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A Mixed Methods Investigation of Student Achievement and Satisfaction in
Traditional versus Online Learning Environments

by

Jessica L. Manion

A Dissertation submitted to the Education Faculty of Lindenwood University

in partial fulfillment of the requirements for the

degree of

Doctor of Education

School of Education

A Mixed Methods Investigation of Student Achievement and Satisfaction in
Traditional versus Online Learning Environments

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This dissertation has been approved in partial fulfillment of the requirements for

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Doctor of Education

at Lindenwood University by the School of Education



Dr. Mitch Nasser, Dissertation Chair

11/1/19
Date



Dr. Kevin Winslow, Committee Member

11/1/19
Date



Dr. Frank Giuseffi, Committee Member

Nov 1, 2019
Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

Full Legal Name: Jessica Lee Manion

Signature:  _____ Date: 4/1/19

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since the day you were born, my every decision and thought has been centered around providing you with the best future possible. Everything I do is for you.

Abstract

To evaluate student achievement and satisfaction in different course delivery modes the researcher investigated both traditional and online undergraduate accounting courses at a private Midwestern university. By comparing student achievement and satisfaction in traditional versus online undergraduate accounting courses, the study aimed to highlight what works best in education and provide guidance to administrators and instructors alike. This investigation included students enrolled in undergraduate accounting courses during the 2016-2017, 2017-2018, and 2018-2019 school years. The mixed-methods framework allowed the researcher to examine this educational issue from the quantitative and qualitative perspectives. Quantitatively, the researcher examined secondary data from both student course evaluations, as well student grade and demographic data. The qualitative investigation consisted of one focus group and four personal interviews that the researcher performed to gauge students' attitudes and beliefs about the two course delivery modes.

The quantitative analyses revealed no significant differences in course evaluation scores, student engagement, or student satisfaction. However, the researcher did find statistically significant differences in student completion rates and the distribution of final course grades. Further, the qualitative analyses revealed several themes that assisted in the construction and interpretation of interviewees' responses. Results from the quantitative data analyses of the first three hypotheses converged with the qualitative results, inasmuch as there were no observed differences in course evaluation, student engagement, or student satisfaction. However, divergences between the quantitative and qualitative data existed because although student completion rates and student grades

were lower in the online undergraduate accounting courses, students were still equally satisfied in both course delivery modes. The researcher recommended that faculty and curriculum designers ensure that there is equality in the resources, assignments, and assessments, between the online courses and the face-to-face courses. Other recommendations included the need to change faculty perceptions regarding the inferiority of online coursework, as well as offering more blended options for students, as many nontraditional aged students are returning to college. Finally, suggestions for future research included focusing on increasing course completion rates by utilizing the best teaching practices, while also examining potential reason why some age and ethnic groups may be less successful in the learning environment.

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Chapter One: Introduction

Introduction

Today there are many educational options for motivated individuals. From community colleges and trade schools, to traditional and online universities, students have various options to continue their education or job training in any area they wish. Traditionally, returning to college meant driving to a campus, sitting in a classroom, and taking instruction from a teacher at the front of the room. Teacher-centered learning has been, and still is the most common teaching style used in education (Kridel, 2010, p. 848). At the time of this writing, although learner-centered classrooms were becoming more prevalent, teacher-centered instruction was still used in primary, secondary, and in higher education. In 2015, approximately 70% of students in higher education enrolled exclusively in face-to-face courses (Allen & Seaman, 2017, p. 4). In addition, students have the option of attending online classes, sometimes referred to as distance learning courses, to obtain their degrees. While the Internet provides a plethora of information available at the click of a button, in many cases students still need some type of direction from an instructor.

Individuals that prefer a greater amount of instruction from the teacher, more face-to-face time with peers, and the benefit of immediate feedback in the classroom, would succeed in a traditional setting. However, self-directed students that are more comfortable working independently in a learning management system may prefer an online educational experience. Even before online education became so popular, Knowles, Holton, and Swanson (2005) highlighted the ability of technology and online education to foster, encourage, and produce more self-directed learners by giving the

learner control of his or her own education (p. 237). This control gives learners the ability to access course material at their own convenience, the choice to move through coursework at their own pace, and the benefit of being able to continue their education while still working full-time and balancing family obligations. Online classes can certainly be more convenient, but is this convenience at the expense of greater student understanding and achievement?

In addition to student understanding and achievement, some researchers believed that the development of social-emotional and interpersonal skills, which were crucial to success in the workplace, could be negatively impacted by exclusively taking online classes instead of traditional on-campus courses (Lindsey & Rice, 2015). An individual's ability to interact with friends, peers, and coworkers is an important life skill that needs to be exercised frequently. Discussing the importance of interpersonal skill development, Grossman and Johnson (2015) agreed:

Given that the development of non-technical, or soft, skills is often influenced by student interactions with faculty and other classmates, faculty acceptance of online coursework may be limited by their perception that online courses are less effective in instilling these skill sets than the traditional classroom environment. (p. 97)

The social connections and interpersonal relationships that students develop happen much more frequently in face-to-face settings. Lindsey and Rice (2015) concurred, "Improving interpersonal skills/intelligence helps enrich individuals' relationships, helps them cope better at work and in social situations, and especially when dealing with difficult or challenging individuals" (p. 126). Since most careers require these types of coping skills,

it is important for colleges to help students develop not only intellectually; but socially, and emotionally as well.

Educational research in different modalities is important because it provides insights to what works best in education. Whether content is delivered in a traditional fashion, or in a more contemporary manner using technology, it is imperative that educators know which methods yield increased student achievement and success. Since more and more students are choosing to pursue an education online, teachers and instructors should completely understand the ramifications of this shift from face-to-face instruction, to an online learning environment. The purpose of this educational research was to determine whether face-to-face learning, or online instruction, leads to greater student achievement, success, and satisfaction.

Background of the Study

The emergence of distance and online education programs has increased exponentially over the past decade, and the trend does not seem to be slowing. Allen and Seaman (2017) reported that in 2015 total college enrollment was 20,266,367 (Seaman, Allen, & Seaman, 2018, p. 7). Of those enrollees, 29.7% engaged in at least one online course, and 2.9 million students were exclusively in distance education programs. Insofar as distance course enrollments continue to increase, it is imperative for educators to be cognizant of all consequences, good and bad, associated with this shift. Education is not merely the accumulation of knowledge, but also the attainment of the competencies required to become successful in lifelong learning pursuits. Learning does not end when an individual finishes high school, or even after college, but continues throughout life. November (2012) reiterated, “Learning how to learn is an essential lifelong skill” (p.14).

In this way, educators have the very important task of not only teaching their particular discipline, but also helping the student *learn how to learn*, regardless of course delivery mode.

The results of related research were mixed. For example, a case study analysis of pre-service teachers revealed that students found the face-to face program to be a better fit because of additional in-class support, greater social presence, and increased interaction with the instructor (Thompson, Miller, & Franz, 2013). Similarly, when it was necessary to employ critical thinking skills and higher-order thought processes, Lu and Lemonde (2013) found greater student performance in face-to-face courses. Conversely, a 2010 meta-analysis from the U.S. Department of Education found that student achievement in online courses was slightly better than traditional face-to-face learners (DOE, 2010, p.14). In addition, Mendes da Silva, Leal, Pereira, and Neto (2015) reported that online students had higher grade point averages, compared to those in face-to-face courses. Graham and Lazari (2018) agreed the student performance was better in the online section, compared to the corresponding face-to-face course.

This research project studied performance and attitudes of undergraduate accounting students enrolled in both traditional and online courses. The researcher determined if there was any significant difference in student achievement between traditional undergraduate accounting courses, and an online undergraduate accounting course, as measured by final course grades. The research also investigated any differences in achievement by student attributes, such as age, gender, and ethnicity. Student completion rates were also examined to compare differences, if any, between traditional and online undergraduate accounting courses. Further, this research explored

student attitudes and beliefs toward traditional courses and online courses, using standardized student course evaluation surveys, focus groups, and interviews. The researcher also determined if there was any relationship among student attitudes and beliefs, compared to other student attributes, such as age, gender, and ethnicity. Atchley, Wingenbach, and Akers (2013) and Brinson (2017) agreed that further research was needed to examine additional student characteristics to determine if there is any correlation to student success.

As previously stated, educational research in this field was important because it provides insights to what works best in education. Ultimately, higher education should provide all students with a rich learning environment that will embrace students' diversities and natural talents, empower their inherent tendencies for curiosity and investigation, and emphasize the need for continual skill development and lifelong learning. Delors (1996) highlighted the importance of lifelong learning as it related to the development of the individual as a whole, "the notion of lifelong education . . . a continuous process of forming whole human beings-their knowledge and aptitudes, as well as the critical faculty and the ability to act" (p.19). Whether content is delivered in a traditional fashion, or in a more contemporary manner using technology, it is imperative that educators know which methods yield greater amounts of student achievement, engagement, satisfaction, and success. Educators should completely understand the ramifications of this shift from face-to-face instruction, to an online learning environment, since more and more students are choosing to pursue an education online.

Importance of the Study

Researchers and educators have only begun to scratch the surface when studying the effects of face-to-face versus online learning. Although online classes were more convenient for the student, and perhaps more cost effective for the school, they may not provide the same levels of learning, understanding, and development that traditional classes could provide. Executive functioning skills, some of which were only developed by interacting with peers and other individuals outside of the home, were imperative for the development of an individual as a whole. These executive functioning skills included: inhibition and control, ability to shift from one situation to another, emotional control, initiation of a task or activity, working memory, planning and organization, organization of materials, and self-monitoring (Cooper-Kahn & Dietzel, 2019). Educators must consider the macro-growth of the whole student, as opposed to just focusing on the transfer of knowledge in a prescribed content area.

Many skills are developed in a classroom setting, some of which are not necessarily used in an online setting that will help to prepare students for life after college. Lindsey and Rice (2015) reiterated this by saying, “An individual’s ability to be a team player, to collaborate with individuals from different cultures and backgrounds, to interact with diverse personalities, and to work on projects with strict deadlines is required in the marketplace” (p. 128). Unfortunately, online and distance learning programs do very little to help students develop and exercise these skills. Dutcher, Epps, and Cleaveland (2015) agreed, “research that examines course delivery outcomes in specific disciplines will increase knowledge of discipline-specific factors that may impact student learning” (p. 129). Ultimately, the goal of education was to develop a well-

rounded individual that cannot only be successful in an educational setting, but that can be successful in other aspects of life as well. For these reasons, it is important for educators to understand all of the ramifications and variances in education between traditional classrooms and online courses.

Purpose of the Study

The purpose of this mixed methods research study was to investigate the differences, if any, in student achievement and satisfaction between traditional and online undergraduate accounting courses at a Midwestern University. Data from both quantitative and qualitative elements were collected and analyzed concurrently (Schoonenboom & Johnson, 2017). This study included a deductive, or quantitative, analysis, and determined if there were any, significant differences in final grades of students in traditional versus online undergraduate accounting courses. The study aimed to highlight which type of instructional delivery method was most effective for students, in order to increase student success. Student completion rates were also examined to determine if there were any differences in traditional and online undergraduate accounting courses. In addition, the study determined if there was any difference between final course grades and other student demographics, such as age, gender, and ethnicity.

This investigation also included an inductive, or qualitative, examination to determine student attitudes and beliefs about traditional courses and online courses in undergraduate accounting, by analyzing focus group and personal interview results. In doing so, the study highlighted the strengths and weaknesses of the two different instructional delivery modes. Similarly, the researcher investigated for any differences

between student attitudes and beliefs, and other student attributes such as age, gender, and ethnicity. Quantitative and qualitative results were analyzed separately, with a culminative integration of the results to determine any convergence, divergence, or emergence of themes throughout the analyses. By completing the mixed methods analysis, the study aimed to highlight the differences, if any, in effectiveness of traditional undergraduate accounting courses versus online undergraduate accounting courses; examine student completion rates in traditional undergraduate accounting courses compared to online undergraduate accounting courses; and identify student attitudes and beliefs regarding traditional undergraduate accounting courses and online undergraduate accounting courses. The study also aimed to investigate any differences between student achievement and satisfaction, compared to other student attributes, such as age, gender, and ethnicity.

Research Questions

Research Question 1. What are the attitudes and beliefs of teacher performance in online undergraduate accounting courses, compared to traditional undergraduate accounting courses?

Research Question 2. How do study participants feel about their engagement in online undergraduate accounting courses versus traditional undergraduate accounting courses?

Hypotheses

Hypothesis 1. There is a difference in instructor course evaluation scores between undergraduate accounting students receiving face-to-face instruction and those receiving online instruction only.

Hypothesis 2. There is a difference in student engagement of undergraduate accounting students receiving face-to-face instruction and those receiving online instruction only.

Hypothesis 3. There is a difference in student satisfaction in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses.

Hypothesis 4. There is a difference in student completion rates in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses.

Hypothesis 5. There is a difference in final course grades of undergraduate accounting students receiving face-to-face instruction than those undergraduate accounting students receiving online instruction.

Hypothesis 6. There is a difference between student demographics and student satisfaction in undergraduate accounting courses.

Hypothesis 6a. There is a difference between student age and student grades in undergraduate accounting courses.

Hypothesis 6b. There is a difference between student gender and student grades in undergraduate accounting courses.

Hypothesis 6c. There is a difference between student ethnicity and student grades in undergraduate accounting courses.

Limitations of the Study

As with other research, there were limitations that existed in this study. This study was limited to college students in a Midwest university, so it may not be representative of undergraduate accounting students in universities across the country and abroad. In addition, the data tested only came from courses that were offered in both the

online and traditional formats, taught by the same instructor, so the samples are not completely random. Since secondary data were utilized, the researcher had no control of the data; hence, a large amount of trust was placed in the representative providing the data. Although the researcher used standardized course evaluations for the survey instrument, the researcher was responsible for the development of the focus group and interview questions. These questions were formulated to evaluate the perceived advantages and disadvantages in face-to-face courses and online courses. The focus groups and interviews were performed with a limited number of participants and did not necessarily achieve saturation. Further, the study concentrated on course delivery mode, whether online or face-to-face, as the main factor in investigating student achievement and satisfaction. Other extraneous variables, such as previous experience and level of academic achievement could have affected the results as well. Another potential limitation existed because of the two separate populations participating in the study. Qualitative data came from focus group and interview responses collected during the spring and summer semesters of 2019, whereas the secondary data came from undergraduate accounting students over a period of the previous three school years, so interview responses may not fully represent all of the secondary data population. Triangulation of the quantitative and qualitative results in this mixed methods study added to the validity and credibility of the results.

Definition of Key Terms

Traditional Course. “Course with no online technology used-content is delivered in writing or orally” (Allen & Seaman, 2008, p. 4).

Didactic (Traditional) Learning Environment. “In traditional didactic or expository learning experiences, content is transmitted to the student by a lecture, written material, or other mechanism” (U.S. Department of Education, 2010, p. 3).

Face-to-Face Instruction. “Mostly synchronous interaction, content presented as lectures, hands-on, pencil-and-paper assessments, content can be planned session-by-session” (“Comparing Face-to-Face,” 2014, para. 2).

Distance Education Course. “A course in which the instructional content is delivered exclusively via distance education” (Allen & Seaman, 2017, p. 6).

Online Learning. “Learning that takes place partially or entirely over the Internet” (DOE, 2010, p. 9).

Teacher-Centered Instruction. “Teacher takes an active role and presents information to the entire class while the students’ main role is to listen to the new information being provided” (Garrett, 2008, p. 35)

Learner-Centered Instruction. “perspective that couples a focus on individual learners...with a focus on learning-the best available knowledge about learning and how it occurs and about teaching practices that are most effective in promoting the highest levels of motivation, learning, and achievement” (McCombs & Vakilia, 2005, p. 1584).

Self-Directed Learning. “A process in which individuals take initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (Knowles, 1975, p. 18).

Lifelong Learning. “A process through which individuals acquire information, knowledge and competencies in a range of formal and informal settings, throughout life” (Sartori & Tacconi, 2017, p. 1)

Summary

Students have many options when deciding how to further their education. Community colleges, universities, and trade schools alike, offer online courses, traditional classroom settings, and hybrid choices as well. Some learners prefer a greater amount of instruction from the teacher, which is received in a traditional classroom setting, while others are more self-motivated and self-directed. Self-directedness and learner motivation are essential elements to success in online coursework. However, education is not only about the transfer of knowledge, but also about the development of the whole student intellectually, socially, and emotionally. In the subsequent chapter, the research investigated several aspects of course delivery modes namely historical origins, student attributes, differences in the learning climate and instructional methods, as well as the technological implications in face-to-face and online courses.

Chapter Two: Literature Review

Introduction

Over the past several years, the number of online learning and distance education programs offered to students increased dramatically. As previously stated, approximately 30% of students are enrolled in at least one online course, compared to around 10% just ten years ago (Allen & Seaman, 2017, p. 11). Many factors contributed to an individual's choice in preferred educational delivery methods. Convenience factors, transportation restrictions, family obligations, and work schedules all have to be considered when making such a great life decision. At the time of this writing, many students still choose the traditional classroom setting; however, more and more often online courses are being taken. This literature review touched on the historical perspective of education, examined student attributes, compared learning climate and instructional methods, as well as highlighted the technical implications of education in our modern society. This in-depth investigation incorporated research in these areas from various fields and disciplines, with the goal of providing a well-rounded perspective of this educational issue in higher education.

Historical Perspective

Many topics of study in academia start by exploring the chronological development of the subject. Philosophy, education, arts, and even the sciences, such as earth, social, and political science, generally begin with examining the past. This investigation into the differences between traditional face-to-face coursework and distance education is no exception, and began by exploring the origins, historical development, and conditions leading up to the digital revolution. These two different

educational delivery modes were compared and contrasted to recognize the factors that contributed to the development of each. By exploring the history of higher education, as it relates to these two instructional modes, a greater understanding into the then-current state of education was built upon.

The origins of higher education date back hundreds of years ago to European countries in the 11th and 12th centuries (Haskins, 1957). Although ancient Greek philosophers like Socrates, Plato, and Aristotle pondered issues, such as *What is Justice?*, *What is Beauty?*, and *What is Love?*, centuries earlier; formal and organized higher education developed centuries later. Preceded by monasteries, mainly for the training of religious servants, the University of Bologna in Italy is credited with being the first university (Haskins, 1957). Although many universities were established over the past several hundred years, the main purpose, “the training of scholars and the maintenance of the tradition of learning and investigation” has remained constant (Haskins, 1957, p. 25). The desire for educational attainment spread across the globe, and over time human knowledge increased exponentially. The sharing of this knowledge, and the development of lifelong learning faculties, was the essence of academia and helped to shape higher education into its current state.

Formal university education in the United States began in the seventeenth century with the inception of Harvard University (Reza, 2017; Sass, 2019). Over the next hundred years, several of the ivy-league colleges were founded, and by the end of the Revolutionary War, many American leaders began to focus on the importance of educating the young men returning from war. In the adolescence of the Union, educational training was viewed as a catalyst for the development of the new republic,

and to create an individual that was, “confidently knowledgeable yet self-controlled guardian and skilled developer of the republic who would love, protect, and oversee its peaceful expansion” (Sumner, 2014, p. 6). In this macro-societal perspective, these new intellectuals would not only bring success to their families, but to their communities, and American society as a whole. College communities began to emerge all over the east coast, and even inland as far as Kentucky. These communities were revered as places that young people could be trained in virtue, ethics, and other standards of success. Students of these new colleges, “did indeed find a highly regulated, intimate, microscopic world designed to mold their minds and manners in ways that, they were promised, would bring about their improvement and ultimate success” (Sumner, 2014, p. 53). In this manner, education would enable individuals to develop the behaviors and mental capacities to operate as intelligent and moralistic beings.

Education continued to expand operating under the framework of traditionalism. Traditionalists believed that education was the foundation to creating a civilized society, one that promoted human welfare and principles of democracy, such as liberty and equality (Kelly, 2014). Traditionalistic ideas in education remained prevalent for most of the 20th century. Heads of state and university came together and collaborated to reinvent the higher education system as an epicenter of knowledge, expertise, and as “a locus for administration coordination in the federal government, and a mediator of democratic citizenship” (Loss, 2012, p. 1). Throughout this time, higher education achieved remarkable expansion with the help from government land grants. In fact, higher education institutions grew 400 percent during which time, college attendance grew over 5,000 percent from 250,000 to 14,000,000 (Loss, 2012, p. 3). Today, there are

thousands and thousands of educational institutions in the United States and abroad, and education is still marketed as a means of success, a platform for liberty, and a device of equality.

Although the roots of distance education were not quite as deep as that of traditional education models, there were examples as early as the 18th century. In 1728, the *Boston Gazette* advertised a program that offered shorthand instruction through the mail (Bower & Hardy, 2004, p. 6). Another early example was the establishment of The Society to Encourage Studies at Home in 1873. The founder, Anna Eliot Ticknor, came from a wealthy family of educators, with relatives serving as presidents at both Harvard and Trinity College. Correspondence courses in English, History, Science, French, German and Art were offered to students, namely woman, through the mail. These courses included syllabi, reading materials, and learning assessments (Bower & Hardy, 2004; Caruth & Caruth, 2013; Larreamendy-Joerns & Leinhardt, 2006). Larreamendy-Joerns and Leinhardt (2006) agreed the instruction via mail was a great approach to reaching large numbers of students, regardless of age, with the purpose of betterment in the human condition. The ability of educators to reach additional student populations, through the mail, opened an entirely new niche in the higher education market.

The earliest universities in the United States to offer distance education courses included the Illinois Wesleyan College, the Correspondence University of Ithaca, and the University of Chicago. Former president of the latter, William Rainey Harper, was credited as being a major contributor in the formation of distance education (Bower & Hardy, 2004). Proponents of the new delivery method argued distance education offerings were, “part of a university’s responsibility to reach all of society and to provide

education for all” (Caruth & Caruth, 2013, p. 144). As innovations in technology continued to increase, correspondence courses expanded to audio recordings and eventually visual recordings as well. According to Larreamendy-Joerns and Leinhardt (2006), this departure from traditional, face-to-face teaching methods was a, “pedagogical oddity, often requiring further justification, such as the extension of educational opportunities or the encouragement of life-long learning” (p. 570). Western Reserve University was a trailblazer in distance education, and the first to offer courses through video recordings. This growth continued internationally as well, with distance-education universities emerging with a multitude of degree offerings (Bower & Hardy, 2004). The expansion in audio and video technologies enabled distance education courses to reach even more prospective students and learners.

Until the past couple decades, distance education meant receiving and sending course content and assignments via postal mail, listening to content on audio, and even communicating through video transmission. However, with the advent of the personal computer, the Internet, and the subsequent World Wide Web, educational programs have significantly increased their online course offerings. Only 15% of degree granting institutions offered online courses prior to 1999, and as of 2015 that number had grown to approximately 70%, which represented a 366% increase. In comparison, 3,180,050 students enrolled in at least one online course in 2005, a number that grew to 6,022,105 in 2015, which represented an 89% increase (Allen & Seaman, 2008; Allen & Seaman, 2017). Those figures illustrate the impact of online coursework in education. Distance education programs and courses have become a more convenient and sensible choice for postsecondary education students, regardless of age. Mann and Henneberry (2014)

attributed this shift in education to the increased demand for college training, improved availability of computer technologies, expanded access to internet tools, and the multiplied growth of online class availability. Discussing the future implication of online learning, Caruth and Caruth (2013) reiterated distance education is flourishing, “particularly in higher education and shows no signs of slowing down. The ease of learning via the internet has made it viable to reach students that were previously unserved” (p. 147). Distance education allowed individuals to pursue their education despite the many obstacles that stand in the way of taking face-to-face courses.

Traditional face-to-face and distance education were compared and contrasted to appreciate the factors that contributed to the development of each. This investigation into the history of higher education, as it related to traditional and online courses, helped to provide a greater understanding into the current state of education. To better serve all students and society, educators needed to ensure that regardless of the instructional delivery mode, students developed the necessary tools to be self-directed, to become autonomous, and to develop into lifelong learners. Lindeman (1926) proclaimed, “Education is life-not a mere preparation for an unknown future living” (p. 6). Since demand for quality educational programs continued to increase, it is imperative to understand all the differences between the traditional classroom experiences versus the online course experiences.

Student Attributes

On college campuses across the nation, student populations represented many different educational, philosophical, and ethnical backgrounds. Whether a student received a private or public education, came from a religious or agnostic home, or grew

up in the inner city or in rural surroundings, this diversity of faculty members and the student population certainly added to the richness of the college experience. Diversity in these areas promoted understanding of different cultures and belief systems, while encouraging acceptance of various perspectives and ideologies. With these variations in mind, the researcher examined student attributes for traditional and online learners. This investigation included research on student demographics such as age, gender, and ethnicity, as well as an examination of motivation and self-directed learning.

Investigating student demographics in relation to college enrollment, helped to illustrate how the postsecondary education population was categorized. The three main attributes that were investigated included age, gender, and ethnicity. The first characteristic examined was that of age. While many traditional students entered college right after high school, non-traditional student enrollment in distance education programs was on the rise. According to the National Center for Education Statistics (NCES) in 2017 there were 16.9 million students enrolled at degree granting organizations. College students enrolled full-time in four-year public institution under the age of 25 made up 89% of the student population. The next age group, 25 to 34-year-old students, accounted for 8% of enrollment in these institutions. Lastly, students 35 and over were 3% of the population. As illustrated in Figure 1, these distributions changed considerably when comparing full-time to part-time students, and four-year programs versus two-year programs (NCES, 2018). Public institutions account for the majority of enrollment, so data from private organizations was not included.

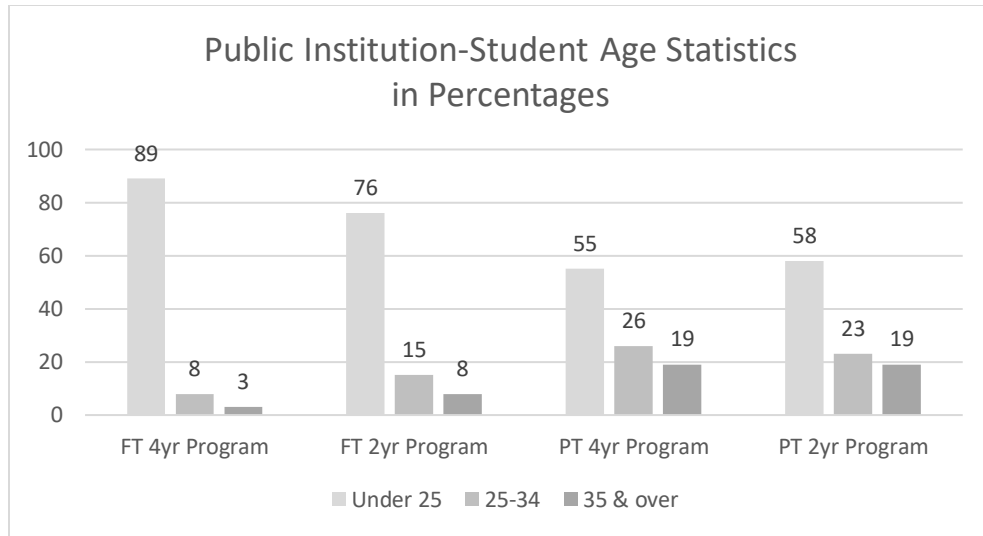


Figure. 1 Age Demographic Statistics

Online enrollment continued to increase year over year, even as overall college enrollment has decreased. In the period from 2012 to 2016, Allen and Seaman (2017) noted increases in distance education courses at an average of just over 4% per year, which amounted to a total increase of 17.2% in the four years (p. 12). These increases were seen at both the undergraduate and graduate level, and in fact, some studies have suggested that non-traditional, or older students, performed better than their younger counterparts. In one study, data collection from the Peregrine Outcomes Assessment, which was essentially an exit exam for individuals graduating in various business administration fields, showed that older students scored remarkably higher (Slover & Mandernach, 2018, p. 4). Another study that sought to classify students into four engagement categories found that the high engagement/high study skills group was made up of older students that had a mean age of thirty years old (Elphinstone & Tinker, 2017, p. 460). Although there were many factors that can contribute to student performance,

age and the maturity and experience that comes with being older, certainly had a positive impact on higher education pursuits.

Gender was also examined during the investigation into student attributes. According to the National Center for Education Statistics (NCES), in 2017 female students accounted for fifty-six percent of college enrollments and males represented forty-four percent (2019, para. 2). Previous research has suggested that there were marked differences between males and females in higher education. While males and females had many of the same motivations for attending higher education programs, namely personal accomplishment, the increased knowledge/skills, and progression toward a new career, females perceived more obstacles than males related to childcare and other family obligations (Kimmel, Gaylor, & Hayes, 2014). Teixeira, Gomes, and Borges (2015) found that female students tended to feel better prepared for educational pursuits and had a greater sense of purpose when choosing to attend college (p. 142). These differences in gender extended to various career paths as well.

Some professions employed more males than females; however, according to 2018 data from the Bureau of Labor Statistics (BLS), the accounting and auditing workforce was comprised of approximately 60% women when it related to business and finance operations. When these professions are considered in relation to office and administrative support, this number jumped to almost 87% (BLS, 2019). Nishiyama, Camillo, and Jinkens (2014) investigated this characteristic and found that women chose the accounting profession more than men, because of “locational freedom, social status, and income stability” (p. 193). Their research also agreed with Kimmel, Gaylor, and Hayes (2014) that women take family obligations and duties into account when

considering career choices. Even though there were gender differences in many different professions, only the accounting field was considered in this investigation.

Ethnic considerations were examined as well. The fall 2016 enrollment data of undergraduate students presented by NCES also gave the breakdown of students according to their ethnicity. Of the nearly 17 million undergraduate students enrolled, 53.8% were White, 18.9% were Hispanic, 13% were Black, 6.5% were Asian/Pacific Islander, and less than 1% were American Indian/Alaska Native (para. 3). A comparison to the population of the United States, which is 76.5%, 18.3%, 13.4%, 5.9%, 1.3% respectively, shows that the college participation statistics are representative of the country's ethnic makeup (US Census Bureau, 2018, para. 3). Although college attendance may reflect the ethnic proportions of the population, there were still instances of minorities feeling underrepresented in higher education. In a survey of student perceptions Sanchez, DeFlorio, Wiest, and Oikonomidoy (2018) noted, "Several college students commented that faculty and staff needed training in diversity; this appears to be particularly necessary to serve students from underrepresented racial/ethnic backgrounds" (p. 408). All educators should be knowledgeable of, and sensitive to, the uniqueness and diversity of every student. Further, every student, regardless of age, gender, or ethnicity, should be treated equally with respect, dignity, and encouragement, to be successful in educational pursuits.

Motivation was an important attribute to possess for success not only in educational pursuits, but in every other aspect of life as well. Every learning situation, whether it be in a formal classroom environment, or just for one's own curiosity, arguably begins with motivation. Motivation can be attributed to three elements

including activation-the start of an activity or inception of a plan, persistence - the perseverance and determination required to continue, and intensity - the dedication and discipline required to see a goal or project through to its completion (Wood & Wood, 1999, pp. 358-359). Levels of persistence and motivation varied from student to student, and as one would expect there is a positive relationship between motivation and academic success. Pintrich and Zusho (2002) argued students' perseverance through challenging, learning situations indicated high levels of persistence and motivation (p. 62).

Motivation was not only required to begin an assignment or task, it was necessary in order to stay focused until its completion. Again, any learning situation, from start to finish, required that students first choose to begin, and then have the persistence to see the task or goal through to its finality.

Several motivational theories were studied including the humanistic theory, the incentive theory, the drive-reduction theory, the arousal theory, the instinct theory, and the expectancy theory (Cherry, 2018; Pintrich & Zusho, 2002; Trolian, Jach, Hanson, & Pascarella, 2016; Wood & Wood, 1999). Perhaps one of the most notable, the humanistic theory, was outlined by Abraham Maslow's hierarchy of needs. Maslow's diagram divided motivational forces into various levels from basic needs, to the higher-level self-actualization purposes (Cherry, 2018; Wood & Wood, 1999; Zhou & Brown, 2015). According to Maslow, an individual must satisfy the lower level physiological essentials such as food, water, and shelter, before being motivated to achieve higher-level needs such as loving relationships, development of self-esteem, and personal accomplishment (Wood & Wood, 1999, p. 363). The desire to continually improve upon oneself until full

potential was realized was indicative of the humanistic theory and of life-long learning pursuits as well.

The incentive theory highlighted the positive relationship between motivation and perceived rewards or incentives. While some theories highlighted internal aspirations, Cherry (2018) contrasted, “incentive theory instead suggests that we are pulled into action by outside incentives” (para. 7). These rewards or incentives, which were also known as extrinsic motivators, served as an impetus for action toward a task or completion of a goal. Realistically, motivational forces came from a combination of both intrinsic and extrinsic factors. The former represented the internal influences such as mastery and self-actualization, while the latter was comprised of external rewards like high grade marks and increased earning potential. Although external rewards were important, Knowles et al. (2005) postulated, “Adults are motivated to learn because of internal factors, such as self-esteem, recognition, better quality of life, greater self-confidence, the opportunity to self-actualize” (p. 294). Inasmuch as college attendance was not required by law, students; therefore, must be motivated by something, to be willing to invest their time and energy. Speaking about the impetus of adult education, Brookfield (2001) agreed, “Labor-including the intellectual labor of learning and teaching-also becomes an object thought to have some intrinsic value” (p. 11). Whether students were motivated intrinsically, extrinsically, or a combination of both, this characteristic was necessary to be successful in any learning situation.

Drive-reduction theorists also attempted to explain human motivation in terms of satisfying needs and wants. Wood and Wood (1999) outlined this process as, “a need gives rise to an internal state of tension or arousal called a drive, and the person or

organism is motivated to reduce it” (p. 360). For example, when an individual felt hunger pains, he or she was driven to satisfy that need. Similarly, the arousal theory was predicated on the belief that internal processes drove individuals toward more or less stimulation, depending on levels of arousal, or perceived lack thereof. Cherry (2018) explained, “When arousal levels get too low, a person might watch a movie or go for a jog” (para. 12). Conversely, “When arousal levels get too high, a person would probably look for ways to relax such as meditating or reading a book” (Cherry, 2018, para. 12). Both drive-reduction and arousal theorists focused on the physiological aspects of motivation and the importance of maintaining balance physically, mentally, and emotionally.

Instinct theorists on the other hand, attributed motivation to innate, or inborn instincts that species possess. While this theory was certainly applicable to some animal and human behaviors, it proved to be problematic when used to rationalize human motivation. Although widely accepted in the early part of the 20th century, psychologists have now abandoned the idea of instincts providing an accurate and complete description of motivation (Wood & Wood, 1999, pp. 359-362). While instinct theorists believed motivation was impelled by one’s inherent and involuntary instincts, conversely, the expectancy theory related these human behaviors to the expectations that individuals had in regard to the future (Cherry, 2018, para. 16). The characteristics of expectancy theory are discussed in the next paragraphs.

Expectancy theory was focused on future outcomes, or expectations, and credits motivation to a concerted effort of cognitive processes such as planning, predication, and decision making. Pintrich and Zusho (2002) cited this theory in their model for student

motivation and attributed motivation to three main beliefs, including expectations of one's abilities, recognizing the value of the learning, and the students' attitudes and feelings toward the task (p. 87). These three elements are also referred to in the literature as, "expectancy, valence, and instrumentality" respectively (Cherry, 2018; Knowles et al., 2005). Self-efficacy, or beliefs about one's aptitudes was important to motivation, insofar as individuals will be less motivated toward a goal if they did not believe they have the skills and abilities to complete the task. Seeing value in the task, whether from intrinsic or extrinsic forces, was equally influential to motivation. Using Pintrich's Motivated Strategies for Learning Questionnaire (MSLQ), Hsieh (2014) found that there was a statistically significant relationship between perceived task value and perceived educational increases (p. 427). Thirdly, students' attitudes and feelings toward the task will impact the level of enthusiasm required to achieve a goal or assignment. These three elements intersect with one another to shape desired outcomes through decision-making, determination, and dedication.

As previously stated, it would be fallacious to assume only one of these theories was wholly responsible for explaining and understanding human behavior and motivation. More realistically, each of these theories combined to provide an overall understanding of motivation. In practical applications, understanding these motivational forces will help educators to engage students in the classroom. Arghode, Brieger, and McLean (2017) reiterated, "Effective instructional practices should be matched with equally good student motivation for promoting learning" (p. 596). Additionally, Galbraith (1990) featured six elements that will influence a student's motivation to learn, including attitude, need, stimulation, affect, competence, and reinforcement (p. 101).

Some of these characteristics were highlighted in the preceding paragraphs. Motivation and self-directed learning go hand in hand, and the more self-directed a student was, the more likely that student will complete a learning task or goal.

Self-directed learning was widely debated and studied in the field of education. Whether an educator operated from a pedagogical or andragogical approach, these abilities were arguably one of the ultimate goals of education and were essential for adult learners and college students alike. Charungkaittikul and Henschke (2018) concurred, “Andragogy and lifelong learning are important in shaping an individual to enhance the capabilities in both personal and professional development” (p. 80). Developing a learner from dependent to independent will ensure his or her ability to continue and to be successful at, lifelong learning pursuits. Knowles (1975) defined self-directed learning as, “A process in which individuals take initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (p. 18). The acquisition of independent learning skills is important because when individuals choose to pursue self-selected objectives, they tend to be more active in the learning process. The maturation from dependent to independent learner follows the natural order of personal growth, and in order to sustain oneself, an individual should keep up with the ever-changing educational environment (Knowles, 1975, pp. 14-15). This idea of dynamic environments was applicable to the workplace as well, where individuals would be required to continually build upon their skills and abilities.

Educators can encourage self-directed learning strategies in the classroom by planning activities and exercises to build on these skills. MacArthur, Philippakos, and Ianetta (2015) explored some of these strategies including setting learning objectives, choosing appropriate learning strategies, using time-management skills, and reflecting on the overall process. Their quasi-experimental study revealed that students who were taught self-directed learning strategies in the treatment group, had greater increases in abilities compared to the control group (pp. 860-863). According to Knowles (1975), the instructor's first step would be to create a classroom atmosphere of openness, collaboration, and sharing by engaging in thoughtful discussion and completing relationship-building exercises. Next, the instructor would assist students in assessing their learning needs and developing a plan. Once learning activities were performed, the instructor would help the student evaluate their plan and reflect on the learning experience (pp. 39-41). Learning contracts helped instructors and students evaluate learning experiences and objectives. Brookfield (1991) touted learning contracts as, "the chief mechanism used as an enhancement of self-direction" (p. 81). Galbraith (1990) agreed that learning contracts can lead to quality educational experiences because, "the learner is actively involved in designing a process of learning, has the learning under control, and is motivated to pursue a process and achieve a product" (p. 147). Inasmuch as the student was responsible for the creation of the contract, he or she will be more engaged in the design aspect, which will in turn increase comfortability with independent learning.

Although self-directed learning strategies were important in a traditional college classroom, they were even more critical in an online learning environment. Kohan et al.

(2017) agreed, “Virtual learners should be able to independently analyze, plan, implement, and assess their own learning activities” (p. 117). While many adult learners possess these skills, some students were not comfortable learning this way. Megeid (2014) emphasized the competencies needed to be successful in an online class including the capacity to be self-directed and work independently, the possession of time management and appropriate literacy skills, adequate computer experience, and the ability to use Web 2.0 technologies (p. 41). Students should certainly be more disciplined in their time-management skills in an online course, since they must cover content independently, as opposed to attending regularly scheduled face-to-face meetings.

Several barriers to self-directed learning existed inside the traditional classroom, as well as externally in an online learning environment. Inside the classroom, teachers’ predispositions and perceptions about their role could hinder the development of these self-regulated strategies. In virtual courses, Kohan et al. (2017) identified three main obstacles to online learning including, “cognitive barriers, communication barriers, and educational and environmental barriers” (p. 119). Cognitive barriers consisted of items that deterred students from their coursework, including an overwhelming overload of course content and inability to focus. The second barrier touched on the lack of communication between teacher and student, as well as the perceived inability to express one’s thoughts through writing. Educational and environmental barriers included not only lack of adaptation and coping skills, but also the inability to manage the workload of multiple courses (Kohan et al., 2017, pp. 119-120). In addition to these barriers Megeid (2014) reiterated, “Online learning requires a high degree of self-motivation and learners may find it difficult to change from the traditional learning mode” (p. 39). Regardless of

the perceived barrier or course format, educators should be able to recognize when a student was struggling and in need of encouragement or assistance.

The investigation into student attributes included research on student demographics such as age, gender, and ethnicity, as well as an examination of motivation and self-directed learning. Examining these attributes helped to highlight the diversity of student populations in postsecondary education, as well as assisted in explaining some of the characteristics necessary to be successful in the pursuit of higher education. The next section will focus on some of the differences in learning climates of traditional face-to-face classes and online courses.

Learning Climate

Traditionally formal education meant being in a physical classroom, surrounded by peers, and receiving instruction from a teacher. This has been true for primary, secondary, and postsecondary education alike. This pedagogical model has served the educational system well for many, many years. In universities across the United States the popularity and availability of distance learning options has made college and continuing education more accessible for many individuals. For some students' transportation restrictions, family obligations, and employment schedules have made it difficult to attend traditional classes on a campus (Kimmel et al., 2014). In fact, Cole, Shelley, and Swartz (2014) revealed that "convenience" was cited as the reason most students were satisfied with their online courses. The ability of students to complete their coursework anytime, anywhere, and at any pace was certainly attractive for busy adults returning to college. The examination of learning climate in traditional, face-to-face delivery modes compared to online delivery modes included research into course

characteristics, communication and engagement, student satisfaction and attrition rates, as well as the growing issue of academic integrity.

The discussion of learning climate began by analyzing course characteristics in relation to the course environment, content structure, and access to resources.

Essentially, in a traditional environment that was bound by temporal and spatial restrictions, students combine what they see and what they hear from the instructor and peers, to process learning situations (Brocato, Bonanno, & Ulbig, 2015, p. 48).

Conversely, a virtual learning environment was not limited to time or space restrictions, and the majority of interaction happened from reading content and formulating responses to the material (Brocato et al., 2015, p. 48). On-campus educators could arrange the desks in their classroom to promote collaboration and social interaction. These types of active learning environments support success and engagement in the classroom. In a study measuring student perceptions, Park and Choi (2014) determined, “in active learning classrooms students had closer relationships with classmates, maintained stronger motivation for learning, held a stronger sense of belonging to the class, regarded the class as more fun, and looked forward to the next class” (p. 766). Aesthetically pleasing classrooms and campuses help to make the learning experience more enjoyable.

Visually stimulating learning management systems will help online students engage and interact with the learning environment. Speaking of design and aesthetics of online course development, Isenberg (2007) stated:

An andragogical climate can be created in an Internet learning experience by using bright, cheery colors, and by using a psychological tone of acceptance and

caring in the text that demonstrates mutual respect, collaboration, mutual trust, openness, fun, support, and humanness. (p. 22)

A virtual learning environment provided the opportunity for learning to become more personalized, removed distance barriers to education, provided flexibility, and ensured that the learner be more autonomous and self-directed (García-Cabrero et al., 2018; Gavira & Omoteso, 2013). Consideration of the physical and virtual aspects of creating a positive learning environment, whether face-to-face or online, was an integral part of educators providing a constructive learning experience. The combination of an effective learning management system, with plenty of opportunities for interaction, and a variety of content and resources will assist in creating a successful online learning environment.

Content structure and access to resources were equally important to course delivery modes as well. Content structure referred to the organization of content and resources in a given course. Some educators chose to organize content by the type of resource. For example, an educator might have three separate content folders; one for chapter reading assignments, one for recorded lectures, and one for online videos. Yet another way to structure course content was through the use of modules, where each module would represent a collection of all required reading and assignments for a time period (i.e. one week). Offering many different types of content and resources, such as social media links, videos, and even music helps to keep the learning experience fun and engaging (Delgado, 2015, p. 228). Although a student may be able to gain understanding by reading the chapter, having variety in resources by offering an accompanying video or lecture will help the student to understand the topic better. Ultimately, educators have the ability to organize the course content any way that they feel best promotes the facilitation

of learning, understanding, and student achievement. Not surprisingly, Spivey and McMillan (2014) found a positive relationship between final course grades and the number of times content was viewed in the 10 days preceding an exam. With this in mind, educators should provide rich content that aids the student in the learning experience.

Effective communication and engagement in the learning climate were good predictors of academic success in higher education as well. While the face-to-face environment was generally considered synchronous, the online environment was termed asynchronous (Bonnici, Maatta, Klose, Julien, & Bajjaly, 2016, p. 1389). Asynchronous communication and interaction occurred through email, messaging applications, or discussion boards (Watts, 2016, p. 24). Essentially the communication or interaction did not happen concurrently in real-time, but rather had a time lag between when a message was sent and then responded to (Watts, 2016, p. 24). Synchronous interactions were those that occurred in real-time, like face-to-face conversations, live streaming videos, or conferences. In practical application, educators should employ both communication methods, irrespective of the type of course format involved. In order to have the same level of quality in both traditional and online courses, instructors should be responsive to students, and provide plenty of opportunities to engage synchronously. Roe, Toma, and Yallapragada (2015) agreed, “Students receiving instruction in any delivery mode, including online delivery, should have the same opportunity for interaction with faculty and with students as do those in F2F classes” (p. 172). Further, effective communication will help to keep the student engaged throughout the course or learning situation.

Student engagement was studied extensively in educational research. Fredin, Fuchsteiner, and Portz (2015) stated, “Student engagement represents not only the resources and approaches the institution utilizes to induce students to participate in worthwhile activities, but it is also the time and effort students put forth in their studies and other educational activities” (p. 49). Additionally, many educators intuitively knew that greater student engagement leads to greater student success. At the onset of a new learning experience, educators have to be mindful of the fact that every learner is different and brings different attitudes, beliefs, and levels of knowledge to a learning situation (Brookfield, 1991; Knowles et al., 2005). Roksa, Trolan, Blaich, and Wise (2017) concurred, “To facilitate student learning, instructors must effectively engage with students existing knowledge” (p. 287). Concept mapping was a research-based practice that assisted students in understanding complex ideas or concepts by linking the content to prior knowledge (Handy & Polimeni, 2017). The prior knowledge and experience of students will help those individuals engage more successfully with the course content, as well as with the instructor and peers. Although educators continually strove to increase student engagement in online courses, face-to-face courses were still much more effective at providing greater amounts of interaction in the learning environment.

Students cited several reasons engagement was higher in face-to-face courses including greater understanding of the assignments and teacher expectations, being able to ask questions while in class and receive an immediate response and having the ability to interact with peers during class. While in class, students can get clarification on an assignment and find out exactly what was required of them, rather than trying to figure out teacher expectations on their own. Also, if a student has a question, they can ask the

instructor and/or listen to the questions that other students pose. Most importantly, students were able to interact with each other, collaborate, and share ideas more easily in a traditional classroom. Discussing some of these benefits of face-to-face delivery mode, Thompson, Miller, and Franz (2013) stated:

The ease of asking clarifying questions in person during or after class, listening to the responses to classmates' questions, or listening to classmates as they discussed among themselves in the face-to-face setting to be more effective in promoting understanding of content and assignments. (p. 243)

Another advantage traditional courses had over online courses was the development of interpersonal or soft skills (Grossman & Johnson, 2015). Irrefutably, students in a traditional face-to-face environment were exposed to social interaction much more frequently than in an online course. It was imperative that students exercise these abilities, since the development of interpersonal skills was critical to success in the workforce. Some individuals prefer taking courses in a traditional classroom setting, however online classes are more flexible and convenient, since students did not have to physically attend classes on campus.

Although flexibility and convenience were often cited as an impetus for choosing an online education program, student satisfaction was not wholly dependent on these factors alone. For this reason, student satisfaction and attrition rates in the different learning environments were examined as well. In a study of student perceptions in relation to faculty performance, Brocato, Bonanno, and Ulbig (2015) discussed several ways an instructor could be evaluated including "building rapport, involving students in

learning, challenging students, providing consistent/timely feedback, providing a stimulating learning environment, and teaching fundamentals” (p. 44). Of these six factors, students ranked *building rapport* the highest, followed by *providing timely feedback*, and then *providing a stimulating environment*. These faculty performance measures could be applied in face-to-face or online course instructor evaluations.

Cole et al. (2014) suggested student satisfaction with online classes was dependent on student interaction that included three categories: Learner-content, Learner-instructor, and Learner-technology. Learner-content involved the students’ interactions with the course content. This content could include a required textbook, online articles, and class discussions to name a few. The Learner-instructor category would include any communications between the students and instructor. Timely responses to email or phone messages, in addition to grading and feedback were important to students (Brocato et al., 2015; Watts, 2016). Lastly, the Learner-technology element centers around the students’ knowledge and skills base with the technology required to complete the online course (Cole, Shelley, & Swartz, 2014). Good technical skills and support were imperative for online learners, as Watts (2016) reiterated students could become very frustrated and disconnected to the learning process when accessibility or connectivity issues arose.

Inasmuch as students in online courses did not have to regularly travel to campus and spend time in a classroom, that time could be utilized in a way that best suited the scheduling needs of the learner (Dendir, 2016, p. 67). Learning management systems can be accessed by students anytime anywhere, which provides the utmost flexibility and convenience for the learner. Convenience can mean different things to different learners

however. Highlighting the various interpretations of convenience Sanford, Ross, Rosenbloom, and Singer (2017) suggested:

For online courses, convenience may hinge on the ease with which course activities. For face-to-face courses, convenience may relate to desirable scheduling, ease and accessibility of parking and shuttle services, and location close to students' places of employment. (p. 80)

In this way, convenience was subjective and dependent on learners' unique situations.

The same idea could be applied to flexibility as well. What one student deemed flexible, a second student may not. Similarly, satisfaction was an ambiguous term as well, insofar as it can have a different meaning for everyone.

Student attrition rates were also investigated to determine variations between course delivery modes. One of the primary goals of educators was to enable students to be successful in all coursework throughout their educational experience. For an instructor it could be troubling when a student was struggling in class or failed to complete the course successfully. Educators want to provide a successful learning experience for all students, not just the majority or educationally inclined learners. One study that analyzed the completion rates of students in an online course, compared to the corresponding face-to-face course, showed that of the sample of 1,219 students, on average 77.5% of the face-to-face students successfully completed the course, while only 68.1% of the online students completed the course successfully (Graham & Lazari, 2018). Speaking to some of the indirect costs of online courses, Wright (2014) lamented, "greater student attrition rates are perhaps the biggest hidden costs of online courses" (p. 16). Instead of continuing their education through to graduation, some of these

disengaged students will eventually discontinue their educational pursuits. Additionally, Faulconer, Griffith, Wood, Acharyya, and Roberts (2018) results agreed, “student withdrawal rates were lowest for students who took the class in person” (p. 404). Although there were many reasons a student may need to withdraw from a class, educators should pay close attention to students who may be struggling, so that they are able to intervene before the student feels hopeless in their ability to be successful in the course.

Finally, literature addressing academic integrity was explored as well. The issue of academic integrity was one faced by on-campus and online educators alike. Academic integrity was defined as, “a commitment to five fundamental values: honesty, trust, fairness, respect, and responsibility” (Fishman, 2014, p. 16). In a traditional on-campus classroom, the instructor met the student face-to-face, and if necessary, through university records was able to verify that the student is who he or she says they are. Identity verification for online courses could be a bit trickier, and the task of maintaining academic integrity has become even more involved with the increase in online and distance education programs. Swartz and Cole (2013) agreed, “as more and more institutions of higher education become involved in online course delivery, preserving honesty and integrity in the learning environment takes on added significance because of the difficulty in controlling activity that occurs in cyberspace” (p. 103). Fortunately, there were several different ways educators could combat academic dishonesty whether in traditional or online course setting.

To alleviate academic dishonesty learning institutions can incorporate methods such as verifying references or work cited and checking for plagiarism within students’

written work, which would be applicable to a face-to-face or online coursework. Online assessment measures could include establishing time limits on tests and quizzes, locking the screen of students while taking an exam, and requiring the use of virtual proctoring services. Periodic video conferences to check students' understanding and verify students' answers by asking probing questions during the conference, could also help educators ensure students' work was authentic (Swartz & Cole, 2013; Wagner, Enders, Pirie, & Thomas, 2016). A multitudinous amount of information is available on the World Wide Web, and it has been very easy for a student to copy and submit someone else's ideas or words. November (2012) reiterated, "The process of examining these issues offers everyone an important tool for expanding our understanding of the uses of millions of resources on the Internet and the information they offer" (p. 60). Even though there were various software programs, such as Turnitin and PaperRater, that help to check student work for plagiarism, these measures alone do not stop all cheating in schools. The International Center for Academic Integrity (ICAI) also highlighted another major issue of academic dishonesty called "Contract Cheating." Contract cheating was when one student compensates another student, or company, to complete his or her assignments (2019, para. 2). Gallant (2019) stated, "Students are beginning to believe that contract cheating is commonplace and once there is a critical mass that shares the belief, it might as well be true" (para. 7). Institutions of higher learning need to be diligent in their efforts to thwart academic dishonesty, so that they know that students who have graduated truly *earned* their degree.

This examination into the learning climate in traditional, face-to-face delivery modes compared to online delivery modes included research into course characteristics,

communication and engagement, student satisfaction and attrition rates, as well as the growing issue of academic integrity. Overall, educators strove to provide quality-learning climates that supported students' interests and learning goals, challenged their knowledge and problem-solving skills, as well as prepared them for the workforce and lifelong learning pursuits. Ensuring that the learning experience was hassle-free, easy to follow, and provided adequate resources and content, all helped students stay engaged and be successful in their educational careers.

Instructional Methods

Most individuals living in the United States today have been educated in grade schools and high schools that were modeled on a traditional, or what was also known as a didactic or an expository learning environment, where information was presented to students by the instructor at the front of class (Kridel, 2010, p. 848). Although this method is still the most prevalent, there has been some transference in educational theories and best teaching practices. For example, the shift from teacher-centered to learner-centered classrooms, a change from direct-instruction to constructivism, and the evolution of the dependent-learner to one who is more autonomous, has required that educators rethink their role in the classroom. This exploration into instructional methods included research into learning theories and styles, as well as examining teaching styles and best practices.

Learning was defined as “a relatively permanent change in behavior, knowledge, capability, or attitude that is acquired through experience” (Wood & Wood, 1999, p. 152). Although there have been several learning theories introduced, contemplated, and expanded upon throughout educational history, this exploration focused on the five major

educational theories, namely behaviorism, cognitivism, constructivism, humanism, and experiential learning. Behavioral theorists believed learning was made evident through a change in behavior or attitude, and that responses were dynamically influenced by positive or negative reinforcements. Through conditioning methods, subjects developed certain responses or reflexes (Silva, 2018). In other words, a conditioned stimulus created a conditioned response. One of the most well-known behaviorists was B.F. Skinner, who believed in the idea of operant conditioning and the impact of external forces of the learning process (Hoy, Davis, & Anderman, 2013; Illeris, 2018; Wood & Wood, 1999). If a teacher or educator desired a decrease in a behavior, he or she would have an adverse reaction to the behavior. Conversely, if one wished to encourage a certain response, that individual would reinforce that behavior through positive consequences.

Cognitive theories of learning began to gain recognition in the mid part of the twentieth century. These theorists believed that learning was not just related to the positive or negative consequences, but rather cognitive processes such as reasoning and reflecting, knowing and understanding, problem solving and critical thinking, as well as making associations and remembering. Educators could encourage these cognitive developments by teaching students 'how to learn' through good study habits, cognitive maps, and other mnemonic learning techniques (Handy & Polimeni, 2017; Hoy et al., 2013; Illeris, 2018; Silva, 2018; Wood & Wood, 1999). Developing these metacognitive abilities in students will promote academic success and encourage lifelong learning endeavors. Since every student was unique and learned differently, understanding these processes was important when considering what works best in education. Slover and

Mandernach (2018) stated, “Cognitive development differences between traditional and nontraditional students, such as academic and real-world experience, affect learning and academic performance” (p. 3). As such, educators should try to understand their students’ current level of experience in a subject, as well as their expected learning outcomes.

Another learning theory introduced in the twentieth century was Constructivism. Essentially constructivists like Jean Piaget, John Dewey, and L.S. Vygotsky believed learning to be a process in which an individual constructed knowledge by relating new information to prior knowledge (Hoy et al., 2013; Illeris, 2018; Silva, 2018; Wood & Wood, 1999). In addition to prior knowledge, constructivists also highlighted experiential differences in cultural beliefs and academic aptness of students (Roksa, Trolian, Blaich, & Wise, 2017). Educators need to be cognizant of these diversities and consider the various backgrounds of learners, so that they are able to engage all students in the classroom. David (2015a) and Roksa et al. (2017) reiterated the significance of the learner as an active participant, rather than a passive recipient, during the construction and contextualization of information. In other words, the student had to have control and responsibility for his or her own learning. Further, Knowles et al. (2005) discussed eight processes in the constructivists’ formation of learning activities including centering the lesson around a big idea or problem, encouraging the student to engage with the issue, designing rich learning tasks and environments to achieve desired competencies, challenging the student to create a learning situation, engaging higher-order thought processes, and requiring the students to reflect on the overall learning experience (pp. 192-193). Some of these principles, which moved the student toward genuine

understanding and lifelong learning abilities, are also repeated in the following discussion on Humanism as well.

Similar to the discussion on the Humanistic Theory of Motivation, Humanism as a learning theory focused on the whole individual in which, “learning is viewed as a personal act to fulfill one’s potential” (David, 2015b, para. 1). The most noteworthy advocates of humanism included familiar names such Maslow, Rogers, and Knowles. Respectively, the ultimate aim of education being that of self-actualization, autonomy, and lifelong learning (Illeris, 2018; Knowles, Holton, & Swanson, 2005; Zhou & Brown, 2015). In a UNESCO report, Faure et al. (1972) posited, “curiosity, the desire to understand, know or discover, remains one of the deepest drives of human nature (p. 28). The betterment of life, learning, and the human condition were the foundations of the humanistic framework, which drove individuals to seek out knowledge and understanding. In practical application, Knowles et al. (2005) stressed the importance of creating learning climates that were, “safe, caring, accepting, trusting, respectful, and understanding”, where educators fostered, “collaboration rather than competitiveness, encouragement of group loyalties, supportive interpersonal relationships, and a norm of interactive participation” (p. 120). Speaking to the main theoretical aspects of Knowles’ research Henschke (2011) reiterated, “Acknowledging that learners are self-directed and autonomous, and that the teacher is a facilitator of learning rather than presenter of content” (p. 34) is an important task for educators. This type of humanistic approach to the classroom will help to ensure educational success of every student.

The last theory examined was one of undisputed importance and has been widely embraced in the field of education. O’Connor and Myers (2018) stated, “Experiential

learning helps to connect information and knowledge to the demands and neural pathways that will draw upon that knowledge” (p. 131). Experiential learning was popularized by Kolb in the 1980s, even though others hypothesized its importance much earlier. Rogers and Freiberg (1994) distinguished between meaningless and superficial learning, to that of significant and experiential learning. They suggested that the elements necessary for this type of learning included personal and self-initiated involvement, ubiquitousness, and reflection. In other words, a learner must recognize the importance of the learning, take steps toward understanding, be aware of its universality and applicability, and be able to reflect on the learning experience. Kolb’s model of experiential learning was comprised of four stages including Concrete Experience-*feeling*, Reflective Observation-*watching*, Abstract Conceptualization-*thinking*, and Active Experimentation-*doing* (Illeris, 2018; Knowles et al., 2005; Kolb, 1984; McLeod, 2017; Sikkema & Sauerwein, 2015). Although a learner could enter the cycle at different points, for genuine learning to happen, all four of the stages must be progressed through. From this model, Kolb was able to examine, explain, and expand upon different learning styles.

Learning styles, or favored methods of learning, had been researched extensively throughout educational history. Knowles et al. (2005) postulated, “Learning styles refer to the broadest range of preferred modes and environments for learning” (p. 213). Kolb (1984) highlighted four learning styles, which included Divergent, Assimilative, Convergent, and Accommodative. The divergent learning style is situated between Concrete Experience and Reflective Observation on Kolb’s model, which indicated the learner is more oriented toward *feeling* and *watching*. These individuals tended to be

extroverted, inasmuch as they enjoyed working with others, being involved in-group discussions, and considering various viewpoints. Individuals with an assimilative orientation were positioned between Abstract Conceptualization and Reflective Observation, which corresponded to *thinking* and *watching*. Assimilators tended to approach new concepts objectively, take a more analytical approach to learning, and be very organized and thoughtful. The Convergent style was located between Abstract Conceptualization and Active Experimentation, corresponding to *thinking* and *doing*, respectively. Similar to assimilators, convergents were less concerned with people and developing interpersonal relationships, and more concerned with task completion, problem solving, and experimentation. Kolb's last learning style was the accommodators, individuals who favored *feeling* and *doing*, which he stationed between Concrete Experience and Active Experimentation. These learners were described as more hands-on individuals who like to experience and try new things. Less analytical than the two previous cohorts, accommodators tended to rely on intuition, personal experience, and experience of others (Kolb, 1984; McLeod, 2017; Rothwell, 2008; Sikkema & Sauerwein, 2015).

Although Kolb's contribution to educational research was immeasurable, he was not the only theorist. Peter Honey and Alan Mumford also developed a learning style questionnaire to help differentiate between learning preferences. Similar to Kolb, Honey and Mumford also identified four learning styles, which they labeled Activists, Reflectors, Theorists, and Pragmatists (Jepsen, Varhegyi, & Teo, 2015; Rosewell, 2005). Activists were described as individuals who enjoy new experiences and taking action without much forethought. These learners tended to be extroverted, enjoyed working in

groups, and valued social engagement in the classroom (Rosewell, 2005, p. 1).

Reflectors, similar to Kolb's assimilators, tended to be organized and contemplative and liked to evaluate a situation by watching. Jepsen, Varhegyi, and Teo (2015) reiterated, "Reflectors tend to be cautious and thoughtful people who like to consider all possible angles before making decisions and whose actions are based on observation and reflection" (p. 577). Theorists were also very thoughtful and analytical as well. In addition, theorists were most comfortable with objective inquiries and clear learning goals. Finally, pragmatists were comparable to convergers, insofar as both groups were oriented toward objectivity and technology, both enjoyed problem solving, and learning material with practical applications (Jepsen et al., 2015; Rosewell, 2005). Categorization efforts did not stop after Honey and Mumford either.

Further research uncovered Neil Fleming's VARK model, which acronymically represents visual, aural, reading/writing, and kinesthetic learning styles. Individuals that leaned toward a visual style preferred information presented in graphs, charts, illustrations or handouts. Aural learners on the other hand, absorbed information best when they hear it, as opposed to seeing it (Cherry, 2019; Medina, García, & Olguin, 2018). For an aural, or auditory learner, class lecture and discussion was preferred over simply reading the material. Sikkema and Sauerwein (2015) noted, "Visual and verbal information are coded differently and, when combined together in a learning environment, persist longer in memory than verbal only constructs" (p. 86). A combination of various types of resources was preferable to engage all learning styles. The reading/writing style is best accommodated when information was presented through text (Cherry, 2019; Medina et al., 2018). This type of learner will generally utilize the

textbook and usually take a lot of notes. The kinesthetic learners, “learn best by touching and doing, hands-on experience is important” (Cherry, 2018, para. 11). In practical applications, the method or methods chosen by a student will often times be dictated by the learning situation.

Whether discussing Kolb’s learning style inventory, Honey and Mumford’s learning style questionnaire, or Fleming’s learning style model, it was important to note that students do not just fall into one single category. Barry and Egan (2018) agreed:

Learning style assessments can be useful for the purpose of reflection on strengths and weaknesses, but it is not a fixed indicator of a person’s educational capabilities...learners need to be empowered to realize that their learning style is not a limiting factor in the ability to adapt to a variety of learning situations. (p.39)

Educators should be aware of these various learning styles, so that they are able engaged all students in the classroom. Just as variety is the spice of life, heterogeneity in lesson plans and course materials will help to keep the content interesting. One disadvantage to a traditional classroom was an inability for the educator to appeal to the various learning styles. Due to schedule limitations, an educator does not usually have an adequate amount of time to differentiate instruction, since there are many students within a class. Unfortunately, these temporal restrictions make it very difficult to account for the variations of learning styles within the classroom. Just as learning styles will impact engagement and classroom success, so too will teaching styles.

An analysis of teaching styles revealed a consensus that these practices can be categorized into either traditional or modern teaching methods. The former were often

times referred to as teacher-centered practices, while the latter were sometimes called learner- or student-centered methods. Conti (1990) defined teaching style as, “the distinct qualities displayed by a teacher that are persistent from situation to situation regardless of the content” (p.81). Teaching styles have also been described as authoritative, demonstrative, facilitative, and delegative (Gill, 2013). Authoritative and demonstrative were both teacher-centered styles insofar as both focused on the transmission of content from teacher to student using lecture, or other presentation methods, in which the students were viewed as passive recipients of information. The teacher speaks most of the time, students complete assignments chosen by the teacher, and the learning usually culminates with an assessment to measure competency (Cabrillana & Mayan, 2017; Conti, 1990; Dimitrios, Labros, Nikolaos, Maria, & Athanasios, 2013; Gill, 2013). The teaching of subjects such as accounting, mathematics, and statistics have generally been approached in this manner. Dimitrios, Labros, Nikolaos, Maria, and Athanasios (2013) agreed, “the teaching of accounting has been done, mostly, by conventional (traditional) or slightly sophisticated teacher-centered methods rather than modern student-oriented applications and techniques” (p.74). However, the use of learning management systems like McGraw-Hill’s Connect program help to give the student independent practice and immediate feedback on homework, making the experience a bit more learner-centered.

Facilitative and delegative educators certainly have a more learner-centered, modern approach in their teaching (Gill, 2013). Learner-centered classrooms encourage collaboration, self-direction, and independent critical thinking skills. Facilitators do this by creating an environment centered around collaboration, including class discussion and

group work, planning activities and assignments based on students' learning needs, requiring students to take responsibility for their own learning, providing flexibility in evaluation and assessment activities, and perhaps most importantly, developing an atmosphere of trust and mutual respect (Blumberg, 2016; Brookfield, 1991; Cabrillana & Mayan, 2017; Conti, 1990; Knowles et al., 2005; Knowles, 1975). In fact, in a study published in *Innovations in Higher Education* creating the supportive learning environment was the most recognized learning-centered practice (Blumberg, 2016, p.308). McCombs (2015) discussed the importance of learner-centered practices and offered guidance to educators when she reiterated:

Crucial aspects of climate in a learner-centered classroom include clarity around the purpose of each lesson, order within the classroom, a clear set of standards, fairness, opportunities for active participation, support to try new things and learn from mistakes, emotional and physical safety, interesting and stimulating learning, and a comfortable and attractive physical environment. (p.61)

Further, Stes and Van Petegem (2014) highlighted, "the more interaction stimulated, the more student-centered a teacher's teaching approach" (p.656). It was imperative for educators to create an atmosphere that encourages learning, irrespective of course delivery formats.

Just as learners possessed various learning styles, teachers also possessed multiple teaching styles. In practical applications, a teacher did not generally use only one teaching style, but a hybrid of methods depending on the learning situation. Highlighting some of the external variables that could affect learning, Brookfield (1991) stated,

“Learning is far too complex an activity for anyone to say with any real confidence that a particular approach is always likely to produce the most effective results with a particular category of learners” (p.122). Diversity in resources and assignments, as well as in teaching methods will help to ensure that no matter what learning or teaching styles were present in the classroom, all students were able to be engaged. Although Brookfield makes an excellent point about the complexities of learning, there were some best teaching practices that every educator can strive toward.

There were several best teaching practices that have been discussed in the literature, however this investigation highlighted teacher personality and attributes, collaboration and engagement in the classroom, and the creation of rich learning experiences. Teacher personality and other attributes were extremely important to student satisfaction in the classroom. Some of the attributes of a good educator were strong teaching abilities, genuine care for each student, stellar academic and business credentials, as well as classroom practice and experience (Jepsen et al., 2015; Raza & Irfan, 2018). Although teachers were formally assessed through periodic evaluations and performance reviews, students could be a tougher crowd than superiors. In a recent survey, students rated teacher personality as the most important factor considered when evaluating their instructor (Raza & Irfan, 2018). Students preferred an educator that possessed, “enthusiasm about teaching, about the specific discipline taught and about business generally” (Jepsen et al., 2015, p.578). Educators that were approachable to students and excited about the course content will have greater success in engaging students.

Collaboration and engagement, whether in a traditional classroom or a virtual one, were also paramount to student success and satisfaction. In addition to group work, class discussions and the sharing of ideas helped to foster cooperation and participation. The 2010 report by the U.S. Department of Education also showed that positive effects were greater when the course was instructor-directed and provided opportunities to work with others within the course (p. 15). Megeid (2014) reiterated, "It is essential to promote a collaborative culture in which students create and share knowledge rather than acquire it passively in isolation" (p.43). With adult learners, this was especially important, since most adults wanted to have an active role in the learning process, rather than just being lectured to. Active participation throughout a course was essential for a student to achieve the learning objectives (Delgado, 2015; Dimitrios et al., 2013; Pattaguan, 2016). Delgado agreed, "The best and most impactful classroom experience occurs when students are facilitated in an integrative and collaborative process that incorporates active learning practices" (p.230). Even though virtual courses usually required students to participate in discussions, face-to-face courses provided greater opportunities for social engagement and peer networking (Bramorski & Madan, 2016, p.33). Every educational experience may be different, however providing plenty of opportunities for interaction and allowing students to participate and share thoughts and ideas will undoubtedly increase engagement in the course.

The creation of rich learning experiences was a process that is unique for every educator. Accounting, like other disciplines, required ethical, logical and analytical individuals to be successful in higher education, and subsequently, in their careers. Speaking to the importance of a rich learning experience Kingry, Havard, Robinson, and

Islam (2015) reiterated, “the accounting profession must maintain high ethical and professional standards that require higher order critical thinking skills and superior interpersonal communication abilities” (p.54). Successful learning experiences should start with clarity. In any new learning situation, educators must be explicitly clear about the objectives, as well as providing assistance throughout the learning process (De Witte & Van Klaveren, 2014; Roksa et al., 2017). Roksa et al. (2017) agreed, “when students experience greater exposure to clear and organized instruction, they perceive their faculty as being more invested in their learning and development, and they report being more academically motivated and engaged in their studies” (p.296). To ensure the creation of rich learning experiences, the instructional design process should begin by first considering the end.

The Backward Design model instructed educators to start by identifying desired results, determining acceptable evidence, and then planning learning experiences and instruction (Pattaguan, 2016; Wiggins & McTighe, 2006). This design process helped to ensure students arrived at the learning outcomes expected of them throughout the term. Additionally, when planning curriculum or complex learning units, the Whole-Part-Whole model was useful for educators. In this model, the first section represented the new content that was introduced; the next section included the parts of the content logically or sequentially divided up for easier consumption. The last section brings the whole learning experience and its parts back together for complete understanding (Isenberg, 2007; Knowles et al., 2005). Dewey (1909) stated “that educators organize a new learning situation by dividing it “into its logical elements; then each should be arranged in series or classes according to logical formulae or general principles” (p.41).

Finally, good instructional design should include consideration of moving past surface level knowledge, to a deeper understanding and analysis. Bloom's Taxonomy was a well-known tool that helped educators plan learning experiences by thinking about the different levels of learning and evidence of achievement at each level (Morrison, 2009).

These best teaching practices were paramount, regardless of whether content was delivered in the classroom or in an online environment. Vygotsky (1978) stated, "the formation of new functional learning systems includes a process akin to that of nourishment in body growth, wherein at any particular time certain nutrients are digested and assimilated while others are rejected" (p.125). For educators it was imperative to aid in this digestion. Despite pushback from some, learner-centered practices were becoming more prevalent in higher education. Discussing the challenges of instructional changes Blumberg (2016) stated, "Peers describing how they adopted learning-centered teaching and, especially, evidence to show that their students are learning more can be compelling for the non-innovators" (p.313). Although there may be resistance from faculty to adopt these best teaching practices, as student achievement grows, so too will the interest, investment, and implementation of more modern teaching methods.

Technological Implications

Over the last few decades online learning and the use of technology has increased substantially. The development of these technological tools had been very beneficial for students and teachers alike, whether in a traditional classroom or an online course.

Reference books, such as encyclopedias, used to be necessary when conducting research, however nowadays individuals can find an enormous amount of information on the World Wide Web. The transfer of information and knowledge, good or bad, was easier

than ever. Much to the dismay of some students, certain skills in technology are now required to be successful in any class setting. As with the previous sections, traditional face-to-face and online courses were investigated to highlight the technological involvement of the two course modes. This examination included insights into hardware and software requirements, accessibility and support issues, technological skill requirements, and employer expectations.

Hardware and software component considerations were investigated first during the technological comparison of different course delivery modes. Hardware requirements such as personal computers, tablets, printers, webcams, etc., could all be necessary depending on the learning situation. Although online coursework generally required the use of more technology, face-to-face courses utilized technology in and out of the classroom as well. Mobile learning, which Sarrab, Al-Shihi, AL-Manthari, and Bourdoucen (2018) defined past as, “a learning paradigm that utilizes the advantages of mobility and wireless technologies in the learning and education process,” is a recent trend toward providing various learning platforms on mobile devices (p.635). Further, many textbook publishing companies were moving toward the production of online textbooks, or eBooks, which were more cost effective, but may not suitable for all students or subjects.

Software necessities could include, but are not limited to, Google Suite, Microsoft Word and PowerPoint, Java, Adobe Acrobat, Skype, YouTube, etc. Several learning management systems are now being utilized to organize course content and allow students access to resources, assignments, and grades. Although these hardware and software lists were not all inclusive, they do provide insight on basic technological

necessities. More specialized fields, such as medical and engineering, of course had more specialized software programs. Computer technology, the combination of these hardware and software components, “is used for a variety of activities including accessing health information, online banking, choosing a place to live, applying for a job, looking up government services, and taking classes” (Ryan & Lewis, 2017, p.1).

Whether students were enrolled in online courses or face-to-face courses, being acquainted with these hardware and software components, as well as developing these technological capabilities, were important to the continual learning situations that would occur throughout life after college.

Student access to technology and technical support issues should be taken into account as well. Even though most universities provided an ample number of computers for students to use on-campus, some students, especially those in a lower socioeconomic stratum, may not have the same access off-campus. According to a United States Census Bureau reported, only 52.5% ± .2 of households that have income of less than \$25,000 have a desktop or laptop. Furthermore, Internet subscriptions in that income group were even lower, at 51.7% ± .2 (Ryan & Lewis, 2017, p.4). As one would expect, the percentage of households that owned a computer had a positive relationship with income and education levels. Although many Americans took personal computers and internet access for granted “a digit divide between those who have and those who lack access to computers and the Internet persists” (Ryan & Lewis, 2017, p.10). The type of Internet connection, whether broadband, cable, or satellite, could potentially make a difference in accessibility as well. Megeid (2014) stated, “Connectivity limitations, and slow downloading creates frustration among learners and affects the ease of learning” (p.39).

While these types of technology issues may not be as prevalent in the classroom, they can certainly hinder the learning process in any type of course environment.

Technical support teams were an integral component of learning institutions, even more so in higher education, since the Information Technology department is servicing both employees and students. Higher education facilities generally utilized many different information and communication technologies, such as websites and mobile applications, to help ensure that all students had access to course content and assignments on various types of devices, whether it be a computer, phone, or tablet (Heiman, Fichten, Olenik-Shemesh, Keshet, & Jorgensen, 2017; Sarrab, Al-Shihi, AL-Manthari, & Bourdoucen, 2018). Technical support was necessary to ensure these programs operate smoothly, since interruptions in accessibility could negatively impact the students' learning experiences. Effective communication between technical support and end user, whether that be faculty, staff, or student was paramount when connectivity issues arose. Thompson and Seiler (2017) agreed "well-thought communication delivered through an appropriate channel can achieve positive results, the complete opposite can occur when ill-considered messages are being directed through ineffective routes" (p.217). Ultimately, information and communications technologies were only supportive of the learning process when the systems functioned properly. A protocol should be in place to help direct problems and issues to the correct individuals as they surfaced.

All students should possess certain competencies with respect to technology, regardless of their field of study. These skills must be continually exercised, updated, and built upon, since technological innovations increase at such a rapid pace. At minimum, students should be able to use word processing and presentation software,

have a working knowledge of the internet, as well as know how to upload, download, and save files (Megeid, 2014, p.47). Likewise, many students were now completing homework assignments and other school related tasks using mobile methods, such as cell phones and tablets, so it was important to be able to transfer this knowledge to various platforms. Additional coverage of mobile search strategies would be helpful, as more and more students conduct research through their mobile devices (Huang, Li, & Zhou, 2016, p.298). In a higher education setting, students should be given plenty of opportunities to learn, develop, and use these abilities.

Not only should students know how to use technology for various applications, they should also be able to disseminate between good and bad information. Many colleges require students to use quality resources in their research assignments, such as scholarly and peer-reviewed journals, so students should acquire these skills throughout their education, especially in a higher education setting. According to Huang, Li, and Zhou (2016) information literacy education were the “methods and techniques of information retrieval” with which, “students are taught how to use information devices including PC, the internet, smartphone; they also use other tools such as library catalogs, digital platforms, databases, search engines, to obtain information” (p.289). Inasmuch as individuals will have to distinguish between good and bad, fact and fiction, and true or false throughout their entire lives, it was imperative to gain these capabilities and competencies in an educational setting.

In addition to learning pursuits, many careers required employees to be technologically savvy as well, and for this reason was important for students to have plenty of access to these tools in the educational setting. Reviewing the importance of

technological skills development, Tucker (2012) stated, “If teachers are not providing students with opportunities to engage in conversations online, work with media to enhance communication, and learn to express themselves digitally, then we are not truly preparing them with the skill set needed for life” (p.2). It was imperative that instructors help their students develop aptitudinally, since these individuals will have to continue developing professionally and updating their skill sets throughout their careers. This was especially true for a more seasoned worker, as many technologies and software programs update and change so rapidly. To be relevant in the job market, all individuals, whether new to the job market or already established in a career, should continue to update their repertoire of knowledge and skills throughout their careers.

Job markets around the globe were more diverse than ever before in history. Some of those diversities include cultural, ideological, and generational differences. While there are many benefits of diversity in the workplace, the variations in thought processes, belief systems, and technical capabilities could be a source of contention (Bencsik, Horváth-Csikós, & Juhász, 2016, p.91). If managed properly, the blending of generations in the workplace provided a unique opportunity for these individuals to learn from each other. Mann and Henneberry (2014) reiterated, “the technology-savvy millennial generation is very knowledgeable about a variety of modern information and communication technologies such as web-based social networks, blogs, and streaming video commonly referred to as web 2.0 technologies” (p.2). In contrast, more experienced workers possessed important institutional knowledge, often referred to as institutional memory that is a vital component of managing an organization. Collaboration and knowledge sharing were central to diverse groups successfully co-

existing in the workplace together. All employees should strive to work together, to be lifelong learners, and to keep their skills updated by attending workshops, professional development seminars, training webinars, or even continuing in higher education pursuits.

By investigating hardware and software requirements, accessibility and support issues, skill requirements, and employer expectations, some of the technological implications of higher education have been highlighted. Innovations and increases in information technologies have made it possible for universities to improve all course formats, whether face-to-face or online, by incorporating more technology into the curriculum (Megeid, 2014, p.35). Kimmel et al. (2014) reiterated the importance of technology, “technology has provided the bridge to higher education for adult learners whose career schedules and caretaking roles had previously presented barriers to their enrollment” (p.75). Whether the discussion was about traditional or nontraditional students and coursework, the importance of technology in the classroom and the workplace was undeniable. Educators needed to be sure that students possess the skills needed to be successful in all future learning endeavors.

Summary

This literature review compared and contrasted traditional face-to-face education with online learning. To accomplish this the researcher explored the historical perspective of education, examined student attributes, compared learning climate and instructional methods, as well as highlighted the technological implications of education in our modern society. With the increased demand for online, or distance education courses, it was important for educators to not only understand what practices will

contribute to a successful learning environment, but also some of the barriers to these two different delivery modes. This in-depth investigation incorporated research in these areas from various fields and disciplines, with the goal of providing a well-rounded perspective of this educational issue.

Chapter Three-Research Design

Introduction

This mixed methods research study addressed the question of which delivery method, online or face-to-face, had a greater effect on student achievement, engagement, and satisfaction. Several fields of study have employed mixed methods research including education, social sciences, as well as various disciplines within the healthcare field (Cameron & Molina-Azorin, 2011, p. 286). In education, the availability of online learning programs was increasing exponentially, so it is imperative that educators understand any variations in achievement between course delivery modes. Traditionally in face-to-face classroom settings, students have had access to the teacher to ask questions, the opportunity to receive clarification on assignments, and the ability for social connections within the classroom. Since online classes are becoming more and more popular, these interactions between learner, instructor, content, and peers are changing. This study determined if student achievement, engagement, and satisfaction are different in face-to-face instruction versus online instruction.

Research Site

Data were collected from a private Midwest university in Saint Charles, Missouri. The university had enrollment of nearly 10,000 students, 6,856 undergraduates (69.3%) and 3,040 graduate students (30.7%). Based on demographic data from the incoming class of Fall 2017, female students represented 54.6% of the population and male students 45.4%. Additionally, the ethnical breakdown included White/Caucasian 72.9%, Black/African American 7.5%, Hispanic/Latino 5.9%, Asian/Pacific Islander 4.2%,

American Indian/Alaskan .03%, and Multiethnic/Other/Unknown 9.2% (Lindenwood, para. 2).

Research Questions and Hypotheses

Research Question 1. What are the attitudes and beliefs of teacher performance in online undergraduate accounting courses, compared to traditional undergraduate accounting courses?

Research Question 2. How do study participants feel about their engagement in online undergraduate accounting courses versus traditional undergraduate accounting courses?

Null Hypothesis 1. There is no difference in instructor course evaluation scores between undergraduate accounting students receiving face-to-face instruction and those receiving online instruction only.

Null Hypothesis 2. There is no difference in student engagement of undergraduate accounting students receiving face-to-face instruction and those receiving online instruction only.

Null Hypothesis 3. There is no difference in student satisfaction in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses.

Null Hypothesis 4. There is no difference in student completion rates in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses.

Null Hypothesis 5. There is no difference in final course grades of undergraduate accounting students receiving face-to-face instruction than those undergraduate accounting students receiving online instruction.

Null Hypothesis 6. There is no difference between student demographics and student grades in undergraduate accounting courses.

Null Hypothesis 6a. There is no difference between student age and student grades in undergraduate accounting courses.

Null Hypothesis 6b. There is no difference between student gender and student grades in undergraduate accounting courses.

Null Hypothesis 6c. There is no difference between student ethnicity and student grades in undergraduate accounting courses.

Independent and Dependent Variables

In this study, the independent variables were the course delivery modes, including both face-to-face undergraduate accounting courses and online undergraduate accounting courses, as well as student demographics such as age, gender, and ethnicity. Course delivery modes serve as the independent variables inasmuch as student attitudes and beliefs, course evaluation scores, student engagement and satisfaction, as well as student completion rates and final course grades are all dependent upon the course delivery mode. The aforementioned dependent variables were tested to determine if any significant differences or relationships existed in these areas between the traditional undergraduate accounting courses and online undergraduate accounting courses. In this study, the researcher did not manipulate independent or dependent variables, rather the student self-selected the type of course, online or face-to-face, for which to enroll.

Research Design and Methodology

The design process of this research study began by first establishing its purpose and theoretical drive, the typological designed utilized, as well as establishing the timing

of data collection and points of integration. While there can be many different purposes for choosing a mixed methods design, this research was centered around the primary purpose of triangulation of the results. Triangulation of the results not only helps to bring various perspectives of a research problem together, it also adds validity, credibility, and reliability to the study by building “evidence for a code or theme from several sources or from several individuals” (Creswell & Plano Clark, 2011, p. 212) Additionally, the researcher hoped the quantitative and qualitative results would prove to be complementary to each other, while also expanding on the understanding of the results by performing analyses of the two components (Schoonenboom & Johnson, 2017). Insofar as each type of data has their own inherent limitations, combining the two helped to address and compensate for where the other lacked. Onwuegbuzie, Johnson, and Collins (2011) referred to this as “weakness minimization” because of the ability of the one method’s advantages, to counter balance the other method’s weaknesses (p. 1261). Creswell and Plano Clark (2011) agreed, “the limitations of one method can be offset by the strengths of the other method, and the combination of quantitative and qualitative data provide a more complete understanding of the research problem than either approach by itself” (p. 8). With these purposes and reasons in the forefront, an overall theoretical drive could then be highlighted.

An investigation into theoretical drivers uncovered the notion of worldviews, or philosophical assumptions made by every researcher. These worldviews, or what are also known as paradigms, include Postpositivist, Constructivist, Participatory, and Pragmatist. A researcher’s worldview, or paradigmatic beliefs, determine the type of data being collected and the levels of inquiry being performed, as well as the category or

classification the research would fall into (Creswell & Plano Clark, 2011, pp. 38-41).

This research was developed through the lens of pragmatism and sought to find what works best to address the hypotheses and research questions. Johnson and Onwuegbuzie (2004) alluded to the benefits of a pragmatic approach as being a philosophical and methodological middle ground for researchers, possessing the ability to focus on practical approaches to inquiry to achieve study objectives and better answer research questions (p. 17). Creswell and Plano Clark (2011) defined pragmatism as having a “focus on the consequences of research, of the primary importance of the question asked rather than the methods, and on the use of multiple methods of data collection to inform the problems under study” (41). As such, the hypotheses and research questions were best addressed using both the qualitative and quantitative analyses.

Next, and perhaps most importantly, the typological design that best fit this research was a Convergent Parallel Design, also known as a Triangulation Design. Discussing the utilization of this design, Creswell and Plano Clark (2011) stated, “This design is used when the researcher wants to triangulate the methods by directly comparing and contrasting quantitative statistical results with qualitative findings for corroboration and validation purposes” (p. 77). Fraenkel, Wallen, and Hyun (2015) added the two paradigms could be employed to analyze the data, and through a cumulative integration of the results, the goal of greater understanding of the hypotheses and research questions can be achieved (p. 559). At first, the explanatory/exploratory designs were considered, but after further research into each of those frameworks, it was determined that both these designs do not allow for equality in the both data types. Although other designs such as embedded and transformative designs were considered,

the Convergent Parallel Design ensured that the quantitative and qualitative data are of equal importance, and that both are viewed as integral parts in the understanding of the research problem.

Finally, discussion on the timing of data collection and points of integration complete the mixed method framework. In this study, the two types of data will be collected and analyzed concurrently and independently of each other. Again, this design will ensure that both quantitative and qualitative data were given equal status and are of equal importance, denoted acronymically by QUAN + QUAL. (Johnson & Onwuegbuzie, 2004; Schoonenboom & Johnson, 2017). There are four main points of integration discussed in the literature including during the design phase, data collection, data analysis, and interpretation (Creswell & Plano Clark, 2011, pp. 66-68). For this study, the two main points of integration will be during the data analysis and interpretation functions. By planning and implementing more than one point of integration, the research was viewed as more complex. Schoonenboom and Johnson (2017) reiterated, “It is the responsibility of the researcher to create more complex designs when needed to answer his or her research question(s)” (p. 123). Using both quantitative and qualitative elements added credibility and context to the study, and additionally, the qualitative results assisted in illustrating the quantitative findings (Creswell & Plano Clark, 2011; Schoonenboom & Johnson, 2017). A procedural diagram adapted from Tobi and Kampen (2018) is shown in Figure 2 to help illustrate this design.

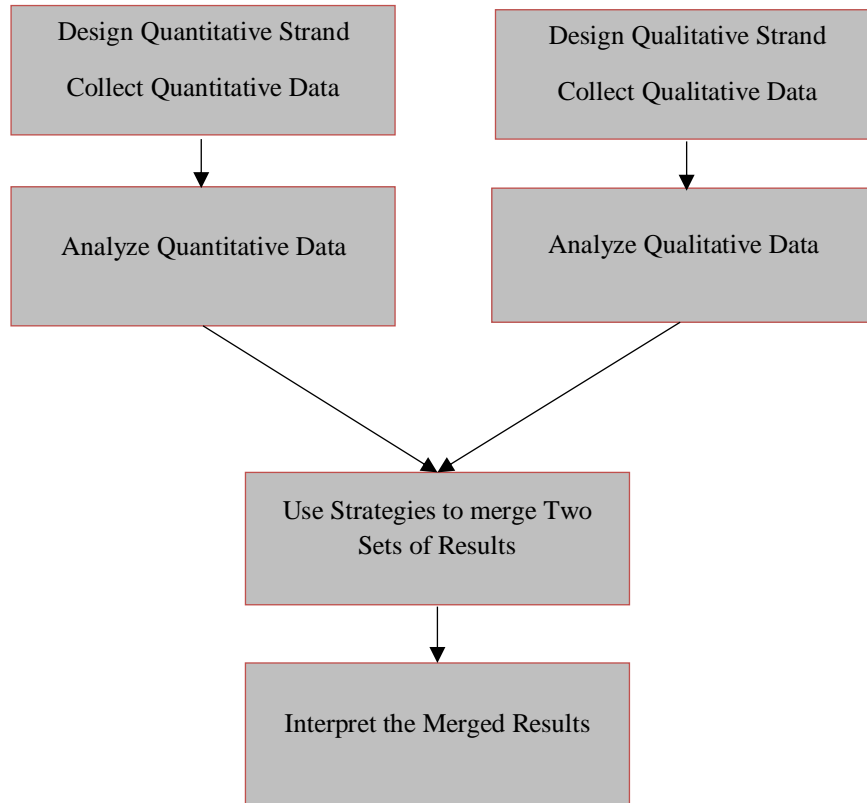


Figure 2. Procedural Diagram for Convergent Parallel Design

As shown in the diagram, in step one and two the quantitative and qualitative data were collected and analyzed independently of each other. The quantitative strand was comprised of data from course grades and student course evaluation scores, while the qualitative data consisted of student focus group and interview responses. Step 3 shows the first point in integration with the emergence of the results. The strategies that will be used to bring together the quantitative and qualitative data will include data reduction, data display, data transformation, data correlation, data comparison, and finally data integration (Creswell & Plano Clark, 2011, pp. 212-215). Lastly, step 4 illustrates the second point of integration with the interpretation of the merged results.

Instrumentation

For the collection of qualitative data, focus groups and personal interviews were employed. The focus group and personal interview questions are shown in Appendix A. These questions were organized to include inquiry into students' attitudes and beliefs about teaching, engagement, and course content. Fraenkel et al. (2015) stated, "the object is to get at what people really think about an issue or issues in a social context where participants can hear the views of others and consider their own views accordingly" (p. 455). For quantitative data collection, already existing course evaluations based on an attitude scale, also known as a Likert Scale, were analyzed. The student course evaluations collect information from students regarding their attitudes and beliefs of instructor performance and course content. There are nine questions relating to instructor performance and evaluation, seven questions relating to course content. For a full list of course evaluation questions see Appendix B. This survey was developed by university associates and overseen by the Office of Institutional Effectiveness.

Sampling Procedures

Quantitative and qualitative data were assembled from undergraduate courses that have both an online course section and a face-to-face course section taught by the same instructor. The inclusion of only online courses and face-to-face with the same teacher reduced the amount of variability in content, assignments, and exams between the two delivery modes. Using secondary data archived in EvaluationKit and CAMS learning management systems, in addition to analyzing focus group results and interview responses, this research compared both student achievement in terms of completion rates

and final grades, as well student attitudes and beliefs of teacher performance and engagement in the two different types of courses.

Sample selection for this research employed a hybrid of sampling procedures consisting of Cluster Random Sampling, Convenience Sampling, and Purposive Sampling. Fraenkel et al. (2015) stated, "Cluster random sampling is similar to simple random sampling except that groups rather than individuals are selected" (p. 97). In this research, these groups were comprised of undergraduate accounting courses that had a traditional course section, and an online course section, taught by the same instructor. The student course evaluation surveys from EvaluationKit, as well as student grade and demographic data were both selected through the use of Cluster Random Sampling. Focus group samples and interview participants were selected through the use of Convenience and Purposive Sampling (Bluman, 2015, p. 14; Fraenkel et al., 2015, p. 101). Focus group and interview participants were recruited through an email distributed to undergraduate accounting students in both a face-to-face undergraduate accounting course and an online undergraduate accounting course. Email respondents were then informed of study details and requirements and then allowed to participate if they agreed. According to Fraenkel et al. (2015), purposive sampling can be used by researchers to choose participants, based on their judgment and prior experience, that the researcher believed would provide the information that is needed (p. 101).

Participants' Demographics

The sample population of this research study consisted of secondary data from 400 students enrolled in undergraduate accounting courses. This data were extracted from 18 separate courses, consisting of nine face-to-face courses and nine online courses.

Demographic data of the sample participants, namely gender, age, and ethnicity are shown in Tables 1, 2, and 3 respectively. Demographic data for focus group and personal interviews were not collected as part of this investigation.

Table 1

Gender	n	F2F	Online	Percent (%)
Female	180	79	101	45
Male	218	119	99	54.5
Unknown	2	2		.5
Total	400			400

Table 2

Age	n	F2F	Online	Percent (%)
18-23	293	175	118	73.3
24 & over	107	25	82	26.7
Total	400			100

Table 3

Ethnicity	N	F2F	Online	Percent (%)
White	245	136	109	61.2
Black or African American	49	20	29	12.3
Hispanic	22	10	12	5.5
Asian	24	12	12	6
Two or More/Unknown	60	22	38	15
Total	400			100

Data Collection Procedures

Data collection began by first identifying undergraduate accounting courses that have face-to-face and online course offerings taught by the same instructor. These courses were selected from the 2016-2017, 2017-2018, and 2018-2019 school years. The researcher then obtained permission to use data from the Assistant Dean and Accounting Department Chair in the business division. Quantitative data consisted of both students'

grades and demographic data, as well as survey results from student course evaluations.

Course grades and demographic data were extracted from the CAMS learning management system and student course evaluation results were extracted from the EvaluationKit learning management system. The Office of Institutional Research washed the secondary data of any information that could potentially identify the study participants, including name and student identification number. Eichhorn and Matkin (2016) stated, “Any information that can be directly attributed to a student (name, email address, student I.D. number, or pattern of course interaction) must be isolated and protected” (p. 33). The researcher received data that had already been deidentified of any identifying information.

Qualitative data were collected through the administration of one focus group and four interviews. During the focus group and personal interviews, the researcher took notes, as well as used a voice recorder to document all the interview sessions. The recordings helped the researcher revisit the focus group discussion and personal interviews for analyzation purposes. Focus groups were chosen because of their ability to provide benefits through both interviewing and observing. Maxwell (2013) discussed the strengths of both interviews and observations together, “Although interviewing is often an efficient and valid way of understanding someone’s perspective, observation can enable you to draw inferences about this perspective that you couldn’t obtain by relying exclusively on interview data” (p. 103). One of the main benefits of the focus group and the personal interviews was the ability of the researcher to interact with the study participants directly, which allowed the researcher to employ follow-up questions during

the discussion, and make judgements based on the participants' verbal cues, body language and behaviors.

Data Analysis

Data analysis in this research study was performed on three separate levels. The first level included analyzing the quantitative and qualitative data separately, the second level during the comparison and conversion function, and the third level was the interpretation, after evaluation and transformation were complete (Creswell & Plano Clark, 2011, p. 221). The researcher received anonymous data that had been washed of all identifying information. The analyzation of quantitative data began by utilizing some descriptive statistical procedures including calculating the means, standard deviations, and sample variances. A t-Test of independent means was then employed to test each applicable hypothesis. By first establishing the appropriate level of significance, and then a subsequent p-value, the data were tested to determine if any significant differences exist between the face-to-face undergraduate accounting courses and the online undergraduate accounting courses. Inferential statistical procedures including a t-Test of Independent Means, a z-Test of Proportions, an analysis of variance (ANOVA), and *Chi-Square* tests measured if any differences existed between the face-to-face and online undergraduate accounting courses (Bluman, 2015). In addition, data were analyzed per semester as well as aggregately for overall comparison and interpretation.

In order to analyze qualitative data, focus group and interview responses were recorded and transcribed for analyses. During this process the researcher repeatedly read and listened to the recordings while taking notes, this helped to, “develop tentative ideas about categories and relationships” concerning the data (Maxwell, 2013, p. 105). Coding

strategies were then employed to assist in categorizing and labeling the data. These responses were then imported and analyzed using NVivo software. NVivo assisted in coding using string methodology for common words related to the two separate course instructional modes (i.e. instruction, curriculum, engagement, satisfaction). In discussing the benefits of this type of software in qualitative research, Creswell and Plano Clark (2011) reiterated:

Qualitative computer software programs can store text documents for analysis; enable the researcher to block and label text segments with codes so that they can be easily retrieved; organize codes into a visual, making it possible to diagram and see relationship among them; and search for segments of text that contain multiple codes (p. 208).

The researcher then aggregated the results for interpretation and searched for any emergent themes using categorizing and connecting strategies (Maxwell, 2013). To aid in the analyses the researcher also employed a matrix for organization. Discussing the benefits and purpose of a matrix, Maxwell (2013) stated its, “a tool for displaying and further developing the results of a categorizing analysis of your data,” the matrix, “is structured in terms of your main research questions, categories, or themes and the data that address and support these” (p. 108). Quantitative and qualitative results were analyzed separately, with a culminative integration of the results, which determined any convergence, divergence, or emergence of themes throughout the analyses.

Reflexivity

Many educational researchers choose a topic to study that they have a genuine interest in. Whether it is a kindergarten teacher researching how to increase early literacy

skills, or a college instructor studying various learning styles, best teaching practices are revealed through evidence-based inquiry and examination. This study into delivery modes of undergraduate accounting courses is no exception. The researcher chose this topic out of a genuine interest as to what works best for students in face-to-face and online undergraduate accounting courses. The researcher earned her Master of Accountancy degree and began teaching undergraduate accounting courses in 2011. With eight years of teaching experience under her belt, she decided to pursue her doctoral degree, not only to further her career in academia, but also to learn what works best in education and how she could provide the best learning experiences for her students.

Although educational researchers have some flexibility in the research, they choose to pursue, “the choice of what to study is a privilege, but also a responsibility” (Ferreira, 2017, p. 523). With these words in mind, the researcher sought to develop a methodological framework to achieve the aforementioned objectives, give guidance to other accounting instructors, as well as add to the current literature. Even though quantitative research tends to be more objective and less susceptible to biases, qualitative inquiries generally, require subjective interpretation of the results. Nabiha (2009) agreed, “Qualitative research deals in reality construction” (p. 82). As such, the researcher’s connections to the accounting discipline helped to interpret and construct meaning from interviewees’ responses. These subjective interpretations were based partly on the researcher’s reflexivity and the inherent biases that exist because of the connection to the topic being studied.

Reflexivity in and of itself is a subjective concept and can mean different things based on the researcher’s or the reader’s interpretation. Nabiha (2009) defined reflexivity

as, “the researcher’s values, background, experiences, and social identity that shape the research process...reflexivity serves as an impetus for various ways of asking questions about knowledge and knowledge construction” (pp. 84-85). Further, Medico and Santiago-Delefosse (2014) explained, “The explicit objective of a reflexive position is to establish more clearly the researcher’s reality vis-à-vis the object of research and to increase the transparency of analysis development” (p. 352). In this way, reflexivity added to the creditability of the study because the researcher possessed insider knowledge about the teaching of accounting and the accounting discipline, and as such, was able to probe interviewees more in-depth and construct meaning from their responses.

Summary

This research study was started to address the question of which delivery method, online or face-to-face, has a greater effect on student achievement. Data were collected from a private Midwest university in Saint Charles, Missouri. A mixed methods design was utilized, which combined both quantitative and qualitative data. Quantitative data were collected from final grades for each course, as well student course evaluation survey results. Qualitative data came from student responses to focus group questions and interview responses. This research study sampled participants from an online undergraduate accounting course section, as well as students from a face-to-face undergraduate accounting section taught by the same instructor. The sample was extracted from courses meeting this criterion from Fall 2016 to Summer 2019. Data were analyzed per semester as well as aggregately for comparison. The statistical procedures that were employed include descriptive and inferential analyses, which were performed

on both the qualitative and quantitative data sets. The results of these analyses are shown in Chapter Four.

Chapter Four

Overview

The purpose of this mixed methods research study was to investigate the differences, if any, in student achievement and satisfaction between traditional and online undergraduate accounting courses. Although there have been many studies that have addressed the differences in delivery modes in various disciplines, limited research existed from higher education accounting courses. As such, this research extended the existing literature by focusing on the accounting field in particular. Both primary and secondary data were collected and analyzed in this study. Primary data were collected via interviews, course evaluation surveys, and focus group responses. Secondary grade and demographic data were collected from both face-to-face and online undergraduate accounting courses over a span of three academic years. The former was coded and analyzed to determine students' attitudes and beliefs regarding their satisfaction and engagement in their undergraduate accounting courses, whereas the latter was investigated to determine any differences in achievement, as measured by final grades, in the two separate delivery modes.

Research Questions and Hypotheses

For the purpose of this study, the researcher established two research questions that were both related to student satisfaction in undergraduate accounting courses. The researcher gauged student satisfaction by analyzing qualitative and quantitative data related to teacher performance and student engagement. In addition, six hypotheses statements were developed to test any differences or relationships in student satisfaction,

engagement, and achievement in the face-to-face undergraduate accounting courses, compared to the online undergraduate accounting courses.

Research Question 1. What are the attitudes and beliefs of teacher performance in online undergraduate accounting courses, compared to traditional undergraduate accounting courses?

Research Question 2. How do study participants feel about their engagement in online undergraduate accounting courses versus traditional undergraduate accounting courses?

Null Hypothesis 1. There is no difference in instructor course evaluation scores between undergraduate accounting students receiving face-to-face instruction and those receiving online instruction only.

Null Hypothesis 2. There is no difference in student engagement of undergraduate accounting students receiving face-to-face instruction and those receiving online instruction only.

Null Hypothesis 3. There is no difference in student satisfaction in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses.

Null Hypothesis 4. There is no difference in student completion rates in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses.

Null Hypothesis 5. There is no difference in final course grades of undergraduate accounting students receiving face-to-face instruction than those undergraduate accounting students receiving online instruction.

Null Hypothesis 6. There is no difference between student demographics and student grades in undergraduate accounting courses.

Null Hypothesis 6a. There is no difference between student age and student grades in undergraduate accounting courses.

Null Hypothesis 6b. There is no difference between student gender and student grades in undergraduate accounting courses.

Null Hypothesis 6c. There is no difference between student ethnicity and student grades in undergraduate accounting courses.

Demographic Data

The sample population of this research study consisted of secondary data from 400 students enrolled in undergraduate accounting courses. This data were extracted from 18 separate courses, consisting of nine face-to-face courses and nine online courses. Demographic data of the sample participants, namely gender, age, and ethnicity are shown in Tables 1, 2, and 3 respectively. In addition to the demographic data presented, the secondary data sample was comprised of students from four major continents, including North and South America, Europe, and Asia. Demographic data for focus group and personal interviews were not collected as part of this investigation.

Table 1

<i>Gender of Study Participants</i>				
Gender	n	F2F	Online	Percent (%)
Female	180	79	101	45
Male	218	119	99	54.5
Unknown	2	2		.5
Total	400			400

Table 2

Age	n	F2F	Online	Percent (%)
18-23	293	175	118	73.3
24 & over	107	25	82	26.7
Total	400			100

Table 3

Ethnicity	N	F2F	Online	Percent (%)
White	245	136	109	61.2
Black or African American	49	20	29	12.3
Hispanic	22	10	12	5.5
Asian	24	12	12	6
Two or More/Unknown	60	22	38	15
Total	400			100

Quantitative Data

Quantitative data consisted of both students' grades and demographic data, as well as survey results from student course evaluations. Course grades, demographic data, and student course evaluation results were all extracted from the CAMS learning management system and EvaluationKit. Individuals within the Office of Institutional Research washed these data of any information that could potentially identify the study participants, including name and student identification number. The student course evaluations collect information from students regarding their attitudes and beliefs of instructor performance and course content. There are nine questions relating to instructor performance and evaluation, seven questions relating to course content. For a full list of course evaluation questions see Appendix B. This survey was developed by university associates and is overseen by the Office of Institutional Effectiveness.

The analyzation of quantitative data began by utilizing some descriptive statistical procedures including calculating the means, standard deviations, and sample variances.

A t-Test of independent means or a z-Test of proportions were then employed to test each applicable hypothesis. By first establishing the appropriate level of significance, and then a subsequent critical value, the data were tested to determine if any significant differences exist between the face-to-face undergraduate accounting courses and the online undergraduate accounting courses. Inferential statistical procedures continued for Null Hypothesis 6, where the Pearson product moment correlation coefficient (PPMC), analysis of variance (ANOVA), and *Chi-Square* tests measured if any relationships or correlations existed among the variables.

Results

Null Hypothesis 1. There is no difference in instructor course evaluation scores between undergraduate accounting students receiving face-to-face instruction and those receiving online instruction only.

To address the first hypothesis the researcher completed an in-depth statistical analysis of course evaluation results. Course evaluations were essentially end-of-course surveys that collected information from students regarding their attitudes and beliefs of instructor performance and course content. These course evaluations were optional for a student to complete, and generally there were reminder messages to complete the survey every time a student logged into their learning management system. There were nine questions relating to instructor performance and evaluation, seven questions relating to course content. The evaluations use a 5-point Likert scale, where 0=Not Applicable, 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree. This data consisted of a

sample population of 268 course evaluations, 136 from face-to-face undergraduate accounting courses and 132 from online undergraduate accounting classes.

The researcher began by removing any incomplete survey responses, which resulted in a final count of 264 course evaluation surveys. Analyzation of quantitative data began by utilizing statistical procedures including calculating the means, standard deviations, and sample variances for all 264 course evaluations. A t-Test of independent means was then employed to test each survey. By first establishing the appropriate level of significance, and then a subsequent critical value, the data were tested to determine if any significant differences exist between the face-to-face undergraduate accounting courses and the online undergraduate accounting courses.

The researcher conducted a t-Test of two independent means to see if the overall course evaluation scores for face-to-face undergraduate accounting courses was different from those of the online undergraduate accounting courses. A preliminary test of variances revealed that the variances were equal. The analysis revealed that the course evaluation scores for the face to face courses ($M = 3.53$, $SD = 0.33$) were not significantly different from those of online courses ($M = 3.46$, $SD = 0.23$); $t(17) = 0.59$, $p = .564$. The researcher failed to reject the null hypothesis and concluded that the course evaluation scores for the face-to-face courses and the online courses were not significantly different. These results are summarized in Table 4.

Table 4

Overall Course Evaluation Statistical Summary

	<u>F2F</u>		<u>Online</u>		d.f.	t	P	Sig?
	Mean	SD	Mean	SD				
Aggregate Results								
Hypothesis 1	3.53	.33	3.46	.23	17	.59	.564	No

Null Hypothesis 2. There is no difference in student engagement of undergraduate accounting students receiving face-to-face instruction and those receiving online instruction only.

This hypothesis was examined through the analyzation of applicable course evaluation data. There are five questions on the course evaluations that directly reference and relate to engagement, these are shown in Table 5.

Table 5

Course Evaluation Engagement Questions

Q4. The professor/instructor made learning interesting and engaging.

Q12. The classroom sessions contributed to my understanding and engagement with the course content.

Q13. The online learning resources, such as presentations, graphics, audio, visual, website(s), or electronic resources contributed to my understanding and engagement with the course content.

Q14. The textbook contributed to my understanding and engagement with the course content.

Q15. The course added to my knowledge of the topic in a significant manner.

The researcher conducted a t-Test of two independent means to see if the student engagement from applicable course evaluation scores for the face-to-face undergraduate accounting courses was different from those of the online undergraduate accounting courses. A preliminary test of variances revealed that the variances were equal. The analysis revealed that the course evaluation scores for the face to face courses ($M = 3.5$, $SD = 0.34$) were not significantly different from those of online courses ($M = 3.41$, $SD = 0.24$); $t(17) = 0.65$, $p = .526$. The researcher failed to reject the null hypothesis and

concluded that the student engagement from applicable course evaluation scores for the face-to-face courses and the online courses were not significantly different. These results are displayed in Table 6.

Table 6

<i>Course Evaluation Engagement Summary</i>								
Aggregate Results	F2F		Online		d.f.	t	p	Sig?
	Mean	SD	Mean	SD				
Hypothesis 2	3.5	.34	3.41	.24	17	.65	.526	No

Null Hypothesis 3. There is no difference in student satisfaction in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses.

Data analysis of applicable course evaluation questions determined if any difference existed in student satisfaction between face-to-face and online undergraduate accounting courses. There are several ways educators can increase student satisfaction in a course such as creating a stimulating learning atmosphere, which relates to course evaluation questions 1, 2, 4, 5, 6, 11, 12, and 13. Including students in the learning process is also important and corresponds to course evaluation questions 1, 2, 5, 6, 11, 12, 13, 14, and 15. Supplying feedback regularly to students also contributed to student satisfaction and is measured in course evaluation question 3. A fourth factor is delivering challenging and engaging coursework, which is represented by course evaluations questions 7, 12, 13, 14, and 15. Building a trustful and respectful relationship is another element of student satisfaction, the researcher examined course evaluations questions 8 and 9 for this metric. Finally, teaching course fundamentals not only increases satisfaction, but overall achievement and success in the classroom. Course evaluation questions applicable to teaching fundamentals included 13, 14, and 15 (Brocato et al.,

2015, p. 44). The applicable questions related to student satisfaction are shown in Table 7.

Table 7

<i>Course Evaluation Satisfaction Questions</i>
Q1. The professor/instructor clearly communicated the course objectives.
Q2. The professor/instructor clearly communicated how the course objectives would be assessed.
Q3. The professor/instructor provided useful feedback about my work and/or participation.
Q4. The professor/instructor made learning interesting and engaging.
Q5. The professor/instructor taught the course in an organized way.
Q6. The professor/instructor provided clear explanations, examples, and/or illustrations.
Q7. The professor/instructor helped me develop problem-solving and critical thinking skills.
Q8. The professor/instructor appeared to have a strong knowledge of the course content.
Q9. The professor/instructor was accessible to students.
Q11. The course calendar was clear.
Q12. The classroom sessions contributed to my understanding and engagement with the course content.
Q13. The online learning resources, such as presentations, graphics, audio, visual, website(s), or electronic resources contributed to my understanding and engagement with the course content.
Q14. The textbook contributed to my understanding and engagement with the course content.
Q15. The course added to my knowledge of the topic in a significant manner.

The researcher conducted a t-Test of two independent means to see if the student satisfaction from applicable course evaluation scores for the face-to-face undergraduate accounting courses was different from those of the online undergraduate accounting courses. A preliminary test of variances revealed that the variances were equal. The analysis revealed that the course evaluation scores for the face to face courses ($M = 3.54$, $SD = 0.33$) were not significantly different from those of online courses ($M = 3.47$, $SD = 0.23$); $t(17) = 0.61$, $p = .552$. The researcher failed to reject the null hypothesis and

concluded that student satisfaction from applicable course evaluation scores for the face-to-face courses and the online courses were not significantly different. These results are displayed in Table 8.

Table 8

<i>Course Evaluation Satisfaction Summary</i>	<u>F2F</u>		<u>Online</u>		d.f.	t	P	Sig?
	Mean	SD	Mean	SD				
Hypothesis 3	3.54	.33	3.47	.23	17	.61	.552	No

Additionally, to answer this null hypothesis the researcher conducted a two-sample test of proportions to determine if student recommendation rates were different in face-to-face undergraduate accounting courses to the online undergraduate accounting courses. Although many of the questions were organized in a Likert Scale format, one question required students to type in a response. Of the sample of face-to-face course evaluation surveys, 81.5% explicitly stated they would recommend their professor, while in the online format 76.9% explicitly stated they would recommend their professor. The proportional analysis revealed that the student recommendation rates of students enrolled in the face-to-face courses (n = 135, 81.5%) was not significantly different from that of the online courses (n = 130, 76.9%); $z = .92$, $p = .356$. The researcher concluded that the student recommendation rates of the two course delivery formats programs were not significantly different.

Null Hypothesis 4. There is no difference in student completion rates in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses.

Data analysis for student completion rates began by identifying the number of students who received a passing grade of A, B, C, or D, versus the number of students

that did not complete the course. Noncompletion was determined by a grade of AF (attendance failure), F, or W (withdraw). The results are presented in Table 9.

Table 9

<i>Course Completion Rates</i>			
<u>Delivery Mode</u>	<u>Completion</u>	<u>Noncompletion</u>	<u>Totals</u>
	(%)	(%)	
Traditional (F2F)	189	11	200
	94.5%	5.5%	
Online	175	25	200
	87.5%	12.5%	
Totals	364	36	400
	91%	9%	

The researcher conducted a two-sample test of proportions to determine if student completion rates were different in the face-to-face undergraduate accounting courses to the online undergraduate accounting courses. The analysis revealed that the student completion rates of students enrolled in the face-to-face courses ($n = 189$, 94.5%) was significantly different from that of the online courses ($n = 175$, 87.5%); $z = 2.45$, $p = .014$. The researcher rejected the null hypothesis and concluded that the student completion rates of the two course delivery formats programs were significantly different.

Null Hypothesis 5. There is no difference in final course grades of undergraduate accounting students receiving face-to-face instruction than those undergraduate accounting students receiving online instruction.

Analysis of grade data determined if any difference existed between face-to-face and online undergraduate accounting courses. The researcher first segregated these data into their respective grade categories, namely A, B, C, D, and F. Grade data are presented in Table 10.

Table 10

Nominal Final Grade Data

<u>Course Mode</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>F</u>	Totals
F2F	88	66	30	5	5	194
Online	64	70	34	7	18	193
Totals	152	136	64	12	23	387

A chi-square analysis was then employed to determine if the distribution of final course grades was different in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses. The analysis revealed that there was a significant difference in grade distribution between the face-to-face and online courses; $\chi^2(4, n = 387) = 11.84, p = .019$. The researcher rejected the null hypothesis and concluded that final course grades were distributed differently between face-to-face and online undergraduate accounting courses.

Based on the same data shown in Table 10, the researcher conducted a Goodness of Fit test determine if the distribution of final course grades is different in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses. The analysis revealed that there was a significant difference in grade distribution between the face-to-face and online courses; $\chi^2(4, n = 387) = 19.66, p = .019$. Once again, the researcher rejected the null hypothesis and concluded that final course grades were distributed differently between face-to-face and online undergraduate accounting courses.

The researcher investigated these results further and determined that the statistically significant differences existed between the distribution of As and Fs in the face-to-face courses compared to the online courses. The proportion of As and Fs in each course delivery mode were analyzed. The researcher conducted a two-sample test of proportions to determine if the number of students that received a grade of A is different

in face-to-face undergraduate accounting courses compared to the number of As awarded in the online undergraduate accounting courses. The analysis revealed that the number of As awarded in the face-to-face courses ($n = 88, 45.4\%$) was significantly different from that of the online courses ($n = 64, 33.2\%$); $z = 2.46, p = .014$. Similarly, the researcher conducted a two-sample test of proportions to determine if the number of students that received a grade of F is different in face-to-face undergraduate accounting courses compared to the number of Fs received in the online undergraduate accounting courses. The analysis revealed that the number of Fs received in the face-to-face courses ($n = 5, 2.6\%$) was significantly different from that of the online courses ($n = 18, 9.3\%$); $z = 2.79, p = .005$. These proportional analyses helped to highlight where the significant grade distribution differences in the chi-square analyses stemmed from.

Finally, to ensure the null hypothesis was investigated every potential angle, the researcher conducted a t-Test of two means to determine if grade points awarded in the face-to-face undergraduate accounting courses were different from those awarded in online undergraduate accounting courses. A preliminary test of variances revealed that the variances were not equal. The analysis revealed that the grade points awarded in face-to-face courses ($M = 3.17, SD = 0.96$) were significantly different than those in the online courses ($M = 2.80, SD = 1.21$); $t(192) = 3.31, p = .001$. The researcher rejected the null hypothesis and concluded that the grade points awarded in face-to-face courses was significantly different than those awarded in the online courses. These results are displayed in Table 11.

Table 11

Final GPA Statistical Summary

	<u>F2F</u>		<u>Online</u>		d.f.	t	p	Sig?
	Mean	SD	Mean	SD				
Aggregate Results								
Hypothesis 3	3.17	.96	2.80	1.21	192	3.308	.001	Yes

Null Hypothesis 6

Null Hypothesis 6a. There is no difference between student age and student grades in undergraduate accounting courses.

Analysis of grade data in relation to the student age demographic examined if any significant differences existed between different age groups. The researcher conducted an Analysis of Variance (ANOVA) to determine whether the final grade points awarded for the four age groups were the same. The sample sizes, means, and variances for each group are shown in Table 12. As displayed in Table 12, these initial calculations revealed a considerably lower mean in Group 2, compared to all other age groups.

Table 12

Statistical Summary of Each Group

<u>Age Groups</u>	<u>N</u>	<u>Mean</u>	<u>Variance</u>
Group 1 18 to 22 years	246	3.10	1.06
Group 2 23 to 27 years	92	2.61	1.54
Group 3 28 to 32 years	20	3.20	1.12
Group 4 33 & above	29	3.10	1.17

A confidence level of 95% determined whether to reject the null hypothesis. The overall ANOVA summary of statistical means and variance levels are shown in Table 13. This analysis showed a statistically significant difference between the age groups. With the level of significance $\alpha = .05$, and the p -value of .03, the researcher rejected the null hypothesis and concluded that there is a difference final grade points awarded based on age.

Table 13

ANOVA Summary Results for Age Groups

	Sum of Squares	d.f.	Mean Square	F	p-value	F Critical
Between Groups	17.474	3	5.825	3.044	.03	2.643
Within Groups	453.461	237	1.913			

Additional post hoc Tukey analysis revealed that the mean for Group 2 was significantly lower than all other age groups. Again, this supported the researcher's decision to reject the null hypothesis, as there is enough evidence to support a difference final grade points awarded based on the age groups. The Tukey results are shown in Table 14.

Table 14

Tukey Statistical Results

Age Groups	Mean	Difference from Group 1	Difference from Group 2	Difference from Group 3
Group 1 18 to 22 years	3.10			
Group 2 23 to 27 years	2.61	.489*		
Group 3 28 to 32 years	3.20	.102	.591*	
Group 4 33 & above	3.10	.006	.495*	.097

Note. Yardstick = .3201, * $p < .05$

Null Hypothesis 6b. There is no difference between student gender and student grades in undergraduate accounting courses.

Analysis of grade data in relation to the student gender examined if any significant differences existed between different genders. For the purposes of this study, the researcher only considered the male and female genders, any blanks or nonresponses were excluded from the analysis. The researcher conducted a t-Test of two independent means to see if the final grade points awarded to males in the undergraduate accounting courses were different from those awarded to females in undergraduate accounting

courses. A preliminary test of variances revealed that the variances were equal. The analysis revealed that the final grade points by males ($M = 2.97$, $SD = 1.11$) were not significantly different from those earned by females ($M = 3$, $SD = 1.10$); $t(383) = 0.25$, $p = .802$. The researcher failed to reject the null hypothesis and concluded that final grade awarded to males and females were not significantly different. These results are displayed in Table 15.

Table 15

<i>Final Grade Points by Gender</i>								
	<u>Male</u>		<u>Female</u>		d.f.	t	p	Sig?
	Mean	SD	Mean	SD				
F2F and Online Aggregate Results	2.97	1.11	3	1.10	383	.251	.802	No

Null Hypothesis 6c. There is no difference between student ethnicity and student grades in undergraduate accounting courses.

Analysis of grade data in relation to the student ethnicity demographic examined if any significant differences existed between different ethnic groups. The researcher conducted an Analysis of Variance (ANOVA) to determine whether the final grade points awarded for the five ethnic groups were the same. The sample sizes, means, and variances for each group are shown in Table 16. As displayed in Table 16, these initial calculations revealed a considerably lower mean in Group 2, compared to all other ethnic groups.

Table 16

Statistical Summary by Ethnical Group

<u>Ethnical Groups</u>	<u>N</u>	<u>Mean</u>	<u>Variance</u>
Group 1 White	240	3.10	.93
Group 2 Black/African American	48	2.50	1.66
Group 3 Hispanic	21	3.14	1.53
Group 4 Asian	23	3.30	1.04
Group 5 Other/Unknown	25	3.28	.63

A confidence level of 95% determined whether to reject the null hypothesis. The overall ANOVA summary of statistical means and variance levels are shown in Table 17. This analysis showed a statistically significant difference between the ethnical groups. With the level of significance $\alpha = .05$, and the p -value of .038, the researcher rejected the null hypothesis and concluded that there is a difference final grade points earned based on ethnicity.

Table 17

ANOVA Summary Results for Ethnical Groups

	Sum of Squares	d.f.	Mean Square	F	p -value	F Critical
Between Groups	18.006	4	4.502	2.584	.038	2.414
Within Groups	369.277	212	1.742			

Additional post hoc Tukey analysis revealed that the mean for Group 2 was significantly lower than Group 1, Group 3, and Group 4. Again, this supported the researcher's decision to reject the null hypothesis, as there is enough evidence to support a difference final grade points earned by ethnical groups. The Tukey results are shown in Table 18.

Table 18

Tukey Statistical Results-Ethnicity

Ethnic Groups	Mean	Diff from Group 1	Diff from Group 2	Diff from Group 3	Diff from Group 4
Group 1 White	3.10				
Group 2 Black/African American	2.50	.596*			
Group 3 Hispanic	3.14	.047	.643*		
Group 4 Asian	3.30	.209	.804*	.162	
Group 5 Other/Unknown	3.28	.184	.78	.137	.024

Note. *Yardstick* = .3288, * $p < .05$

Qualitative Data

The researcher collected qualitative data from student responses to focus group questions, interview questions, as well course evaluation survey responses. In order to analyze qualitative data, focus group and interview responses were recorded and transcribed verbatim for evaluation. During this process the researcher repeatedly listened and re-listened to the recordings while taking notes to categorize information and highlight code words established a priori, namely content, experience, engagement, and satisfaction. Transcriptions were then read and reread to highlight any other repetitive words or phrases within the text. Coding strategies and the use of a matrix for organization, helped to organize, categorize, and conceptualize the data. Additionally, these responses were then imported and analyzed using NVivo software. NVivo assisted in coding using string methodology for common ideas and repeated responses related to the two separate course instructional modes. The use of nodes in the NVivo program which represent themes, concepts, or ideas within the data further assisted the researcher in visualizing the most referenced ideas and themes. The researcher then aggregated the results for interpretation and highlighted the emergent themes. These analyses revealed

ten themes that emerged from the focus group and interview responses, these are shown in Table 19 and are further explored in the subsequent paragraphs.

Table 19

<i>Emerging Themes</i>	
Effective Teaching	Real-world Application
Communication	Self-Directed/Self-Paced
Content Coverage	Convenience
Feedback	Technology Issues
Groupwork	Varying Perspectives/Experiences

Focus Group and Personal Interview Participants

Although demographic data were not collected on focus group and personal interview respondents, during the interview process the researcher determined the type of course, whether online or face-to-face, for which the respondents were enrolled and also the semester in which the course was taken. To maintain anonymity, the participants' names were not used in the study, but rather each was identified by a letter. Participant A and B were both enrolled in an online undergraduate accounting course during the Spring Semester 2019. Likewise, Participant C was enrolled in an online undergraduate accounting course, but during the Summer Semester 2019. Participant D was enrolled in a face-to-face undergraduate accounting course during the Spring Semester 2019. Conversely, Participant E was enrolled in an online undergraduate accounting course during the Summer Semester 2019. Finally, Participant F was enrolled in a face-to-face undergraduate accounting course during the Spring Semester 2019.

Research Question 1. What are the attitudes and beliefs of teacher performance in online undergraduate accounting courses, compared to traditional undergraduate accounting courses?

The researcher investigated the first research question by analyzing student responses to interview and focus group questions, as well as the applicable opened ended question on the student course evaluation survey. Although the researcher established a few code words prior to the study, the compilation of data represented in the interview and focus group responses expanded on these ideas and concepts. Of the 10 themes that emerged during the aforementioned analyses, four were applicable to teacher performance including Effective Teaching, Communication, Content Coverage, and Feedback. This thematic analysis served as the outline in the presentation of the results.

Theme 1. Effective Teaching.

Regardless of course delivery mode there are several best practices and teaching tools that are important to student success in a learning environment. A number of these best practices and teaching tools were discussed in the literature review and emerged throughout the analyses of the student responses. When students were asked how their professor made learning interesting and engaging, they offered up both examples and recommendations. For example, Participant F revealed, ‘I do think online is convenient, but face to face is better suited for my learning needs because I am so visual and kinesthetic, I could definitely be more hands on with somebody who is providing me with the information’ (p. 1). Further, Participant B proclaimed, ‘when you actually have somebody there teaching it, it does seem to make material kind of sink in a little easier’ (p. 3).

The interviewees also touched teacher personality, clarity, and organization in relation to the most helpful practices and tools. As revealed in the literature review teacher personality is of high importance to students and Participant D reiterated, ‘It

always just went better if they had a passion for what they're teaching you, so somebody that loves to teach accounting, it's a lot more enjoyable' (p. 1). Discussing her experience Participant F added, 'My professors are always available if I need them you know after class, I feel like I can always raise my hand and ask a question anytime during class, I feel like I'm encouraged to' (p. 3). Clarity is also of utmost importance for students. Discussing clarity and teacher expectations Participant B stated, 'The material you are actually covering doesn't necessarily pertain to what you are reading or in that same order, I just feel like if there is going to be an online class there should be some sort of requirement to know what the teachers are looking for' (p. 6). Another respondent alluded to the concept of clarity, Participant E exclaimed, "There is a lot of information . . . I would just appreciate more of a study guide of here's the filter of what you really should look at, because there's [sic] so many things in those chapters' (p. 3). Participant C commented, 'Teachers should have a well-organized online presentation and examples that they do on the board' (p.2).

Theme 2. Communication

The analysis of the focus group and personal interview responses also uncovered repetitiveness in terms of communication and teacher responsiveness. In this sense, communication encompasses both instructor and peer communication. Although communication with the instructor is important in both online and face-to-face courses, online students may at times be more susceptible to feelings of isolation. Participant B highlighted, 'Teachers that are more familiar with technology who are more responsive to emails, because one of the teachers I had wasn't as responsive, so you kind of felt like you were a little on an island at times' (p. 4). Conversely, when asked about interaction

with her professor, Participant E proclaimed, 'I think it's good, I've had to email her on a couple of items and she's always been very responsive and very helpful' (p. 5).

Naturally, students' experiences vary with different courses and instructors. Some of the participants commented on the lack of an immediate response in an online environment.

For example, Participant C responded, 'That wait between what you have in mind versus writing an email, then two hours later have to respond again, it's kind of frustrating' (p.

4). Participant D agreed, 'If I had a question is a lot easier to ask a peer if they knew, then to send the professor an email about I don't know what's going on, can you answer me at your earliest convenience' (p. 3). Asynchronous communication, whether it be

between instructor or peers, does have a number of disadvantages. Discussing his perceived pitfalls of electronic communication and discussion Participant C stated:

The discussion boards are probably the most difficult thing for me because it's not like a paper, your trying to be informal and I'm too formal...it's hard to have a discussion when not in person, I'm used to the traditional kind of schooling, and I feel like our society is very introverted and disengaged because of that...but doing it in person it's easier to get a point across.' (p.2)

On the other hand, some students really enjoy the online discussions and consider them to be an important part of online interaction. When asked if she was satisfied with the online discussions in her course Participant E postulated, 'yeah I am, I feel the only thing I would say would be if they had more of them' (p. 9). Participant B agreed, 'discussion boards have been keeping everything somewhat engaging, because you feel like you're kind of starting to see the same responses from same people'' (p. 3).

Theme 3. Content Coverage

Content coverage methods varied not only by discipline, but also by teaching styles and course delivery modes. The researcher analyzed the interview and focus group responses and determined which content coverage methods students perceived as most effective. For example, Participant A and Participant B in the focus group both agreed that in an online class environment recorded lectures were most helpful. Participant A stated, 'Recorded lectures are the most engaging because they still go through the chapter and through the examples and things like that, and you can hear somebody talking and sometimes someone talking is better than just reading it, it helps that way' (p. 4). Participant B agreed, 'recorded lectures are the most helpful' (p. 4) and additionally he added, 'the recorded lectures should almost be mandatory' (p. 6). Students also referenced content overviews as being helpful to their learning. Discussing the benefits of the overviews Participant E stated:

Overviews were probably anywhere from twenty to twenty-seven slides each one and then there's a question answer with every single one, so those take a little bit more time because they have videos usually on every single one that are at least one to two minutes.' (p. 4)

Tutorials were also repetitively mentioned as being effective learning devices.

Participant C suggested:

For accounting, I would say tutorials, like some of the McGraw-Hill tutorials, I really like. When I cannot find a problem out, first I kind of skim through these pictures, like oh you do this, this, and this, but then when you read it and it doesn't make sense, having a tutorial I feel like really kind of engages your mind' (p. 4)

Most undergraduate accounting students at the research site were required to use the McGraw-Hill's Connect online book and homework platform in their courses for both the face-to-face and online courses. Participant D agreed, 'They have the tutorials on McGraw-Hill Connect that are very helpful' (p. 2). Many of the comments about McGraw-Hill's Connect learning management system were positive. In addition to tutorials, Participant C also discussed homework in the McGraw-Hill software and stated, 'First it was very frustrating because I've never done online homework and done it in that fashion, where you do little chunks, but now it makes a lot of sense, so it's helpful' (p. 3). Participant F agreed, 'even though homework is not my favorite, it's definitely very good and it's definitely needed' (p. 3).

Worked examples, both in-class and online, were beneficial to students as well. Participant D claimed, 'In-class exercises definitely help because then I could see if I was doing it right' (p. 2). Conversely Participant A suggested, 'Sometimes the online lecture doesn't have as many problems as I'd like, but they've got some, so it kind of helps you walk through the steps' further the participant recommended, 'sometimes they need to do more of it' (p. 7). In addition to worked examples, study guides and concept maps were used by students to digest the content. Participant E revealed, 'I do screenshots and make my own study guides for every single chapter' (p. 3). The participant further explained, 'Because, to me I have to have that information, what I think is prudent, right in front of me' (p. 4). Concept maps, or what are also known as cognitive maps, were also employed in undergraduate accounting courses. Participant C disclosed:

After I get homework 100% right, I take a screenshot screen grab of that of the work and the question and the steps and then I draw like colored arrows...and

lines to show X, Y, and Z...I think it kind of builds a pathway in your head of like a flow chart.’ (p. 4)

Indeed, content overviews, homework, study guides, and even cognitive maps can all be used to teach and learn content in an educational setting.

Theme 4. Feedback

Another common theme that emerged during the analyses was the concept of feedback in a learning environment. Feedback is imperative in any learning situation, inasmuch as it helps to guide or even redirect the student if necessary. When asked about course delivery choice Participant F stated:

For that course specifically I feel like face-to-face, I feel like because of everything involved and the hands on it's very helpful to be able to kind of feed off of your peers and be able to get immediate feedback from your professor. (p. 1)

Participant B alluded to a potential drawback of the online course format, ‘If you don't understand something just research and things on your own, trying to piece it together, there wasn't as much feedback’ (p. 4). Discussing interaction with the instructor

Participant C concurred, ‘It's hard because you miss out on being able to ask questions in person, it's always hard to do it by email’ (p. 4). Participant C further exclaimed, ‘The greatest thing about having a human interaction or teacher is when you have problem and you can go to them and it saves you five hours of staring through text book or something’ (p. 1). In response to a question about preferred teaching methods, Participant F preferred, ‘visually seeing it on the board and all written out and being able to ask

questions and get an immediate response' (p. 2). The juxtaposition of synchronous and asynchronous feedback was discussed and highlighted numerous times.

In addition to the analysis of focus group and interview responses, the researcher also analyzed the applicable open-ended question from the course evaluation survey. Although many of the questions were organized in a Likert Scale format, one question requires students to type in a response. Of the sample of face-to-face course evaluation surveys, 81.5% explicitly stated they would recommend their professor, while in the online format 76.9% explicitly stated they would recommend their professor. Although there is a slight difference in these proportions, it was not statistically significant.

Research Question 2. How do study participants feel about their engagement in online undergraduate accounting courses versus traditional undergraduate accounting courses?

The researcher investigated the second research question by analyzing student responses to interview and focus group questions. As with the previous research question, the compilation of data represented in the interview and focus group responses revealed common ideas and themes. Of the 10 themes that emerged during the aforementioned analyses, six were applicable to teacher performance including Groupwork, Real-world application, Self-directed/self-paced, Convenience, Technology issues, and Varying Perspectives/Experiences. This thematic analysis served as the outline in the presentation of the results.

Theme 5. Groupwork

Groupwork and other participatory learning methods were discussed during the focus group and personal interviews. Participants were asked about how their professor makes learning interesting and engaging, as well as how these things could be increased. The data revealed conflicting results. In support of participatory learning and groupwork Participant C asserted that even in an online class engagement could be improved by holding periodic lecture sessions where, ‘Attendance was mandatory and everyone had to come and you would just work in groups on stuff and you could make connections between peers’ (p. 3). Participant F agreed engagement was increased by, ‘the group work, when you get together and work with classmates is definitely helpful (p. 1). Conversely, a few participants touched on the anxiety of not being able to depend on other students. Participant A stated:

We're in groups on a couple discussion questions and you always worried about if someone else is going to do their part, just like you do in any other group whether you're in class or not, but you still have to get them to interact and sometimes they wait to the last minute. (p. 5)

Participant B agreed:

The whole working in a group in an online setting it kind of it [sic] doesn't seem like the best idea to me because it's hard enough if you're in a class to try to wrangle everyone to make sure there on the same page and find times that work, but when people are maybe a different states, some people might work weekends and they're just doing homework on that day, it gets really hard to get people together it feels like to get everything done at the same time. (p. 6)

Participant E further exclaimed:

I always like independent more because you're always worried about somebody not doing something and then you just have to do it at the last minute...to me if you had a face to face your comfortable doing that kind of stuff because then you can get a feel for if this person is really not going to do it, but online you just have no idea. (p. 4)

Theme 6: Real-world Application

On a few occasions, real-world application was discussed throughout the interviews. For example, when asked about increasing engagement Participant F suggested, 'Accounting was interesting to me because it increased my understanding of the accounting department functions at my job' (p. 2). Participant E stated, 'less focus on terms and what things mean, rather than how they actually work in the accounting world' would increase engagement. Additionally, Participant C concurred, 'to see some real-world application and to be able to do some of that stuff to connect to real life...for me it would be really cool to be able to use these tools for example in real life' (p. 5).

Theme 7. Self-directed/self-paced

One of the main goals of higher education is to encourage students to be more self-directed and independent in their learning pursuits. These concepts were at the forefront of the focus group and personal interview responses. In pre-interview communication, Participant E admitted that she reserves Tuesday, Wednesday, and Thursday evenings to complete homework and assignments usually due by Friday. During the interview the participant exclaimed, 'especially if people have families and kids, you put them to bed and do what you got to do' (p. 2)

Participant E further proclaimed:

To me I think online is more accessible to more people, there's a lot more people that are going back to school nowadays that their employees are just not going to allow them to be gone during the day... I think a lot of the people that are enrolling in these kinds of programs need to have the ability a little bit more flexible. (p. 1)

The ability to do homework and assignments anytime, anywhere is certainly appealing. Participant C agreed, 'It's hard for me to sit down in the classroom and learn at someone else's pace and just sit there for a few hours' (p. 1).

Theme 8. Convenience

Not surprisingly, convenience and flexibility were repeated multiple times during the focus group and personal interviews. External forces, such as family and career obligations, can limit an individual's availability, so online coursework is very attractive to adult learners in particular. In response to a question posed about course choice,

Participant A stated:

I work full time and I have 2 kids, so it's just more convenient. I can still be home helping them with their homework and still make it to their activities and do my homework it's just convenient for me. (p. 2)

Participant B agreed, 'I also work full time and I didn't feel like trying to find a way to fit it into my work schedule or anything like that, I figure I can just do it whenever it's convenient for me and kind of works out (p. 3). Further commenting on the benefits of online courses, Participant A stated:

I like the online because I can do it in my own time schedule, and if I want to sit outside do homework, or if I just want to sit in my pajamas and do homework, I can do it either way I'm comfortable and I don't have to sit in a classroom. (p. 7)

Theme 9. Technology issues

Issues with technology can be especially frustrating when your success in the learning environment depends on these tools working properly. When asked about technology tools that are utilized a couple participants revealed their issues with McGraw-Hill's Connect platform. Participant E lamented, 'What I am kind of annoyed by is that it cost so much money and you can't resell it like a normal book you know what I mean, I'm like wait a minute my husband is going to take this class and I'm still going to have to buy this again' (p. 3). Although for a different reason, Participant C also expressed frustration when attempting to complete homework in McGraw-Hill's Connect website. Participant C stated, 'The way they do the homework online first really aggravated me, but it's actually very helpful once you figure out' (p. 2).

Perhaps more importantly, some interviewees communicated their displeasure for the online testing service ProctorU. Participant E exclaimed, 'that ProctorU for our exams, they are absolutely horrible, horrible, horrible' (p. 5). Participant A and B also agreed the ProctorU was a source of annoyance. Participant B stated, 'I'm not the biggest fan of ProctorU just because it's an annoying thing to have to deal with . . . I prefer to honestly probably go into like a testing center instead of using ProctorU' (p. 4).

Participant E recalled:

I couldn't get it to work and so I contacted their people I was on instant messenger through their website for three hours. I talked to six different people and their

conclusion was...you need to use a different computer. I'm sorry but this is your service and that that's the answer you're giving people. (p. 6)

Participant E further explained:

So then I went in and made sure it worked with their online platform and they're like OK you're ready to take the exam, like no I've been doing this all day I want to reschedule for tomorrow. To be honest I'm not a good test taker, so the fact that I had somebody staring at me adds anxiety because I have somebody sitting there physically watching me take the test, I have enough anxiety on my own. (pp. 6-7)

Theme 10. Varying Perspectives/Experiences

In any learning situation whether in-class or online, a student will inevitably come in contact with varying perspectives and differing levels of experience. Multiple interviewees commented on the benefits of being able to learn and understand different perspectives and life experiences. Discussing the online discussions Participant E stated:

I think it's good because you see a lot of people's insights on things that you wouldn't necessarily see and to me I always like that kind of environment where you can get a different perception on things because I always tried to be like OK well I guess that's how I think, but doesn't mean that's correct... the people I think there have a lot more insight on things just because they've been out in the world. (p. 8)

To increase this interaction Participant C suggested:

Maybe like a lab session or something where you could come in and work and also meet other students in person because I feel that helps out with a lot of stuff

too because you can ask them questions and some people see things different ways...I find it very helpful having other students that you know and meet through class, that they can they see things differently and you can ask them questions. (p. 2).

Summary

The purpose of this mixed methods research study was to investigate the differences, if any, in student achievement and satisfaction between traditional and online undergraduate accounting courses. Both primary and secondary data were collected and analyzed in this study. Primary data were collected via interviews, course evaluation surveys, and focus group responses. While secondary grade and demographic data were collected from both face-to-face and online undergraduate accounting courses over a span of three academic years. The former was coded and analyzed to determine students' attitudes and beliefs regarding their satisfaction and engagement in their undergraduate accounting courses, whereas the latter was investigated to determine any differences in achievement, as measured by final grades, in the two separate delivery modes.

Chapter Five-Discussion

The purpose of this mixed methods research study was to investigate the differences, if any, in student achievement and satisfaction between traditional and online undergraduate accounting courses at a Midwestern University. Data from both quantitative and qualitative elements were collected and analyzed. This study included a quantitative analysis which determined if there were any significant differences in student completion rates and final grades of students in traditional versus online undergraduate accounting courses. The researcher investigated which type of instructional delivery was most effective for students, in order to increase student success. In addition, the study determined if there was any relationship between final course grades and other student demographics, such as age, gender, and ethnicity. This investigation also included a qualitative examination which determined student attitudes and beliefs about traditional courses and online courses in undergraduate accounting, by analyzing focus group and interview responses, as well as student course evaluation survey results. In doing so, the study highlighted the strengths and weaknesses of the two different instructional delivery modes.

Quantitative and qualitative results were analyzed separately, with a culminative integration of the results which determined any convergence, divergence, or emergence of themes throughout the analyses. By completing the mixed methods analysis, the study aimed to highlight the differences, if any, in effectiveness of traditional undergraduate accounting courses versus online undergraduate accounting courses, examine student completion rates in traditional undergraduate accounting courses compared to online undergraduate accounting courses, identify student attitudes and beliefs regarding

traditional undergraduate accounting courses and online undergraduate accounting courses, and also investigate any relationships between student achievement, compared to other student attributes, such as age, gender, and ethnicity.

Questions & Hypotheses

This study investigated student achievement and satisfaction in undergraduate accounting courses in both the face-to-face and online formats. Two research questions and six hypotheses addressed students' attitudes and beliefs about teacher performance and engagement in their undergraduate accounting course, as well as course evaluation scores, completion rates, and final grades.

Research Question 1. What are the attitudes and beliefs of teacher performance in online undergraduate accounting courses versus traditional undergraduate accounting courses?

Research Question 2. How do study participants feel about their engagement in online undergraduate accounting courses versus traditional undergraduate accounting courses?

Hypothesis 1. There is a difference in instructor course evaluation scores between undergraduate accounting students receiving face-to-face instruction and those receiving online instruction only.

Hypothesis 2. There is a difference in student engagement of undergraduate accounting students receiving face-to-face instruction and those receiving online instruction only.

Hypothesis 3. There is a difference in student satisfaction in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses.

Hypothesis 4. There is a difference in student completion rates in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses.

Hypothesis 5. There is a difference in final course grades of undergraduate accounting students receiving face-to-face instruction than those undergraduate accounting students receiving online instruction.

Hypothesis 6a. There is a difference between student age and student grades in undergraduate accounting courses

Hypothesis 6b. There is a difference between student gender and student grades in undergraduate accounting courses.

Hypothesis 6c. There is a difference between student ethnicity and student grades in undergraduate accounting courses.

Interpretation of the Results

For this study, the researcher examined two research questions and six hypotheses statements. Through thematic analyses, the researcher determined students' attitudes and beliefs about teacher performance and engagement. Additional statistical analyses, both descriptive and inferential, determined if there was significant support for each hypothesis. Quantitative results will be discussed first, followed by discussion of the qualitative findings.

Hypothesis 1. The first hypothesis statement in this study, 'There is a difference in instructor course evaluation scores between undergraduate accounting students receiving face-to-face instruction and those receiving online instruction only' was addressed through the use various statistical procedures. Descriptive statistics were employed to begin. The means and standard deviations were calculated for all 264

course evaluation surveys, face-to-face (n=135, 51.14%) and online (n=129, 48.86%).

The researcher then calculated an overall mean for each course and compared the face-to-face course means to the online course means. A *t*-test of two independent means was employed to test the hypothesis. At the 95% confidence level, there was not enough evidence to support Hypothesis 1. Although there was a difference in means of the face-to-face and online course evaluation scores, this difference was not large enough to be statistically significant. In other words, students in the online undergraduate accounting courses rated their course and professor equally compared the students in the face-to-face undergraduate accounting courses.

The researcher chose to compare course evaluation scores of each course delivery mode because these metrics gave educators a direct evaluation of their course from students. Jepsen et al. (2015) stated, “students’ overall evaluation of the course or teacher is an additive function of component aspects of teaching behavior weighted by the students’ view of the importance of those aspects for quality teaching” (p. 578). The results of Hypothesis 1 were contrary to other studies performed, namely Brocato et al. (2015), Bunn, Fischer, and Marsh, (2014), and Sanford et al., (2017), which all found greater evaluation scores in the face-to-face delivery mode compared to the online delivery mode. Ultimately, educators should strive to provide the same quality teaching and learning environment in online and face-to-face courses.

Hypothesis 2. The second hypothesis statement, ‘There is a difference in student engagement of undergraduate accounting students receiving face-to-face instruction and those receiving online instruction only’ was investigated using descriptive and inferential statistical analyses. Of the 17 student course evaluation questions, five related

specifically to engagement. These questions and their respective evaluation scores were isolated to perform the statistical analyses. The means and standard deviations of the five engagement questions were calculated from all 264 course evaluation surveys. The researcher then calculated an overall mean for each course and compared the engagement scores of face-to-face course means to the engagement scores of online course means. A *t*-test of two independent means was employed to test the hypothesis. At the 95% confidence level, there was not enough evidence to support Hypothesis 2. Although there was a slight difference in means of the face-to-face and online course evaluation scores, this difference was not large enough to be statistically significant. In other words, students in the online undergraduate accounting courses rated their course engagement equally compared the students in the face-to-face undergraduate accounting courses. This result concurred with Butts, Heidorn, and Mosier (2013) that found engagement equal in face-to-face and online courses; however, this result was contrary to Dutcher et al. (2015) who found students in the face-to-face format found class discussion to be more beneficial to learning, compared to the online students.

Hypothesis 3. The third hypothesis statement was, ‘There is a difference in student satisfaction in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses.’ As with the previous two hypotheses, the researcher investigated the claim investigated using descriptive and inferential statistical analyses. The researcher isolated questions within the course evaluation surveys that were applicable to student satisfaction, and then calculated the means and standard deviations of their respective course evaluation scores. An overall mean for each course was calculated. A comparison of the face-to-face course means to the online course means

ensued. A *t*-test of two independent means was employed to test the hypothesis. At the 95% confidence level, there was not enough evidence to support Hypothesis 3. Although there was a slight difference in means of the face-to-face and online course evaluation scores, this difference was not large enough to be statistically significant. In other words, students in the online undergraduate accounting courses rated their satisfaction equally compared to the students in the face-to-face undergraduate accounting courses. This was contrary to Sanford et al. (2017) who found satisfaction to be higher in the face-to face format.

Hypothesis 4. The fourth hypothesis statement, ‘There is a difference in student completion rates in face-to-face undergraduate accounting courses compared to online undergraduate accounting courses’ was examined by applying both descriptive and inferential statistical analysis. The researcher began by calculating the completion rates of face-to-face undergraduate accounting courses ($n=189$, 94.5%) and then comparing those to the completion rates of students in the online undergraduate accounting courses ($n=175$, 87.5%). At the 95% confidence level, a *z*-test of two proportions supported the hypothesis. Accordingly, the *p*-value revealed a statistically significant difference between student completion rates in face-to-face undergraduate accounting courses compared to online undergraduate accounting students. These results were aligned with the prior research of Faulconer et al. (2018), Graham and Lazari (2018), as well as Wright (2014), who all found completion rates to be higher in face-to-face courses.

Hypothesis 5. The fifth hypothesis statement, ‘There is a difference in final course grades of undergraduate accounting students receiving face-to-face instruction than those undergraduate accounting students receiving online instruction’ was explored

using descriptive and inferential statistical analyses. The researcher began by aggregating the nominal grade data into their respective categories. Chi-square tests were employed, both the Contingency Table test as well as the Goodness of Fit test supported hypothesis 5. The p -values of each determined a significant difference in the distribution of grades in the face-to-face undergraduate accounting courses compared to online undergraduate accounting courses. The researcher investigated these results further and determined that the statistically significant differences existed between the distribution of As and Fs in the face-to-face courses compared to the online courses. Finally, to ensure this hypothesis was investigated thoroughly, the researcher conducted a t-Test of two means, which further supported the hypothesis. At a 95% confidence level, the p -value determined a significant difference in grade points awarded in the face-to-face undergraduate accounting courses compared to online undergraduate accounting courses. These results agreed with Bunn et al. (2014) who found grades to be better in the face-to-face course delivery mode, but were in opposition of Mendes da Silva et al. (2015), Moazami, Bahrapour, Azar, Jahedi, and Moattari (2014), and the U.S. Department of Education (2010) who all reported online grades to be higher than face-to-face.

Hypothesis 6a, 6b, and 6c. Hypothesis 6 in this study was divided into three parts: (a) ‘There is a difference between student age and student grades in undergraduate accounting courses’, (b) ‘There is a difference between student gender and student grades in undergraduate accounting courses’, and (c) ‘There is a difference between student ethnicity and student grades in undergraduate accounting courses.’ All three parts of this hypothesis were investigated using descriptive and inferential statistical analyses. Analyses of Variance (ANOVA) was utilized for Part A. The researcher determined

there was a statistically significant difference in final course grade points earned in relation to the various age groups. Group 2, which was comprised of 23 to 27-year-old students, was the lowest performing group, where as Group 3 made up of 28 to 32-year-old students, was the highest performing group. These results agreed with Elphinstone and Tinker (2017) and Slover and Mandernach (2018) who both found performance metrics for nontraditional aged students to be higher than that of their traditional counterparts.

For Part B the researcher employed a t-Test of independent means and determined that final grade points earned by males were not significantly different from those earned by females. With a level of significance $\alpha = .05$ and a p-value = .802, the researcher concluded that final grades awarded to males and females were not significantly different. Finally, for Part C the researcher again utilized the Analyses of Variance (ANOVA) test, which showed a significant difference in final grade points earned and student ethnicity. With a level of significance $\alpha = .05$ and a p-value = .038, the researcher determined there was a statistically significant difference in final grade points awarded and student ethnical groups.

Research Question 1. What are the attitudes and beliefs of teacher performance in online undergraduate accounting courses versus traditional undergraduate accounting courses?

Theme 1. Effective Teaching

During the analyzation process, a few sub-themes emerged from student responses, namely teacher personality, helpfulness, clarity, and organization. Organization is important in face-to-face and online courses alike. Not only should

overall course design be organized into a logical sequence and easy to follow, but individual assignments and presentations should be well organized to promote student understanding. Clarity of assignments and expectations was also critical to students. Pattaguan (2016) agreed, “everything faculty members do must be focused on what they want students or learners to be able to do successfully (p. 135). Assignment and project instructions should be clear and well written, so that students understand what is expected of them. Teacher personality and helpfulness were also meaningful to students, whether that meant responsiveness to messages and problems in the online environment, or always willing to take time after class when a student had a question.

Theme 2. Communication

Respondents also considered communication to be an integral part of the learning environment. Communication included not only instructor and student, but interaction between student and student as well. The nature of an online environment was understandably prohibitive to communication and interaction, the comments from students were mixed. Watts (2016) agreed, “Both asynchronous and synchronous interactions keep students engaged in the online setting” (p. 28). Online discussion boards help to engage students because you become more familiar with your course mates. One respondent even wished there were more discussions, less homework, and other objective assignments. Conversely, the issues with expressing one’s thoughts through writing and only having the option to communicate asynchronously through email, were periodic frustrations for other students. Rather than waiting for an instructor to respond through email, students preferred to ask a peer for guidance and understanding.

Theme 3. Content Coverage

Various ways of interacting with the content were discussed by respondents. Recorded lectures were cited first. Students agreed the lectures help to highlight the important information within the text. In addition, the recorded lectures were narrated, so the students could also listen to information, as opposed to just reading it. These comments agreed with Mann and Henneberry (2014) who found students to have, “a higher preference for video (all types) than for course notes” (p. 12). Content overviews were also noted as helpful to the students. These overviews not only included PowerPoint slides that covered the important information and concepts within the chapter, but also videos for the students to watch and questions throughout the presentation students were required to answer. In this way, the overviews were chocked full of rich content and interactive for students as well. Tutorials seemed to be important to students as well. When students had an issue with an exercise, or one of their accounting problems, they were able to get help through tutorials and hints in the McGraw-Hill Connect learning management system. Worked examples of the accounting exercises and problems, as well as screenshots of the content, also assisted students in learning the material. In addition, student-created study guides and concept maps helped the students to focus on the most pertinent concepts and information.

Theme 4. Feedback

Feedback, whether in an online or face-to-face environment, was important to many students. Most respondents commented about the differences in feedback between the two course delivery modes. The main difference cited by the students was lack of immediate feedback. The inability to ask their instructor or peers a question when they

were not doing an accounting exercise or problem correctly was a source of frustration. Although students commented positively about their instructor's responsiveness to email, the real-time synchronous feedback was noted as a disadvantage of the online environment.

Research Question 2. How do study participants feel about their engagement in online undergraduate accounting courses versus traditional undergraduate accounting courses?

Theme 5. Groupwork

Respondent's comments were mixed when talking about groupwork or other participatory learning activities. While some students noted that groupwork and working with other students helped to increase engagement in the classroom, others expressed their concerns about group projects in an online environment. One issue with groupwork cited was the inability to depend on other students, which was an issue for students in a face-to-face course or an online course. The other issue, perhaps more applicable to the online course, was the struggle to get everyone together and on the same page about project work allocations.

Theme 6. Real-World Application

Another theme that emerged was the desire for real-world application when learning the various accounting rules and operations. In entry level accounting courses, a great deal of time was focused on rote memorization of concepts and terms. Students expressed their interest in learning more about how these concepts were applied to real-world scenarios. Blumberg (2016) agreed, "All faculty members, regardless of discipline, can help students to appreciate the value of studying the content by discussing

applications to the real world and how students can use the content in their personal lives or future careers” (p. 313). Giving students the ability to get practice using actual accounting software such as QuickBooks, would give real-world bookkeeping experience, as well as practice with the electronic preparation of financial statements. In addition, relating the accounting function in business to their personal finances helps to illuminate some of the similarities between the concepts being covered and the applicability to their personal lives.

Theme 7. Self-Directed/Self-Paced

Perhaps one of the most important themes revealed was the need to be self-directed and the ability to be self-paced. The goal of education, especially at the college level, was to help students develop into autonomous, independent, and self-directed learners. Respondents noted the benefit of an online environment being more self-paced and flexible, inasmuch as students could work on assignments and homework anytime that suited their schedules. Bonnici, Maatta, Klose, Julien, and Bajjaly (2016) proclaimed, “Self-paced learning is the root of online education...student-determined pace of learning allows for flexibility in work demands on time and cognitive acuity” (pp. 1392-1393). All students were different in terms of self-directness and academic abilities, so the type of course delivery mode could potentially affect their achievement in the course.

Theme 8. Convenience

Throughout the literature review, convenience was the main benefit cited of online courses. Respondents of the focus group and personal interviews also commented on the convenience of the online course delivery mode. The ability to do coursework

anytime, anywhere was an attractive feature for many students. Adult learners in particular usually have work and family obligations that limited the amount of time available for coursework. A couple of respondents even commented on the ability to tend to their youngsters' needs, and then working on course assignments and homework after the children go to sleep. The flexibility and convenience of online coursework seem to outweigh any other potential drawbacks on the online learning environment.

Theme 9. Technology Issues

While convenience was one of greatest benefits of online education, technology issues were perhaps one of biggest drawbacks. There can be many potential issues with technology including connectivity, accessibility, and functionality. Megeid (2014) agreed, "Lack of e-content, inadequate infrastructure, connectivity limitations, and slow downloading creates frustration among learners and affects the ease of learning" (p. 39). For students taking courses online, a good reliable internet connection was absolutely imperative. Likewise, the ability to access the resources was needed to be successful and was also important. Instructors should make sure all files and links within the learning management system are accessible and easy to locate for students. Further, the functionality of necessary programs and software was important insofar as, when issues arose it created frustration and hindered the students' learning.

Theme 10. Varying Perspectives/Experiences

The last theme that emerged throughout the analyses of focus group and personal interview responses was the ability to see varying perspectives and learning of other students' experiences. In the face-to-face courses, this was accomplished through meeting and speaking with fellow peers, as well as listening to their questions and

responses within the classroom, in the online format this happened through discussion boards. The ability to read other student responses to discussion questions and learn about their personal and work experiences as the term progresses is engaging to students. All students come to a learning situation with differing levels of experience and varying perspectives and beliefs, and based on comments from students, they enjoyed being able to learn about different viewpoints and experiences.

Triangulation of Results

The researcher began these analyses by first using a data reduction strategy. This assisted the researcher in summarizing the quantitative data through the statistical procedures employed and condensing the qualitative data into the emergent themes. Data correlation and comparison was then utilized to search for convergences and divergences in the quantitative and qualitative data. Finally, the researcher integrated these results to better understand the research questions and hypotheses. Results from the quantitative data analyses of the first three hypotheses converged with the qualitative results, inasmuch as there were no observed differences in course evaluation, student engagement, or student satisfaction. Divergences between the quantitative and qualitative data existed insofar as, although student completion rates and student grades were lower in the online undergraduate accounting courses, students were still equally satisfied in both course delivery modes. There were also divergences uncovered in students' attitudes and beliefs within the qualitative analyses about groupwork and online discussion boards.

Limitations

As with other research, there were limitations that existed in this study. This study was limited to college students in a Midwest university, so it may not be representative of undergraduate accounting students in universities across the country and abroad. In addition, the data that was tested only came from courses that were offered in both the online and traditional formats, taught by the same instructor, so the samples were not completely random. Since secondary data were utilized, the researcher had no control of the data; a large amount of trust was placed in the representative providing the data. Although the researcher used standardized course evaluations for the survey instrument, the researcher was responsible for the development of the focus group and questions. These questions were formulated to evaluate the perceived advantages and disadvantages in face-to-face courses and online courses. The focus groups and interviews were performed with a limited number of participants and did not necessarily achieve saturation. Further, the study concentrated on course delivery mode, whether online or face-to-face, as the main factor in investigating student achievement and satisfaction. Other extraneous variables, such as previous experience and level of academic achievement could have affected the results as well. Qualitative data came from focus group and interview responses collected during the spring and summer semesters of 2019, whereas the secondary data came from undergraduate accounting students over a period of the previous three school years, so interview responses may not fully represent all of the secondary data population. Triangulation of the quantitative and qualitative results in this mixed methods study added to the validity and credibility of the results.

Additional Results

In addition to the hypotheses and research questions established a priori, the researcher also investigated the student course evaluation results per school year and determined that the research site has made small gains each school year. Although the researcher did not find a statistically significant improvement over just one school year, when comparing 2016-2017 ($M = 3.44$, $SD = .61$) there was a significant difference from 2018-2019 ($M = 3.62$, $SD = .50$); $t(153) = 2.00$, $p = .047$. Considering a level of significance $\alpha = .05$, the p -value = $.047$ was borderline significant. However, when speaking of teacher performance and course content evaluations, any evidence of improvement was good news. Overall, there was enough evidence to show significant improvement of course evaluation scores from the 2016-17 school year, compared to the 2018-19 school year. Additionally, the researcher also investigated grade points awarded per school year and per semester and determined there were no statistically significant differences in the means of either the school years or per semester.

Recommendations for Practice

The ultimate goal of education is to produce independent, well-rounded individuals that will be able to be successful in current educational activities, chosen careers paths, and future learning pursuits. This study was performed at a Midwestern university that strives to provide a liberal education by, “enhancing lives through quality education and professional preparatory experiences” (Lindenwood). This type of education is one that influences, encourages, and enables students to be independent individuals that are prepared for their desired career paths, as well as lifelong learning interests. With these educational goals in mind, the researcher has made a few

recommendations that will help to ensure a positive learning environment and fruitful educational experiences.

The first recommendation was for higher education administration, curriculum designers, and faculty alike to ensure that online courses are equal to face-to-face courses. This recommendation was based on the Equivalency Theory, which stated, “Distance education’s appropriate application should provide equivalent learning experiences for all students—distance and local—in order for there to be expectations of equivalent outcomes of the educational experience” (Simonson, 1999, p. 7). This equality would include the same content, assignments, assessments, and course objectives, irrespective of course delivery mode. Recorded lectures would allow online students to view the same lectures as their on-campus counterparts. Assignment and assessments should be equal as well, so that all students are able to learn and achieve the same course objectives. Essentially, “Online and face-to-face can be viewed as equal when differences in course characteristics are eliminated” (Dutcher, Epps, & Cleaveland, 2015, p. 128). Ensuring these two delivery modes are equal, will assist in changing faculty perceptions about the inferiority of online education.

The next recommendation was to change faculty perceptions about the effectiveness of online education. Although many institutions have embraced the demand for online classes, some educators still have reservations about their ability to provide educational experiences equal to the on-campus courses. Grossman and Johnson (2015) agreed, “Faculty members find the online educational environment unequal to the task of imparting either technical or soft skill sets to students” (p. 101). These interpersonal, or soft skills, were necessary to be successful in the workplace after

college, so it is important for students to exercise these abilities throughout their education. Roe et al. (2015) concurred that any educators, and employers alike, still harbor feelings of inequity as it relates to the quality of education in a traditional degree program versus an online learning program. Through course equivalency measures, as well research-based evidence that proves the two delivery modes are equivalent, more and more faculty will be willing to consider both online and face-to-face courses as equally effective.

The third recommendation was to offer more blended options for students pursuing a degree in higher education. The demand for online course offerings was continually increasing as more and more nontraditional students were returning to school. Whether it was a public or private university, or a profit or non-profit institution, to remain relevant and in demand, higher education institutions need to provide more flexibility to students. Nasser (2017) posited, “Leaders face affordability concerns, access issues, and a dwindling pool of traditional college aged students (p. 1152). Some of these issues could be addressed through more flexible course offerings. Although many students chose online education for the convenience factors, some would also like to have periodic course meetings where they could ask their instructor questions and meet their peers. More blended options will give students the best of both worlds. Tucker (2012) agreed, “Blended learning provides teachers and students with flexibility. Teachers can design lessons that weave the best of traditional instruction with the unique benefits of an online component to achieve optimal learning outcomes for all students” (p. 12). In this way, education can be more attainable for all, traditional and non-traditional students alike.

Recommendation for Future Research

The first recommendation was centered around the need for future research in the accounting field. Although the researcher did not find any statistically significant differences in course evaluation scores, engagement, or satisfaction, there were significant differences in completion rates and the distribution of final course grades of the face-to-face undergraduate accounting courses compared to the online undergraduate accounting courses. As more and more online course offerings are becoming available, educators need to be aware of the obstacles faced by nontraditional students to reduce noncompletion rates. Kenner and Weinerman (2011) agreed, “Because integration into the academic environment is a challenge for adult students, developmental educators must understand the background of adult students and develop a curriculum that address their particular needs” (p. 90). Unfortunately, the students in the noncompletion category were generally disengaged and less likely to be retained through graduation. The potential decrease in student confidence was just one of the hidden costs of online delivery mode (Wright, 2014, p. 16). For these reasons, future research should focus on increasing course completion rates by utilizing the best teaching practices.

A second recommendation centers around the results of Hypotheses 6a and 6c. The former related to student grades and student age, while the latter considered student grades in relation to student ethnicity. Although the researcher was able to perform statistical analyses, which determined significant differences in student grades compared to both of these demographic areas, these analyses do not necessarily provide explanations as to *why* there were differences. Likewise, the course evaluation results, which could potentially provide these explanations do not collect demographic data. For

these reasons, future research should focus on investigating why these groups exhibited lower performance metrics compared to their peers.

Conclusion

Throughout history, many educational theories have been introduced and further developed to provide educators with a framework with which to base their instruction and best teaching practices. The emergence and continual increase of distance education courses and subsequent online classes has forced educators to rethink their roles and instructional methods in the learning environment. The juxtaposition of traditional face-to-face courses and the online classes has been the focus of many research studies, however not extensively in accounting discipline. In an effort to provide students with best learning experience possible, many educational researchers have highlighted what works best in both the traditional classroom and the online learning environment.

Five main areas were investigated in this research study including student evaluation of instructor performance, student engagement, student satisfaction, course completion rates, and student grades. In addition, the researcher explored the relationship of student grades to other student demographics such as age, gender, ethnicity. The researcher found equivalent evaluation scores, engagement, and satisfaction in the online undergraduate accounting courses compared to the face-to-face accounting classes; however, there were significant differences in completion rates and final course grades. The researcher recommends further exploration to close the gap in completion rates and final course grade differences between the face-to-face and online format.

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Appendix A

Focus Group/Interview Questions

1. How do you feel undergrad accounting would be best delivered (F2F, online, combination)?

Follow Up: Why did you choose your course type?

2. How does your professor make learning interesting and engaging?

Follow Up: What would you recommend to increase interest/engagement?

3. Which teaching methods do you find most engaging (lecture, tutorials, groupwork, etc.)?

Follow Up: What in-class/online activities do you find helpful to learning?

4. What technology tools do you find to be most beneficial to learning?

5. How do you feel about your interaction with the instructor and peers in the classroom environment?

Follow Up: How could interaction be improved?

6. How can the teaching of accounting be improved?

Appendix B

Course Evaluation Questions

Q1: The professor/instructor clearly communicated the course objectives.

Q2: The professor/instructor clearly communicated how the course objectives would be assessed.

Q3: The professor/instructor provided useful feedback about my work and/or participation.

Q4: The professor/instructor made learning interesting and engaging.

Q5: The professor/instructor taught the course in an organized way.

Q6: The professor/instructor provided clear explanations, examples, and/or illustrations.

Q7: The professor/instructor helped me develop problem-solving and critical thinking skills (such as applying information to new situations, making connections between ideas, or showing steps to reaching a conclusion).

Q8: The professor/instructor appeared to have a strong knowledge of the course content.

Q9: The professor/instructor was accessible to students.

Q10: Would you recommend this instructor to another student? Why or why not?

Q11: The course calendar was clear.

Q12: The classroom sessions contributed to my understanding and engagement with the course content.

Q13: The online learning resources, such as presentations, graphics, audio, visual, website(s), or electronic resources contributed to my understanding and engagement with the course content.

Q14: The textbook contributed to my understanding and engagement with the course content.

Q15: The course added to my knowledge of the topic in a significant manner.

Q16: This course contributed to my understanding and appreciation of cultural, ethnic, gender, or other forms of diversity in our society. (If Applicable)

Q17: This course influenced my understanding of why people who are of different races, religions, gender, and/or come from different ethnic and cultural backgrounds may hold different belief systems, worldviews and think and behave differently through discussions held in the lecture (If Applicable).