization, (e) meaningful assignments, (f) clarity of expectations with due dates, (g) threaded discussion that encourages enlightenment, (h) clear relevant topics and requirements, and (i) accurate assessment instruments. Cognitive and social presence involve the scaffolding created for student success that increases learning through collaborative involvement with cohorts. The successful resulting effect provides students with a sense of connection with the class, instructor, and educational institution; pride in the accomplishment of fulfillment; and a desire to find out more (a goal of all postsecondary education is “creating life-long learners”). An actively engaged instructor plays a key role in the effectiveness of online learning. The student perspective of the direct level of teacher interaction and importance of various indicators will help define an improved pedagogy.

Although measurable learning outcome metrics may favorably compare asynchronous online content delivery to traditional methodology, the retention rates of students completing asynchronous online classes and persisting to goal completion are usually lower. The perceptions of the students about the success of the learning and teacher immediacy in taking technology-based classes are an indicator of their success.

This investigator believes research into this problem should include an objective evaluation of teacher presence and student satisfaction.

### **Purpose of the Study**

The purpose of this study was to explore the significance and efficacy of teacher interaction (i.e., role and presence) as a contributing factor to students' satisfaction and course completion in the virtual online asynchronous learning environment. A further purpose was to compare the importance of teacher interaction in public and for-profit private institutions. To accomplish this purpose the investigator administered a survey instrument to an appropriate sample of public and for-profit virtual online asynchronous online students.

Many factors influence the ability of students to reach learning outcomes in an asynchronous content delivery environment, including the social milieu, course structure, and instructor presence. The instructor is responsible for three main areas: organizing asynchronous content in a way that creates an appropriate learning-centered classroom, providing an experience that is conducive to students' social collaboration and academic growth, and delivering instruction that is a scaffolding for learning with periodic assessment to measure progress. The goal of this dissertation was to examine indicators of instructor presence in these three areas that are important to students.

### **Limitations and Delimitations**

This research focused on a target demographic of postsecondary students who were currently taking or had taken online classes. Data mining and corresponding assumptions were limited to a small portion of the students currently enrolled in classes at the college level in the Inland Empire, Southern California. The focus of the survey



instrument was limited to students' perceptions of important factors of instructor presence. Myriad factors could be of significant consequence to course completion yet not researched here, including financial logistics, overall student GPA, degree level, non-traditional students returning to college, students with disabilities, illness, gender, occupation, access to technology, and the degree of competency with technology. Instructor perceptions were not examined in this study. Comparisons involving instructor perceptions in both traditional and virtual environments would be a fruitful area for future research.

### **Research Questions and Hypotheses**

A sample of Inland Empire postsecondary virtual online asynchronous learning students involving public and for-profit private providers completed a survey. The survey used in this study addressed the importance of teacher-interaction, the types of interaction most contributory to student satisfaction, and the possible relationship between student satisfaction and course completion in an online virtual asynchronous learning environment, as well as how these three factors may vary in public versus private institutions. Four research questions were used to guide this study:

1. How significant do students consider the instructor presence in their successful completion of an online course?

H1<sub>a</sub>: Students consider the instructor presence in their successful completion of an online course as significant.

H1<sub>0</sub>: Students do not consider the instructor presence in their successful completion of an online course as significant.

2. What is the statistical relationship between the level of teacher interaction and students' level of satisfaction and completion of an online course in an online asynchronous learning environment?

H2a: There is a positive correlation between the level of teacher interaction and students' level of satisfaction and completion of an online course in an asynchronous learning environment.

H2o: There is no meaningful relationship between the level of teacher interaction and students' level of satisfaction and completion of an online course in an asynchronous learning environment.

3. What aspects of a teacher's interaction (i.e., role or presence) in the asynchronous content delivery do students consider as contributing mostly to their satisfaction and success in completing an online course?

H3a: There are one or more aspects of a teacher's interaction (i.e., role or presence) in the asynchronous content delivery that students consider as contributing mostly to their satisfaction and success in completing an online course.

H3o: There are no aspects of a teacher's interaction (i.e., role or presence) in the asynchronous content delivery that students consider as contributing mostly to their satisfaction and success in completing an online course.

4. Do any teacher presence or student satisfaction factors differ between public and for-profit private institutions?

H4<sub>a</sub>: One or more aspects of teacher interaction (i.e., role and presence) in the virtual online asynchronous content delivery significantly differs between public and for-profit private institutions.

H4<sub>0</sub>: No teacher interaction factors (i.e., role and presence) in the virtual online asynchronous content delivery differ between public and for-profit private institutions.

### **Significance of the Study**

According to Picciano (2012), approximately one-third of all postsecondary students, or more than six million students, were enrolled in online classes in 2010 with millions more taking blended online and on-ground classes. This content is being delivered by both traditional public and innovative private for-profit providers. Data-driven metrics for curriculum decision-making now include the impact and importance of virtual and traditional educational delivery systems. This study is significant because creating successful virtual interactive online learning communities is vital to the future of education. Technology will continue to change education and modify pedagogic methodology. The research is significant because asynchronous classes are currently of high importance to academic planners due in part to the economic crises in education. Economic conditions indicate that there will be an explosion of enrollment in web classes adjoined by a disturbing very high non-completion rate. The role of the teacher is evolving to include asynchronous virtual content, which will significantly transform the non face-to-face classroom environment. This study involved an examination of the importance of traditional aspects of instructor presence in the new virtual online asynchronous environment together with associated student completion rates.

## CHAPTER TWO: LITERATURE REVIEW

This literature review contains discussions of factors that influence student satisfaction, course completion, and retention. Brown (2011) indicated there was an 8% higher dropout rate for online course students compared to traditional classes when looking at a sample of 51,000 community college students in Washington State from 2004 and 2009. Persistence metrics the Washington State study showed students with mostly online courses were much less likely to complete their degrees than were students taking traditional classes. Although student dropout rates for online or web-assisted courses are higher when compared to traditional face-to-face courses (Aron, 1999; Diaz, 2002; Frankola, 2001), the increased demand for online courses driven by a cohort of educational planners, students, and faculty along with improvements in technology have made this an economical and pragmatic method to accommodate an exploding increase in student enrollment. According to the Sloan Consortium report entitled, *Going the Distance: Online Education in the United States, 2011* (Allen & Seaman, 2011), the growth in online enrollment is 10 times that of traditional and yet a third of academic leaders opine that online education is inferior. The U.S. Department of Education, in a September 2010 report entitled *Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies* (Means, Toyama, Murphy, Bakia, & Jones, 2010), found that on average, online learners perform modestly better than their face-to-face counterparts. There is no implicit evidence to support a correlation between high dropout rates and an argument that online education is inferior to traditional education. The U.S. Department of Education has researched the effectiveness of online learning and concluded that in many ways it is more successful in

reaching appropriate outcomes (National Center for Education Statistics, 2011). Given this seemingly positive revelation, the question surrounds why the attrition rate is frequently as much as six to seven times that of traditional face-to-face content delivery modalities (Patterson & McFadden, 2009; Rovai, 2003; Willging & Johnson, 2004). The social integration process and its impact on persistence is well-documented with much compelling research presented by scholars such as Spady, Astin, Tinto, Pascarella, and Braxton, yet research into the social integration and persistence of students taking online classes is in its infancy with little peer-reviewed research available. Related areas included in the literature review include factors that influence student persistence, including financial and social considerations.

### **Technology**

According to Soares (2013), postsecondary learners are transformed by the use of technology and the educational market is shaped by the demands of the marketplace for a higher skill set. Picciano (2002) stated technology is at the center of turbulence in today's times because the Internet is ubiquitous in permeating society and education. He also posited a transformation in education caused by online learning is driving analytics and decision-making (Picciano, 2012). The use of the Internet and computer networks has changed students' daily lives. Haythornthwaite (2002) argued the lean e-mail text-based computer-based communications do not compare with rich face-to-face interactions and are, therefore, anti-social. Yet, it can be argued that technology actually increases the possibility of communication through the always on immediacy, opportunity for varied connections, and directness of focus of instant messaging, social networking, and e-mail. Accessibility can make communication more frequent.

The exponential increased use of technology in education creates unique challenges and opportunities for educators and planners. The role of the teacher in using technology to create an online environment for active learning-centered activities and positive outcomes cannot be understated. The role of the teacher in online education is really three-fold. First is to design, plan, and administer the education platform; second is to create a social environment conducive for student growth and learning; and third is to create direct instruction with scaffolding and evaluation that certifies individual competencies (McDonald & Reushle, 2002).

### **Course Completion / Persistence**

Much has been written about completion and persistence in traditional class settings while the amount of research into asynchronous learning is limited (Boston et al., 2010). Herbert (2006) stated there is a causal relationship between student satisfaction, completion, and persistence. This section includes a discussion of the research surrounding factors that influence retention, how online classes are similar and different in developing academic communities, and what theoretical framework can be used to evaluate learning efficacy and retention.

According to the largest study of persistence and dropout rates, Willging and Johnson (2004) argued that factors leading to dropouts included students not being placed in the correct course, students finding it difficult to make friends, students were not comfortable at the beginning of the course, students were not satisfied with the teacher presence and quality of instruction, and students had difficult financial circumstances. Frankola (2001) listed the main reasons for high dropout rates as: time management, lack of motivation, technology problems, lack of student support, inadequately designed

courses, and instructors. The academic, psychological, emotional, and financial factors that affect persistence have been studied thoroughly since the 1980s and prior (Astin, 1993; Bean, 1990; Spady, 1970). Tinto (1975) argued that social integration is the key to keeping students in school working toward their degree goal. Academic issues that surround persistence are complex and include the dynamic of the student's perception of his or her success relative to goals. This also contains psychological variables about self-worth and can include the emotional factors that govern social interaction. The interaction between students, professors, college staff, and other students has been found to be essential in creating a sense of belonging that increases the likelihood of a student persisting in education. Financial factors indicated by social demographic information also influence the likelihood students will succeed in achieving their goals.

Similar factors occur in the online educational community. Stodel, Thomas, and MacDonald (2006) examined the sense of "presence" a student has in online content delivery where "five themes emerged: robustness of online dialogue, spontaneity and improvisation, perceiving and being perceived by the other, getting to know others, and learning to be an online learner" (p. 1). The online dialogue discourse built into the class influences how the student feels about the "classroom" experience. Spontaneity is an important factor in student discovery and learning. How online classes are structured to prevent digression may affect improvisation and spontaneous learning. The way students perceive themselves as members of a cohort is vital to a positive learning-centered environment. A common misgiving a cohort may have concerns whether they are understood and interacting accurately. The sense of "connection" students achieve may relate to persistence. These factors were evaluated using the COI construct developed by

Garrison, Anderson, and Archer (2001). This theoretical framework and most frequently used analysis have been used to interpret and evaluate a student's educational experience through three overlapping circumstances: teaching, social, and cognitive (Jézégou, 2010).

### The COI Theoretical Framework for Evaluating Student Experience

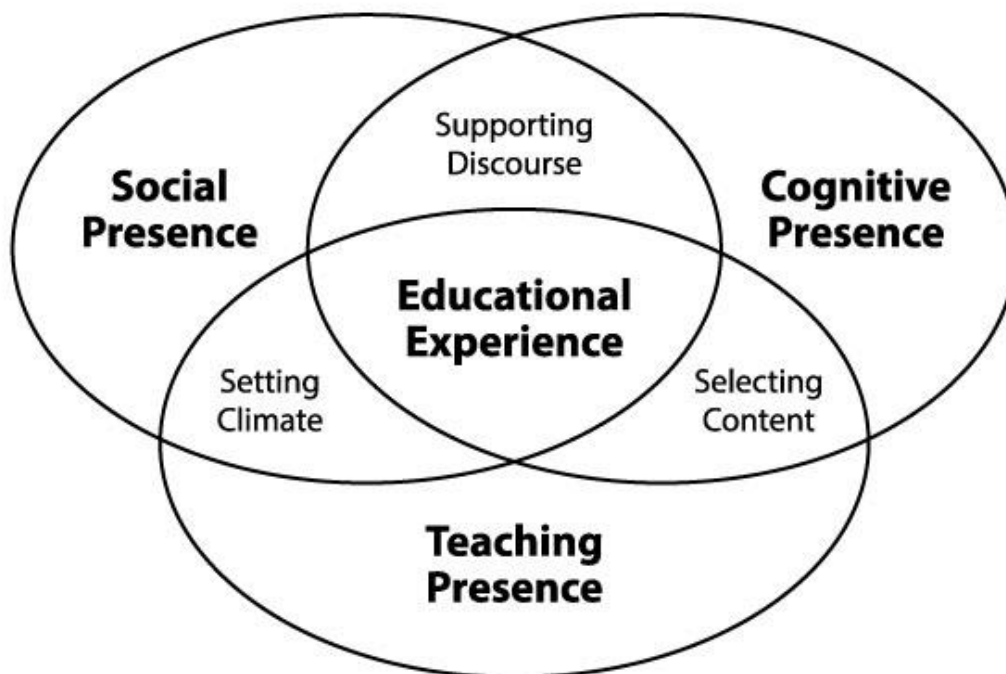


Figure 1. Teaching & Learning Center: COI construct (Garrison, Anderson, & Archer, as cited in Garrison & Arbaugh, 2007).

*Social presence* is defined as the basis for meaningful constructivist learning (Akyol et al., 2009; Richardson & Swan, 2003; Swan & Shih, 2005). Does the student feel he or she is part of a real “community” with a social presence, open communication, and group cohesion? Garrison, Anderson, and Archer defined *cognitive presence* as the “extent to which learners are able to construct and confirm meaning through reflection and discourse” (as cited in Garrison & Arbaugh, 2007, p. 157-172). Students may reach the higher levels of Bloom’s educational taxonomy through the synthesis, evaluation, and



application of new knowledge (Simonson & Schlosser, 2003). Research shows specific triggers influence this higher learning and the presence of the professor directly affects students. Garrison, Anderson, and Archer (2001) defined *teaching presence* as instructional design, organization, facilitation of discussion, and direct instruction (Coppola, Hiltz, & Rotter, 2002; Shea, Swan, Li, & Pickett, 2005).

An examination of these three presences (i.e., teaching, social, and cognitive) should indicate factors that influence the likelihood of a student remaining enrolled in online learning. No one would argue that the way college students interact with each other and the community they form have not changed over the past 20 years. This study included an examination of the new dynamics of education and community offered in asynchronous learning and how they relate to completion.

### **Teacher Presence**

The classroom setting is of fundamental importance to the success of student learning. Online settings are technologically based, so student interaction is virtual and not mitigated by physical human dynamics. This creates a real challenge for teachers to establish an environment that is conducive to and supports engagement in learning, meaningful social interaction, and a sense of “belonging” that promotes completion and persistence. Anderson et al. (2001) stated the teacher fulfills a very important role in precipitating learning that is purposeful and focused on worthwhile goals and essential concepts. It is the teacher’s responsibility to sustain essential communication with students in furthering these goals. The online teacher moderator’s impact could be categorized as intellectual, organizational, and social. The theoretical framework as established by Garrison et al. (2007) defines the teacher’s role as a cognitive, teaching,

and social presence. Empirical findings from over 3,000 end-of-course evaluations revealed important factors to fostering meaningful education included the teacher facilitating appropriate discussions, teacher responsibility in course design, and course scaffolding requirements (Rossman and Rallis, 2003). A survey of the research into the success of online classes supported the presumption that good teacher-student interaction is important. Most student surveys indicate interaction with the teacher is a key factor in the student successfully completing an online class. A study of 3,800 State University of New York (SUNY Learning Network) students demonstrated the more the discussion component affected their grade, the more interaction they had with peers and the instructor and the more they felt satisfied that they learned from the course (Shea, Fredericksen, Pickett, Pelz, & Swan, 2001). Dziuban and Moskal (2001) found a statistically significant correlation between interaction and student satisfaction and students found this to be more important in web classes than traditional or blended classes. Because the nature of asynchronous discussion is nonlinear, how quickly the instructor interacts is also significant. For example, if in a threaded discussion a student makes an incorrect assumption or reference, this may affect many cohorts' perceptions prior to it being corrected or clarified by the facilitator. Palloff and Pratt (2003) defined the instructor's presence as a successful interaction style by frequently and accurately posting to threaded discussions and modeling good online communications.

### **Social Presence**

Baker (2010) defined social presence in an online classroom as the sense that cohort learners are communicating with other people and not impersonal objects. Distance learners may become isolated if they do not feel connected to both the collegiate

environment and program social context (Abrahamson, 1998; Besser & Donahue, 1996; Brown, 1996; Rahm & Reed, 1998). Students who do not feel they are part of a learning community may drop out of a program or course (DeVries & Wheeler, 1996). Ko and Rosen (2010) stated learning online can be exasperating for students. Many students, some for the first time, are thrust into an unfamiliar environment where cohorts collaborate through posting, e-mail, and chat. They may be accustomed to interaction and note taking in the traditional classroom but are not comfortable in the world of asynchronous learning. The sense of isolation a student has is an important factor of online education (Walker, 2007). Hara and Kling (2009) posited that student perceptions of the classroom and difficulties and annoyances may inhibit learning opportunities.

They identified four types of student frustrations:

- Technological problems – the student cannot resolve issues related to navigating course material, is challenged when using the Internet for source information, or lacks the hardware and software necessary to succeed.
- Minimal or untimely feedback – frequently causes a disconnect in the cognitive learning process and scaffolding necessary to reach appropriate learning outcomes.
- Ambiguous instructions – were intentionally simple to allow for flexibility but increased confusion about the learning goal.
- Too many e-mails or postings – caused problems where frequently the thread was lost due to cohorts posting without first reading responses, redundant responses, and the discussion moving on prior to a student returning to post.

McInnerney and Roberts (2004) stated three protocols can be used to mitigate isolation, create a sense of community, and lead to more positive social interactions:

- Introduce some synchronous interactive communication with student cohorts in addition to (not in lieu of) asynchronous activities.
- Include in the instructional design of the course a formative acclimation stage that will allow the students to “warm up” before entering the rigorous course required diligence.
- Increased emphasis on the provision of and adherence to guidelines for successful student interaction and communication.

Curry (2001) stated that attrition rates are partly due to students’ sense of isolation. Creative communicative techniques such as recording student and teacher posts using video, Skype sessions, and other synchronous elements can reduce student isolation through vicarious immediacy (Burns, 2005). Ludwig-Hardman and Dunlap (2003) stated a vital component of effective retention is a vigorous learner support program. According to Tait (2000), techniques and processes for creating learner support for student success are systemic, affective, and cognitive. *Systemic* includes registering for courses, requirements, and curricula. *Affective* involves encouragement that counseling support provides. The *cognitive* aspect includes learner scaffolding for success that requires three intertwined elements: identity, individualization, and interpersonal interaction (Thorpe, 2001). Identity is created with direct one-on-one interaction with learner support personnel, the plan for the student being individualized to his or her specific needs, and interpersonal interaction being reciprocal with specific learning goals communicated, not just information disseminated globally.

This cognitive process of scaffolding for success is collaborative with an individualized formative assessment plan that includes an intake interview, student self-assessment, a diagnostic learning-oriented questionnaire, an orientation to taking online classes, one-on-one advising, and access to a community of learners (Ludwig-Hardman & Dunlap, 2003).

A sense of “self” relative to the learning community requires looking at social interaction factors in distance learning that differ from traditional classrooms. Tu and Corry (2001) stated the transition from the traditional social milieu to online can create a sense of uncertainty as students develop their roles as members of the community. According to sociologist Gordon Marshall (1998), “the virtual self” is very relevant to the study and understanding of the efficacy of online learning. McInnerney and Roberts (2004) also argued that this social context is important to learners’ success in meeting critical cognitive learning goals. According to Palloff and Pratt (2003), social interaction related to community in the traditional classroom may not be given as much consideration because in the traditional classroom students relate to each other before and after class and elsewhere on campus. Communication includes visual facial expression, posture, and other clues to the normative behavior that drives social roles. These factors are not present in the text-based environment of distance education (Curtis & Lawson, 2001). Wegerif (2012) suggested the dialogue between successful and non-successful students can create insider and outsider social groups. Some cohorts consider students who are successful in participating in discussions and meeting class objectives insiders, and are less likely to interact with and support students who are outsiders. Norton and Hathaway (2008) asserted that the group discussion board has become the most relied

upon course design mechanism for student interaction. Students are encouraged or required to make posts to an online discussion or exploration. The threaded discussion becomes part of the learning dynamic as well as an important factor in social interaction and possible camaraderie as a means to enhance communication (Easton, 2003).

### **Cognitive Presence**

Detractors of distance learning have claimed it is less effective due to the lack of face-to-face interaction (Picciano, 2002). A case study conducted by Bullen (1998) demonstrated the disconnect students felt in an online class negatively affected their critical thinking and completion of learning objectives in a college undergraduate class. The most cited reason for this disconnect was a lack of face-to-face interaction with other students and the instructor. Research has been conducted on affective and cognitive learning in traditional classrooms (Gorham, 1988; Gorham & Zakahi, 1990; McCroskey, Sallinen, Fayer, Richmond, & Barraclough, 1996) and results revealed a direct causal effect of teacher presence and immediacy on cognitive learning. Interaction between students and teachers is at the heart of the successful classroom dynamic in both traditional and virtual classrooms (Picciano, 2002; Swan, 2002; Wantstreet, 2006). Possibly even more significant is that immediacy of interaction is at the heart of successful active learning, motivation, and achievement of learning outcomes (Du, Havard, & Li, 2005; Lam, Cheng, & McNaught, 2005; Sargeant, Curran, Allen, Jarvis-Selinger, & Ho, 2006).

According to Garrison and Cleveland-Innes (2005) and Romero and Barberá (2011), the frequency of interaction in an online learning community may signify a robust social presence but not necessarily effective cognitive engagement. Romero and Barberá

believed quality cognitive time is measured through an analysis of mental activity in higher-level cognitive skills such as decision-making or information-processing capacity. Garrison and Cleveland-Innes proposed that critical discourse is an indicator of cognitive presence and it must be achieved through cohesive structured targeted assignments. The online teaching presence as facilitator is vital to reaching higher levels of thinking by ensuring discussion threads are clear and constructive, and not disjointed monologues. The leadership role of the instructor to bring students to appropriate synthesis through discussion is powerful (Aviv, Erlich, Ravid, & Geva, 2003; Meyer, 2003).

Cleveland-Innes and Emes (2005) explained that approaches to learning come through a combination of student motivation and three basic student strategies: deep, surface, and achievement. *Deep learning* comes from the student's intrinsic sense of curiosity and a thorough search for meaning in class material. *Surface learners* are likely to put forth the least amount of effort, possibly skimming material to reach required minimum results. *Achievement learning* is goal-oriented and manifests through a focus on achieving a high grade in the class.

Deep learning is dependent on contextual factors such as workload, type of learning, student management of learning strategies, time constraints, and opportunities for metacognition provided by course design and evaluation (Garrison & Cleveland-Innes, 2005). According to Bilyk (2012), deep learning happens when students “climb Bloom's taxonomy” (p. 1) in an online class, where the highest level of creating becomes a synthesis of observable outcomes. Garrison and Cleveland-Innes (2005) took this further by stating a deep learning approach can be achieved through Anderson's (2003)

model of the COI, which is the integration of three factors (i.e., social, cognitive, and teacher presence).

Richardson and Swan (2003) presented that albeit the circumstances of content delivery are different in traditional and asynchronous modalities, online may present opportunities that parallel, compensate for, and even exceed traditional classroom interaction. Kassop (2003) asserted that discussions and interactions online can be highly reflective and of a quality that may even surpass traditional discussions. Meyer (2004) added that feedback can be quicker and more directed due to the instantaneous access to reference material in the virtual classroom environment. Learning analytics derived from assessment instruments are the key to ensuring appropriate student learning support (Prineas & Cini, 2011). Real learning comes from what the student thinks, synthesizes, and does. Because most postsecondary distance learning classes are provided through a content management system, all student work is recorded and there are a plethora of data available for mining to ensure students are reaching appropriate learning outcomes and given opportunities for higher level synthesis. Jared Cohon (2012), President of Carnegie Mellon University, described the Open Learning Initiative (OLI) as a positive system to enhance the science of learning and higher education productivity. Three elements make the OLI powerful and distinctive:

- Course creation becomes a collaborative effort of faculty, course design teams, human-computer interaction specialists, learning scientists, software engineers, and designers.



- Each segment of the learning process will have unique data collected by the system, showing the most detailed view of what learners are responding to or not in the learning environment.
- The data are shared with everyone in a 360-degree feedback loop. All participants, including instructors, students, and course designers, are involved, enabling quick course improvements to correct what is not working. Students can see how they are doing immediately, with less frustration and more support.

According to Prineas and Cini (2011), three types of feedback loops assist in making OLI courses effective:

- Students receive assessment feedback while they are problem-solving, promoting self-paced incremental progress toward learning objectives.
- Instructors are presented with data that allow them to make timely revisions and intervene in effective ways.
- Course designers receive feedback frequently that allows them to make real-time changes to improve student course interaction through evaluation of usage patterns and problem areas.

Kassop (2003) agreed that the potential for immediate feedback is one of the factors that provides the potential for online learning to match or surpass its traditional counterpart.

Comeaux (2006) identified other benefits of online learning and assessment compared to traditional as: technology enhanced management and collection of assessment data, automatic tracking of student documents and posts, multiple communication methods that facilitate dialogue, increased methods to provide feedback to students, boundless

comprehensive libraries of Internet resources, increased participation via threaded discussion and collaborative analysis, increased emphasis on thoughts and reflection due to writing emphasis, more accurate appraisals and rubrics, and accessibility of online testing with fewer time restrictions.

### **COI Model and Student Satisfaction**

The theoretical framework of the COI, which includes cognitive presence, teacher presence, and social presence, defines the constructivist-learning milieu presented to a student in an online class (Garrison et al., 2000). According to Strachota (2006), an efficient methodology for measuring the efficacy of student success and learning outcomes is the online survey research instrument. The student satisfaction survey instrument can be developed based on the various types of online interaction. Moore and Kearsley (2005) stated the following constructs should be used to develop a survey:

- Learner-content interaction (aligns with COI construct of cognitive presence)
- Learner-instructor interaction (aligns with COI construct of teacher presence)
- Learner-learner interaction (aligns with COI construct of social presence)

Weimer (2013), when researching key factors for persistence in online classes, found a correlation between student satisfaction with online learning and completion issues. In fact, according to her research, students who completed the course rated satisfaction at 90% and those who withdrew only rated it at 20%.

Research into online student satisfaction is an important part of postsecondary planning. Although college and university leaders spend a great deal of effort in expanding and developing programs to meet the needs of the changing marketplace, technology, and education, they are frequently less effective in measuring program

outcomes through student satisfaction survey instruments and data mining (Strachota, 2006). The current study was designed to fill part of that gap and benefit educational planners in both formative and summative program evaluation plans.

## **CHAPTER THREE: METHODOLOGY**

Practical and professional experiences convinced this investigator that the classroom presence of an instructor is a critical component of students' academic success. It is not clear whether such classroom presence is being delivered similarly in an online environment—especially when that environment is asynchronous. This study was designed to accomplish three goals in order to clearly determine the importance of teacher-interaction (i.e., role and presence) to students as a contributing factor to their satisfaction and course completion in the asynchronous learning environment: (a) to find the relationship between teacher interaction and student satisfaction and course completion; (b) to identify the most significant aspects of teacher interaction to student satisfaction and course completion; and (c) to explore whether teacher interaction, student satisfaction course completion, or any other factors significantly differ between public and for-profit private institutions.

### **Research Design**

A mixed research methodology was deemed appropriate and was used in order to effectively accomplish the goals of this study. A mixed research method creates access to the best of the qualitative and quantitative methods and provides exposure to relevant and in-depth information in context, together with a reliable predictive opportunity with large data (Jackson, 2009; Lieber & Weisner, 2012). In other words, a mixed research method allows the investigator to combine critical aspects of both the quantitative and qualitative methodologies, which offers the benefit of reducing the drawbacks of each when they are used independently and maximizes their individual advantages when they are used in a complementary way (Creswell, 2009; Jackson, 2009; Lieber & Weisner,

2012; University of Connecticut, 2012). This method allowed for the accumulation of detailed data regarding participants' perceptions, including beliefs, attitudes, and thought processes, to facilitate a broader understanding of the subject matter. The investigator began the exploration with direct observation and subjective impressions, and ultimately tested specific hypotheses using inferential statistics. Comment area questions were used to address the three main areas of interaction described in the COI framework (e.g., social interaction, instructor presence interaction, and cognitive content interaction) regarding learning activities while the interview questions were used to explore the principles of Anderson's (2003) Interaction Equivalency Theorem (IET). The responses yielded descriptions of learners' interaction experiences and satisfaction with online learning in the context of the virtual presence of the instructor. Three broad open-ended questions afforded students opportunities to provide anecdotal impressions. These impressions were then used to enrich the understanding of much more specific responses later in the process. They also enabled the investigator to critically examine how his biases may have affected interpretations.

Adopting a mixed method in this study enabled the collection of both subjective qualitative information through a semi-structured interview sufficient to reach saturation, and objective quantitative data in response to specific prompts. The quantitative survey method further offered the opportunity to collect a sample big enough to make statistical inferences about the convenience sample of students. This approach is appropriate according to the views of researchers (e.g., Jackson, 2009; Lieber & Weisner, 2012; University of Connecticut, 2012). In addition, findings from the qualitative component

were used to subjectively validate and deepen the understanding of findings from the quantitative survey method.

A general to specific sequential mixed method design involving a subjective concurrent triangulation strategy was used to interpret the answers to the research questions. A concurrent triangulation is a mixed methods research model “when a researcher uses two different methods in an attempt to confirm, cross-validate, or corroborate findings within a single study” (Creswell, 2009, p. 217). This study involved three phases: Qualitative Phase 1 (QPH1); Quantitative Phase 2 (QPH2); and the Confirmation, Cross-validation, or Corroboration of Findings Phase 3 (CCCFP3). In QPH1, individual students were informally interviewed until saturation was achieved. In QPH2, a survey was administered online to a convenience sample of students currently involved in online instruction at either a public or for-profit private school to generate quantitative data. In CCCFP3, as the name implies, findings from the first approach were used to enrich the understanding of the survey responses to make more intuitive conclusions.

### **Research Questions and Hypotheses**

1. How significant do students consider the instructor presence in their successful completion of an online course?

H1<sub>a</sub>: Students consider the instructor presence in their successful completion of an online course as significant.

H1<sub>0</sub>: Students do not consider the instructor presence in their successful completion of an online course as significant.

2. What is the statistical relationship between the level of teacher interaction and students' level of satisfaction and completion of an online course in an online asynchronous learning environment?

H2a: There is a positive correlation between the level of teacher interaction and students' level of satisfaction and completion of an online course in an asynchronous learning environment.

H2o: There is no meaningful relationship between the level of teacher interaction and students' level of satisfaction and completion of an online course in an asynchronous learning environment.

3. What aspects of a teacher's interaction (i.e., role or presence) in the asynchronous content delivery do students consider as contributing mostly to their satisfaction and success in completing an online course?

H3a: There are one or more aspects of a teacher's interaction (i.e., role or presence) in the asynchronous content delivery that students consider as contributing mostly to their satisfaction and success in completing an online course.

H3o: There are no aspects of a teacher's interaction (i.e., role or presence) in the asynchronous content delivery that students consider as contributing mostly to their satisfaction and success in completing an online course.

4. Do any teacher presence or student satisfaction factors differ between public and for-profit private institutions?

H4<sub>a</sub>: One or more aspects of teacher interaction (i.e., role and presence) in the virtual online asynchronous content delivery significantly differs between public and for-profit private institutions.

H4<sub>0</sub>: No teacher interaction factors (i.e., role and presence) in the virtual online asynchronous content delivery differ between public and for-profit private institutions.

### **Sampling**

A purposive sampling technique was used in QPH1 to identify students who would be interviewed until saturation was achieved (Creswell, 2009, p. 185). The purpose or idea of the interviews was to access primary and detailed information directly from students based on their experiences with virtual online instructors. The number of students interviewed was entirely based on the investigator's sense of saturation. Conversely, a large sample survey technique was used in QPH2 of the study with sufficient power to allow for the appropriate use of inferential statistics.

### **Participants**

The participants for this study were first year college students from two accredited postsecondary institutions in Southern California, one public and the other for-profit private, who were taking all or some online classes. Six participants were determined to be sufficient for the QPH1 interviews. Participants in QPH2 were online students from either of the selected postsecondary schools who chose to voluntarily participate in a survey that requested information about their perceptions of teacher presence in online classes. At least 50 students were expected to participate from each postsecondary



school. It was expected that students who completed the survey from each school would be of both genders and various ethnic groups.

### **Instruments**

Two instruments were used to gather data in this study. A simple informal questionnaire containing open-ended questions was used for the interviews while a Likert-scaled questionnaire was used for the survey. Both survey instruments were administered to participants through FluidSurveys, an online website for survey administration, data collection, and descriptive statistical analysis.

**Interviews.** The qualitative survey contained three main open-ended questions (See Appendix A). Question 1 addressed the instructor interaction or presence and its significance for the success and completion of an online course. Question 2 addressed teacher interaction (i.e., role and presence). Question 3 addressed the student's overall perception about the level of teacher interaction. An anonymous interview question sheet was used to administer the open-ended questions to participants.

**Survey.** The Teacher Interaction, Student Satisfaction, and Course Completion Survey (TISSCCS) was developed for use in this study (See Appendix B). The TISSCCS contained extensively modified versions of questions drawn from the Class Interaction, Structure, and Support (CISS) and Distance Learning Student Satisfaction Survey (Hsu, 2008). The survey questions were 4-point Likert scale questions. This approach was appropriate according to Creswell (2009) and Jackson (2009).

The survey contained four sections and 32 questions. Section A contained 10 demographic questions exploring course and school name, gender, ethnicity, academic status, age, and number of online courses taken. Section B explored instructor presence

and its significance to the successful completion of an online course. It contained six Likert questions probing the student's level of satisfaction and the likelihood of completing a course based on the influence or effect of a teacher's level of interaction. Section C contained 13 questions and addressed teacher interaction specifically in light of role and presence, or the things teachers are expected to do in the online platform to facilitate learning. The last section was Section D and contained three questions to address the student's overall perception about level of teacher interaction in the online class in the school. Appropriate questions or grouping of questions formed the objective basis for answering the four research questions.

### **Variables**

The variables in this study were: (a) teacher interaction, (b) student satisfaction, and (c) course completion. These variables were evaluated indirectly through an analysis of the survey responses. The relationships between these variables were explored by means of statistical analyses that helped the investigator tease out the complex relationship between teacher interaction and student satisfaction and course completion in both public and private for-profit venues.

### **Procedures**

First, all Institutional Review Board (IRB) protocols for Argosy University and the study sites were met through the use of consent forms and applications (See Appendix C). Once all approval to conduct the study was secured, the interviews were conducted and the TISSCCS was administered via FluidSurveys with an invitation sent via a blind recipients e-mail to approximately 200 postsecondary students. The survey was completely voluntary and confidential, and no names, student identification, financial, or

other personal information was collected. Data were tabulated and analyzed to answer the research questions.

The researcher took and passed the preparatory human subjects protection test by CITI soon as the research proposal was approved and before the submission of the IRB application. Pursuant to CITI and IRB guidelines, the anonymity of participants was rigorously protected to avoid any stigma attached to those whose results might be considered negative outcomes. Questionnaires were completely confidential with section numbers and generic response numbers indicated but no names identified. The survey size was large enough to ensure reliability and comparisons were made to data sample sets to draw reasonable conclusions about the importance of the data collection.

Disclosure was made prior to participation of possible risks and effects, including a brief synopsis of the reasons for the research and possible outcomes. Participants were informed that they could end their participation at any time without consequences. All survey results will be kept in a secured location for a minimum period of 5 years after the data collection and then destroyed.

### **Data Analysis**

The quantitative data of this study were in the form of Likert scores using choices of “strongly agree,” “agree,” “disagree,” and “strongly disagree.” On the assumption that each interval was one step removed from the next, these Likert responses were recorded as numbers ranging from 1 to 4. Such a transformation allowed the researcher to carry out the same analyses one would use with full ratio data: differences in time, differences in frequency, or differences in quantity. Therefore, the researcher was able to use all of the tools of classical parametric statistics, beginning with mean and standard deviation

and continuing through to Analysis of Variance (ANOVA) and regression analyses. According to Jackson (2009) and Kaye and Freedman (2011), such classic tests can be used to determine whether there is a statistically significant difference in the mean scores on different variables. However, one must remember the data might not meet all assumptions of these classical tests. The range of scores was reduced from infinity to four, with imaginary differences between the values. To validate the assumptions about the data, the researcher conducted the analyses in a step-by-step manner:

1. Coding Likert scores as real numbers from 1 to 4.
2. Calculating means and standard deviation scores for each test item.
3. Conducting simple pair-wise comparisons before making multivariate comparisons.
4. Validating parametric paired findings against nonparametric tests for correlation comparison: *t*-tests against Mann Whitney Wilcox in (ordinal) or sign test (nominal); Pearson *r* correlation vs. Spearman  $\rho$ .
5. Using validated pair wise comparisons to evaluate whole families of differences that represent all usable question scores from the entire instrument: one way and multivariate ANOVAs; linear and non linear regression analyses.
6. Focusing on those differences and inter-relationships among the Likert scores that best answer the research questions and test specific hypotheses.

### **Statistical Tests**

Due to the nature of the variables in RQ1, the single-sample one-tail *t*-test and *z* test, may be used at an alpha level = 0.05 level of significance to analyze data and test the

hypothesized relationship between the two variables for any one or all of the test questions. This approach was appropriate according to the views of researchers (Cal State University, n.d.; Jackson, 2009).

To analyze data for RQ2, the aim was to determine the significance of instructor-interaction and the probability that a relationship existed between teacher interaction and student satisfaction and completion, and most importantly, if a relationship existed between the two variables to determine the strength of the relationship and in what direction, positive or negative. The statistic of choice for such comparisons across questions was the Pearson  $r$  for pair wise comparisons.

To analyze data for RQ3, the investigator relied on simple mean differences and linear regressions. The aim was to determine the aspect of teacher interaction (i.e., role or presence) in the asynchronous content delivery that students consider to contribute the most to their satisfaction and success in completing an online course. A frequency rank table (See Table 1) was used to record and analyze the data.

Table 1

*Frequency /Rank of Teacher's Role and Contribution to Satisfaction/Completion*

Question	Low Contrib./Frequency	High Contrib./Frequency	Rank
Bq11			
Bq12			
Bq13			
Bq14			
Bq15			
Bq16			
Cq17			
Cq18			
Cq19			
Cq20			
Cq21			
Cq22			

Cq23					
Cq24					
Cq25					
Cq26					
Cq27					
Cq28					
Dq29					
Dq30					
Dq31					
Dq32					

The ANOVA, followed by Scheffe or protected specific pair wise *t*-tests and *z* tests, were used in RQ4 to determine whether any test score or any question in the survey differed in public compared to private institutions.

### **Data Analysis Procedures**

Four general procedures were used for answering the research questions. First, all information traceable to participants was removed and data were coded to retain anonymity. Second, data were scored using Excel or SPSS and processed by applying statistical tests. Third, the result of the tests was used to test the null hypotheses. Fourth, the result was reported.

Four procedures were followed in answering the first research question, “How significant do students consider the instructor presence in their successful completion of an online course?” First, data related to students’ responses of the importance or significance of teacher presence were extracted from fluid surveys. Second, data were scored or imported into a Microsoft Excel spreadsheet. Third, the data was analyzed, and fourth, the result was reported.

Four procedures were followed in answering the second research question, “What is the statistical relationship between the level of teacher interaction and students’ level of

satisfaction and completion of an online course in an online asynchronous learning environment?” First, data on students’ responses surrounding teacher-interaction, student satisfaction, and completion were extracted from FluidSurveys. Second, data were scored or imported into a Microsoft Excel spreadsheet. Third, the data was analyzed, and fourth, the result was reported.

Four procedures were followed in answering the third research question, “What aspects of a teacher’s interaction (i.e., role or presence) in the asynchronous content delivery do students consider as contributing mostly to their satisfaction and success in completing an online course?” First, data on students’ responses on all aspects of teacher-interaction were collated. Second, data were scored or imported into Microsoft Excel spreadsheets. Third, the aspect of teacher interaction students considered as contributing mostly to their satisfaction and success in completing an online course was identified through an analysis and application of the appropriate statistical test. Fourth, the result was reported.

Four procedures were followed in answering the fourth research question, “Do any teacher presence or student satisfaction factors differ between public and for-profit private institutions?” First, data on students’ responses on teacher-interaction, student satisfaction, and completion were extracted from FluidSurveys. Second, data were scored or imported into a Microsoft Excel spreadsheet. Third, the data were comparatively analyzed, and fourth, the result was reported.

### **Summary of Research Methodology**

The mixed method approach was used to make the most of data collection because it combines both the quantitative and qualitative methodologies and is

advantageous in reducing their drawbacks when they are used independently and maximizing their individual advantages when they are used in a harmonizing way (Creswell, 2009; Jackson, 2009; Lieber & Weisner, 2012; University of Connecticut, 2012). In this study, the variable of teacher interaction and its importance to two other variables, student satisfaction and the determination to complete a course, which are personal factors, could best be explored through a mixed method that involved qualitative interviews with students to obtain general impressions and a quantitative survey data approach that allowed specific hypotheses to be tested. This approach was appropriate according to the views of researchers (e.g., Jackson, 2009; Lieber & Weisner, 2012; University of Connecticut, 2012). In addition, findings from the qualitative component were used to confirm or validate findings from the quantitative survey in a design that enhanced the validity and reliability of results and the study.

The design was a sequential three-phase mixed method that integrated concurrent triangulation to confirm, cross-validate, or corroborate findings from the study (Creswell, 2009 p. 217). In addition, the design included a purposive sampling approach to constitute a qualitative group of a convenience sample of participants who were first year college students from local accredited postsecondary institutions in Southern California. A sample size of 182 public and private non-profit students was included in the data set. Gender, age, ethnicity, and health were not limitations to participation.



## CHAPTER FOUR: FINDINGS AND ANALYSIS

The researcher's experience in postsecondary education influenced his opinion that there is a significant difference in active faculty presence within the learning community in both online and on-ground modalities that influences student success and course completion. Though online classrooms and on-ground classrooms are significantly different, there is consistent evidence of successful learning influences that good faculty make in both. These techniques have been verified through existing research in the review of literature that supports this evidence. Online education is becoming an increasing part of the college experience for students. The techniques the instructor uses to create a positive learning environment can be defined as instructor presence in online education. As indicated in the literature review, the classroom setting is of fundamental importance to the success of student learning. Online settings are technologically based, so student interaction is virtual and not mitigated by physical human dynamics. This creates a real challenge for teachers to establish an environment that is conducive to and supports engagement in learning. The teacher/student interaction as outlined in the Community of Inquiry (COI) framework can be defined as instructor presence.

This study was designed to examine instructor presence in online education and student success through four research questions:

1. How significant do students consider the instructor presence in their successful completion of an online course?
2. What is the statistical relationship between the level of teacher interaction

and students' level of satisfaction and completion of an online course in an online asynchronous learning environment?

3. What aspects of a teacher's interaction (i.e., role or presence) in the asynchronous content delivery do students consider as contributing mostly to their satisfaction and success in completing an online course?
4. Do any teacher presence or student satisfaction factors differ between public and for-profit private institutions?

Twenty-two individual questions in the online survey implemented address these.

A cohort of students enrolled in postsecondary online courses at two Southern California institutions was developed to yield descriptive statistical analysis and data mining to evaluate whether they agreed about the importance of instructor presence. An appropriate questionnaire as an evaluation instrument was developed to enhance analysis.

### **Sample Characteristics**

The questionnaire (See Appendix B) began with demographic statistics. In Section A, the personal information section, students identified whether their school was public or private, their department or discipline, the course level, how many online courses they were taking, how many online courses they completed, their gender, their ethnic background, whether they were full-time or part-time, their length of enrollment, and age.

A total of 182 students returned the voluntary FluidSurveys instrument, and of these, 129 students attended the for-profit institution and 53 attended the public institution (See Figure 1).

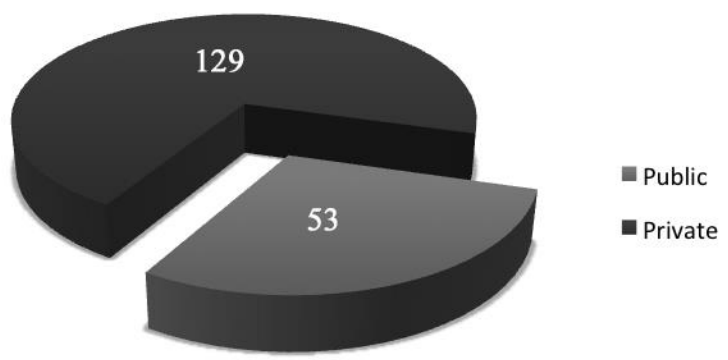


Figure 1. Number of for-profit vs. public surveys returned.

The department / discipline for the majority of students was technology at 73, with 51 students in the humanities, six in math, and 49 in other. Other disciplines included business and advertising (See Figure 2).

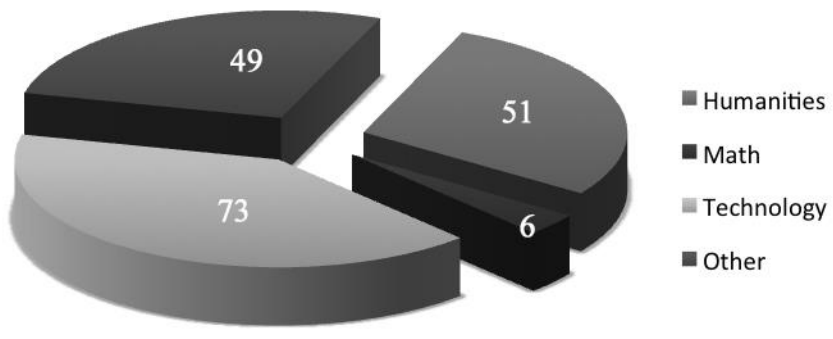


Figure 2. Department / discipline.

The majority of students (122) were undergraduates, with 32 at the graduate level, seven certificate, and 32 other, which included students who were auditing classes (See Figure 3).

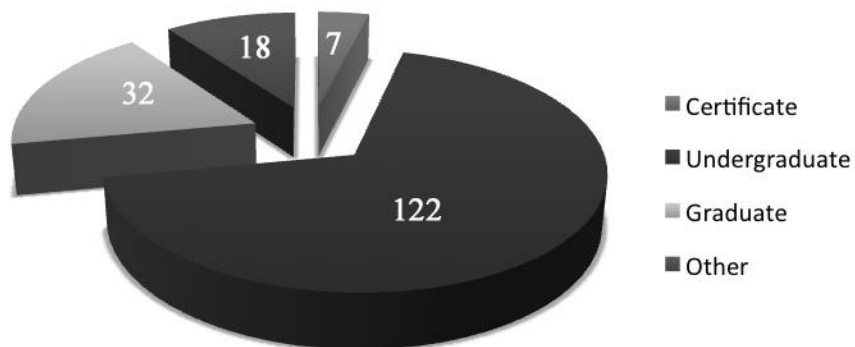


Figure 3. Course level.

A total of 96 students were taking one online class, 24 were taking two, and 28 students were taking three or more online classes (See Figure 4).

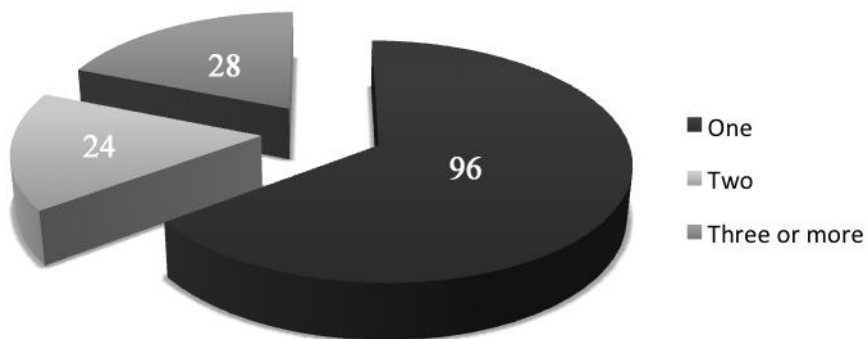


Figure 4. Number of online courses.

Sixty-one students had completed one to three courses online, 20 completed four to six, 10 completed seven to nine, 16 completed 10 or more, and 37 had not completed any online classes (See Figure 5).

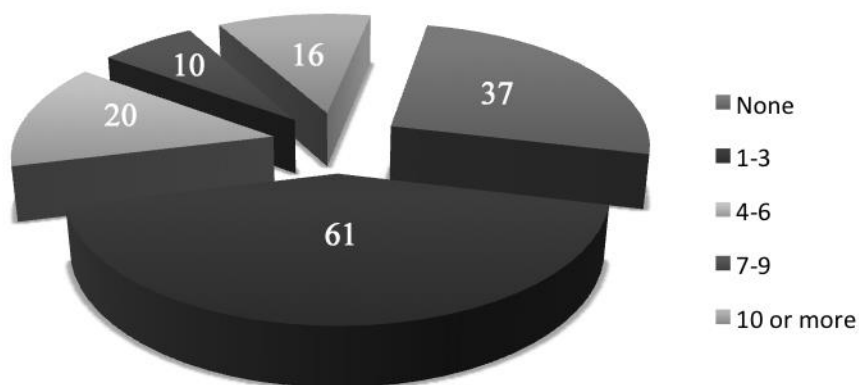


Figure 5. Number of online courses taken.

In the total sample, 107 participants were male, which accounted for 58% of the population, and 77 were female, which accounted for 42% of the population (See Figure 6). This is somewhat unexpected because according to Post Secondary Education (2014) males normally account for 44% of the population.

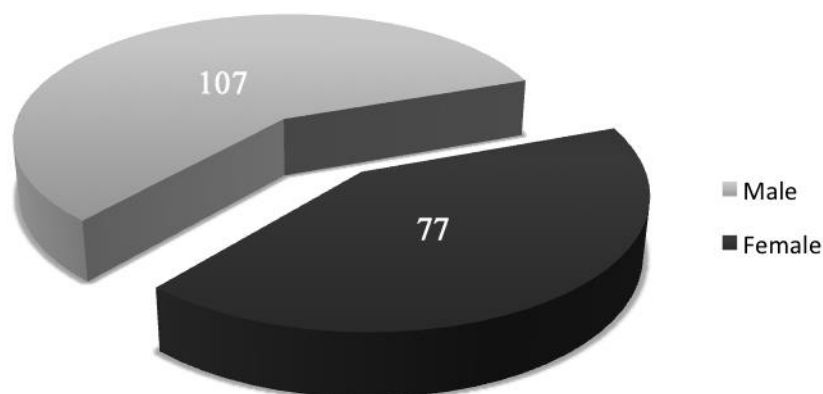


Figure 6. Gender.

The student participants were from a diverse background, with the largest segment of 86 students reporting Hispanic/Latino. These results are not remarkable and are representative of the surrounding communities (U.S. Census Bureau, 2014). Thirty-three were Caucasian, 29 Black, and 21 Asian. A smaller percentage of three students were American Indian/Alaskan Native and nine students marked other (See Figure 7).

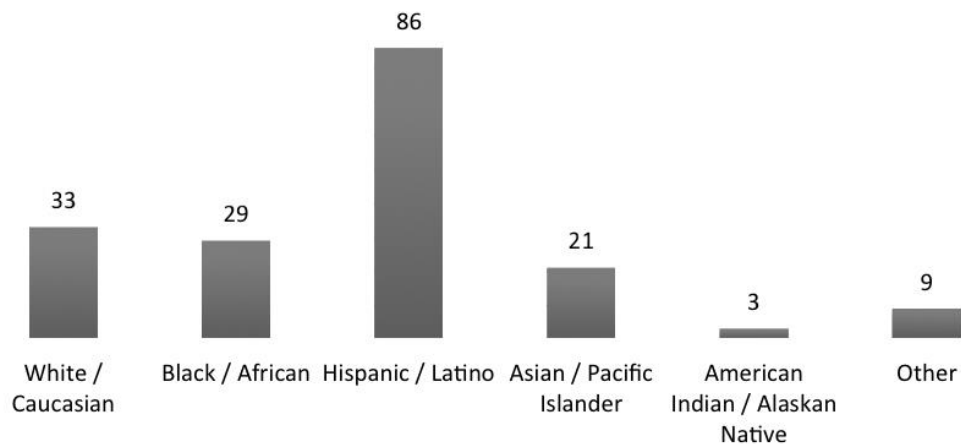
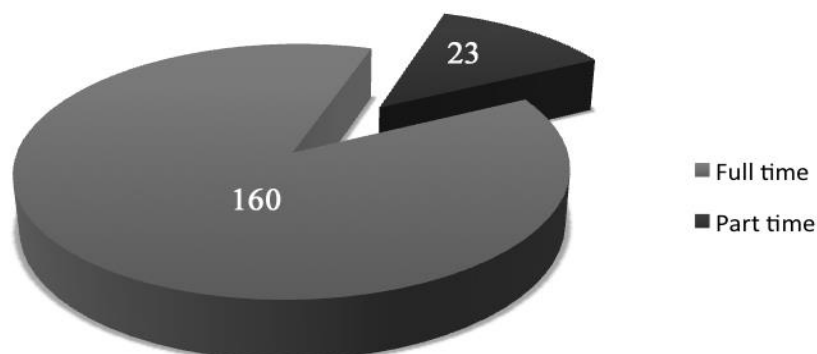


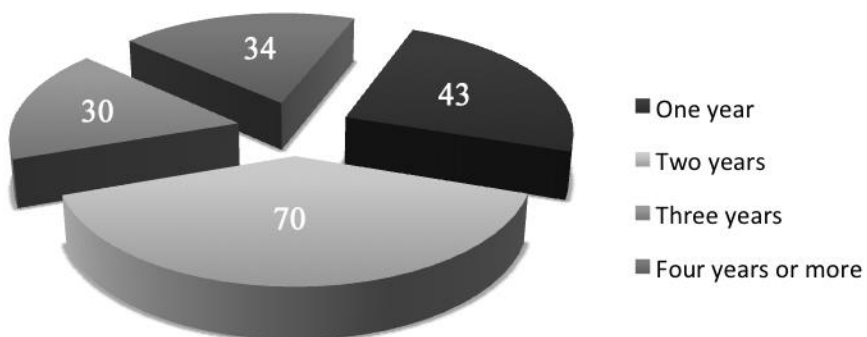
Figure 7. Ethnic background.

Most of the students surveyed were full-time students; 160 were full-time with only 23 part-time (See Figure 8).



*Figure 8.* Student academic status.

It is not remarkable that the largest group of students responding were in their second year of college. Seventy students were sophomores, 43 were freshmen, 34 were seniors, and 30 were collegiate juniors (See Figure 9).



*Figure 9.* Academic length of enrollment.

There was nothing statistically remarkable that the largest age group of the participating student population was from 18 to 24 with 129 students in this category. Thirty-four students were 25 to 34, 12 were 35 to 44, and only eight were 45 years and above (See Figure 10).

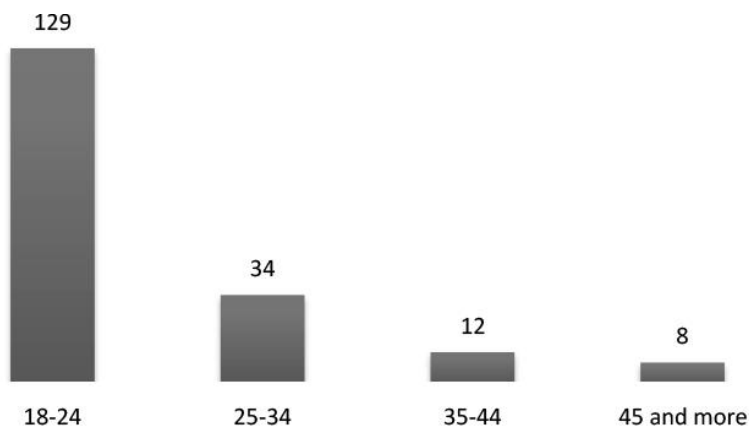


Figure 10. Student age.

### Instructor Presence / Significance

RQ1 was: How significant do students consider the instructor presence in their successful completion of an online course? The first question in Section B of the survey was: An instructor's level of interaction with students is important for student satisfaction and their successful completion of an online course? Using a Likert scale of 1 (*strongly disagree*), 2 (*disagree*), 3 (*agree*), and 4 (*strongly agree*), a value of 2.5 would be the standard mean. The survey population returned a mean value of 3.18, which was significantly higher than the standard. In fact, more than half of the recipients strongly agreed, with 138 (80.7%) participants agreeing or strongly agreeing (See Figure 11).

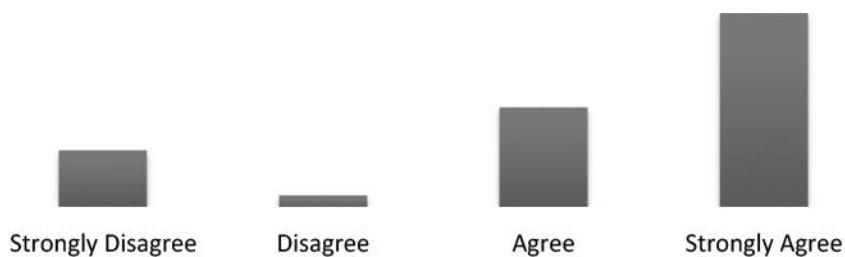


Figure 11. Importance of level of interaction, student satisfaction, and successful completion.

Due to the nature of the variables in RQ1, the single-sample one-tail *t*-test and *z* test, may be used at an alpha level = 0.05 level of significance to analyze data and test the

hypothesized relationship between the two variables for any one or all of the test questions. Table 2 shows that there is a confidence level of .044 which is more than 95%.

Table 2

*Descriptive Statistics for Sample M (all 22 questions)*

Mean	3.256621331
Standard Error	0.021188197
Median	3.251968504
Mode	3.251968504
Standard Deviation	0.099381454
Sample Variance	0.009876673
Kurtosis	0.228136444
Skewness	-0.319971204
Range	0.401574803
Minimum	3.031496063
Maximum	3.433070866
Maximum	3.433070866
Sum	71.64566929
Count	22
Confidence Level (95.0%)	0.044063268

The z test was conducted to evaluate whether the responses were favorable to “presence” by comparing the mean Likert ratings with the average score of all the Likert survey questions

RQ2 was: “What is the statistical relationship between the level of teacher interaction and students’ level of satisfaction and completion of an online course in an online asynchronous learning environment?” To analyze data for RQ2, the aim was to determine the significance of instructor-interaction and the probability that a relationship existed between teacher interaction and student satisfaction and completion, and most importantly, if a relationship existed between the two variables to determine the strength of the relationship and in what direction, positive or negative. The statistic of choice for



such comparisons across questions was the Pearson  $r$  for pair wise comparisons. Table 3 shows that the significance level was so high there was virtually no chance of the student ratings happening by chance.

Table 3

*z-Test: Two Sample for Means*

	Variable 1	Variable 2
Mean	3.256621331	2.5
Known Variance	0.0098767	0.0098767
Observations	22	22
Hypothesized Mean	0	
$z$	25.25044246	
$P(Z \leq z)$ one-tail	0.0000000000	
$z$ Critical one-tail	1.644853627	
$P(Z \leq z)$ two-tail	0.0000000000	
$z$ Critical two-tail	1.959963985	
		.000 > p

Results from the  $t$ -test,  $z$  test, and ANOVA showed an overwhelming perceived significance between student level of satisfaction and completion (See Appendices I through J). The student scores showed normal variance and values. The mean for the entire survey population was 3.26 relative to a 2.5 with a standard error of .021, a standard deviation of .099, and sample variance of .0099. This provided a confidence level of 95%.

RQ3 was: “What aspects of a teacher’s interaction (i.e., role or presence) in the asynchronous content delivery do students consider as contributing mostly to their satisfaction and success in completing an online course?” To analyze data for RQ3, the investigator relied on simple mean differences and linear regressions. The aim was to determine the aspect of teacher interaction (i.e., role or presence) in the asynchronous

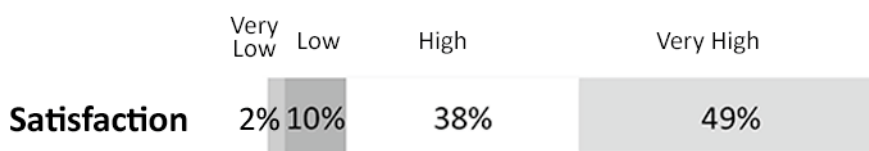
content delivery that students consider to contribute the most to their satisfaction and success in completing an online course. A frequency rank table (See Table 4) was used to record and analyze the data. The Low Contribution was considered those scoring 1 or 2 and High Contribution those scoring 3 or 4. The overall ranking of High Contribution was based on the sums of those scoring 3 and 4 combined.

Table 4  
*Frequency /Rank of Teacher's Role and Contribution to Satisfaction/Completion*

Question	Low Contrib./Frequency		High Contrib./Frequency		Rank
Bq11	27	6	47	91	15
Bq12	3	13	70	82	3
Bq13	5	16	63	81	11
Bq14	4	18	66	84	4
Bq15	5	16	71	82	2
Bq16	5	15	83	71	1
Cq17	0	25	85	53	15
Cq18	2	17	80	63	13
Cq19	1	14	81	68	6
Cq20	3	21	77	62	14
Cq21	3	17	82	63	9
Cq22	5	21	74	58	21
Cq23	6	28	73	56	22
Cq24	7	12	76	68	11
Cq25	2	13	88	62	4
Cq26	7	23	87	46	20
Cq27	4	15	78	67	9
Cq28	3	21	79	58	18
Dq29	4	16	75	71	8
Dq30	2	14	71	76	7
Dq31	4	23	68	70	15
Dq32	7	19	64	73	18

Comparing the highest ranking question Bq16 with the lowest ranking question Cq23 using a two-tailed *t*-test revealed a highly significant difference. The statistics identified the five highest (Bq16, Bq15, Bq12, Bq14 and Cq25) and the five lowest (Cq23, Cq22, Cq26, Cq28, and Dq32) ranking questions. It appeared the higher scoring items tended to indicate “active” presence while the lower scoring items tended to indicate a more passive presence. A regression analysis indicated a small, non-significant correlation between the five highest and the five lowest, suggesting that “active” and “passive” items may be different dimensions of presence.

Survey questions Bq12 through Bq14 addressed respondents' perceptions by asking them to rate the level of instructor interaction relative to their satisfaction with the course, the course completion, and the amount of interaction using a Likert scale of 1 (*very low*), 2 (*low*), 3 (*high*), and 4 (*very high*). Question Bq12 read, "How important is your instructor's interaction to your satisfaction with your online course?" Figure 12 and Table 5 show the students consistently returned values of high and very high when asked the importance of teacher interaction. The mean value was 3.3 compared to the expected 2.5 (See Appendix E).



Number of Students Responding to Section B Question 12 = 165

5 chose Very Low (Likert Value 1)

16 chose Low (Likert Value 2)

63 chose High (Likert Value 3)

81 chose Very High (Likert Value 4)

Mean Value = 3.333 Standard Deviation = 0.773291535

*Figure 12.* Students' perceptions of importance of teacher interaction.

Table 5

*The Importance of Teacher Interaction*

Section B Question 12

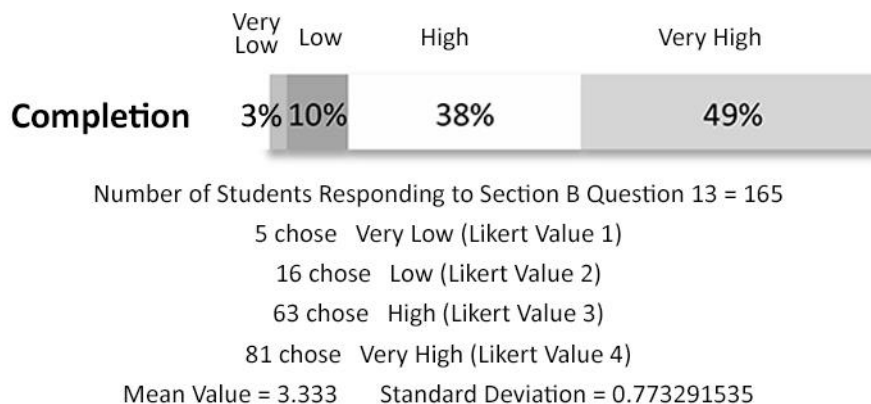
How important is your instructor's interaction to your satisfaction with your online course?

	1 Very Low	2 Low	3 High	4 Very High
Number Selected	3	13	70	82
Percentage Selected	2	11	38	49

Mean Value	3.375
Standard Deviation	0.704471264
Total Responses	168

Survey question Bq13 read, "How important is your instructor's interaction to

your completion of your online course?” Figure 13 and Table 6 show that students consistently returned values of high and very high when asked the importance of teacher interaction. The mean value was 3.3 compared to the expected 2.5 (See Appendix F).



*Figure 13.* How teacher interaction affects completion.

Table 6  
*The Importance of Teacher Interaction*

Section B Question 13				
How important is your instructor's interaction to your completion of your online course?				
	1 Very Low	2 Low	3 High	4 Very High
Number Selected	5	16	63	81
Percentage Selected	2	11	38	49
Mean Value	3.333			
Standard Deviation	0.773291535			
Total Responses	165			

Survey question Bq14 read, “Based on your experience in this course, rate the level of teacher interaction or presence in this course?” Figure 14 and Table 7 shows that students consistently returned values of high and very high when asked the importance of teacher interaction. The mean value was 3.3 compared to the expected 2.5 (See Appendix G).



Number of Students Responding to Section B Question 13 = 172

4 chose Very Low (Likert Value 1)

18 chose Low (Likert Value 2)

66 chose High (Likert Value 3)

84 chose Very High (Likert Value 4)

Mean Value = 3.337 Standard Deviation = 0.756529179

*Figure 14.* Students' perceptions of the importance of teacher presence.

Table 7

*The Importance of Teacher Interaction*

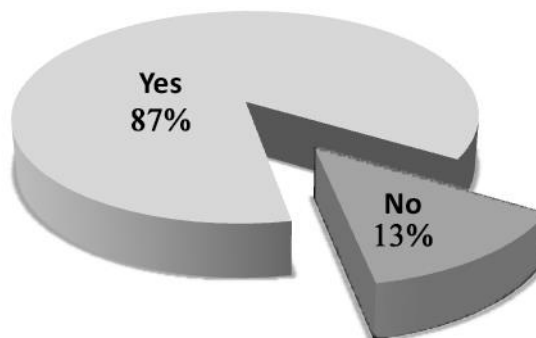
Section B Question 14

Based on your experience in this course, rate the level of teacher-interaction or presence in this course?

	1 Very Low	2 Low	3 High	4 Very High
Number Selected	4	18	66	84
Percentage Selected	2	11	38	49

Mean Value	3.337
Standard Deviation	0.756529179
Total Responses	172

Survey question 15 directly addressed students' satisfaction with instructor participation (See Figure 15).



*Figure 15.* Satisfaction of instructor participation.

Survey questions 16 and 17 asked the students to rate their level of satisfaction with instructor participation and to what extent the role of the instructor affected their course completion. The correlation of the role of the teacher within the COI framework can be seen by comparing satisfaction with the teacher and whether it affected course completion and ultimately persistence to achieve the degree goal. The mean values for these two questions were 3.32 and 3.26, much higher than the 2.5 standard mean (See Figure 16).

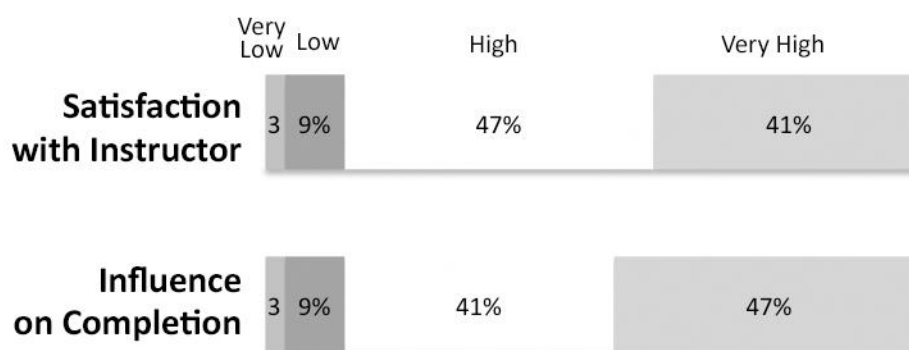


Figure 16. Satisfaction with instructor interaction and completion.

### Instructor Role and Presence

RQ3 was: What aspects of a teacher's interaction (i.e., role or presence) in the asynchronous content delivery do students consider as contributing mostly to their satisfaction and success in completing an online course? Section C, survey questions 1 through 6, identified specific areas of instructor-student interaction. Figure 17 shows the students consistently rated the instructor presence as significant with little or no significant variance in each area.

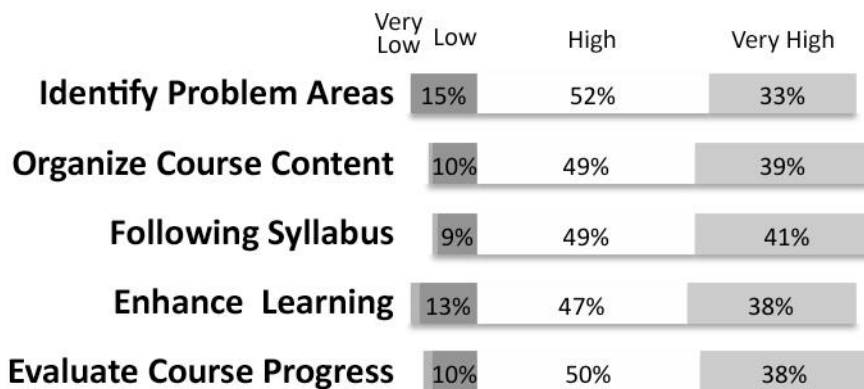


Figure 17. Instructor interaction (i.e., role and presence).

RQ4 was: “Do any teacher presence or student satisfaction factors differ between public and for-profit private institutions?” The mean scores were calculated for both profit and non-profit schools (and the combined means all students). An ANOVA comparing the public and for-profit ratings found a borderline statistically significant difference ( $p < .05+$ ), with private institutions scoring slightly higher in student satisfaction and teacher presence.

### Summary of Findings

The demographic characteristics of the student sample population produced nothing unusual in that it was random and not unique or dissimilar to the aggregate population of the area. The population was what would be expected. The responses to the open-ended qualitative questions produced some anecdotal inferences regarding student attitudes about instructor presence and participation. The overall responses were overwhelmingly positive about the importance of instructor presence to student satisfaction, success, and course completion.

The summary of findings of this research points to the need for faculty training to address the differences that affect the online learning community in a positive way. The traditional methodology good teachers use in creating effective positive active learning



communities can be transferred to the asynchronous learning environment. More research is warranted in creating collaborative environments that address the needs of the students. This collaboration can include multiple teacher input designed into the structure of the course design. Moving forward, research into creating workshops to increase faculty efficacy in the online environment can bring the best practices of highly effective teachers to the online environments that are becoming increasingly important and vital to the success of modern postsecondary institutions.

## CHAPTER FIVE: SUMMARY, CONCLUSION, AND RECOMMENDATIONS

There are many components to the issues surrounding instructor presence and online course completion, including technology, the interactive online classroom environment, and the development of a community of learning. The purpose of this study was to examine instructor presence relative to student satisfaction and completion in both public and private (i.e., for-profit) institutions.

Due to the overwhelming positive responses, one might infer from the statistics gathered from the sample population that there is a significant difference in teacher presence and student success, course completion, and satisfaction. The *t*-test, *z* test, and ANOVA demonstrated there was a highly significant difference and disproved the following null hypotheses:

H1<sub>0</sub>: Students do not consider the instructor presence in their successful completion of an online course as significant.

H2<sub>0</sub>: There is no meaningful relationship between the level of teacher interaction and students' level of satisfaction and completion of an online course in an asynchronous learning environment.

H3<sub>0</sub>: There are no aspects of a teacher's interaction (i.e., role or presence) in the asynchronous content delivery that students consider as contributing mostly to their satisfaction and success in completing an online course.

When the mean scores for both public and for-profit schools were calculated, as well as the combined means all students, results from an ANOVA comparing the public and for-profit ratings revealed a borderline statistically significant difference ( $p < .05+$ ),

which suggested the for-profit system might have been a bit more user-friendly than the non-profit system of instruction, which disproved the fourth null hypothesis:

H<sub>40</sub>: No teacher interaction factors (i.e., role and presence) in the virtual online asynchronous content delivery differ between public and for-profit private institutions.

Anecdotal qualitative evidence gathered supported the quantitative conclusions about the active and significant participation of the instructor. Also, an unexpected consequence of instructor presence was uncovered when the researcher identified the five highest (2, 3, 4, 5, and 20) and the five lowest (7, 12, 13, 16, and 18) scoring items. It appeared the higher scoring items tended to indicate “active” presence while the lower scoring items tended to indicate a more “passive” presence. A regression analysis indicated a small, non-significant correlation between the five highest and the five lowest ranking items, suggesting that active and passive items may be different dimensions of presence, and the active presence of the instructor contributed more to student success, satisfaction, and completion (See Appendix J; See Figure 18).

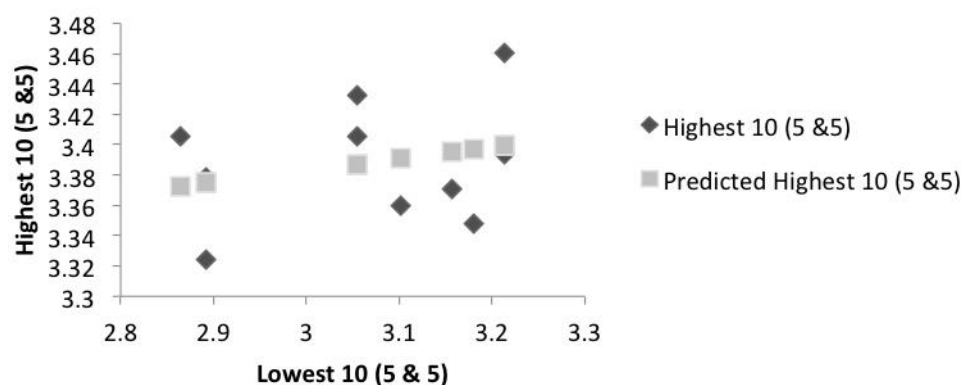


Figure 18. Regression analysis showing passive versus active presence.

## **Recommendations**

This unique study points to the importance of qualified instructors using appropriate learning-centered techniques in creating learning communities online, but since the survey sample population was limited to less than 200 students more research of this type is warranted. Since the sample population was only 42% female, which differs from statistics compiled by the State of California it would be prudent to conduct a survey to determine if gender is a determining factor in online student satisfaction with teacher presence. These findings should be shared with educators who are in a position of creating formative and summative analysis of online programs. Other studies are warranted to include larger student populations to evaluate the importance of the presence of online instructors and student success. More research would benefit the student population in choosing a public or private college and the creation of successful user-friendly online learning communities.

The classroom setting is of fundamental importance to the success of student learning. Online settings are technologically based, so student interaction is virtual and not mitigated by physical human dynamics. This creates a real challenge for teachers to establish an environment that is conducive to and supports engagement in learning. Research into the design and management of quality online courses, implementing the latest online learning strategies, technique in keeping a diverse student population engaged and using technology to evolve and improve existing distance education is an essential component of post secondary learning.

The efficacy of teacher presence and interaction in participation with students in online education is an area that requires quality assurance strategies that will insure

learning centered environments that meet the needs of twenty-first century students. This study and future research addresses implications for teachers, administrations and students to be involved in creating these essential new successful online modalities.

## REFERENCES

- Abrahamson, C.E. (1998). *Issues in interactive communication in distance education*, College Student Journal, 32(1).
- Akyol, Z., Arbaugh, B., Cleveland-Innes, M., Garrison, R., Ice, P., Richardson, J., & Swan, K. (2009). A response to the review of the community of inquiry framework. *Journal of Distance Education*, 23(2). Retrieved from <http://www.jofde.ca/index.php/jde/article/view/630/885>
- Allen, I. E., & Seaman, J. (2008). *Online nation: Five years of growth in online learning*. Newburyport, MA: The Sloan Consortium. Retrieved from [http://sloanconsortium.org/sites/default/files/online\\_nation.pdf](http://sloanconsortium.org/sites/default/files/online_nation.pdf)
- Allen, I. E., & Seaman, J. (2011). *Going the distance: Online education in the United States, 2011*. Newburyport, MA: The Sloan Consortium. Retrieved from [http://sloanconsortium.org/sites/default/files/online\\_nation.pdf](http://sloanconsortium.org/sites/default/files/online_nation.pdf)
- Anderson, T. (2003). Getting the mix right again: An updated and theoretical rationale for interaction. *The International Review of Research in Open and Distance Learning*, 4(2).
- Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*, 5(2), 1-17.
- Arbaugh, J. B. (2005). Is there an optimal design for online MBA courses? *Academy of Management Learning and Education*, 4(2), 135-149.
- Aron, L. (1999). Online U. *Across the Board*, 36(8), 63-66.
- Astin, A. W. (1993). *College retention rates are often misleading*. Chronicle of Higher Education A48.
- Aviv, R., Erlich, Z., Ravid, G., & Geva, A. (2003). Network analysis of knowledge construction in asynchronous learning networks. *Journal of Asynchronous Learning Networks*, 7(3).
- Baker, C. (2010). The impact of instructor immediacy and presence for online student affective learning, cognition, and motivation. *The Journal of Educators Online*, 7(1).
- Bean, J.P. (1990). *Why students leave: Insights from research*. In Hossler, Bean, and Associates, *The strategic management of college enrollments*: Chap. 9, 147-169. San Francisco: Jossey-Bass.
- Berge, Z., & Huang, Y. (2004, May). A model for sustainable student retention: A holistic perspective on the student dropout problem with special attention to

- elearning. *DEOSNEWS*, 13(5). Retrieved from [http://www.ed.psu.edu/acsde/deos/deosnews/deosnews13\\_5.pdf](http://www.ed.psu.edu/acsde/deos/deosnews/deosnews13_5.pdf)
- Besser H. & Donahue S. (1996). *Introduction and overview: Perspectives on distance independent education*. *Journal of the American Society for Information Science*, 47(11). Retrieved from [http://dx.doi.org/10.1002/\(SICI\)1097-4571\(199611\)47:11<801::AID-ASII>3.0.CO;2-6](http://dx.doi.org/10.1002/(SICI)1097-4571(199611)47:11<801::AID-ASII>3.0.CO;2-6)
- Bilyk, R. (2012). Climbing Bloom's taxonomy in online learning. *Creative Commons*. Retrieved from [http://www.engagelearner.org/lodestar/Blooms\\_Taxonomy/Taxonomy\\_OnlineLearning.pdf](http://www.engagelearner.org/lodestar/Blooms_Taxonomy/Taxonomy_OnlineLearning.pdf)
- Bloom, B. S. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Co Inc.
- Bos, N., & Shami, N. S. (2006, October). Adapting a face-to-face role-playing simulation for online play. *Educational Technology Research and Development*, 54, 493.
- Boston, W., Diaz, S., Gibson, A., Ice, P., Richardson, J., & Swan, K. (2010). An exploration of the relationship between indicators of the community of inquiry framework and retention in online programs. *Journal of Asynchronous Learning Networks (JALN)*, 13(3). Retrieved from [http://apus.academia.edu/PhilIce/Papers/203835/An\\_exploration\\_of\\_the\\_relationship\\_between\\_indicators\\_of\\_the\\_Community\\_of\\_Inquiry\\_Framework\\_and\\_retention\\_in\\_online\\_programs](http://apus.academia.edu/PhilIce/Papers/203835/An_exploration_of_the_relationship_between_indicators_of_the_Community_of_Inquiry_Framework_and_retention_in_online_programs)
- Bransford, D., Brown, A., & Cocking, R. (1999). *How people learn: Brain, mind, experience and school*. Washington, DC: Committee on Developments in the Science of Learning, Commission on Behavioral and Social Sciences and Education National Research Council, National Academy Press.
- Brook, C., & Oliver, R. (2003). Online learning communities: Investigating a design framework. *Australian Journal of Educational Technology*, 19(2) 139-160. Retrieved from <http://ascilite.org.au/ajet/ajet19/brook.html>
- Brown, K.M. (1996). *The Role of internal and external factors in the discontinuation of off-campus students*. *Distance Education*, 17(1). Retrieved from <http://dx.doi.org/10.1080/0158791960170105>
- Brown, R. (2011). *Community-College students perform worse online than face to face*. *The Chronicle of Higher Education*. Retrieved from <https://chronicle.com/article/Community-College-Students/128281/>
- Bullen, M. (1998). Participation and critical thinking in online university distance education. *Journal of Distance Education*, 13(2), 1-32.
- Burns, M. (2005, December). Reduce online learners' isolation through vicarious immediacy. *Online Cl@ssroom*. Retrieved from [http://www.vcu.edu/cte/resources/newsletters\\_archive/OC0512.PDF](http://www.vcu.edu/cte/resources/newsletters_archive/OC0512.PDF)

- Cal State University. (n.d.). *Tests of statistical significance*. Retrieved from [www.csulb.edu/~msaintg/ppa696/696stsig.htm](http://www.csulb.edu/~msaintg/ppa696/696stsig.htm)
- Cleveland-Innes, M., and Emes, C. (2005). *Social and academic interaction in higher education contexts and the effect on deep and surface learning*. National Association of Student Personnel Administrators.
- Chickering, A. W., & Gamson, A. F. (1987). *Seven principles for good practice in undergraduate education*. Racine, WI: The Johnson Foundation / Wingspread.
- Cohon, J. D. (2012). A game changer: The Open Learning Initiative. *Presidential Perspectives: Carnegie Mellon University*. Retrieved from [http://www.cmu.edu/leadership/assets/Carnegie\\_Mellon-Open\\_Learning\\_Initiative.pdf](http://www.cmu.edu/leadership/assets/Carnegie_Mellon-Open_Learning_Initiative.pdf)
- Comeaux, P. (2006). Assessing students' online learning: Strategies and resources. *Essays on Teaching Excellence*, 17(3). Retrieved from <http://cte.udel.edu/sites/cte.udel.edu/files/u7/v17n3.htm>
- Coppola, N. W., Hiltz, S. R., & Rotter, N. G. (2002). Becoming a virtual professor: Pedagogical roles and asynchronous learning networks. *Journal of Management Information Systems*, 18(4).
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. (3rd ed.). Thousand Oaks, CA: Sage.
- Curry, D. B. (2001). *Collaborative, connected and experiential learning: Reflections of an online learner*. Retrieved from ERIC database. (ED463721)
- Curtis, D. D., & Lawson, M. J. (2001). Exploring collaborative online learning. *Journal of Asynchronous Learning Networks*, 5(1), 21-34.
- Davis, S. S. (2012). Technology in the classroom: Assets and liabilities. *Faculty Focus*. Retrieved from <http://www.facultyfocus.com/articles/teaching-with-technology-articles/technology-in-the-classroom-assets-and-liabilities/>
- DeVries, Y. E., and Wheeler, C. (1996). *The interactivity component of distance learning implemented in an art studio course*. Education Indianapolis, 117.
- Diaz, D. (2002). *Online drop rates revisited*. Retrieved from the Technology Source Archives website: [http://technologysource.org/article/online\\_drop\\_rates\\_revisited/](http://technologysource.org/article/online_drop_rates_revisited/)
- Diaz, D., & Cartnal, R. (2006). Term length as an indicator of attrition in online learning. *Innovate: Journal of Online Education*, 2(5).
- Du, J., Havard, B., & Li, H. (2005). Dynamic online discussion: Task-oriented interaction for deep learning. *Educational Media International*, 42(3), 207-218.



- Duncan, A. (2010, December 7). *Secretary Duncan: Schools must become centers of communities*. Retrieved from PBS Newshour website:  
[http://www.pbs.org/newshour/bb/education/july-dec10/duncan\\_12-07.html](http://www.pbs.org/newshour/bb/education/july-dec10/duncan_12-07.html)
- Dziuban, C. & Moskal, P. (2001). *Evaluating distributed learning in metropolitan universities*. Metropolitan Universities, 12(1). Indianapolis: Indiana University-Purdue University Indianapolis (IUPUI).
- Easton, S. (2003). Clarifying the instructor's role in online distance learning. *Communication Education*, 52, 87-105.
- Fisher, M., & Baird, D. (2005, March 23). Online learning design that fosters student support, self-regulation, and retention. *Campus-Wide Information Systems*, 22(2), 88-107. Retrieved from [https://pantherfile.uwm.edu/simonec/public/Motivation%20retention%20articles/Articles/Fisher\\_OnlineLearningDesign.pdf](https://pantherfile.uwm.edu/simonec/public/Motivation%20retention%20articles/Articles/Fisher_OnlineLearningDesign.pdf)
- Frankola, K. (2001). Why online learners drop out. *Workforce*. Retrieved from <http://www.workforce.com/articles/why-online-learners-drop-out>
- Gaide, S. (2004). Best practices for helping students complete online degree programs. *Distance Education Report*, 8(20), 8.
- Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *Internet and Higher Education*, 11(2), 1-14.
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence and computer conferencing in distance education. *American Journal of Distance Education*, 15(1).
- Garrison, D. R., & Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues and future directions. *The Internet and Higher Education*, 10(3).
- Garrison, D. R., & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction is not enough. *American Journal of Distance Education*, 19(3).
- Gentles, J. J., (2012). *Impact of technology on student satisfaction in a for-profit private university business program*. (Doctoral dissertation). Retrieved from <http://www.proquest.com/en-US/catalogs/databases/detail/pqdt.shtml>
- Gorham, J. S. (1988). *The relationship between verbal teacher immediacy behaviors and student learning*. *Communication Education*, 37.
- Gorham, J.S. & Zakahi, W. R. (1990). *A comparison of teacher and student perceptions of immediacy and learning*. *Communication Education*, 39.

- Hara, N., & Kling, R. (2009). Students' frustrations with a web-based distance education course. *First Monday*, 4(12). Retrieved from <http://firstmonday.org/ojs/index.php/fm/article/view/710/620>
- Haythornthwaite, C. (2002). *Social networks and internet connectivity effects*. Retrieved from [http://www.itu.dk/stud/speciale/specialeprojekt/Litteratur/Haythornthwaite\\_2005%20%20Social%20networks%20and%20internet%20connectivity%20effects.pdf](http://www.itu.dk/stud/speciale/specialeprojekt/Litteratur/Haythornthwaite_2005%20%20Social%20networks%20and%20internet%20connectivity%20effects.pdf)
- Herbert, M. (2006). Staying the course: A study in online student satisfaction and retention. *Online Journal of Distance Learning Administration*, 9(6). Retrieved from <http://www.westga.edu/~distance/ojdl/winter94/herbert94.htm>
- Hsu, C. (2008). Analysis of learning outcomes and satisfaction between online and onground psychology courses. (Doctoral dissertation). Retrieved from <http://www.proquest.com/en-US/catalogs/databases/detail/pqdt.shtml>
- Jackson, S. L. (2009). *Research methods and statistics: A critical thinking approach*. Belmont, CA: Wadsworth.
- Jézégou, A. (2010). Community of inquiry in e-learning: A critical analysis of the Garrison and Anderson model. *The Journal of Distance Education*, 24(3). Retrieved from <http://www.jofde.ca/index.php/jde/article/view/707>
- Johnson, L., Adams, S., Cummins, M., & Estrada, V. (2012). *Technology outlook for STEM+ education 2012- 2017: An NMC Horizon report sector analysis*. Austin, TX: The New Media Consortium.
- Kassop, M. (2003). Ten ways online education matches, or surpasses, face-to-face learning. *The Technology Source*. Retrieved from [http://technologysource.org/article/ten\\_ways\\_online\\_education\\_matches\\_or\\_surpasses\\_facetoface\\_learning/](http://technologysource.org/article/ten_ways_online_education_matches_or_surpasses_facetoface_learning/)
- Kaye, D.H. & Freedman, D.A. (2011) *Reference guide on statistics*. (3rd ed.). Reference Manual on Scientific Evidence 211, Federal Judicial Center.
- Ko, S., & Rosen, S. (2010). *Teaching online: A practical guide* (3rd ed.). London, England: Routledge.
- Lam, P., Cheng, K. F., & McNaught, C. (2005). *Asynchronous online discussion: Empirical evidence on quantity and quality*. Norfolk, VA: AACE.
- Lieber, E., & Weisner, T. (2012). *What is mixed methods research?* Retrieved from <http://blog.dedoose.com/2012/10/what-is-mixed-methods-research/>
- Ludwig-Hardman, S., & Dunlap, J. (2003). Learner support services for online students: Scaffolding for success. *The International Review of Research in Distance Learning*, 4(1). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/131/211>

- Marks, Sibley, and Arbaugh Parker, A. (2003). United States Distance Learning Association Journal. *Identifying predictors of academic persistence in distance education*. Education at a Distance. (V 17: 1).
- Marshall, G. (1998). *A dictionary of sociology*. Oxford, UK: Oxford University Press.
- McCroskey, J. C., Sallinen, A., Fayer, J. M., Richmond, V. P., Barraclough, R. A. (1996). *Nonverbal immediacy and cognitive learning: A cross-cultural investigation*. Communication Education, 45.
- McDonald, J., & Reushle, S. (2002, December 8-11). *Charting the role of the online teacher in higher education: Winds of change*. Presentation at the 19th annual conference of the Australasian Society for Computers in Learning in Tertiary Education, Auckland, New Zealand. Retrieved from <http://www.ascilite.org.au/conferences/auckland02/proceedings/papers/095.pdf>
- McInnerney, J. M., & Roberts, T. S. (2004). *Online Learning: Social Interaction and the Creation of a sense of community*. Educational Technology & Society, 7(3).
- Means, B., Toyama, Y, Murphy, R., Bakia, M., & Jones, K. (2010, September). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*. Washington, DC: U.S. Department of Education. Retrieved from <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>
- Meyer, K. A. (2003). Face-to-face versus threaded discussions: The role of time and higher-order thinking. *Journal of Asynchronous Learning Networks*, 7(3).
- Meyer, K. A. (2004). Evaluating online discussions: Four different frames of analysis. *Journal of Asynchronous Learning Networks*, 8(2), 101-114.
- Moore, M. G., & Kearsley, G. (2005). *Distance education: A systems view*. Belmont, CA: Wadsworth.
- National Center for Education Statistics. (2011). *The condition of education 2009* Retrieved from <http://nces.ed.gov/pubs2009/2009081.pdf>
- National Center for Education Statistics. (2011). *Actual and projected numbers for enrollment in all degree-granting postsecondary institutions, by race/ethnicity: Fall 1993 through fall 2018* [Table]. Retrieved from [http://nces.ed.gov/programs/projections/projections2018/tables/table\\_22.asp?referrer=list](http://nces.ed.gov/programs/projections/projections2018/tables/table_22.asp?referrer=list)
- Norton, P., & Hathaway, D. (2008). Exploring two teacher education online learning designs: A classroom of one or many? *Journal of Research on Technology in Education*, 40.

- Palloff, R. M., & Pratt, K. (2003). *The virtual student: A profile and guide to working with online learners*. San Francisco, CA: Jossey-Bass.
- 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>
- Park, C. L.; Boman, J.; Care, W. Dean; Edwards, M.; Perry, B., (2009). *Persistence and attrition: What is being measured?* Journal of College Student Retention: Research, Theory & Practice, v10 n2 (ERIC Document Reproduction Service No. EJ806244).
- Picciano, A. G. (2002). Beyond student perceptions: Issues of interaction, presence, and performance in an online course. *Journal of Asynchronous Learning*, 6(1).
- Picciano, A. G. (2012). The evolution of big data and learning analytics in American higher education. *Journal of Asynchronous Learning Networks*, 16(4).
- Post Secondary Education (2014). *Ethnic and gender diversity report*. Retrieved from <http://www.cpec.ca.gov/StudentData/DiversityReport.ASP>
- Prineas, M., & Cini, M. (2011, October). *Assessing learning in online education: The role of technology in improving student outcomes* (NILOA Occasional Paper 12). Champaign, IL: National Institute for Learning Outcomes Assessment. Retrieved from <http://www.learningoutcomeassessment.org/documents/onlined.pdf>
- Rahm, D. & Reed, B.J. (1998). *Tangled webs in public administration: Organizational issues in distance learning*. Public Administration and Management, 3(1).
- Richardson, J. C., & Swan, K. (2003). Examining social presence in online course discussions. *Journal of Asynchronous Learning Networks*, 7(1).
- Romero, M., & Barberá, E. (2011). Quality of learners' time and learning performance beyond quantitative time-on-task. *IRRODL*, 12(5).
- Rossman, G. B., & Rallis, R. S. (2003). *Learning in the field: An introduction to qualitative research*. Thousand Oaks, CA: Sage Publications, Inc.
- Rovai, A. P. (2003). In search of higher persistence rates in distance education online programs. *The Internet and Higher Education*, 6(1), 1-16.
- Russell, T. (2001). *The no significant difference phenomenon*. Raleigh, NC: North Carolina State University.
- Sargeant, J., Curran, V., Allen, M., Jarvis-Selinger, S., & Ho, K. (2006). Facilitating interpersonal interaction and learning online: Linking theory and practice. *The Journal of Continuing Education in the Health Professions*, 26, 128-136.

- Shea, P., Fredericksen, E., Pickett, A., Pelz, W., & Swan, K. (2001). Measures of learning effectiveness in the SUNY Learning Network. In *Online Education: Proceedings of the 2000 Sloan Summer Workshop on Asynchronous Learning Networks*. Retrieved from <http://www.suny.edu/sunytrainingcenter/files/ALNWorkshop2000.pdf>
- Shea, P., Swan, K., Li, C. S., & Pickett, A. (2005). Developing learning community in online asynchronous college courses: The role of teaching presence. *Journal of Asynchronous Learning Networks*, 9(4).
- Shea, P., Swan, K., Li, C. S., & Pickett, A. (2006). A study of teaching presence and student sense of learning community in fully online and web-enhanced college courses. *Internet and Higher Education*, 9(1), 175-190.
- Simonson, M., & Schlosser, C. (2003). Bloom's taxonomy. *The Quarterly Review of Distance Education*, 4(1), 318.
- Smith, B. L. (2001, March 3). *The challenge of learning communities as a growing national movement*. Presentation at the Association of American Colleges and Universities Conference on Learning Communities, Providence, Rhode Island. Retrieved from <http://www.cgc.maricopa.edu/Academics/learningCommunities/Learning%20Community%20References/The%20Challenge%20of%20Learning%20Communities%20as%20a%20Growing%20National%20Movement.pdf>
- Soares, L. (2013, January). *Post-traditional learners and the transformation of postsecondary education: A manifesto for college leaders*. Washington, DC: American Council on Education. Retrieved from <http://www.acenet.edu/news-room/Documents/Post-traditional-Learners.pdf>
- Spady, W. (1970). *Dropouts from higher education: An interdisciplinary review and synthesis*. *Interchange* 1: 64-85.
- Stodel, E., Thompson, T., & MacDonald, C. (2006). Learner's perspectives on what is missing from online learning: Interpretations through the community of inquiry framework. *The International Review of Research in Open and Distance Learning*, 7(3). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/viewArticle/325/743#>
- Strachota, E. (2006, October 4-6). *The use of survey research to measure student satisfaction in online courses*. Presentation at the Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education, University of Missouri, St. Louis, MO. Retrieved from [http://www.umsl.edu/continuingeducation/mwr2p06/pdfs/D/Strachota\\_Use\\_of\\_Survey\\_Research.pdf](http://www.umsl.edu/continuingeducation/mwr2p06/pdfs/D/Strachota_Use_of_Survey_Research.pdf)
- Swan, K. (2002). Building learning communities in online courses: The importance of interaction. *Education, Communications, & Information*, 2(1), 23-49.

- Swan, K., & Shih, L. F. (2005). On the nature and development of social presence in online course discussions. *Journal of Asynchronous Learning Networks*, 9(3).
- Tait, A. (2000). Planning student support for open and distance learning. *Open Learning*, 15(3), 287.
- Thorpe, M. (2001). *Rethinking learner support: The challenge of collaborative online learning*. *Open learning* 17(2).
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89-125.
- Tinto, V. (2002, October 23-25). *Enhancing student persistence*. Retrieved from <https://www.ou.edu/content/dam/HousingFood/Documents/PDF%20-%20Research/Connencting%20the%20Dots%20-%20Tinto.pdf>
- Toporski, N. (2004). *Design principles for online instruction: A new kind of classroom*, Online Submission, Turkish Online Journal of Distance Education, TOJDE. 5(1).
- Tu, C-H., & Corry, M. (2001). A paradigm shift for online community research. *Distance Education Journal*, 22(2), 245-263.
- University of Connecticut. (2012). *Qualitative versus quantitative research*. Retrieved from <http://spirit.lib.uconn.edu/~punj/m3506.pdf>
- U.S. Census Bureau, (2014). *California State Quick Facts*. Retrieved from <http://quickfacts.census.gov/qfd/states/06000.html>
- Walker, B. (2007). *Bridging the distance: How social interaction, presence, social presence, and sense of community influence student learning experiences in an online virtual environment* (Unpublished doctoral dissertation). The University of North Carolina at Greensboro, Greensboro, NC.
- Wantstreet, C. E. (2006). Interactions in online learning environments. *The Quarterly Review of Distance Education*, 7(4), 399-411.
- Wegerif, R. (2012). *Dialogic: Education for the Internet age*. London, England: Routledge.
- Weimer, M. (2013, March 27). Student persistence in online courses: Understanding the key factors. *Faculty Focus*. Retrieved from <http://www.facultyfocus.com/articles/teaching-professor-blog/student-persistence-in-online-courses-understanding-the-key-factors/>
- Willing, P. A., & Johnson, S. D. (2004). Factors that influence students' decision to dropout of online courses. *Journal of Asynchronous Learning Networks*, 8(4), 2-15. Retrieved from [http://www.adesignedmedia.com/onlineresearch/factors-dropoutv8n4\\_willging.pdf](http://www.adesignedmedia.com/onlineresearch/factors-dropoutv8n4_willging.pdf)



## APPENDICES



**APPENDIX A**

**Qualitative Interview Questions**

### Qualitative Questions

Number	Question
1	<p>How do you see an instructor's level of interaction with students as important for student satisfaction and successful completion of an online course? <i>Kindly write down some of the key points in your answer to</i></p> <hr/> <hr/>
2	<p>What are the roles you expect a teacher to play in an online class?</p> <hr/> <hr/> <p>Of all the roles you mentioned, which do you think contributes mostly to your satisfaction and determination to completion this course and why?</p> <hr/> <hr/>
3	<p>What is your overall perception about level of teacher interaction in the online class school? _____</p> <p>What do you think can be done to improve your perception</p> <hr/> <hr/>

**APPENDIX B**

**Sample Survey Instrument**

## Section A

### Personal Information

1. School \_\_\_\_\_
2. Department/Discipline: Humanities \_\_\_\_\_ Math \_\_\_\_\_ Technology \_\_\_\_\_ Other,  
Specify \_\_\_\_\_
3. Course Level: Certificate \_\_\_\_\_ Undergrad \_\_\_\_\_ Graduate \_\_\_\_\_ Other,  
Specify \_\_\_\_\_
4. How many courses are you currently taking online? 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 or more \_\_\_\_\_
5. How many online courses have you completed?  
  

None    1-3    4-6    7-9    10 & more
6. Gender: \_\_\_\_\_ Male    \_\_\_\_\_ Female
7. Ethnic Background: \_\_\_ White \_\_\_ Black / African \_\_\_ Hispanic / Latino \_\_\_ Asian /  
Pacific Islander  
  
Or \_\_\_ American Indian / Alaskan Native \_\_\_ Other, Specify \_\_\_\_\_
8. ACADEMIC STATUS: \_\_\_ Full-time \_\_\_ Part-time \_\_\_
9. Length of enrollment: 1 year \_\_\_\_\_ 2 years \_\_\_\_\_ 3 or more \_\_\_\_\_
10. Age: 18-24 \_\_\_\_\_ 25-34 \_\_\_\_\_ 35-44 \_\_\_\_\_ 45 and More \_\_\_\_\_

## Section B

### Instructor Presence and its significance to Student Success and Completion of an Online Course

This Section contains questions about how you consider the instructor presence in your successful completion of an online course as significant or important Please; rate by circling the appropriate for each question.

1. An instructor's level of interaction with students is important for student satisfaction and their successful completion of an online course?

Strongly Disagree      Disagree      Agree      Strongly Agree

2. How important is your instructor's interaction to your satisfaction with this online course?

Very Low      Low      High      Very High

3. How important is your instructor's interaction to your completion of this online course?

Very Low      Low      High      Very High

4. Based on your experience in this course, rate the level of teacher interaction or presence in this course?

Very Low      Low      High      Very High

5. Are you satisfied with teacher interaction in this course? Yes No

If yes, rate your level of satisfaction

Very Low Low High Very High

6. To what extent would your level of satisfaction and observed level of teacher interaction (as in questions 4 and 5) in this course determine your completing this course?

Very low Low extent High extent Very High

### Section C

#### Teacher Interaction (role and presence)

Please, rate the aspects of teacher interaction (role and presence) according to their contribution to your satisfaction and determination to completion this course

7. The instructors help in identifying problem areas with my study for this course.

Very low Low High Very High  
Contribution Contribution Contribution Contribution

8. The instructor's organization of the course content in a way that made learning easier.

Very low Low High Very High  
Contribution Contribution Contribution Contribution

9. The instructor's following of the course syllabus.

Very low Low High Very High  
Contribution Contribution Contribution Contribution

10. The instructor's emphasis on student to student interaction to get more out of this course.

Very low	Low	High	Very High
Contribution	Contribution	Contribution	Contribution

11. The instructor periodic and timely information about course progress during this course.

Very low	Low	High	Very High
Contribution	Contribution	Contribution	Contribution

12. The instructor encouraged a sense of community among students taking this course.

Very low	Low	High	Very High
Contribution	Contribution	Contribution	Contribution

13. The instructor encouraged small groups/teams work.

Very low	Low	High	Very High
Contribution	Contribution	Contribution	Contribution

14. The instructor provided feedback that is useful.

Very low	Low	High	Very High
Contribution	Contribution	Contribution	Contribution

15. The instructor gave tests and assignments based on what is learned in the course.

Very low	Low	High	Very High
Contribution	Contribution	Contribution	Contribution

16. The instructor allowed students to work at their own pace in this course.

Very low	Low	High	Very High
Contribution	Contribution	Contribution	Contribution

17. The instructor's encouragement to students to participate and become actively involved in class discussions.

Very low	Low	High	Very High
Contribution	Contribution	Contribution	Contribution

18. The instructor's provision of comprehensive feedback on my assignments.

Very low	Low	High	Very High
Contribution	Contribution	Contribution	Contribution

19. The instructor's course design, support, and interactions help a student to reaching higher learning.

Very low	Low	High	Very High
Contribution	Contribution	Contribution	Contribution

### **Section D**

#### **Overall Perception about Level of Teacher Interaction in the online class in the School**

20. Please, rate your overall perceptions about level of instructor and students interaction in your school

Very Low	Low	High	Very High
----------	-----	------	-----------

21. Please, rate your overall perceptions on the level of interaction between students and their fellow students in this school

Very Low	Low	High	Very High
----------	-----	------	-----------

22. Rate the instructor's overall effectiveness of teachers' interaction in the online learning in your school

Very Low	Low	High	Very High
----------	-----	------	-----------



**APPENDIX C**  
**Informed Consent**

## INFORMED CONSENT LETTER

### Online Survey Participants

Dear Student,

You have been invited to participate in a study being conducted by Frank Houlihan at Argosy University, Southern California. The title of the study is **TEACHER PRESENCE AND COURSE COMPLETION IN ONLINE LEARNING**

**What you will do in this study:** You will be asked to complete a questionnaire. This involves answering a series of questions. Questions will seek information about your perception of the importance of teacher interaction (role and presence) and how it affects your satisfaction, and the likelihood of your completing an online course in the school, including what you see as the most contributing aspect of teacher interaction to your learning.

**Time required:** The study will take approximately twenty minutes to complete.

**Risks:** There are minimal risks for participation in this study. This research study is designed to test theories or applications of psychology rather than measuring your personality traits or intellectual abilities. If you feel uncomfortable with any question, at any point while completing the survey you may stop.

**Benefits:**

There are no direct benefits to participants. However, it is hoped that your participation will help the researcher learn more about the importance of teacher interaction in an online class. At the end of the study, you will upon request, receive a copy of the study.

**Confidentiality:**

All information provided will remain confidential and will only be reported as aggregate with no individual information. All the information gathered from the study, will be kept in a secure location and only those directly involved with the research will have access to them. After the research is completed, the information will be destroyed after a period of a year.

**Participation and withdrawal:**

Your participation in this study is completely voluntary. You may withdraw from the study at any time without penalty and this will not affect your current or future relationship with Argosy University, Southern California. You may withdraw by telling the researcher that you no longer wish to participate and your participation will terminate.

**Researcher Contact:**

If you have any further questions after participating from this study, please contact me at: 951-233-8946 or e-mail: fhoulihan@aii.edu

**Whom to contact about your rights in this experiment:**

This study is conducted under the supervision of Dr. Jean-Marie Hamilton-Boone from the Argosy University, Orange County, Department of Education. She can be contacted at (951) 858-4448, <mailto:msaouli@verizon.net> email: [jhboone@argosy.edu](mailto:jhboone@argosy.edu) or you can write to the Chair of Argosy University, Southern California Institutional Review Board at 601 South Lewis Street, Orange, California, 92868 or phone: (714) 620-3625.

Respectfully,

Frank Houlihan

**Agreement:**

After reading through the purpose and nature of this research study, I understand that I am free to withdraw at any time without any penalty. Clicking on the button below and completing the Survey or Questionnaire and sending or submitting this to the researcher constitutes my consent to voluntarily participate in the research study.

**APPENDIX H**  
**Statistical Summary**

## STATISTICAL SUMMARY

	QUES 1	QUES 2	QUES 3	QUES 4	QUES 5	QUES 6	QUES 7	QUES 8
<b>MEAN (All)</b>	3.213	3.433	3.402	3.386	3.346	3.299	3.165	3.252
<b>Difference from the Mean</b>	0.713	0.933	0.902	0.886	0.846	0.799	0.665	0.752
<b>MEAN (Pub)</b>	2.892	3.378	3.405	3.432	3.324	3.324	3.054	3.135
<b>MEAN (Priv)</b>	3.348	3.461	3.393	3.371	3.360	3.281	3.213	3.292
<b>MEDIAN</b>	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500
<b>STANDEV(All)</b>	1.077	0.659	0.713	0.732	0.746	0.756	0.661	0.710
<b>STANDEV(Pub)</b>	1.181	0.672	0.635	0.718	0.660	0.700	0.655	0.741
<b>STANDEV(Priv)</b>	1.007	0.654	0.744	0.740	0.782	0.779	0.661	0.690
Sample Variance		.00987						

	QUES 9	QUES10	QUES11	QUES12	QUES 13	QUES14	QUES 15	QUES 16
<b>MEAN (All)</b>	3.323	3.236	3.252	3.165	3.079	3.236	3.268	3.031
<b>Difference from the Mean</b>	0.823	0.736	0.752	0.665	0.579	0.736	0.768	0.531
<b>MEAN (Pub)</b>	3.270	3.297	3.297	3.054	2.892	3.162	3.108	2.865
<b>MEAN (Priv)</b>	3.348	3.213	3.236	3.213	3.157	3.270	3.326	3.101
<b>MEDIAN</b>	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500
<b>STANDEV(All)</b>	0.663	0.715	0.687	0.781	0.829	0.768	0.669	0.783
<b>STANDEV(Pub)</b>	0.643	0.563	0.563	0.655	0.763	0.637	0.606	0.843
<b>STANDEV(Priv)</b>	0.672	0.771	0.735	0.828	0.847	0.818	0.683	0.750

	QUES 17	QUES18	QUES19	QUES20	QUES 21	QUES22
<b>MEAN (All)</b>	3.252	3.173	3.291	3.370	3.220	3.252
<b>Difference from the Mean</b>	0.752	0.673	0.791	0.870	0.720	0.752
<b>MEAN (Pub)</b>	3.270	3.162	3.324	3.405	3.135	3.216
<b>MEAN (Priv)</b>	3.247	3.180	3.281	3.348	3.247	3.270
<b>MEDIAN</b>	2.500	2.500	2.500	2.500	2.500	2.500
<b>STANDEV(All)</b>	0.753	0.733	0.733	0.696	0.822	0.773
<b>STANDEV(Pub)</b>	0.553	0.637	0.617	0.591	0.777	0.663
<b>STANDEV(Priv)</b>	0.825	0.773	0.779	0.736	0.838	0.818

## STATISTICAL SUMMARY

## Descriptive Statistics for Sample M

Mean	3.256621331
Standard Error	0.021188197
Median	3.251968504
Mode	3.251968504
Standard Deviation	0.099381454
<b>Sample Variance</b>	<b>0.009876673</b>
Kurtosis	0.228136444
Skewness	-0.319971204
Range	0.401574803
Minimum	3.031496063
Maximum	3.433070866
Sum	71.64566929
Count	22
Confidence Level (95.0%)	0.044063268

---

**APPENDIX I****Statistical Summary Z Test**

## z-Test: Two Sample for Means

	<i>Variable 1</i>	<i>Variable 2</i>
Mean	3.256621331	2.5
Known Variance	0.0098767	0.0098767
Observations	22	22
Hypothesized Mean Difference	0	
<b>z</b>	<b>25.25044246</b>	
P(Z<=z) one-tail	0.0000000000	
z Critical one-tail	1.644853627	
<b>P(Z&lt;=z) two-tail</b>	<b>0.0000000000</b>	
<b>z Critical two-tail</b>	<b>1.959963985</b>	



**APPENDIX J**

**Statistical Summary ANOVA**

## SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
MEAN (Pub)	22	70.40540541	3.2002457	0.029055556
MEAN (Priv)	22	72.15730337	3.279877426	0.007188956

## ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	0.069753329	1	0.069753329	3.849042214	0.05642391	4.072653663
Within Groups	0.76113476	42	0.018122256			
Total	0.830888089	43				

**APPENDIX K****Statistical Summary *t*-test**

	[Bq12]	[Cq26]
Mean	3.433070866	3.031496063
Variance	0.437945257	0.618047744
Observations	127	127
Pearson Correlation	0.21765217	
Hypothesized Mean Difference	0	
df	126	
t Stat	4.968834618	
P(T<=t) one-tail	1.07379E-06	
t Critical one-tail	1.657036982	
P(T<=t) two-tail	2.14759E-06	
t Critical two-tail	1.978970576	

[Bq12] How important is your instructor's interaction to your satisfaction with your online course?

[Cq26] The instructor allowed students to work at their own pace in this course.

**APPENDIX K**  
**Statistical Summary Output**

<i>Regression Statistics</i>	
Multiple R	0.261
R Square	0.068
Adjusted R Square	-0.049
Standard Error	0.041
Observations	10.000

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1.000	0.001	0.001	0.582	0.467
Residual	8.000	0.014	0.002		
Total	9.000	0.015			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	3.151	0.310	10.154	0.000	2.436	3.867	2.436	3.867
Lowest 10 (5 & 5)	0.077	0.101	0.763	0.467	-0.156	0.311	0.156	0.311

RESIDUAL  
OUTPUT

<i>Observation</i>	<i>Predicted Highest 10 (5 &amp; 5)</i>	<i>Residuals</i>	<i>Standard Residuals</i>
1.000	3.375	0.004	0.094
2.000	3.387	0.018	0.466
3.000	3.387	0.045	1.158
4.000	3.375	-0.050	-1.290
5.000	3.373	0.033	0.840
6.000	3.400	0.061	1.566
7.000	3.400	-0.006	-0.161
8.000	3.395	-0.024	-0.625
9.000	3.391	-0.031	-0.802
10.000	3.397	-0.049	-1.245