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INVESTIGATING AND UNDERSTANDING STUDENT LEARNING OUTCOMES
IN AN ONLINE AND FACE-TO-FACE
GRADUATE-LEVEL LEGAL ADMINISTRATION COURSE: AN EMBEDDED
MIXED METHODS DESIGN

A Dissertation

Presented to

The Faculty of the Morgridge College of Education

University of Denver

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

by

Hope E. Kentnor

June 2015

Advisor: Dr. Bruce Uhrmacher

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Title: INVESTIGATING AND UNDERSTANDING STUDENT LEARNING
OUTCOMES IN AN ONLINE AND FACE-TO-FACE GRADUATE-LEVEL LEGAL
ADMINISTRATION COURSE: AN EMBEDDED MIXED METHODS DESIGN

Advisor: Dr. Bruce Uhrmacher

Degree Date: June 2015

ABSTRACT

Online education is a new teaching and learning medium with few current guidelines for faculty, administrators or students. Its rapid growth over the last decade has challenged academic institutions to keep up with the demand, while also providing a quality education. Our understanding of the factors that determine quality and effective online learning experiences that lead to student learning outcomes is still evolving. There is a lack of consensus on the effectiveness of online versus face-to-face education in the current research. The U.S. Department of Education conducted a meta-analysis in 2009 and concluded that student-learning outcomes in online courses were equal to and, often times, better than face-to-face traditional courses. Subsequent research has found contradictory findings, and further inquiry is necessary.

The purpose of this embedded mixed methods design research study is to further our understanding of the factors that create quality and successful educational outcomes in an online course. To achieve this, the first phase of this study measured and compared learning outcomes in an online and in class graduate-level legal administration course. The second phase of the study entailed interviews with those students in both the online and face-to-face sections to understand their perspectives on the factors contributing to learning outcomes.

Six themes emerged from the qualitative findings: convenience, higher order thinking, discussions, professor engagement, professor and student interaction, and face-to-face interaction. Findings from this study indicate the factors students perceive as contributing to learning outcomes in an online course are consistent among all students and are supported in the existing literature. Higher order thinking, however, emerged as a stronger theme than indicated in the current research, and the face-to-face nature of the traditional classroom may be more an issue of familiarity than a factor contributing to learning outcomes.

As education continues to reach new heights and developments in technology advance, the factors found to contribute to student learning outcomes will be refined and enhanced. These developments will continue to transform the ways in which we deliver and receive knowledge in both traditional and online classrooms. While there is a growing body of research on online education, the field's evolution has unsettled earlier findings and posed new areas to investigate.

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PREFACE

“Education is the most powerful weapon which you can use to change the world”

- Nelson Mandela, former president of South Africa, 1993

Nobel Peace Prize laureate

The digital revolution has changed the way we learn, teach, communicate, and share. The traditional brick-and-mortar institution of higher education has existed for centuries, its current infrastructure has been in place for decades, and faculty teach much as they did fifty years ago (Stark, 2003). This is changing. The digital revolution has forced academic institutions to question how we teach and has urged us to better understand how students learn. Digital technologies are a part of every aspect of our society, and education is being “cyberized” because developed societies have been “cyberized” (Sener, 2012). For the first time that I can remember educators are questioning our teaching techniques, increasing our understanding of student learning styles, and seeking new ways to convey knowledge in face-to-face (F2F) and online learning environments.

Education provides an economic and social benefit to society. Learning is the avenue through which individuals understand and makes sense of their lives, their experiences, and the world around them. Higher levels of education are correlated with higher employment and lower poverty rates, greater civic participation, and healthier

lifestyle choices, all of which affect society. Learning fosters growth, and now, with online education, there are not only fewer obstacles to reaching out but also greater opportunities to learning through collaboration. Those who were once unable to return to school now have new possibilities. Online education enables global learning, opening the classroom to those around the world to share and learn from others' views and perspectives. To develop new ideas and new solutions this collaboration has endless possibilities. We all see things differently, from different perspectives and with different lenses. Our experiences in life affect what we see and how we perceive. Online learning allows us to share these perspectives with one another, to share ideas and find solutions, resolve challenges, or imagine possibilities. It allows diverse minds to think, reflect, share, and learn together. Collaboration is social, it is engaging, and it can make us more evolved social beings. I am certain that education and global collaboration are the answer to some of our most complex issues: water and drought problems, cancer, climate change, poverty, conflict, etc. I am passionate about education, and I want so badly to learn how to make it better and more accessible for everyone. Learning is growing, learning is empowering, and learning is life changing.

I believe education is the solution to the many problems we have as a global society, community, or as individuals. My personal and professional goal is to improve education at the graduate level. This research will help us determine what is important in creating online learning environments for all to thrive.

CHAPTER ONE: INTRODUCTION

Distance education is a method of teaching in which students and teachers are physically separated. It utilizes audio, correspondence, video, computer, and internet technologies (Roffe, 2004). Online education is a form of distance education in which at least 80% of the course content is delivered online via computers and the Internet (Allen & Seaman, 2008; Shelton & Saltsman, 2005).

Online education is no longer a trend but has become mainstream. In the fall of 2007, approximately 3.9 million students enrolled in at least one online course in the United States (Allen & Seaman, 2008). By the fall of 2010, approximately 6.1 million students in the United States enrolled in at least one online course (Allen & Seaman, 2011). By the fall of 2012, that number increased to 6.7 million students (Allen & Seaman, 2013). From 2007 to 2010, the number of students enrolled in an online course grew by 56%. Over the last two years enrollments in online courses have begun to plateau. They are presently growing at an average of about 4.9% annually, as opposed to the 18.8% rate observed between 2007 and 2010. With enrollments in online courses still growing and the realization they are here to stay, educational institutions are challenged to meet the demand while continuing to provide a quality education. Further, online education is a relatively new teaching and learning medium with few current guidelines for faculty, students, or administrators; therefore, our understanding of the factors that

determine quality and effective online learning experiences and lead to improved learning outcomes are still evolving.

In 2009 (and later revised in 2010) the U.S. Department of Education released a meta-analysis that concluded learning outcomes in predominately higher education online courses were equal to or better than those in traditional Face-to-face (F2F) courses. Based on these findings, the *New York Times* published an article entitled, “Study Finds That Online Education Beats the Classroom” (Lohr, 2009). Many contend the findings in the meta-analysis do not hold and the study is flawed (Figlio, Rush, & Yin, 2010; Jaggars & Bailey, 2010). Yet, other studies have found no difference between student performance in online and in-class environments (Beck, 2010; Dell, Low, & Wilker, 2010; Lyke & Frank, 2012), or suggest that the F2F environment is superior (Urtel, 2008; Emerson & MacKay, 2011). Research results are simply inconsistent.

As developments in education technology advance, the characteristics that contribute to a quality online learning experience will be refined and enhanced. These developments will continue to transform the ways in which we deliver and receive knowledge in both traditional and online classrooms. While there is a growing body of research on online education, the field’s evolution has unsettled earlier findings and posed new areas to investigate.

There are many facets that affect online learning experiences—subject matter, online pedagogy, faculty experience, course design, institutional support, interactivity and engagement in the classroom, participation, student learning style, etc. Consequently, recognizing all of the characteristics that differentiate one online learning experience from another is vital to understanding online education and improving its quality. A

meta-analysis by Bernard et al. (2004) concluded that pedagogical methods and medium of instruction (online, face-to-face, etc.) are separate constructs and should not be considered a singular element or characteristic of instruction. Schutte (1996), in a study comparing distance and F2F learning outcomes found students scored on average 20% higher in the distance learning course than the traditional course found the virtual students were frustrated, but not with the technology. Rather, the frustration stemmed from the inability to ask questions F2F. Further, Schutte (1996) inferred virtual interaction produced better results than F2F interaction. Again, online education is a new practice, therefore understanding all of the individual dynamics and elements that contribute to successful and effective learning experiences is necessary to further improve the quality of online education.

One area of study yet to embrace online education is law. The American Bar Association's (ABA) Council of the Section of Legal Education and Admissions to the Bar ("the Council") is the agency responsible for the accreditation of programs leading to the Juris Doctorate (J.D.) degree. The ABA Standards for Approval of Law Schools 2013-2014 provides several stipulations for using distance education coursework toward credit for the J.D. degree. In January 2014, the American Bar Association's Task Force on the Future of Legal Education released a report with recommendations to the American Bar Association that Standard 306 (relating to distance education) be "eliminated or substantially moderated" (American Bar Association Task Force on the Future of Legal Education, p. 31). While there are no ABA-accredited, online J.D. programs in the country, one ABA-accredited law school has offered an online (non-J.D.) Legal Administration master's degree since 2003. Legal Administration, the business side

of practicing law, is the study of how to manage and operate law firms, courts, or legal organizations. While it is not a program leading to a J.D. degree or a program accredited by the ABA, it is a program within an ABA-accredited institution. Based on the 2014 report by the ABA Task Force, the American Bar Association may become more receptive to online instruction in law schools. Despite the growth of online education in most subject areas, the research is silent on the study of law or legal administration. This study will be the first to compare student-learning outcomes in a F2F and online, graduate-level legal administration course at an institution accredited by the American Bar Association.

Background of the Study

The U.S. Department of Education conducted a meta-analysis in 2009 and concluded that learning outcomes in online courses were equal to or, often times, better than in traditional F2F courses. Several errors and misrepresentations have been found in the initial meta-analysis (Figlio et.al, 2010; Jaggars & Bailey, 2010). Subsequent research has found no difference in student performance in online and in-class environments (Beck, 2010; Dell, Low, & Wilker, 2010; Lyke & Frank, 2012), while others find the F2F environment is superior (Urtel, 2008; Emerson & MacKay, 2011). The research is inconsistent, prompting the need for further inquiry. Additionally, online learning is a relatively new teaching and learning medium, and further research is necessary to better understand which online learning factors influence learning outcomes.

Purpose of the Research Study

This research will further our understanding of the factors that create successful educational outcomes in online legal administration courses by measuring and comparing

learning outcomes in an online and an in-class, graduate level legal administration course and then interviewing students to understand their perspectives on the factors contributing to learning outcomes. Student Learning Outcomes (SLO) are defined as “the expected knowledge, skills, attitudes, competencies, and habits of mind that students are expected to acquire at an institution of higher education” (National Institute for Learning Outcomes Assessment, 2012). SLOs are the best indicators of whether a student has learned a course’s intended material.

Definitions Used in the Study

Blended or Hybrid Education: Course or program that blends online and traditional education. A course or program typically has a reduced number of face-to-face meetings and between 30 to 79% of the content is delivered online (Allen & Seaman, 2013).

Distance Education: A method of teaching where the student and teacher are physically separated. It utilizes a combination of technologies, including audio, correspondence, video, computer, and Internet (Roffe, 2004).

Engagement: “Involvement” which encompasses active and collaborative learning, participation in challenging academic activities, formative communication with academic staff, immersion in enriching educational experiences, and feeling legitimate and supported by university learning communities (Coates, 2007, p. 122).

F2F: Face-to-face education. Used interchangeably with in-class or in the classroom.

In-class: Traditional in-classroom education. Used interchangeably with face-to-face education (F2F).

Interaction: The interactions between faculty and students, as well as students to students, and the collaboration that ensues from these interactions.

Online Education: One form of distance education that utilizes computers and the Internet as the delivery mechanism, with at least 80% of course content delivered online (Allen & Seaman, 2008; Shelton & Saltsman, 2005).

Student Learning Outcomes: Used interchangeably with learning outcomes. The expected knowledge, skills, attitudes, competencies, and habits of mind that students are expected to acquire at an institution of higher education” (National Institute for Learning Outcomes Assessment, 2012).

Traditional Education: A course or program where all content is delivered in writing or orally and students are physically present. No online technology is used in the delivery (Allen & Seaman, 2013). Terms used synonymously are in-class education and face-to-face instruction

Significance of the Study

Online education is a new medium for delivering knowledge and its power and reach is still unknown. What is known is that online learning is widespread, in demand, and progressing every day. The current literature on student learning outcomes in online courses is growing, but the findings are inconsistent and in some cases likely to be contested. As technology continues to advance, online education will further evolve. The study of law has not embraced the online learning medium, but one legal administration program, within an ABA-accredited institution, has embraced online education. This research study will compare student-learning outcomes in an F2F and online legal administration courses at an ABA-accredited institution. It will also (1) contribute to the current body of research on online education, (2) aid educators and institutions of higher education in determining the best tools for assessing online courses, (3) further their

understanding of the dynamics that create effective online learning experiences, and (4) aid in the measurement of student learning outcomes in online courses.

Research Questions

This research study will compare learning outcomes between an F2F and online graduate-level Legal Administration course. It will also explore student perceptions of learning outcomes and the effectiveness and quality of learning in the online environment. I hypothesize there will be no significant difference in student learning outcomes between the F2F and online courses. The research questions addressed in this study are:

1. Is there a difference in student learning outcomes between an online and F2F graduate-level legal administration course?
2. Do online students perceive online learning to be as effective as face-to-face learning?
3. What characteristics or factors do online students perceive as affecting learning outcomes in an online course?
4. What results emerge from integrating the qualitative data on online education and learning outcomes with quantitative data that compares learning outcomes in online and F2F courses?

Organization of the Dissertation

This dissertation consists of six chapters. Chapter One introduces the reader to the purpose and significance of this research. Chapter Two provides a brief history of distance and online education, clarifies how I use the term “quality” with regard to online education, and includes a detailed review of the literature. Chapter Three provides the

research methodology for this study. Chapter Four outlines the research findings for the quantitative phase. Chapter Five outlines the findings for the qualitative phase, and Chapter Six presents a summary of the study, findings, and conclusion.

CHAPTER TWO: REVIEW OF THE LITERATURE

Chapter Two provides a detailed review of the literature related to online education. This chapter is divided into six sections:

1. The History and Evolution of Online education
2. Quality in Online Education
3. Student Perceptions of Online Education
4. Interaction and Engagement
5. Online Versus F2F—The Literature
6. Online Education Today

The History and Evolution of Online Education

Distance education is not a new way of teaching. Rather it can be traced back to as early as the 18th century. Its evolution and progression over the last 300 years runs parallel to innovations in communications technology and continues to grow in popularity. It was common beginning in the late 1800s but its rapid growth began in the late 1990s with the beginning of the online technical revolution. The evolution of distance education begins with correspondence courses and the use of parcel post as the delivery mechanism to radio, then to television, and finally to online education, a system that delivers instruction via the Internet. Online education has grown immensely in the last decade and continues to grow.

Correspondence – Parcel Post

Correspondence education was traditionally “education for nonresident students, primarily adults, who receive lessons and exercises through the mail [or some other device] and, upon completion, return them for analysis, criticism, and grading” (Correspondence Education, 2012). The earliest known reference to correspondence education was on March 20, 1728, when Caleb Phillips placed an advertisement in the *Boston Gazette* offering shorthand lessons for any “Person in the Country desirous to Learn this Art, may be having several Lessons sent Weekly to them, be as perfectly as those that live in Boston” (Phillips, 1728). With no record of two way communication, this type of course may not strictly qualify as distance education; yet, the premise and intent is apparent in the advertisement - to teach shorthand by way of the postal service.

Isaac Pitman, a pioneer of distance education, began teaching shorthand by correspondence in 1840 in Bath, England. He mailed postcards to students and instructed them to transcribe passages from the bible into shorthand and to return them, by post, for correction (Verduin & Clark, 1991). Just three years later, in 1843, the Phonographic Correspondence Society, a precursor to Sir Isaac Pitman’s Correspondence College, was founded. Thirty years later, in 1873 Anna Eliot Ticknor founded the Society to Encourage Studies at Home, which was based on the correspondence school model. Less than a year later Illinois Wesleyan College became the first academic institution to offer degree programs “in absentia” (Emmerson, 2004, p. 2). By the 1870s the foundation for correspondence education was laid and it was on the brink of taking off.

The Chautauqua Movement of the 1870s was responsible for the onset and acceptance of correspondence education for adults. In 1874 Lewis Miller and John Heyl

Vincent heralded the movement in New York State as a summertime training program for Sunday school teachers. Gradually, the program expanded to include general education and the arts, with supplemental readings and studies to be completed at home and through correspondence. Several “Chautauquas” developed across the country as assemblies and seminars of learning. Although known for their summer gatherings, they offered four year programs of reading through correspondence, and participants earned a certificate of study (Harting & Erthal, 2005). In 1878, John Vincent, established the Chautauqua Literary and Scientific Circle, the first adult education program and correspondence school in the country (*Cincinnati Daily Gazette*, 1878; Scott, 1999). Chautauqua University, formed in 1883, introduced extension and correspondence courses as well as summer terms until 1892 when it closed its doors due to lack of resources.

In 1892, William Rainey Harper, using Chautauqua University’s model, offered college-level correspondence courses at the University of Chicago (Scott, 1999). The correspondence division at the University of Chicago was quite successful in terms of enrollment, enrolling 3,000 students in 350 courses with 125 instructors (Rumble, 1986).

The need for correspondence education continued to gain strength in the late 1800s and early 1900s as the desire for a college degree grew despite the barriers of traveling to a traditional university. Similarly, with the need to provide equal access to educational opportunities, correspondence education took a new turn. The growing demand for and popularity of correspondence education was accompanied by a concern for the quality of correspondence education. In 1915, the National University Extension Association formed in an effort to “develop and advance ideals, methods, and standards in continuing education and university extensions” (National University Extension

Association, n.d.) Whether it was to educate students for degrees, update professional knowledge and skills, or to train new soldiers, the goal of correspondence education was to provide a quality education and enable any and all to expand their intellect and knowledge.

Radio

Distance education took another turn in 1894 when Guglielmo Marconi invented the spark transmitter and obtained the first patent for a radio device (*Omaha World Herald*, 1897; Buckland & Dye, 1991). It was not long before distance educators sought to explore new communication technologies as a means to reach more learners. In 1906, the University of Wisconsin-Extension was founded as a distance teaching unit. In 1919, University of Wisconsin professors began an amateur wireless station later known as WHA, the first federally licensed radio station dedicated to educational broadcasting (Verduin & Clark, 1991). By the end of the 1920s, 176 educational institutions had broadcast licenses.

The early 1920s is seen as the beginning of educational broadcasting. Very quickly colleges and universities went beyond transmitting educational matter and entered the social broadcasting of sporting events, concerts, dramas, and college lectures (Buckland & Dye, 1991). Despite the growth in radio broadcasting, there was no governing law that regulated land-based public broadcasting stations. The Radio Act of 1912 sought to address this lack of regulation by requiring the licensing of all station operators and transmitting apparatuses for interstate or foreign commerce (Department of Commerce, 1914). The Radio Act of 1912, however, did not reference radio broadcasting; therefore, by 1922, the plethora of new radio stations continued and quickly

exhausted the limited number of frequencies available for radio transmission. Herbert Hoover, then Secretary of Commerce, was therefore forced to deny licensing requests (Verduin & Clark, 1991). In 1923, a federal appeals court ruled against Hoover, which again resulted in a dramatic increase in radio stations and interference on broadcasting channels. In 1927, Congress passed the Radio Act of 1927, which attempted to regulate the broadcasting industry and placed licensing powers in the hands of an independent agency (United States Congress, 1927).

These regulatory issues affecting radio, coupled with the economic turmoil of 1929 significantly affected educational institutions and educational radio broadcasting. By 1929, of the 176 radio stations at educational institutions, only 35 survived (Buckland & Dye, 1991). Just to keep functioning, some institutions began a “school of the air” program, offering daily science, literature, history and music programming. The Ohio State Department of Education developed the first such program, Ohio School of the Air, in fall of 1928 (Duff, 1929; Holy, 1949). Also in 1928, The National Broadcasting Company (NBC) started the Radio Corporation of America (RCA) Educational Hour. The Columbia Broadcasting System (CBS) followed in 1930 with the American School of the Air (Johnson, 1936; Wood & Wylie, 1977). On May 11, 1930, in an effort to promote radio broadcasting as a teaching medium, the Rockefeller and Carnegie Foundations organized and funded the National Advisory Council for Radio in Education (NACRE) (Buckland & Dye, 1991; New York Public Library, n.d). About the same time the Institute for Education by Radio (IER) was founded in Columbus, Ohio, where radio was used extensively in the classroom. The IER concentrated on techniques used in educational broadcasting.

The growing need for a national organization in Washington dedicated to using radio for educational broadcasting and coordinating efforts on the part of the institutions and stations was clear. On December 30, 1930 the National Committee on Education By Radio (NCER) was formed:

to secure to the people of the United States the use of radio for educational purposes by protecting the rights of educational broadcasting, by promoting and coordinating experiments in the use of radio in school and adult education, by maintaining a Service Bureau to assist educational stations in securing licenses and in other technical procedures, by exchange of information through weekly bulletin, by encouragement of research in education by radio, and by serving as a clearinghouse for research (National Committee of Education by Radio, 1931, p. 1).

Radio was the new communication technology of the 1920s; however, its use in education was more popular in Europe and other countries around the world than in the United States. This was especially the case in nations where radio was more reliable than the postal service, or where literacy rates were lower. Greville Rumble (1986) noted:

“In Latin America, radio broadcasting organizations were among the pioneers of distance education, and this is reflected in the structure of many current systems where there is less emphasis on print and individual correspondence tuition, and more on locally organized listening groups” (p. 9).

It was, and still is in some countries, the ideal instrument for informing and educating the masses. It was inexpensive, instant, and content could be changed quickly and reach a large number of people. The distance education innovation of the 1700s continued to grow with the introduction of new technologies. It was not long after radio broadcasting was introduced that the ability to see an instructor on a television screen, from a distance, became the marvel.

Television

The foresight to use visual technology in education came long before such capacity existed; yet, surprisingly once implemented, it did not gain strength in education as anticipated (Verduin & Clark, 1991). In an interview with Frederick Smith (1913), Thomas Edison said, “Books will be obsolete in the public schools. Scholars will be instructed through the eye. It is possible to teach every branch of human knowledge with motion picture. Our school system will be completely changed inside of ten years.” He further stated:

We have been studying and reproducing the life of the fly, mosquito, silk weaving moth, brown moth, gypsy moth, butterflies, scale and other various insects, as well as chemical crystallizations. It proves conclusively the worth of motion pictures in chemistry, physics and other branches of study, making scientific truths difficult to understand through textbooks, plain and clear to children (p.24).

The evolution of visual media as a medium for education was conceived long before the use of its audio counterpart (radio) in education. Although the science was developed as early as the late 1800s, commercial television did not become part of the public domain until Secretary of Commerce Herbert Hoover and Bell Laboratories held the first long distance live video and voice transmission, on April 9, 1927. Hoover said, “Today, we have, in a sense, the transmission of sight for the first time in the world’s history. Human genius has now destroyed the impediment of distance in a new respect, and in a manner hitherto unknown” (*Cleveland Plain Dealer*, 1927; Federal Communications Commission, n.d., p. 1). Despite the availability of the technology, the first use of television broadcasting for education did not originate until between 1932 and 1937 at the University of Iowa. Even this was only an experiment in the use of television for

educational purposes (Koenig & Hill, 1967). The growth of ETV was hampered by World War II. The widespread use of audio-visual media in military training, however, demonstrated its effectiveness in education; thus, the use of video in the classroom increased considerably. Yet, this still did not lead to the use of television for distance education (Verduin & Clark, 1991).

The pioneers of educational television, and those who recognized the potential of educational television early on, were the University of Iowa, Iowa State University, Kansas State University, the University of Michigan, and American University (Koenig and Hill, 1967). Although the use of video as a teaching medium continued to evolve, the use of television for distance education still faced many barriers. In 1948, the Federal Communication Commission (FCC) issued a “freeze” on granting new television licenses to resolve interference and allocation issues that arose from the rush of license applications. By 1950, educational institutions had begun to recognize the potential of television as a medium for teaching and learning, but they were “not organized as a unified educational body” and were unable to influence the FCC’s decision regarding educational television frequencies (Koenig and Hill, 1967, p. 5). Finally, in 1952, in the *Sixth Report and Order*, the FCC answered educator’s request to reserve television channels for the exclusive use of education. A total of 242 channels were reserved initially, increasing to 632 channels by 1966. Of the educational stations on the air in 1966, one third were licensed to state and local educational systems, another third to colleges and universities, and a final third to community organizations (Koenig and Hill, 1967). Following recommendations by the Carnegie Commission on Educational Television Congress passed the Public Broadcasting Act of 1967, which established the

Corporation for Public Broadcasting (CPB). The mission of the CPB was “to encourage the growth and development of public radio and television broadcasting, including the use of such media for instructional, educational, and cultural purposes” (Buck, 1971; United States Congress, 1977, p.1).

The use of radio and television in education continued to grow, but not in terms of distance education. Educators were using the television in the classroom as a tool to demonstrate and explain concepts and families were “tuning in” at home to educational broadcasts, but the use of television for distance education, whereby an instructor and student interacted asynchronously, waned. Television courses for distance education at the time were poorly produced, which perhaps was a reason for their low viewership. These television courses usually involved an instructor simply reading notes making it difficult to keep the viewers’ attention. By the mid to late 1970’s this began to change, as the British Broadcasting Company began to set a standard for American television course developers to follow (Verduin & Clark, 1991). At the same time that the use of computers as a medium for delivering education was implemented, educators seemed unimpressed and unwilling to embrace the new technology.

Internet—Online Education

The use of computers to educate arose in the corporate arena during the 1980s as companies used computer-based programs to train new employees (Rudestam & Schoenholtz-Read, 2002). The emergence of online educational programs began at the University of Phoenix in 1989 using Compuserve (University of Phoenix, n.d.). Shortly thereafter, in 1991, the World Wide Web was unveiled and the University of Phoenix became one of the first to offer online education programs through the Internet. Although

a for-profit institution, the University of Phoenix's move toward the online education marketplace, prompted many reputable institutions and not for profit colleges and universities to follow suit (Carlson & Carnevale, 2001). The Alfred P. Sloan Foundation, a philanthropic, grant-making institution, developed the Asynchronous Learning Networks (ALN) in 1992 to explore educational alternatives for those unable to attend traditional classes in brick-and-mortar schools (Alfred P. Sloan Foundation, n.d.). As online education continued to grow, the Foundation also began funding institutions that offered online programs in an effort to improve the quality of online education. The vision and effectiveness for this new medium for distance education was apparent, so it was only a matter of time before academia entered the market.

Universities and colleges began experimenting in online courses in the early to mid-1990s, but rapid growth in online education in traditional nonprofit institutions did not start until 1998. In October of 1998 New York University (NYU), already operating one of the largest continuing education schools in the country, was the first large nonprofit university to create a for-profit online education subsidiary, NYUonline. Western Governors University, a college founded and supported by 19 governors, was also started in the fall of 1998 to make education more accessible. The California Virtual University a consortium of almost 100 universities and colleges in California with nearly 1,600 online courses, opened in November of 1998 (Arenson, 1998). Several other institutions opened for profit subsidiaries about the same time, but unfortunately many failed to survive. Even NYUonline, which was believed to be the only institution able to compete with the growing for-profit University of Phoenix, closed its doors, in October 2001. Similarly, the University of Maryland's distance education for-profit arm shut

down. Surprisingly, that same year, the University of Phoenix's enrollments nearly doubled from 16,000 to 29,000 (Carlson & Carnevale, 2001). By 2002 over 1.6 million postsecondary students were enrolled in online courses, and six years later the number had almost tripled (Allen & Seaman, 2010). Aside from the University of Phoenix, however, many online educational programs started at this time did not survive. Of these, many were online programs started by traditional brick-and-mortar institutions.

Numerous factors influenced the demise of these online institutions, but perhaps the most significant were the lack of understanding of online pedagogy and online learning styles, as well as the lack of faculty support for online education (Marcus, 2004). Online education is a different medium and requires a different pedagogy (Bernard et al., 2004). Further, faculty are an integral part of a university's success; yet, many faculty at the traditional universities did not embrace online education due to the concerns regarding the quality of education being provided through this medium (Shelton & Saltsman, 2005). As many traditional universities entered the online marketplace, they did so without the full support of the faculty, ultimately influencing the sustainability of their online programs (Carlson & Carnevale, 2001). According to Bates (2000), "presidents may dream visions and vice presidents may design plans, and deans and department heads may try to implement them, but without the support of the faculty members, nothing will change" (p. 95).

Another factor that led to the closure of many of the institutions providing online education was the failure on the part of educators to recognize that differences exist between teaching and learning in the online and face-to-face environments. Many professors merely provided the online students with lecture notes from the traditional

classroom, with the assumption this would suffice. Research, however, has found that the importance of a well-designed, documented, and structured online course that facilitates active engagement with students is essential for success (Gaytan & McEwen, 2007; Dykman & Davis, 2008; Palmer & Holt, 2008). Carlson and Carnevale (2001), contend that online pedagogy is not the only reason for the initial failure, but rather the lack of institutional support for the faculty and lack of leadership with an understanding of online education were also to blame. Shelton and Saltsman (2005) found the most common complaints from faculty regarding online education were a lack of understanding for its methods of teaching, a lack of institutional support, and fear that the quality of education in the online environment suffers. In sum, in 1998 as nonprofit institutions sought to increase revenues by entering into the online marketplace through the creation of subsidiaries and partnerships, they ignored the fundamental principles of educational quality, institutional governance and project planning. Derek Bok (2003) argued, new technologies harness great power with the potential to improve teaching and learning; yet, should universities continue to seek a profit and commercialize education, the credibility and integrity of the institution of higher education will be threatened. He further states, universities must invest in researching new technologies and use them to improve the quality of education.

In the evolution of distance education, some of the same questions and concerns that emerged during the correspondence, radio, and television eras of distance learning remain. Can this medium provide a viable quality education? What are the characteristics that foster “quality” learning experiences?

Quality in Online Education

What does “quality” mean in reference to education? What are the characteristics, dynamics, or elements that contribute to a quality online learning experience? Is quality in an online course different than quality in an in-class course? Quality, in reference to teaching and learning, regardless of the medium, has always been contested (Mitchell, 2010). Another term, used almost interchangeably with quality, is learner effectiveness.

Learner effectiveness means the learners who complete an online program receive educations that represent the distinctive quality of the institution. The goal is that online learning is at least equivalent to learning through the institution’s other delivery modes, in particular through its traditional face-to-face, classroom based instruction... Interaction is key (Moore, 2002).

Simply stated, if online courses are expected to “measure up” to face-to-face courses and face-to-face courses are the standard of comparison, to what quality standards are face-to-face courses adhering?

Student learning outcomes (SLO) are defined as “the expected knowledge, skills, attitudes, competencies, and habits of mind that students are expected to acquire at an institution of higher education” (National Institute for Learning Outcomes Assessment, 2012). Therefore, student learning outcomes are the desired result of a “quality” or “effective” educational experience. The overall goal of education, regardless of medium, is learning; therefore, learning effectiveness must be the primary factor for which quality in education is measured or judged (Swan, 2003). Quality in an online program or course can be separated into four categories: stakeholder perceptions, quantifiable elements, course design elements, and external standards (Mitchell, 2010). Additionally for the

conceptual purposes of research, Bernard et al. (2004) stated that these categories must be treated as separate constructs and not used interchangeably.

Stakeholder Perceptions

Stakeholder perceptions involve the general feedback received from students, instructors, and others involved in the online learning experience. They come in the form of course, faculty, and program evaluations and can either be qualitative or quantitative.

Quantifiable Elements

Quantifiable elements include grades, test scores, graduation rates, retention rates, or employment rates and are usually used by accrediting agencies, organizations, or boards to determine quality or success. Mitchell (2010) found grades and test scores were frequently used to compare the quality of online and F2F courses. Russell's (1999) "no significant difference" study sought to determine the difference in quality between distance (primarily correspondence, television, and radio) and face-to-face instruction. The study found much of the research comparing quality did not always hold constant the same factors that may affect quality, such as course design, instructional methodology, and faculty preparation, which are parallel to Bernard's (2002) findings that such factors should be considered separate constructs in measuring quality. In essence, quantifiable elements are desirable because they are measurable, although not necessarily valid. Further, researchers should understand and recognize the various factors and characteristics that influence the "quality" of a course, regardless of the medium.

Course Design

Course design is another factor that determines the quality of an online course. The theory is that if a course is designed properly, then the students will learn. The

elements that encompass course design include discussion, assignments, examinations, organization, communication, and use of technology. Courses must be designed to meet the needs of a variety of learners with a variety of learning styles. Many institutions have employed course or instructional designers as well as instructors, in an effort to increase the quality of online courses (Mitchell, 2010).

External Standards

Several organizations have developed standards, benchmarks, or best practices based on proven effective course design practices. These standards are often developed and determined by peer review teams, or accrediting bodies, whose members include those from within and outside the discipline. The most widely recognized of these organizations in online education are Quality Matters and the Sloan Consortium, both of which focus on learning effectiveness, cost-effectiveness, student support services, and faculty and student satisfaction with online programs. Accrediting agencies have similar strategies and recommendations for developing “quality” online learning experiences. While the recommendations by accrediting agencies and peer review agencies are similar, they are not the same. The peer review institutions focus primarily on the course, while the accrediting bodies focus more on the program and institutional level. It is necessary to look at all aspects, as all characteristics, on both levels, can affect course quality.

The term quality is vague, and a definition is hard to come by in the research. There are means for assessing quality in online courses and tools to aid in the development of quality online course, but Mitchell (2010) argues the institution striving to assess both online and face-to-face courses should define the term quality. This would, in essence, eliminate the controversy of holding online courses to different quality

standards than those for the face-to-face courses. For the purpose of this research, quality is the achievement of student learning outcomes and “positive” learning experiences for the students.

Student Perceptions of Online Education

Online education has become an integral part of the curriculum at institutions of higher education. Enrollments in online courses continue to grow and institutions of higher education face the challenge of increasing enrollments and keeping up with the demand, while providing a quality education. The Internet and advancements in technology have made higher education more accessible and in some cases more affordable. Students who were unable to attend traditional, face-to-face classes can now pursue a degree. The primary advantages of online education are flexibility (Petrides, 2002; Yang & Cornelius, 2004; Hurt, 2008), convenience (Poole, 2000; Bickle & Carroll, 2003), and that it opens doors (Bickle & Carroll, 2003). Hurt (2008) found the flexibility of online education helped students with issues of childcare, work obligations, etc. Hurt also found that students who were financially troubled were able to avoid high gas prices by not commuting to class. Online education enables the flexibility and convenience of completing modules or learning sections at a time convenient for the students. Bickle & Carroll (2003) found that the online classes also addressed the issue of the overcrowded traditional course, while increasing the choices of courses in which students could enroll. The flexibility and convenience afforded by online education has also increased access to education for a much larger and more diverse population than that of traditional brick and mortar institutions (Allen & Seaman, 2007). Online education also appeals to the non-traditional student. Whether a single parent, a student who resides a great distance from a

university, or one who has travel commitments for work, online education has created new opportunities.

While there are advantages to online education, there are also disadvantages. Feelings of isolation (Hurt, 2008), lack of faculty acceptance or support of online education (Allen & Seaman, 2007), delay in communication (Petrides, 2002; Lee et. al, 2011), and technology challenges (Reisetter & Boris, 2004, Hurt, 2008) have all been found to be drawbacks of online education. Hurt (2008) found feelings of isolation emerged from the lack of face-to-face contact. Lee (2010) found that prompt feedback is essential, as a delay in communication is one of the primary complaints students have about online education. Allen & Seaman (2007) found that the lack of faculty acceptance for online education to be a major disadvantage of online education. Shelton & Saltsman (2005) found the most common complaints from faculty regarding online education are a lack of understanding for this method of teaching, a lack of institutional support, and fear that the quality of education in the online environment suffers. This is a “top down” problem and Bates (2000) argues it is the institutional leadership’s responsibility to enlist faculty approval, acceptance, and support for these online programs.

As stated, online education is a new method for teaching and learning. As we increase our knowledge and understanding of online education, we will learn new strategies and acquire tools to improve its quality and improve student perceptions. While there are disadvantages to online education, the advantages far outweigh the disadvantages and all of the disadvantages can be resolved. Interaction and engagement are some of the most pressing challenges faced in online classrooms, as they have the capacity to resolve the disadvantages of feelings of isolation and the delays in

communication associated with online learning. Implementing the tools to facilitate interaction and engagement in the online learning environment will transform the students' experience and increase satisfaction.

Interaction and Engagement

Engagement in the online learning environment is defined as “involvement” which encompasses active and collaborative learning, participation in challenging academic activities, formative communication with academic staff, immersion in enriching educational experiences, and feeling legitimate and supported by university learning communities (Coates, 2007, p. 122). Interaction in the online learning environment refers to the communication between faculty and students, between students and students, and the collaboration that ensues from these interactions. Although the research is inconsistent about whether online learning is as effective as the F2F learning environment, research has found that online courses that utilize tools to augment interaction (student-to-student and student-to-instructor) and engagement further enhance learning outcomes and overall satisfaction (McFarland & Hamilton, 2005; Dykman & Davis, 2008; Norton & Hathaway, 2008; Offir, Lev, & Bezalel, 2008; Palmer & Holt, 2008). The importance of a well-designed, documented, and structured online course enabling students to actively engage cannot be overstated (Gaytan & McEwen, 2007; Dykman & Davis, 2008; Palmer & Holt, 2008). The number of studies on interaction and engagement in the online classroom, and its correlation to quality online learning is limited. Research consistently shows that engagement and interaction in the online classroom leads to student learning outcomes, and a quality online learning experience (McFarland & Hamilton, 2005; Dykman & Davis, 2008; Palmer & Holt, 2008).

There are two forms of interactivity in the online learning environment: synchronous and asynchronous. Synchronous interactivity in the online classroom refers to interactions (between students and professor and students and their classmates) that occur in “real time,” while asynchronous interactions are separated by time. The widespread growth of online education stems from its flexibility in that it provides students the means to go to school without compromising work, family, or travel responsibilities (Gaytan & McEwen, 2007). Synchronous interactivity, with its real time requirement, limits this flexibility. Studies that show the importance of interactivity and engagement in the online learning environment (McBrien, Cheng, & Jones, 2009) contend the only way to accomplish this is by reducing the feeling of “distance” and facilitating engagement by offering synchronous interactions. Further, Offir, Lev, and Bezalel (2008) found synchronous learning to be more effective among students with a high cognitive ability. Additionally, McBrien and colleagues (2009) found students who participated less in face-to-face classroom discussions participated more in the synchronous interaction. Andresen (2009) found, through a comprehensive review of the literature on asynchronous discussion forums, the two most important factors for successful asynchronous discussion forums were the role of the instructor and creating an environment that encourages critical thinking and deeper/higher level learning. In sum, much of the literature about asynchronous online discussion indicates its purpose is to develop critical thinking skills, and suggests the benefit of the asynchronous forum is that it allows the time for reflection, not available in the F2F discussion format. This research will compare student learning outcomes between a F2F course and an online asynchronous course.

Online Versus F2F – The Literature

The literature comparing online to F2F education is inconsistent, and a debate exists concerning the efficacy of online learning. Advancements in technology coupled with the growing demand for online learning have placed great pressure on reputable institutions of higher education to keep up with this demand while continuing to provide a quality online learning experience. Sener (2004) argues online learning programs are under greater scrutiny than their F2F counterparts, which is likely due to the rapid growth of online education. Regardless, there is no consensus in the research, over the last two decades. Schutte (1996), Bernard (2004), and the most recent cause for this division and uncertainty, the meta-analysis conducted by the U. S. Department of Education in 2009 (and later updated in 2010), all found students in online courses performed better than in the classroom.

Schutte (1996) found the online course scored on average 20% higher than the traditional F2F course, and post-test results found the online course had higher perceived peer contact and students spent more time on class work. Ultimately, Schutte suggests the technology or teaching medium had little to do with the results, but rather because students were unable to ask the instructor questions face-to-face, the students interacted and collaborated among themselves. This interaction ultimately led to improved student achievement. Therefore, he is arguing that it is student-to-student interaction and engagement more than student-to-faculty interaction and engagement that facilitates student learning.

In a meta-analysis using research from 1985-2002 Bernard et al. (2004) found classroom instruction to be comparable to distance education (the research used a variety

of media, not just online), yet the research on distance education was “of low quality” (p. 416). In contrast, more recent studies have found that students do not perform equally as well or better in the online environment than in the F2F environment (Urtel, 2008; Emerson & MacKay, 2011). Again, however, no discussion or reference is made to the specific factors that contribute to quality online learning experiences.

The U. S. Department of Education found the learning outcomes in online courses were equal to or better than that of the traditional F2F courses. The *New York Times* immediately published an article entitled, “Study Finds That Online Education Beats the Classroom” (Lohr, 2009). Jaggars and Bailey (2010) argued the meta-analysis was flawed and claimed it presented no evidence that online delivery is superior to the F2F traditional delivery. Some of the flaws included mischaracterizations: that fully online and hybrid (blended) courses were both “online courses” (p. 3); that all studies used traditional courses, but, in fact, over half of the courses analyzed were short educational interventions (e.g., how to use a search engine); and that studies analyzed only college courses, while, in fact, the sample included a wide range of populations from primary school to professionals outside of the academic or college setting. Finally, of the 28 studies in the meta-analysis, only seven were entirely online, semester long and asynchronous. Jaggars and Bailey (2010) added that among the seven studies no significant differences in learning outcomes between the two delivery media were found. Yet, qualitatively, they found the students felt better prepared for the F2F courses. With that said, many of the studies did not provide professors’ background, a detail of the course structure (online or in-the-classroom) or curriculum, level of institutional support for online education, or an overview of student support services available, all of which

have proven instrumental in determining quality online learning experiences as outlined in the benchmarks, standards, and best practices of online education. Therefore, how can a study determine one learning experience is better than another when the characteristics that have been proven to create “quality” learning experiences are not even discussed, referenced or used in the comparison? Much of the variance in online and F2F learning can be attributed to different environments and inconsistencies in study methods (Russell, 1999; Bernard, 2004; Jaggars and Bailey (2010).

There are many factors that contribute to a successful learning experience, regardless of the learning medium. Whether referencing pedagogy, subject matter, teaching and learning media, or grade level of instruction, these are all separate constructs. Comparing studies that measure different constructs will lead to a misrepresentation of findings (Bernard et al., 2004). Further, failure to address the indicators or characteristics for each class, as laid out in the benchmarks, standards, and guidelines, is misleading and can affect inferences. Accrediting agencies and peer review groups use indicators to assess quality. Therefore in studying and comparing quality in online courses, it is only fitting to reference and acknowledge them. For instance, in comparing student learning outcome between online and F2F courses the findings would be more valid and credible, if all of the courses were at the same level of instruction (K-12, undergraduate, or graduate). Since the meta-analysis conducted by the U.S. Department of Education (2009) used research on predominately higher education courses, but also included short intervention courses (such as, how to use the Internet), the findings from this study are inevitably misleading. Additionally, an institution that is supportive and committed to teaching online is more likely to produce an increased

number of satisfied students with higher rates of achievement than an institution that is not supportive of online learning and solely using it as a tool to increase enrollments and generate revenue. Further, if a study is comparing student learning outcomes in online and F2F classes at an institution that is not supportive of online education, could this impact the results of the study? Yes. The guidelines, benchmarks, and standards exist for a reason. Therefore, the importance of including all key aspects of the course, the program, and the institution is essential.

Online Education Today

Online education is today's version of distance education. Questions of quality in the online learning environment are very much the same questions that arose during the eras of correspondence, radio, and television. The lessons we learned then can guide us today. The traditional brick-and-mortar institution of higher education has existed for centuries. Its infrastructure has been in place for decades, and faculty teach much as they did fifty years ago (Stark, 2003). This is changing. In fact, the advent of online education, followed by its rapid growth, has forced academic institutions and faculty to question the current styles and techniques for teaching and learning. Currently, the need for research to improve our understanding of the qualities and variables that facilitate student learning outcome achievement in the online classroom is paramount. This research must utilize and be guided by the existing research on quality learning experiences: more specifically, on the benchmarks, indicators, and best practices used by the accrediting agencies and organizations focused on online educational improvement. Distance education has evolved over the last decade. The medium for conveying the knowledge has changed, but the premise has not. Online education is not a fad, it is here to stay. This research will

contribute to our increasing understanding and knowledge of online education and the characteristic and facets that create quality and successful online learning experiences.

CHAPTER THREE: METHODOLOGY

Philosophical Foundation

Online education is a new vehicle used to deliver knowledge. Some argue that it is not the vehicle that is used to deliver the knowledge that affects student learning outcomes, but rather learning is more likely to be influenced by content and instructional method or strategy (Schutte, 1996; Clark, 2001). The goal of any instructional strategy, at the graduate level, is to promote higher order thinking, which includes “critical, reflective, metacognitive, creative, and logical thinking” (King, Goodson, & Rohani, n.d., p. 1). To promote this level of thinking one must use teaching strategies that challenge the learner and result in explanations, decisions, performances, and products that promote learning. The first step is to understand the principles of learning and how students learn (Ally, 2004).

This study is informed by the constructivist school of learning. Constructivists see learning as active rather than passive. Learning is not from the outside; it is achieved or guided by the learner’s interpretation or experience and the integration of prior knowledge, beliefs, and experiences. In essence, constructivists believe that knowledge is constructed rather than given (Duffy & Cunningham, 1996). In terms of online learning (in graduate level education), high level processing occurs amid active meaningful activities that require knowledge application or personal interpretation. This level is not achieved by “giving” students information or knowledge (rote memorization or

repetition); rather, interaction and engagement with other students in a course (e.g., discussions, group work, etc.) provide students the opportunity to contextualize and personalize information. It is this process that fosters learning, according to the constructivists (Duffy & Cunningham, 2004). The social constructivist school of learning emphasizes collaboration and the importance of community in a social context. Collaboration facilitates learning. Lev Vygotsky (1978) proposed that learning occurred in a social context and could not occur otherwise. Working with others and sharing ideas and experiences aids in the formulation of meaning that promotes learning and constructs knowledge. Social constructivists emphasize the interdependence of social and individual processes in formulating knowledge (Palincsar, 1998). While interaction and engagement in the online learning environment is essential for quality online learning experiences, this research is not guided by the belief that all cognitive functions are products of social interactions. Instead, it is informed by the broader constructivist educational theory.

It is the responsibility of the instructor to create activities to foster this higher level of learning. In online education it is not the process of learning that has changed, but rather the instructional methods used to promote learning that have changed. This study is also guided by Ralph Tyler's (1949) *Basic Principles of Curriculum and Instruction*. Tyler outlines a rationale for "viewing, analyzing, and interpreting" a curriculum. According to Tyler when developing a curriculum or determining which tools or activities to use to promote higher order thinking, one must answer the following four questions:

1. Objective: What educational purposes should the school seek to attain?

2. Learning Experiences: What educational experiences are likely to attain these purposes?
3. Organization: How can these educational experiences be effectively organized?
4. Evaluation: How can we determine whether these purposes have been attained?

Tyler contends that objectives must be established before any curriculum or program can be developed. There are three sources used for gathering data to develop educational objectives: studies of learners (their needs and interests), contemporary life (society), and subject specialists. Objectives guide the course. They are used to formulate the statement of purpose, which, in turn, guides the choice of instructional tools and activities and determines assessment and evaluation techniques.

Tyler argues that course objectives are the basis of and one of the most important steps in developing a course. All processes in the development of a curriculum revolve around the course's objectives. For instance, in developing activities, instructors ask: what activities (or experiences) will assist a student in achieving the purpose or learning a course outcome/objective? This study compares student learning outcome achievement in an online and in-class course. The measures used to assess learning outcomes are developed from course objectives, which are the roadmap of a course, that enable educators to measure and assess what is learned in a course.

Research Design

Mixed Methods Design

A research design is a procedure used to collect, analyze, interpret, and report data in a research study. A mixed methods research design is an approach to research that combines quantitative and qualitative methods to understand a research problem (Creswell & Plano Clark, 2011). The chosen method for this study is the embedded mixed methods approach in which the collection and analysis of both quantitative and qualitative data is combined within a traditional quantitative or qualitative research design (Plano Clark & Creswell, 2010; Creswell & Plano Clark, 2011). The initial quantitative dataset (measuring student learning outcome achievement in an online and F2F course) is the primary strand, while the secondary is the qualitative strand (interviews to understand student perceptions). The rationale for using the embedded mixed method design is to enhance and expand the findings from the measurement of student learning outcomes through interviews with the students who participated. While other designs were considered for this study (explanatory research design method), the embedded mixed methods design was most appropriate because the questions for the primary and secondary strands were different and the goal in adding the secondary strand (qualitative) was to augment the primary strand (rather than simply to support the primary strand) (Plano Clark & Creswell, 2010.).

In the initial phase of this study I administered a pre-test (first day of class) and post-test (after the final paper was submitted) to determine student learning outcomes in an online and F2F graduate-level legal administration course. The measure was developed by the course's professor, the master's degree program director, and two

former students (one from a previous online section and the other from a previous face-to-face section). It consisted of 40 multiple choice and true/false course-content questions and seven demographic questions. The course-content questions were all based on the student learning outcomes of the course. The initial intent was to compare pre-/post-test data to determine if there was a difference in student learning outcomes between the online and F2F legal administration course. Then from the online course, the two students with the greatest difference (between pre- and post-test) in student learning outcome scores and the two students with the least difference (between pre- and post-test) would be interviewed to discuss perceptions of online education and the characteristics and qualities perceived to contribute to student learning outcomes in online courses. Due to extremely low enrollment numbers in the F2F course and limited participation in the initial phase, however, there was insufficient data to compare students learning outcome between the online and F2F sections; therefore, all students (from both the F2F section and online section) who participated in the pre and post-test portion of the study (n=6) were interviewed. The ultimate goal of this study is to better understand the factors and dynamics of the online learning experience that affect student learning outcomes.

This study is an embedded mixed methods design. The priority is on the quantitative strand, as the qualitative strand was intended to augment and enhance the findings of the initial quantitative strand. The timing of the phases was sequential because the qualitative research could not be completed until the quantitative data collection was complete. The study entailed mixing data during data collection as the results of the quantitative strand informed the qualitative collection. The mixing point of interface occurred during data analysis, while also using a mixing strategy of connecting analysis

to collection. This is the process whereby one strand builds on the collection of data for the second strand (Creswell & Plano Clark, 2011). In terms of sampling, nonprobability sampling was used for the quantitative strand and purposeful sampling was used for the qualitative strand (See Figure 1: Study Diagram).

Study Diagram

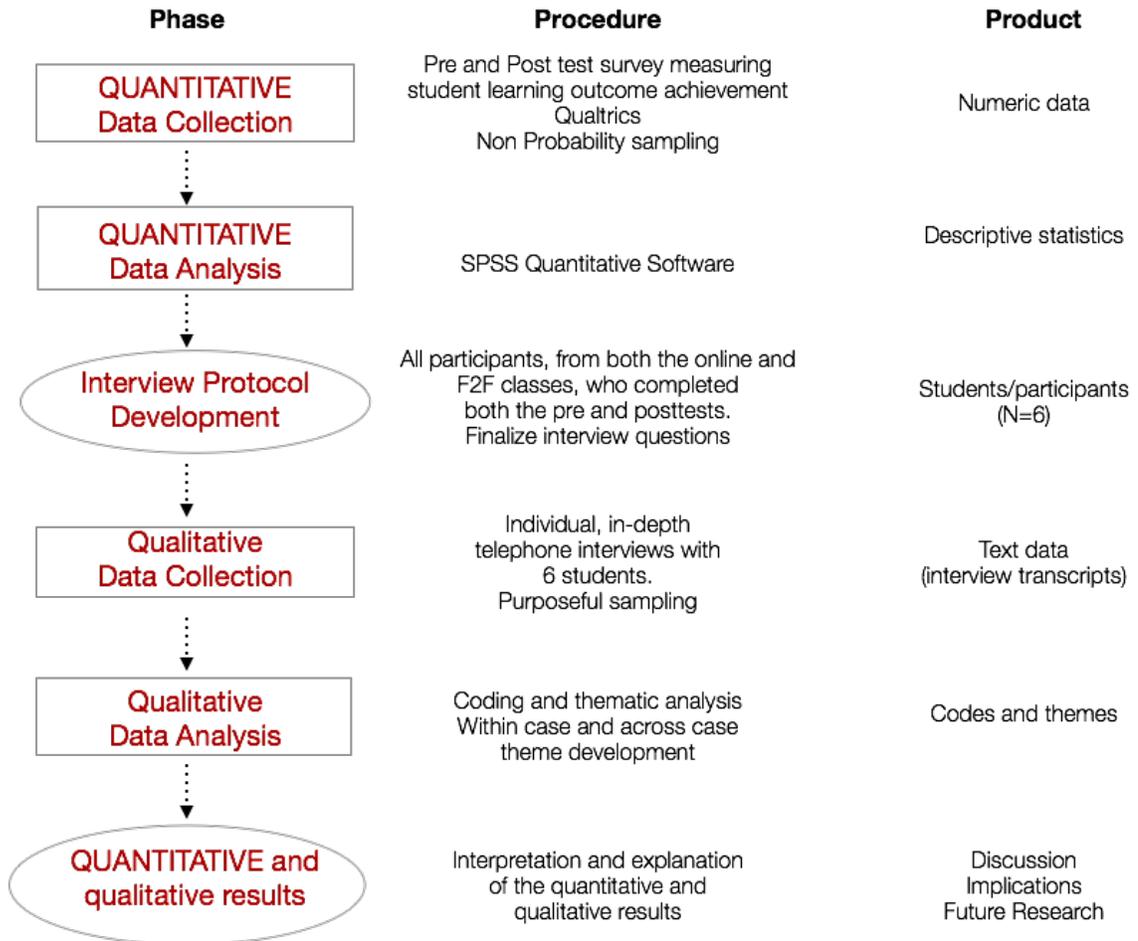


Figure 1

Background of the Course, Program, and Institution

The course chosen for the study is a required course in the Master of Science in Legal Administration (MSLA) program at the University of Denver Sturm College of Law. The course, Introduction to the U.S. Judicial System, is a 14-week, three semester-hour course that is offered in online and in-class formats. Both formats are taught by the same adjunct professor in the MSLA program. The professor assisted in the development and design of the course in 2008 and has taught the course, both online and in-class, every year for five years. The professor has a doctorate in higher education, a master's degree in business administration, and has worked in judicial administration for 25 years. In 2009, prior to teaching online, the professor completed the Distance Learning Workshop, a course that covers the fundamentals of teaching online. The professor is committed to educating future legal administrators on the history and role of the judiciary in the United States. The Introduction to the U.S. Judicial System course description follows:

“The third branch of government, the judiciary, consists of a system of courts spread throughout the country. This course will examine the history and the role of the judiciary in the United States. The purpose of this course is to provide a detailed introduction of judicial institutions and actors (courts, judges and lawyers). Students will explore the power vested in our court systems (federal, state, and local), become acquainted with salient issues facing the judiciary, both historically and currently, and discuss judicial independence. Students in the MSLA program and law students should find this course useful since the issues we will discuss are germane to a variety of law careers. Upon completion of this class, each student should have a clear understanding of the fundamentals of our court system, the history of the courts, and the role and purpose of our legal system.”

The Master of Science in Legal Administration (MSLA). The Master of Science in Legal Administration program educates and trains students in the business, operations, and management of law firms, courts, and legal organizations. Since its inception in 1972, the MSLA program has been committed to improving the quality of justice worldwide through the education and training of the professions that manages and leads legal entities. The MSLA degree requires 36 semester-hours of credit and may be completed in one year or up to 4 years. Most of the students in the MSLA work while attending school part time. All in-class classes are in the evenings, while the online courses are asynchronous. The MSLA program began offering online courses in 2003.

The University of Denver Sturm College of Law and American Bar Association. The MSLA program is a department within the University of Denver's Sturm College of Law. The Sturm College of Law is accredited by the American Bar Association (ABA) and is a top 100 law school in the United States. The ABA's Council of the Section of Legal Education and Admissions to the Bar ("the Council") is the agency responsible for the accreditation of programs leading to the Juris Doctorate (J.D.) degree. The ABA Standards for Approval of Law Schools (2013) provides several stipulations for using distance education coursework toward credit for the J.D. degree. The ABA does not, however, prohibit online coursework in programs other than the J.D. degree. While there are no ABA-accredited online J.D. programs, the MSLA program at the Sturm College of Law is the only online legal administration program within an ABA-accredited institution.

The University of Denver. The University of Denver is a private research university accredited by the Higher Learning Commission of the North Central

Association, which is one of six regional accrediting bodies that is recognized by the federal government (University of Denver, 2011). It is an institution dedicated to the public good and its mission “is to promote learning by engaging with students in advancing scholarly inquiry, cultivating critical and creative thought and generating knowledge” while “striving for excellence, innovation, engagement, integrity and inclusiveness” (University of Denver, 2011, p.1).

The University of Denver developed the Office of Teaching and Learning (OTL) to promote and support excellence in teaching through collaboration, professional development, and the use of technology and web based applications in the classroom and at a distance. OTL is comprised of instructional designers, technology experts, and educational support staff to assist all faculty and departments on campus. OTL offers workshops to educate faculty on the practice of online teaching and learning. All faculty who wish to teach online in the Master of Science in Legal Administration program are required to complete the Distance Learning Workshop offered through OTL.

Additionally, in 2007 the University of Denver established the Distance Learning Council (DLC) to provide a review and approval board for distance learning programs at the University. The DLC reviews and oversees existing programs to ensure compliance with the standards and best practices used by accrediting bodies to examine programs (University of Denver, 2014).

Limitations of Mixed Methods Inquiry

A mixed methods research design collects, analyzes, and mixes quantitative and qualitative data into a single study (Creswell & Plano Clark, 2011). Researchers use mixed methods research design for many reasons: the findings are enhanced by the use of

a second method; using a mixed methods design offsets the weaknesses of either quantitative or qualitative research; and, using an additional form of data collection can provide more evidence for a study's findings (Johnson & Onwuegbuzie, 2004). There are, however, limitations or challenges in using a mixed methods research design. First, an understanding of and experience in collecting and analyzing quantitative and qualitative research is necessary, and it is difficult to find researchers with experience in both types of research. Mixed methods research can be time consuming and expensive as it requires the researcher to design, collect, and analyze two different data sets using different methods and approaches. While the limitations and challenges are valid, it is important to recognize when to use a mixed methods design and to be able to recognize its benefits. This study will investigate student learning outcomes in an online and F2F class (quantitative) and explore how students perceive the online learning environment and what factors or characteristics lead to higher student learning outcomes (qualitative). The qualitative phase is intended to enhance the findings to ultimately better understand online education and the factors that improve student learning.

For this study, the limitation was the sample size. While Introduction to the U.S. Judicial System is a required course, the program is small and each class generally only has eight or ten students. Unfortunately, this term, there were fifteen students registered in the online section and two in the F2F section. The two students in the F2F section participated in the pre- and post-test (quantitative phase) but only four from the online section participated in both the pre and post-test (quantitative); therefore, the sample was n=6. The preference for the online section is because most students happen to live out of state or have family and work obligations; further, students were able to register for their

preferred section. Recognizing the potential drawbacks of a small sample size, which influences generalizability and statistical significance, a qualitative strand was initially proposed to enhance and expand the findings. Also to counteract the effects of the small sample size, all students, from both the online and F2F classes, who participated in the pre- and post-test (quantitative phase) were asked to participate in the qualitative phase.

Phase One: Quantitative

Quantitative: Participants

For this embedded mixed methods design study, all students registered for the in-class and online Introduction to the U.S. Judicial Administration course at the University of Denver Sturm College Of Law were asked to participate in the study. Nonprobabilistic sampling was used for the quantitative portion of this study. Students were permitted to register for either the online or F2F course and all students registered were asked to participate in the study. It should be noted, that because the students were not randomly assigned to the online or in-class sections, proper randomization was not achieved. Generally, there are ten students registered in each of the online and in-class courses (total n=20). Unfortunately this term, there were fifteen students registered in the online section and two in the F2F section. An incentive was offered for participation (\$40 Visa gift card for participation in the quantitative phase and a \$40 Visa gift card for participation in the qualitative phase).

Quantitative: Data Collection and Preparation

The data for the quantitative and qualitative phases were collected sequentially. The pre-test was administered to the F2F and online sections the first day of class and a post-test was administered the last day of class to all who completed the pretest. Data

were not analyzed until the post-test data were collected. The quantitative student learning outcome assessment surveys were administered using Qualtrics and the data were converted to SPSS. Once the data were in SPSS, the data were merged and prepared for analysis, which entailed assigning numerical values to categorical demographic variables, cleaning data entry errors, etc.

Quantitative: Instrument

The instrument was developed by the course professor, the master's degree program director, and two former students (one from a previous online section and the other from a previous face-to-face section) and was developed solely for this study. It was a close-ended questionnaire consisting of forty multiple choice and true/false course-content questions and 7 demographic questions. (See Appendix A for student learning outcome achievement measure). The course-content questions were all based on the learning outcomes of the course.

Quantitative: Data Validation

Construct validity is the ability of a survey to measure a construct accurately. Findings from a new measure are compared to existing theory when no previous measure exists. Content validity is the extent to which a survey reflects the content measured. This was established through literature review, existing theory, content experts, and interviews. Field notes were obtained from the content experts and cognitive interviews. Minor modifications were made to the survey in wording and content.

Quantitative: Reliability

Reliability is the degree to which a measure yields the same results on multiple trials. A plan was not in place to administer the test to a pilot group, although this would

strengthen validity and reliability. The course is only offered in the fall and due to time constraints and a small sample size a pilot study was not possible. It was anticipated that the sample size for the quantitative strand would only be about ten students per class (total n=20), which is why the qualitative strand was added to the study. The qualitative strand therefore strengthens the instrument's validity.

Quantitative: Data Analysis

In a mixed methods design, data analysis refers to the examination of data to address the research questions or hypotheses of the study (Creswell & Plano Clark, 2011). The quantitative data were first visually inspected; then descriptive statistics were run in SPSS to determine the mean and standard deviation (SD) for the F2F pretest group, online pretest group, post-test F2F group, and post-test online group. The intent was first to determine how well the students did overall on the pre- and post-test, where the online group was in the beginning of the class in relation to the F2F group, and to compare the findings: pre versus post and online versus F2F. A one sample T-test was also conducted on the difference of total test scores (pre- and post-) to determine the academic performance of the online and F2F sections and to determine if there was a difference between the online and F2F groups.

Phase Two: Qualitative

Qualitative: Participants

All students, from both the online and F2F sections, who participated in the pre- and post-test were asked to participate in the qualitative interviews (n=6). The course instructor was also interviewed to further understand the dynamics of the online learning environment, from the lens of the professor.

Qualitative: Data Collection

Participants for the qualitative strand were initially to be chosen based on the data collected in the quantitative strand (purposeful sampling): the two students in the online course with the greatest learning outcome achievement score and the two students with the lowest achievement scores were to be asked for an interview to understand student perceptions of online learning (total n =4). However, due to low enrollment and limited participation on the pre- and post-test phases, each student who participated in the pre- and post-test was interviewed (total n=6) (See Appendix C for qualitative interview questions). The interviews were recorded and transcribed.

Qualitative: Focused Interviews

The student interviews (n=6) were conducted over the phone, recorded, and transcribed. Each interview was about one hour long and took place within two weeks of the last day of class

Qualitative: Data Preparation and Analysis

In a mixed methods design, preparing the data refers to converting raw data into a form useful for data analysis, while data exploration is the examination the data for trends or to develop an understanding of the data (Creswell & Plano Clark, 2011). The semi structured qualitative interviews were recorded, transcribed, and converted into a word processing file. The questions and responses were then input into an Excel spreadsheet.

The qualitative data analysis entailed reading through the prepared data to identify significant statements and then formulate meanings and subsequently cluster into themes (Creswell & Plano Clark, 2011).

Qualitative: Data Validation

Data validation in a mixed methods study ensures that the explanation provided by the participants and the researcher is accurate and credible (Lincoln & Guba, 1985). Data validation was established using the triangulation of data. A review of the literature on the factors that contribute to a quality online learning environment aided in the development of the theory and thematic structure. Further, discussions with current and former online and F2F students corroborated the literature. Finally, an expert review by a licensed clinical psychologist and adjunct faculty member was consulted to assess the framing and content of the questions. Field notes were kept to record expert feedback and modifications were made based on the feedback.

Summary

The ultimate goal of this study is to further our understanding of the factors that create quality and successful educational outcomes in online learning environments. To achieve this goal, this study, using a mixed methods embedded design, sought to first compare student learning outcomes in an online and F2F graduate-level legal administration course and subsequently followed-up individually with the students and professor to learn the factors they perceive to be instrumental in achieving success and having a positive online learning experience.

The first part of the study was the quantitative phase in which all students, in both the F2F and online sections, were asked to complete a pretest to determine the student's current knowledge of the U.S. Judicial System. Those who participated were asked after the 14-week course to complete the same measure (post-test). This instrument was developed for this study and based on the course learning outcomes. The second part of

the study was the qualitative phase in which students, from the online and F2F sections, who completed the pre- and post-test were asked to participate in individual interviews. Their responses addressed the qualities and factors that students perceive to increase student learning outcomes.

CHAPTER FOUR: QUANTITATIVE RESULTS

Research Question

The first phase of the study was the quantitative phase. The purpose of the quantitative phase was to determine if there was a difference in student learning outcomes between the online and F2F graduate-level legal administration sections. This phase addressed the first research questions of the overall study:

1. Is there a difference in student learning outcomes between an online and F2F graduate-level legal administration course?

Hypotheses

The hypotheses for the quantitative phase of the study are:

H₀: There is no statistically significant difference in student achievement between the online and F2F sections.

H_a: There is a statistically significant difference in student achievement between the online and F2F sections.

Quantitative Methods

Participants

Table 1 provides a summary of the study participant's demographic information. A sample of 6 adults, 100% females, ages 25 – 42 participated in this study. One Latina or Hispanic Native and five Caucasian (non-Hispanic) were represented.

Table 1. Study Sample Size and Percentage of Sample by Demographic Variables

| Variable | n | % |
|---------------------------|---|-------|
| Gender | | |
| Female | 6 | 100 |
| Male | 0 | 0 |
| Age | | |
| 25 | 1 | 16.7% |
| 27 | 2 | 33.3% |
| 36 | 1 | 16.7% |
| 37 | 1 | 16.7% |
| 42 | 1 | 16.7% |
| Ethnicity | | |
| Asian | 0 | 0% |
| Black or African American | 0 | 0% |
| Hispanic/Latino | 1 | 16.7% |
| Caucasian | 5 | 83.3% |

Note: All demographic data was self-reported

All students from the online and F2F sections were invited to participate in this study. There was a total of 18 students enrolled in both sections of the classes. Four students from the online section and two from the F2F section participated in both the pre and post-test phases. Each student was compensated \$40 for participating in the pre and post-test phases.

Of the six participants five had completed over five or more online, undergraduate courses and one had not completed any online, undergraduate courses. Additionally, four participants had completed five or more graduate-level online courses, while two participants had completed less than five graduate-level online courses.

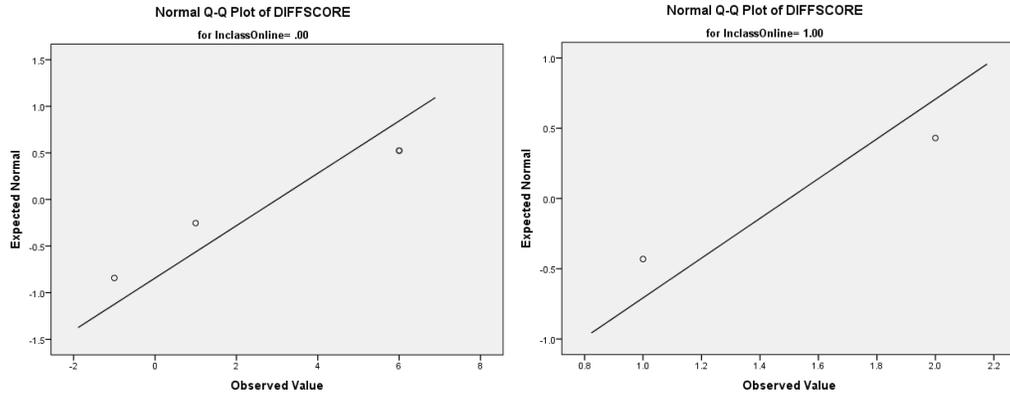
Instrument

The instrument used for this study was developed based on the learning outcomes of the Introduction to the U.S. Judicial System course and was intended solely for this study. It was developed by the professor, the master's degree program director, and two former students (one from a previous online section and the other from a previous face-to-face section). The instrument contained 40 close-ended questions: 33 multiple choice and 7 true and false. (See Appendix A for the learning outcome measure).

Summary of Findings

A difference total score between the pre- and post-test (DIFF) of the online and F2F groups was first calculated to determine how the students did overall between pre and post and to determine where both groups were in relation to one another at the beginning of the class. Next to ensure that the distribution of scores does not deviate from a comparable normal distribution, a Shapiro-Wilk test was used to compare the DIFF score to a normally distributed set of scores with the same mean and standard deviation. The Shapiro-Wilk test is ideal for samples with fewer than 30 people. The results indicated there were no violations of univariate normality using Shapiro-Wilk ($p=.189$) and by observation of Q-Q Plots; all other assumptions were also met.

Figure 2 Q-Q plots for the Online (.00) and F2F (1.00) Groups



Descriptive statistics were then calculated to determine the mean and standard deviation of the DIFF score for the online and F2F sections. Sample means were as follows: Online (M = 3.00, SD = 1.78) and F2F (M = 1.50, SD = .50).

Due to the extremely small sample size (n=6) a t-test was not conducted due to the high risk of making a false inference.

CHAPTER FIVE: QUALITATIVE RESULTS

Research Questions

The second phase of the study was the qualitative phase. The purpose was to expand on the quantitative outcomes and further explore student perceptions of learning outcome achievement. This phase addressed the second and third research questions of the overall study:

1. Do online students perceive online learning to be as effective as traditional, in class learning?
2. What online course characteristics or factors do online students perceive as most affecting their learning outcomes?

Qualitative Findings

Participants

Each student who completed the pretest and post-test participated in the qualitative phase (n=6). The qualitative phase consisted of semi-structured interviews with six students from the Introduction to the U.S. Judicial System course (two from the F2F section and four from the online section).

Interview Question Development

The questions for the focused interviews were developed based on a review of the literature, the research questions, discussions with current and former online and F2F students, and in consultation with a licensed clinical psychologist. The interview

questions were open-ended to allow participants to formulate their own thoughts, ideas, and opinions (Plano Clark & Creswell, 2010). The student interviews were conducted over the phone, while the interview with the professor was conducted in person. All interviews were recorded and transcribed.

Mixed Methods Design – The Qualitative Phase

A mixed methods design, that combines quantitative and qualitative data, can be used to: develop a more complete picture of a social phenomenon; to use one type of data to augment another data source or to answer multiple research questions (Plano Clark & Creswell, 2010). For this study, a mixed methods design was necessary to develop a more complete picture of a quality online learning experience and to answer multiple research questions. The first phase was to measure the change in student learning outcomes for a F2F and an online course. Next, interviews were conducted to understand student perceptions of online learning and the factors that contribute to learning outcomes.

Interviews provide detailed in-depth information on individual experiences and perceptions. There are three general categories of interview design: informal conversational interviews; general guided interviews; and standardized, open-ended interviews (Turner, 2010). The informal conversational interview has no predetermined set of structured questions. It is spontaneous, flexible, and requires the researcher to construct ad hoc questions that respond to interviewer-interviewee interaction.

General guided interviews require more structure, but retain substantial flexibility in the way questions are phrased. The method has the advantage of producing personable interviews, but inconsistent questions make the comparisons difficult.

The last type of interview design is the standardized open-ended interview in which the questions are structured, but open-ended, allowing the participant to contribute as much detail and personal information as desired. While this is the most popular form of interviewing in qualitative research, the quantity of data can require considerable time organizing and properly coding responses (Turner, 2010). This study used a standardized, open-ended interview design.

Qualitative Validation

Qualitative validity refers to verifying that the data are accurate and credible (Plano Clark & Creswell, 2010). The most frequently used strategies for qualitative validation are: bracketing, triangulation, member checking, and auditing. Bracketing is a strategy in which researchers reflect and document their own personal perspectives on an issue and “brackets” them, or sets them aside during the data analysis process. Triangulation requires corroborating, or triangulating, findings with other sources. Member checking summarizes participants’ key findings to ensure an accurate reflection of their perspective. Finally, an external audit entails obtaining an outside individual, with no knowledge of the study, to review the research and findings.

This study used the processes of triangulation and member checking to ensure the findings are valid and credible. Each theme that emerged from the data was supported by the literature, and I asked all participants to verify the accuracy of the themes and findings.

Summary of Findings

Characteristics of Participants

Five of the six student participants indicated completion of five or more online undergraduate courses. Four of the six participants indicated completion of five or more online graduate level courses, and two participants indicated completion of three or fewer online graduate level courses. Only one participant, who was enrolled in the F2F Introduction to the U.S. Judicial System course, had never completed an online course, but she was enrolled in two online courses at the start of this course. In sum, five out of the six participants had extensive prior online learning experiences at the undergraduate and/or graduate level.

All participants, in both the online and F2F sections, worked full-time while enrolled in the Introduction to the U.S. Judicial System course. Both of the participants in the F2F course resided in the Denver metro area. Two of the four online participants resided out of state, one resided in Colorado but outside of the Denver metro area, and one lived within the Denver metro area.

All of the participants indicated convenience was the primary reason for enrolling in the online course; one online participant, however, indicated cost savings (parking, gas, etc.) were also a reason for enrolling in the online section. Both of the F2F participants indicated registering for the F2F section because of their preference for the eye-to-eye “social nature” of this format.

Common Themes

There were six common themes that emerged from the analyzed data:

1. *Convenience* is a primary reason for enrolling in an online graduate level course, and study participants consider it the aspect of online education most beneficial.
2. *Higher order thinking* (“critical, reflective, metacognitive, creative, and logical thinking” (King, Goodson, & Rohani, n.d., p. 1)) is an essential factor in creating a quality, effective, and positive online learning environment that increases learning outcomes.
3. *Discussions* are a primary learning mechanism for online courses.
4. *Professor engagement* is vital in facilitating learning and increasing student learning outcomes in online courses.
5. *Professor and student interaction* aids in creating a positive learning environment and increasing student learning outcomes.
6. Student and professor preference for *F2F interaction* is influenced by the historical role and familiar nature that F2F interactions play in learning.

Convenience. Four of the six participants considered convenience to be the greatest benefit of online education. Besides working full-time while enrolled in the course and program, two students had families with children, which required the flexibility and convenience of the online format. Only one student, from the F2F section, never indicated convenience as a benefit of online education.

Higher order thinking. King, Goodson, and Rohani (n.d.) define higher order thinking as an instructional strategy that includes “critical, reflective, metacognitive, creative, and logical thinking” (p. 1). When asked, “What factors in an online course are most important to you in regard to a “quality” learning experience?” The participants, in both the online and F2F sections, indicated the assignments and discussions that required

“substantive responses,” “personal opinion,” “research,” or an opportunity to “apply the information” in learning outcome achievement. “Regurgitation” was the term used by four of the six participants (and the professor) in reference to factors that are not favorable in online courses. When asked to elaborate, one of the participants indicated regurgitation was “busy work” and is not considered learning. Formulating “opinions,” “sharing experiences,” and responding to “questions to make you think more in depth” are all characteristics of higher order thinking, and one participant indicated this was “expected” in a graduate level course and not just desired characteristics of the online classroom.

Discussions. The online discussion board is the most widely used tool in many online courses. While all students stated discussions were important to the learning experience, three of the six participants indicated “personal interaction,” and “eye-to-eye” contact were especially desirable in discussion. Discussions included, “sharing experiences with classmates,” “applying personal experiences” to a topic, or conducting research and “sharing your topic with the rest of the class.” When asked, “Do you feel discussions contributed to your learning experience?” An online participant stated that “where learning really comes in is in listening to other people’s opinions or other ways of expressing.” A F2F participant stated, “I like the in-class better, I remember more when I am having a conversation.” Another student stated, “so often the responses [on the discussion board] are trite” and don’t need much effort in reviewing other’s posts “this semester and specifically with the Judicial class, there was more lively banter, not necessarily banter, but exchange, conversation where people actually had an opinion.”

Regardless of the learning venue, discussions that achieve a higher order of thinking are essential for student learning.

Professor engagement. Engagement in the online learning environment is defined as “involvement” that encompasses active and collaborative learning, participation in challenging academic activities, formative communication with academic staff, immersion in enriching educational experiences, and feeling legitimate and supported by university learning communities (Coates, 2007, p. 122). All participants, in both the online and F2F class, indicated the importance of professor engagement. Much of the involvement and engagement in the online class took place in the discussion board and assignments. When asked “How important a role do you think interaction with your fellow students and the professor plays in your learning process in an online course?” All students indicated the professor was responsive, which contributed to their positive learning experience. One student stated, “the professor kept on asking me questions and questions about, well you know, what are your thoughts? What do you think about this? Have you done research on this and that? So [the professor] kept me pretty occupied and challenged to learning more and more.” Another student stated, in an online classroom, the discussions are like “back to back conversations, group and individual [with the professor]” at the same time. This only happens, however, when the professor is heavily involved and engaged in the class. One of the F2F participants, who has had substantial online experience, but prefers the F2F classroom, stated “I think when the teachers are really involved in the online course, it's more beneficial. Like [former Professor name], his online course is brutal because he is in there and he is asking you question after

question after question. But it really made you think and look things up and get back to him. And that was probably my best online class because he was very involved.”

Professor and student interaction. Interaction in the online learning environment refers to the communication between faculty and students, between students and students, and the collaboration that ensues from these interactions. Professor and student interaction is a combination of the two previous themes, discussions and professor engagement. Much of the interaction that transpired in this course occurred using the discussion board tool. The participants indicated the value of the conversations and dialogue on the discussion board, “because that's where the learning really comes in is listening to other people's opinions.” Another student stated, “I don't think that I would've been able to learn anything if I didn't have those discussions.” The same student stated, “sometimes people in a classroom setting aren't so excited to talk about all of their life experiences when 20 people are staring straight at them, but I think that's part of the generation now, to hide behind their electronics. But in the [online] classroom setting I think it's almost better because I think it gives people a little bit more initiative to really talk about what they want without maybe feeling embarrassed that 15 people are looking at them.” The conversation – the student opinions, the students’ and professor’s personal experiences, the students’ and professor’s research – is what helps students learn and gives “the class life.”

F2F Interaction. Having a conversation, “person-to-person” and “seeing people’s non-verbals” cannot be replicated in the online learning environment, according to the study participants. Both the participants from the F2F section stressed their preference for the F2F classroom because of their “learning style.” One F2F participant stated, “I think

it's individualistic and probably each person learns differently. But when I am online, I, you know, browse through someone else's post, jot a little something there and move on and forget about it. I don't really think as much as I do when someone's standing in front of me and making me engage in a conversation.”

Generally, students perceived the online courses to be as effective as the traditional F2F course, but one student, from the F2F section, indicated there is “no way” the online could have been as effective as the F2F, because “eye-to-eye contact” and “seeing non-verbals” is important. While this participant was enrolled in the F2F section of this class, the participant was also enrolled, concurrently, in an online course, for the first time, and elaborated on online courses: “next semester, I think it is going to be much different just because I know how it works and I’m going to put more of a personal effort in trying to reach out to my classmates and learning a little bit more about them. That’s what makes me grow as a person and get the most out of my experience.” Another student, thought online learning was as effective as F2F learning: “asking questions on the fly and requiring responses immediately cannot be replicated in the [asynchronous] online environment.” The same student further stated that the online nature of the course requires students to read fellow student responses and think through an idea, which can be of “greater value.”

The primary characteristic of the online classroom that is least favored is the lack of “personal interactions,” “eye-to-eye contact,” and “camaraderie” that comes from interacting physically. One of the F2F participants, who has completed several online courses in the past, stated the F2F class is more “off the cuff,” leading to more details and better learning experiences. A participant from the online section, however, stated, “I

think [I learned more] because, like I said, I think people were more apt to share things that they might not have contributed to discussion in the classroom setting.”

The three characteristics or factors all participants perceived as affecting student learning were the need for higher order thinking, professor engagement, and professor and student interaction. The student responses indicated the need for discussions and assignments based on “true assignments,” “real life issues,” “formulating own opinions,” “sharing experiences,” “research,” and “comparative analysis.” Several participants indicated online discussion boards often require students to “regurgitate” information and it is evident when professors are “wasting time” on the discussion board and creating “busy work,” which doesn’t help learning. One student mentioned this was similar to the Socratic in-class teaching method, but the good thing about online is “you can hide” when this happens. All participants indicated the professor of this class did an excellent job in participating and engaging in the online discussions. Open-ended questions were used to prompt students “to tailor our personal opinions,” but the professor would respond with feedback and further questions to “facilitate discussions.” One student stated, “Professor involvement is huge; otherwise you are reading articles and teaching yourself.”

Merging the Quantitative and Qualitative Data

The fourth and final question of this research study blends both the quantitative and qualitative questions. The quantitative and qualitative data were collected sequentially, not concurrently; therefore, according to Creswell and Plano Clark (2011), the data from the second phase should enhance, or augment, the data from the first phase. The mixed methods research question is:

1. What results emerge from integrating the qualitative data regarding online education and student learning outcomes with the quantitative data, which compares learning outcomes in online and F2F courses?

The student perceptions of factors that contribute to learning outcomes in an online course did not differ between the online and F2F students. All students, in both sections, indicated interaction (student-to-student and professor-to-student), professor involvement, engagement, higher order thinking, and rich discussions and assignments were necessary in learning outcomes. Convenience was also referenced as the primary reason for taking an online course and the number one benefit of online education. (See Appendix C for a joint display)

Perspective of the Professor

Online education is a not simply a new teaching and learning medium for the student, it is for professors as well. Following all student interviews, but before the qualitative data analysis of the student interviews, an interview with the course professor was conducted. Open-ended questions were formulated based on the student questions, with the ultimate goal of learning what the professor perceives to be the factors that contribute to student learning.

The professor developed the course in 2008 and has been teaching it every year, both online and F2F, since 2009. In 2008, the professor completed an online workshop to learn the fundamentals of teaching online and to experience being a student in an online course. Aside from this workshop, the professor has never enrolled in or completed an online course. Further, it should be noted, the professor indicated, “without a doubt,” a preference for teaching F2F.

The findings from the interview with the professor support the current themes that emerged from the interviews with the students. Simply stated, the *convenient* nature of an online program opens the door to many students unable to attend in person. “There are very few programs that are similar to ours in the nation. We have the online program that allows the kid in Texas, the kid in New York, to take a program that allows them to be a future court administrator or a future legal administrator because there's not a lot of those programs out there.”

The diversity of the students—race, ethnicity, gender, work experiences, background, and differing perspectives—drives the richness of the *discussions* in the online classroom and is one of the benefits of the online classroom: “the beauty of online is that you open up the market to a lot more people to participate. And so it's not just a regional thing, it's a national, international thing that you allow people to participate in. So I think that's the true value of online teaching." It is thinking through differing perspectives that leads to *higher order thinking* because it promotes critical, reflective, and metacognitive thinking. According to the professor “interesting feedback” leads to interesting dialogue and discussion.

The professor also indicated her preference to teaching F2F and the value of *F2F interaction*, which cannot be replicated online. Non-verbal communication and facial expressions are lost in the written word, these “nuances that you lose by handing something written versus verbal” cannot be replicated with “LOL or the happy face.” The students develop a sense of respect in the F2F classroom, which is not always found in the online class. “I think just even your credibility online is often more challenged than when you're in the classroom. I find that my students, when I'm having a face-to-face,

I'm having that conversation, I'm asking those questions, I have a dialogue with them that they know I'm an expert." The professor further states, that it is easier to hide online and "easy not to engage." This, interestingly, is contrary to the students perspective, indicating "you can't just sit back" or "as opposed to sitting in a class where you can kind of hide in the back of the classroom and be like yeah, I... I just don't really feel like participating today, but thanks for asking."

Interaction, engagement and involvement are fundamental to learning. Just as students can get lazy, hide, and not engage, so can the professor. When you are in the F2F classroom, no one "can hide."

I work harder online than I do in class. I think professors are lazy when it comes to online students many times. They don't evaluate and go back and, you know, participate. I do because I respond to everything - when they do their assignments I respond to every assignment. While it takes more time to interact with your students, a much longer period than it would be if you were in a classroom... it's also a great opportunity to really put some, to breathe some life into a subject matter. I truly believe that students walk away maybe online with maybe a stronger sense because it's not just my voice that they hear every week, it's their classmates.

CHAPTER SIX: DISCUSSION

Summary and Inferences

The purpose of this mixed methods, embedded design study is to improve the quality of online education by investigating and understanding the factors that contribute to student learning outcomes in an online course. To this end, this study answers the following research questions:

1. Is there a difference in student learning outcomes between an online and F2F graduate-level legal administration course?
2. Do online students perceive online learning to be as effective as face-to-face learning?
3. What factors do online students perceive affecting learning outcomes in an online course?
4. What results emerge from integrating the qualitative data on online education and learning outcomes with quantitative data that compares learning outcomes in online and F2F courses?

The quantitative phase of this study assessed the course learning outcomes of online and F2F students, before and after completion of the course. A noticeable difference was found between pre- and post-test scores in the online ($M = 3.00$, $SD = 1.78$) and F2F ($M = 1.50$, $SD = .50$) classrooms; however, due to a very small sample size, a t-test was not conducted due to the high risk of making a false inference. There is insufficient evidence

to determine whether there is a difference in test scores between the online and F2F groups.

The qualitative phase of this study entailed interviews with each of the students in the online and F2F classes. Each completed a pre- and post-test (n=6). The interviews revealed six common themes:

1. *Convenience* is the primary reason for enrolling in an online graduate-level course, and students also considered convenience the aspect of online education that is most beneficial.
2. *Higher order thinking* (“critical, reflective, metacognitive, creative, and logical thinking” (King, Goodson, & Rohani, n.d., p. 1)) is an essential factor in creating a quality, effective, and positive online learning environment that increases learning outcomes.
3. *Discussions* are a primary learning mechanism for online courses.
4. *Professor engagement* is vital in facilitating learning and increasing student learning outcomes in online courses.
5. *Professor and student interaction* aids in creating a positive learning environment and increasing student learning outcomes.
6. Student and professor preference for *F2F interaction* is influenced by the historical role and familiar nature that F2F interactions play in learning.

The fourth and final research question merged both the quantitative and qualitative phases. The findings indicate there is not a difference in student perceptions of the factors that lead to student learning outcomes between students in the online and F2F classes. Qualitatively, participants in both the online and F2F classes were satisfied with their

experience in Introduction to the U.S. Judicial system and indicated having a quality learning experience. Quantitatively, all but one student performed stronger on the post test, than on the pretest. In sum, students in both sections, regardless of performance on the pre and post-test, have the same perceptions as to the factors that contribute to student learning.

F2F versus Online

Inference #1: Convenience is a growing necessity for students enrolling in graduate education. Online education has made graduate-level education more accessible. This finding is supported by the extant literature that indicates the primary advantages to online education are flexibility (Petrides, 2002; Yang & Cornelius, 2004; Hurt, 2008) and convenience (Poole, 2000; Bickle & Carroll, 2003). Hurt found the flexibility of online education assisted students with issues of childcare, work obligations, etc. All students, in both the online and F2F sections of this study, worked full-time and two of the students in the online section also had families with young children. Those with families indicated if the program were not offered online, they would not have enrolled. One student also indicated cost savings as another reason for opting for the online section, which also supports Hurt's research that students who were financially troubled were able to avoid high gas prices by not commuting to class. In sum, online education appeals to the non-traditional student, whether a single parent, a student who resides a great distance from a university, or one who has travel commitments for work. The flexibility and convenience afforded by online education has increased access to education for a much larger and considerably more diverse population than that of traditional brick-and-mortar institutions (Allen & Seaman, 2007).

Inference #2: It is challenging for students and professors to embrace online education because it is difficult to let go of the eye-to-eye or F2F nature of the traditional classroom setting. This study found that arguments against online education are more about letting go of the familiar rather than which medium is more effective. Those who prefer the F2F format indicated eye-to-eye social interaction was essential for learning and retention. When asked about prior online learning experiences, however, these students provided examples of successful online learning experiences that entailed student-to-student and professor-to-student interaction, involvement, and responsiveness. While there is no consensus in the extant literature regarding the effectiveness of the online versus F2F learning environment, it has been found that online courses that utilize tools to augment interaction (student-to-student and student-to-instructor) and engagement further enhance student learning outcomes and overall satisfaction when compared with those that do not (McFarland & Hamilton, 2005; Dykman & Davis, 2008; Norton & Hathaway, 2008; Offir, Lev, & Bezalel, 2008; Palmer & Holt, 2008). The questions remain: Can professor and student interaction in an online classroom meet the needs of students who require and depend on social interaction for learning? Is it the familiarity of the F2F classroom that makes embracing online education difficult?

Factors Contributing to Student Learning Outcomes

Inference #3: Interaction (student-to-student and professor-to-student) and professor engagement are essential factors in student learning outcomes and student satisfaction in an online course. Engagement in the online learning environment is defined as “involvement,” which encompasses active and collaborative learning, participation in challenging academic activities, formative communication with academic staff,

immersion in enriching educational experiences, and feeling legitimate and supported by university learning communities (Coates, 2007, p. 122). Interaction in the online learning environment refers to the communication between faculty and students, between students and students, and the collaboration that ensues from these interactions. This study found that regardless of preference for the online or F2F format, all participants indicated interaction and engagement were vital to student learning outcomes and positive learning experiences, and all referenced the online discussion board as the venue for such interaction. This further supports the idea that engagement and interaction in the online classroom leads to student learning and a “quality” online learning experience (McFarland & Hamilton, 2005; Dykman & Davis, 2008; Palmer & Holt, 2008). Further, the primary interactive and engagement tool used in this asynchronous classroom was the discussion board. Andresen (2009) found, through a comprehensive review of the literature on asynchronous discussion forums, that the two most important factors for successful asynchronous discussion forums were the role of the instructor and creating an environment that encourages critical thinking and deeper/higher level learning; thus, supporting the findings.

Inference #4: Higher order thinking increases student learning outcomes and student satisfaction in both the online and F2F classrooms. Higher order thinking is the primary goal of instructional strategy at the graduate level (King, Goodson, & Rohani, n.d., p. 1). To promote this level of thinking one must use teaching strategies that challenge the learner and result in explanations, decisions, performances, and products that promote learning. While higher order thinking is a goal of the professor, this study found that it is also an expectation of the student with regard to learning and student satisfaction. All of

the students, in both sections of the course, indicated a desire to apply knowledge and research, have thoughtful discussions, and think in-depth. This theme runs parallel to the research on professor and student interaction on the discussion board. Duffy and Cunningham (2004) found, in terms of online learning (in graduate-level education), high level processing occurs amid active meaningful activities that require knowledge application or personal interpretation. Further, this level is not achieved from “giving” students the information or knowledge (rote memorization or repetition); rather, interaction and engagement (i.e. discussions, group work, etc.) with other students in a course provide students the opportunity to contextualize and personalize information. In sum, much of the literature concerning online discussions indicates its purpose is to develop these higher order thinking skills and suggests the benefit of the asynchronous forum is that it allows time for reflection, unavailable in the F2F discussion format (Andresen, 2009).

Inference #5: Student perceptions of factors that lead to improved learning outcomes in online courses do not differ between those in the online and the F2F class, nor do they differ between those who prefer online or F2F learning. McBrien, Cheng, and Jones (2009) found students who participated less in face-to-face classroom discussions participated more in the asynchronous interaction. All students have preferences and different learning styles; this study found, however, that interaction (student-to-student and faculty-to-student) is an integral part of learning and higher order thinking, regardless of the medium of delivery. The question then is how much more critical thinking or higher learning occurs in the asynchronous versus the F2F classroom? Additionally,

could this change as professors and students become more familiar with online education?

Online education is a new method of teaching and learning for students, faculty, and administrators. As an online student, online instructor, and an administrator of online and F2F academic programs I recognize the vast differences in teaching, administrating, and learning in the two environments. I also recognize, the need for more research to improve our understanding of the qualities and variables that increase student learning outcomes in every learning environment. These perceptions, qualities, and variables continue to evolve as advancements in technology develop and as more students and faculty become more familiar with and embrace online education. Fortunately, the advent of online education and its rapid growth has forced academic institutions and faculty to question the current styles and techniques for teaching and learning. I do believe teaching in the traditional classroom has not changed considerably over the last fifty years, and this recent introspection on our teaching and learning will prove to be a great service to academia. The findings that students seek higher order thinking, collaboration, interaction, and engagement further supports the power and potential of online education. Online education, unlike F2F, opens the doors to global collaboration, to sharing, interacting and thinking with others around the world, attributes for which students are asking; now, it is a matter of learning the best ways to develop and foster them.

Significance of the Study

This study contributes to the growing knowledge of online education and the factors that contribute to student learning outcomes in the online classroom. Up to this point, the research on student performance and learning outcomes in the online and F2F

classroom has been contested. Perhaps the most recent research was by The U.S. Department of Education in 2009 in which a meta-analysis was conducted and concluded that student learning outcomes in online courses was equal to and, often times, better than in the F2F traditional courses. Several errors and misrepresentations have been found in the initial meta-analysis (Figlio, Rush, & Yin, 2010; Jaggars & Bailey, 2010). Subsequent research has found there is no difference in student performance in online and F2F environments (Beck, 2010; Dell, Low, & Wilker, 2010; Lyke & Frank, 2012), while others find the F2F environment is superior (Urtel, 2008; Emerson & MacKay, 2011). This research (1) contributes to the current body of research on online education, (2) aids educators and institutions of higher education in determining the best tools for assessing online courses, (3) furthers their understanding of the dynamics that create effective online learning experiences, (4) aids in the measurement of student learning outcomes in online courses, and (5) contributes to the literature on the efficacy of online courses in legal education.

Limitations and Directions for Future Research

The main limitation of this study is the small sample size. Typically, the online and F2F sections of this class have had larger enrollments and equal numbers in both classes, which would have further strengthened the study. The small sample size ($n=6$) prevents the generalizability of the findings from the sample to the entire population and increases the risk of false inferences. When the results of the study are coupled with the existing literature, there are evident opportunities for future research.

The factors that contribute to quality learning experiences and lead to learning outcomes can always be improved and understood through research. Online education is a new tool for learning that calls for further research, in all areas.

One area for further investigation is the extent to which higher order thinking can be better achieved in an online or F2F format. Higher order thinking in the online classroom emerged as a stronger theme in this study than anticipated. Future research on achieving higher order thinking in the F2F classroom and in the online classroom should be conducted. Does the traditional F2F lecture or Socratic method of teaching achieve higher order thinking? Is there as strong a desire for higher order thinking in the F2F classes as there is in the online classroom? Is the desire for higher order thinking a reason why some students prefer the online classroom over the F2F classroom?

Another recommendation for future research is in the development of policy for faculty in creating and setting up online courses. The importance of interaction and engagement in the online classroom is strongly supported in the literature and not a common characteristic of teaching in the F2F classroom. Developing policy to guide and teach faculty in this effort is necessary. Similarly, further research and support by academic institutions on improving our understanding of online education is vital to increase the reach and power of education. The growth of online education has forced us in the academic profession to critique our way of teaching and the level to which we reach our students, therefore, further research on student perceptions and learning outcomes are necessary.

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APPENDIX A: QUANTITATIVE MEASURE

1. Who is the current (2014) Chief Justice of the U.S. Supreme Court?
 - a. Antonin Scalia
 - b. **John Roberts**
 - c. Clarence Thomas
 - d. Sonia Sotomayor

2. Which of the following is not a commonly used method of Alternative Dispute Resolution, or ADR?
 - a. Arbitration
 - b. Mediation
 - c. **Specialty Courts**
 - d. Summary Jury Trials

3. The “Bill of Rights” is set forth by the first _____ amendments to the U.S. Constitution.
 - a. Five
 - b. Twenty
 - c. **Ten**
 - d. Eleven

4. If you were to file a complaint, what would you be doing?
 - a. Initiating a lawsuit
 - b. Stating the facts of the lawsuit
 - c. **Both A and B**
 - d. Neither A nor B

5. In a civil case the jury needs to decide a case _____, while in a criminal case the jury is instructed to decide a case _____
 - a. “Beyond a reasonable doubt” and “by a preponderance of the evidence”
 - b. **By a “preponderance of the evidence,” and “beyond a reasonable doubt”**
 - c. By “clear and convincing truth” and a “preponderance of the evidence”
 - d. “Beyond a reasonable doubt,” and “clear and convincing truth”

6. What is personal jurisdiction?
 - a. A courts power to hear the case based on the subject matter
 - b. **A courts power over the parties to a lawsuit**
 - c. The permissive joinder of parties
 - d. The consent of parties to give a particular court power over the proceedings

7. Which of these statements concerning voir dire is false?
 - a. Voir Dire is the process of questioning jurors about their backgrounds and potential biases
 - b. **Challenges for cause are the same as peremptory challenges in voir dire**

- c. Both the prosecution and defense are limited in the amount of challenges they are given
 - d. Often referred to as a “trial within a trial”
8. Compensatory damages ...
- a. provide a plaintiff with the monetary amount necessary to replace what was lost, and nothing more.
 - b. Recoverable by a plaintiff who successfully establishes that he or she has suffered an injury
 - c. Compensation agreed upon by the parties entering into a contract, to be paid by a party who breaches the contract to a nonbreaching party
 - d. punish a defendant for his or her conduct as a deterrent to the future commission of such acts.
9. Which of the following is not a major difference between a military court and a civilian court?
- a. The code
 - b. The appeal
 - c. The training for military vs. civilian attorneys
 - d. The applicable laws of the Constitution
10. The Rule of Law means:
- a. That all law should be set out in rules and regulations
 - b. That law is the main way peoples behavior in society is controlled
 - c. That the law applies to everyone without exception
 - d. None of the above
11. True/False Due to the public’s perception of it, the Foreign Intelligence Surveillance Court (FISC) was disabled in 2009.
- a. True
 - b. False
12. The adversary system is...
- a. A system where the outcome is reliant on actual facts
 - b. A right to assistance of counsel for those who cannot afford such representation
 - c. Irrelevant in the modern US Judicial System
 - d. Based on the assumption that the truth is best revealed through head-to-head courtroom combat between two skilled advocates
13. If you were going through a divorce with minor children, which would be the relevant court?
- a. Veterans Court
 - b. Teen Court
 - c. Family Court

- d. Divorce Court
14. Which of the following is NOT one of the three branches of government established by the U.S. Constitution?
- a. Executive
 - b. Legislative
 - c. Administrative
 - d. Judicial
15. The Supreme Court is granted its powers by which Article of the Constitution?
- a. Article III
 - b. Article IV
 - c. Article V
 - d. None of the Above
16. The _____ in the United States is the “supreme law of the land.”
- a. Bill of Rights
 - b. Federal Reporter
 - c. U.S. Constitution
 - d. Presidential Proclamation
17. What is the complaint?
- a. The first paper filed in a civil case
 - b. The first paper filed in a criminal case
 - c. The first paper filed in the appeals process
 - d. The first paper filed by the jury upon reaching a verdict
18. Which of these is NOT an example of a plea bargain?
- a. Tim is charged with a felony theft charge, and he pleads guilty to a misdemeanor theft charge in order to receive a lighter sentence
 - b. Eric has an automobile accident where there is potential for civil liability against him, and he agrees to plead “no contest”
 - c. Sarah, who was in a relationship with kingpin Derek, is charged with obstructing justice. In exchange for her testimony she is granted immunity
 - d. Kimberly, who is in drug court for possession charges, files a countersuit against the state for violation of civil rights
19. What important concept was established through the 1803 case *Marbury v. Madison*?
- a. Rule of Law
 - b. Exclusionary Rule
 - c. Judicial Review
 - d. Preemptory challenges

20. True/False Joy, an Oklahoma citizen, sues Joe Corporation, incorporated in Colorado with its principle place of business in Oklahoma. Joy sues in federal court under the Federal Age Discrimination in Employment Act alleging she was fired because of her age, and replaced with a younger employee. She has supplemental claims for lost wages, unfair employment practices, and breach of contract.

The federal court has subject matter jurisdiction over all of Joy's claims as they arose out of the same matter:

- a. True
- b. False

21. What is the proper name for the jury selection process?

- a. Due Process of Law
- b. Voir dire
- c. Habeus Corpus
- d. Merit Selection

22. Punitive damages ...

- a. provide a plaintiff with the monetary amount necessary to replace what was lost, and nothing more.
- b. Recoverable by a plaintiff who successfully establishes that he or she has suffered an injury
- c. Compensation agreed upon by the parties entering into a contract, to be paid by a party who breeches the contract to a nonbreaching party
- d. punish a defendant for his or her conduct as a deterrent to the future commission of such acts.

23. True/False State courts operate independently under the constitution and the laws of the particular state.

- a. True
- b. False

24. What percentage of cases are generally resolved before going to trial?

- a. 25%
- b. 10%
- c. 90%
- d. 50%

25. What is a "Problem Solving Court?"

- a. A trial court in which everyday citizens can voice their concerns before a judge in an open forum
- b. Any federal court in the United States which attempts to address issues of public interest

- c. Any court which addresses specific, underlying problems that contribute to criminal behavior
 - d. A district court which passes judgment on any case involving a mental health issue
26. What is the function of the Executive Branch of the U.S. government?
- a. Makes laws
 - b. Eliminates laws
 - c. Carries out laws, or puts them into effect
 - d. Evaluates laws
27. True/False The U.S. Supreme Court has complete discretion to select which cases it will hear from among thousands of petitions submitted.
- a. True
 - b. False
28. What protection is guaranteed by the Fourth Amendment?
- a. Protection from cruel and unusual punishment
 - b. Protection from unreasonable search and seizure
 - c. Freedom of speech
 - d. Freedom of religion
29. If you request a motion for summary judgment, what are you requesting?
- a. A judgment by the court for one party stating that there are no disputes of material fact requiring a trial to resolve and that in applying the law to said undisputed facts, one party is clearly entitled to judgment
 - b. A dismissal agreement which preserves the right of the plaintiff to commence the lawsuit at a later date
 - c. Both A and B
 - d. Neither A nor B
30. True/False Federal Judges are appointed for life.
- a. True
 - b. False
31. The Fifth Circuit Court's rulings will be binding precedent on cases located in:
- a. Texas
 - b. Louisiana
 - c. Mississippi
 - d. All of the above
32. True/False Infractions are less serious than misdemeanors and are only punishable by fines, no jail time.
- a. True
 - b. False

33. If you were in a problem-solving court, which of these could you NOT be in?
- Family Court
 - Addiction Court
 - Veterans Court
 - Teen Court
34. What is the function of the Legislative Branch of the U.S. government?
- Makes laws
 - Eliminates laws
 - Carries out laws, or puts them into effect
 - Evaluates laws
35. Who can issue a subpoena (a document to compel an individual to appear at a specified time to give testimony)?
- A grand jury
 - A legislative body
 - An administrative agency
 - All of the above
36. Colorado has a sophisticated system to evaluate the performance of judges based on merit selection. Which of the following is NOT a goal of this system?
- To eliminate the influence of partisan politics in the judicial system
 - To reprimand those judges whom the public deems unethical, based on their personal opinions
 - To strike a balance between an independent judiciary while maintaining public accountability
 - To inspire trust and confidence in the entire judicial system
37. Which of the following is NOT considered a Problem Solving Court topic of interest?
- Domestic Violence
 - Mental Health
 - Veterans
 - All of the above are examples of Problem Solving Courts
38. What is the function of the Judicial Branch of the U.S. government?
- Makes laws
 - Eliminates laws
 - Carries out laws, or puts them into effect
 - Evaluates laws
39. Which of these methods is NOT a way in which the United States selects judges to rule on the bench?
- Judicial Elections

- b. Judicial Appointments
- c. Judicial Merit Selection
- d. All of the above are ways in which a judge may be selected to rule on the bench.

40. True/False Problem-Solving courts focus on particular case types in order to reduce delays and process those cases more efficiently.

- a. True
- b. False

Demographic Questions:

1. What year were you born?
2. To which racial or ethnic group(s) do you most identify?
 - a. African-American (non-Hispanic)
 - b. Asian/Pacific Islanders
 - c. Caucasian (non-Hispanic)
 - d. Latino or Hispanic
 - e. Native American or Aleut
 - f. Other _____
3. What is your gender?
 - a. Female
 - b. Male
 - c. Other _____
4. How many online undergraduate-level courses have you completed?
 - a. 0
 - b. 1
 - c. 2
 - d. 3
 - e. 4
 - f. 5 or more
5. How many online graduate-level courses have you completed?
 - a. 0
 - b. 1
 - c. 2
 - d. 3
 - e. 4
 - f. 5 or more
6. In what city and state were your residing in while taking this course?

7. Why did you choose to take this course in online or in-class format?

APPENDIX B: QUALITATIVE INTERVIEW QUESTIONS

Qualitative Interview Questions: Students

Please note: these questions are merely a guide. Final questions will be completed based on data collection and analysis of initial quantitative data. Final versions will be submitted to IRB for approval at that time.

1. How many online courses have you completed?
2. How many graduate-level online courses have you completed?
3. What city and state did you reside in while enrolled in the Introduction to the U.S. Judicial System course?
4. What were your reasons for enrolling in the online section over the in-class section?
5. Generally speaking, what aspects of online courses have you found most beneficial?
6. Least beneficial?
7. In your opinion, have online and in-class courses been equally effective in terms of experience and knowledge acquired? What experiences have most influenced your opinion?
8. How important a role do you feel interaction with your fellow students and the professor plays in your learning process?
9. If yes it is important– Tell me about how you have experienced this in online and in-class courses.
If no it is not important– Why have you not found it to be helpful? What have you found to be most helpful?
10. What were your interactions/discussions like with fellow students and the professor in this class?
11. Did you feel the discussions contributed to your learning experience?
12. Were you encouraged to formulate your own ideas and opinions?
13. Tell me about your experience with support services (IT, library, student affairs, program administration, registrar, etc.)
14. Do you feel you received the same quality of support as you would have if you were an in-class student?
15. For the purpose of this research, quality is defined as learning what you set out to learn in the course, as well as having a positive learning experience. Do you feel your learning experience in Introduction to the U.S. Judicial System was a “quality” one? Why or Why not?
16. What are the first words that come to mind when you think of your overall experience in this course?
17. The goal of this research is to improve the quality of online education we provide. What factors are most important to you with regards to a “quality” learning experience?
18. The online and in-class Introduction to the U.S. Judicial System Course was taught by the same professor and all students were given the same assignments.

Do you think you would have acquired the same amount of knowledge in the in-class course as you did in the online course?

19. Finally, is there anything about your experience that we have not discussed?

Qualitative Interview Questions - Professor

First I want to state the goal of this study is ultimately to improve the quality of education we provide in the online learning environment. Initially, the intent of this study was to compare student learning outcome achievement in the online and in-class learning environments and then follow-up with interview questions to expand on the findings. As you know we did not have enough students enrolled in the in-class section, therefore all students, from the in-class section and online section who participated in the pre- and post-test were interviewed.

As the professor for both sections, I would like to get your perspective of online education and the factors you consider to impact student learning outcome achievement.

1. First, you began teaching the in class and online sections of this course in 2009, correct? Prior to teaching online you completed the Distance learning Workshop at the University of Denver. Is this correct?
2. Aside from the Distance Learning Workshop, have you ever been a student in an online course?
3. If yes, what was your experience like as an online student? Were there qualities you preferred in the online environment that are not present in the in-class environment?
4. As a professor in both environments, which do you prefer: teaching an entirely online course or a traditional face-to-face course? Why?
5. As a professor, what aspects of teaching in the online environment have you found to be most challenging in comparison to the in class environment?
6. As a professor, what aspects of online education do you perceive to impact student learning outcomes positively? Negatively impact student learning outcome achievement?
7. For the purpose of this research, quality is defined as the students learning what they set out to learn in the course, as well as having a positive learning experience. As a professor in an online course, what factors do you perceive to be most instrumental in your students' achieving a quality learning experience?
8. As the professor for both the in-class and online sections, do you think the students (if they all learned the same) would have acquired the same amount of knowledge in both sections?
9. You have indicated your preference for the face-to-face learning environment over the online learning environment. If your colleague was going to begin teaching in the online learning environment and sought your advice, what guidance would you provide?

10. Professional Development – Do you have suggestions for the MSLA program in terms of professional development for professors?

APPENDIX C: JOINT DISPLAY

Joint Display: Merging of Quantitative and Qualitative Data

| | F2F | Online |
|------------------------------|--|---|
| n | 2 | 4 |
| DIFF Score Mean / SD | Mean= 1.50 SD= .50 | Mean= 3.00 SD= 1.78 |
| Convenience | <ul style="list-style-type: none"> · convenience, nice to take classes on my time; work during the week | <ul style="list-style-type: none"> · Convenience, moved out of state · "I live 2 hours away from Denver and work full time. I have a 2 year old and husband" · "unable to relocate to Denver" |
| Higher Order Thinking | <ul style="list-style-type: none"> · "They were open-ended questions that really made you think... tailor it to my personal opinions." · "[Professor] was like I don't want regurgitation of anything." · Frustration with online classes because "not much interaction. Or professors don't participate. They post these questions on a discussion board and it's really regurgitating what you already read." Needs more than "self-learning" | <ul style="list-style-type: none"> · "So as opposed to simply reading material, which is also beneficial of course, but to a greater degree, actually having to apply the information that you're reading into some sort of an assignment. " · "provide some sort of substantive response to that particular material. " · "especially in higher level education, where you do have more of that critical analysis" · "you need to come to the table with your own thoughts " · "it was a good experience. It was all debates and... Yeah. It was nice. · "But I actually think that I learned a lot more in this class than I did in my class I took in the undergrad because the professor had us research a lot more rather than just work right out of the textbooks. " |

| | | |
|---|---|--|
| <p>Professor Engagement</p> | <ul style="list-style-type: none"> · "And that was probably my best online class because [another professor] was very involved." · Professor should "make it interesting." | <ul style="list-style-type: none"> · "I understand that it's difficult to be a professor and you're trying to make sure you're keeping people engaged, potentially the engagement should be more substantive." · ""One of my fellow students was talking about immigration. At the beginning of the semester, I stated that I wanted to be an immigration lawyer. And the instructor just kept on asking me questions and questions about well, you know, what are your thoughts? What do you think about this? Have you done the research on this and that? So she kept me pretty occupied and challenged to learning more and more. And she wanted to know what I thought about the subject. " · "Some professors were more active throughout the week than others...it keeps me on my toes." · "The professors, you know, had different exercises, different discussion questions, and different assignments. That type of stuff engaged me to learn just as much as I would in a classroom setting with a teacher who wanted to engage his or her students." |
| <p>Professor and Student Interaction</p> | <ul style="list-style-type: none"> · I think it's the professor interaction with making you think, not so much even their interaction was just a comment, but making you think about it further. Like, once you post, have them ask you a question about your post that makes you think a little more in-depth. · "to do something else on that computer and reach out and try and interact with fellow students through that... through that way." | <ul style="list-style-type: none"> · "there should at least be some interest by, you know, others in the class to find out what their fellow students have to say about the subject 'cause that's where the learning really comes from. " · Interaction between the professor and the students is important, because you learn from them." · "if you're not asking questions there's certainly nothing the instructor can do whether you are in class or online." · "I actually learned from everybody [students and professor]" |

| | | |
|-----------------------------------|--|---|
| <p>F2F Interaction</p> | <ul style="list-style-type: none"> · "But when you're in class, having a conversation, it may lead into deeper details or go a different direction that you didn't see it going." · "she [professor] makes it very lively and very entertaining." · "I like eye-to-eye contact. I like to see people's nonverbal communication. I like to put a face with what they're thinking. " · "I'm so used to being in class, I... I missed the camaraderie of a class. That's why I like to be that in-class" · "You formulate a relationship with... with that professor. You learn how they tick and I was able to see the life that she lived, the work that she does. " | <ul style="list-style-type: none"> · "When you're face to face with someone, the conversation is always going to be different than over a text or email or whatever the case may be. So I think that will always be one piece that can never be completely copied. But does that mean that you can't have the same valuable content? No. I think you most definitely can. In fact, I think you can potentially have greater value" · "Sometimes It would be nice if I could interact with my classmates and my instructor, personally, physically" · "I think that in online learning, sometimes people in a classroom setting aren't so excited to talk about all of their life experiences when 20 people are staring straight at them." |
|-----------------------------------|--|---|