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UNDERGRADUATE STUDENTS’ SATISFACTION
AND
PERCEPTION OF KNOWLEDGE GAINED IN A PRIVATE UNIVERSITY

By
CATHY ANN MEJIA

A doctoral dissertation submitted to the
College of Education
in partial fulfillment of the requirements
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March, 2019
UNDERGRADUATE STUDENTS’ SATISFACTION

AND

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DEDICATION

“The LORD is my strength and my shield; my heart trusts in him, and he helps me. My heart leaps for joy, and with my song I praise him” (Psalm 28:7, New International Version).

Thank you, Lord, for always being my rock and shield especially during this dissertation process. I know you have wonderful plans. May I strive to fulfill your word and intentions for the advancement of your kingdom. Thank you for the many dedicated people you strategically placed in my path during this doctoral program.
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work, and caring to all around you. You have paved the way and demonstrated to me how to follow and trust in the Lord. You have taught me to pray and lean onto Christ who makes all things possible!

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ABSTRACT

The purpose of the present study is to investigate undergraduate students’ satisfaction and perception of knowledge gained in a freshman level finance class at a private Christian liberal arts university. To study student satisfaction and knowledge gained, several factors were examined for traditional and online delivery formats. Based upon student self-reported data, the predictive factors included student involvement in the course, effective instructor communication, instructor specification of assignments, and the instructor effectively integrating faith and learning. This quantitative study used a Likert-style course evaluation research method in an undergraduate university program. At the subject university, all students enrolled in the financial literacy business course between the Summer 2014 and Fall 2016 semesters were emailed the anonymous student course evaluation at the end of their respective course. In the present study, effective instructor communication was the most robust predictor for student satisfaction and knowledge gained for both traditional and online environments. Results from the present study may help college stakeholders better understand students’ perceptions about student satisfaction and knowledge gained.

Key Words: [student satisfaction, knowledge gained, student involvement, effective instructor communication, engaged learning, faith-based learning, online learning, traditional classroom.]
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I. INTRODUCTION

Today’s undergraduate students have many university and student involvement choices related to their educational journey. Students can attend public or private schools and choose to be either in traditional, blended, or fully online programs. Higher education institutions are concerned with fostering college student success as tuition is increased year after year. Students and parents want the best fit and affordability regarding the college experience. The U.S. Department of Education continues to raise university standards relating to the student experience and student outcomes (Hénard & Roseveare, 2012).

The student experience includes student satisfaction, academic achievement, attitudes, and beliefs prior to attending college; the university environment; and how the students’ backgrounds influence student perceptions related to student involvement (Astin, 1999). As expectations for higher education have risen, so have the expectations of parents and students. Therefore, the development of the student experience becomes more important to the overall university long-term strategy.

Student engagement refers to the “amount of physical and psychological energy that the student devotes to the academic experience” (Astin, 1999, p. 518). The involved, high-performing student invests time and energy into studying, spending time on campus, and interacting often with professors and other students. Conversely, an uninvolved student neglects studying, attends fewer campus events, and does not socialize with teachers or other students (Astin, 1999). Webber, Krylow, and Zang (2013) have found evidence from recent research
concerning student engagement suggesting that student involvement and student engagement in academics are critical to success. This dissertation presents a descriptive study of student satisfaction as experienced by undergraduate students in a Christian university. The first chapter of this dissertation includes the background of the study, its significance, and a method overview.

**Background of the Study**

Student engagement refers to how students actively engage in their undergraduate experience through various physical and psychological activities such as amount of time studying; participating in extracurricular groups such as debate teams; sports teams, and musical bands; and the development of social connections (Astin, 1999). Pascarella and Terenzini (2005) found that students’ involvement is guided by their personal engagement in the overall collegiate, interpersonal, and extracurricular activities on campus. Murphy and Alexander (2006) echoed Astin’s research, stating that student engagement is the amount of energy students put forth in their studies and other collegiate enterprises. Ben-Eliyahu, Mooreb, Dorph, and Schunn (2018) described student engagement as multidimensional, involving “affective, behavioral, and cognitive engagement” (p. 89). Kuh, Kinzie, Buckley, Bridges, and Hayek (2006) asserted that emotional, psychological, and spiritual dimensions of the student experience are important and critical to student college success.

Students’ voices matter. Students are frequently presented with course evaluations by universities for researchers to gain insight about various topics such as effective teaching, student engagement, student satisfaction, retention, and faith-based learning. At the institution at which the present study was conducted undergraduate students completed a Likert-style course evaluation at the end of every course. The present study examined what matters to students and
what can be deciphered from the course evaluations. The researcher explored student satisfaction and learning through examination of students’ perceptions. Students’ responses were studied from the course evaluations regarding student engagement, effective teaching, faith-based learning, and student satisfaction.

The guiding framework for this current study was Astin’s (1999) student involvement theory. Astin’s student involvement model (1999) provides a comprehensive explanation of how students assess the university experience and how these perceptions provide feedback for future improvement for universities. Astin’s (1999) theory includes three constructs: input, environment, and output (I-E-O). The I-E-O Framework includes an overview of student input (I), which refers to the program entry characteristics of students that include demographic, financial, and behavioral dimensions. The environment (E) refers to the students’ experience throughout the college program including institutional characteristics such as the curriculum, faculty teaching, and the learning experience. The student output (O) refers to the students’ experience, which discusses the environment including course performance and student engagement (Astin, 1999). The objective of the present study was to examine the factors that influence student perceptions of overall satisfaction and knowledge gained in online and traditional courses.

**Problem Statement**

The purpose of this quantitative study was to examine the effectiveness of the educational practices at a Christian university related to undergraduate student perceptions of effective student engagement, effective teaching, faith-based learning, and student satisfaction. Many institutions of higher education are seeking ways to understand and increase student satisfaction and knowledge gained. By examining the constructs that comprise the undergraduate student
experience and perceptions of student satisfaction and knowledge gained, leaders at educational institutions and their stakeholders may garner a better understanding about factors that positively influence student satisfaction and knowledge gained.

**Significance of the Study**

Most higher education institutions are in search of ways to improve student satisfaction. By examining the factors that comprise student satisfaction for undergraduate college students, all college faculty may better understand the resources needed to help students enjoy a better overall college experience. Evaluating how an undergraduate business course relates to student satisfaction and knowledge gained may support faculty members and create awareness for better practices that promote higher student satisfaction in their undergraduate program. Research about student engagement is vital because “the more students engage in educationally purposeful activities, the more they learn” (Hu & McCormick, 2012, p. 739).

**Overview of Method**

An exploratory, non-experimental regression method was used to analyze the results from a student course evaluation. The researcher examined a freshman level financial literacy course and its relationship to knowledge gained and student satisfaction, comparing traditional and online formats at a private Christian liberal arts university. A student satisfaction course evaluation instrument from the university’s Institutional Effectiveness Department was utilized for gathering data.

The quantitative course evaluation section was derived from a Likert-style course evaluation instrument. The anonymous course evaluations were sent near the end of the course term via e-mail to undergraduate college students who took the freshman finance course (see
Participants were drawn from a convenience sample. The sample of students included in the study attended a private Christian liberal arts university located in Central Florida. According to the website National Center for Education Statistics (2018), the undergraduate student population consisted of a demographic representation as follows: White (57%), African American (15%), Hispanic/Latino (18%), Asian (2%), nonresident alien (2%), Native Hawaiian (1%) and ethnicity unknown (5%). The study’s sample of financial literacy students was chosen from the university’s College of Business program due to convenience, accessibility, and the researcher’s financial literacy background. The data set questions focused on knowledge gained and student satisfaction. The sample size consisted of 670 students in online courses and 579 students in traditional classes, representing 1,249 total students. Students completed course evaluations online at the end of each course term during the Summer 2014 through Fall 2016 terms. Their responses were recorded anonymously. The sample size was reasonable for the purposes of hypothesis testing.

The student questionnaires were Likert-style, five-point questionnaires (see Appendix A and Appendix B for more information on the course evaluations). Likert items are used most often for assessing students’ perceptions in course evaluation scales questionnaires (Lovelace & Brickman, 2013). The university’s official archived catalog describes the financial stewardship course as being taught from a Christian perspective. The course addresses cash flow management, use of credit, investing as a steward, and financial planning. The introductory financial literacy course is mandatory for all entering freshmen at the subject university located in Central Florida.
Method

Multiple linear regression was utilized to address Research Questions 1 through 5. The researcher studied students’ perceptions of student satisfaction and knowledge gained, comparing online and traditional courses at a Christian university.

Research Questions

To address the stated research problem, the following questions were posed:

Research Question 1: Based upon student self-report data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of the amount of knowledge gained reported by students enrolled in the online version of the financial literacy course?

Research Question 2: Based upon student self-report data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of the amount of knowledge gained by students enrolled in the traditional version of the financial literacy course?

Research Question 3: Based upon student self-report data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of student satisfaction for an online version of the financial literacy course?

Research Question 4: Based upon student self-report data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of student satisfaction for a traditional version of the financial literacy course?
Research Question 5: Based upon student self-report data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of overall satisfaction and knowledge gained for both face-to-face and online financial literacy courses?

Research Hypotheses

Null Hypothesis 1 (H₀₁): There will be no statistically significant difference in the subscale scores for the online model in relation to reported knowledge gained with the instructor and the course for the following factors: student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning.

Null Hypothesis 2 (H₀₂): There will be no statistically significant difference in the subscale scores for the face-to-face (traditional) model in relation to reported knowledge gained with the instructor and the course for the following factors: student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning.

Null Hypothesis 3 (H₀₃): There will be no statistically significant difference in the subscale scores for the online model in relation to reported student satisfaction with the instructor and the course for the following factors: student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning.

Null Hypothesis 4 (H₀₄): There will be no statistically significant difference in the subscale scores for the face-to-face (traditional) model in relation to reported student satisfaction with the instructor and the course for the following factors: student level of involvement in the course,
effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning.

**Null Hypothesis 5 (H₀ 5):** There will be no statistically significant difference in the subscale scores for both face-to-face (traditional) and online financial literacy courses in relation to reported overall student satisfaction and knowledge gained for the following factors: student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning.

**Analysis**

Adjusted $R^2$ represented an approximation of the effect size for prediction for each independent variable in respective models. The predictive slope $t$ was interpreted for statistical significance. The alpha level $p < .05$ represented the threshold for statistical significance in evaluating each independent variable in the predictive model. The assumption of multicollinearity was evaluated through the interpretation of tolerance values. Tolerance values of $p \geq 0.1$ were considered as fulfilling the assumption. The fitness of the predictive model was assessed through the interpretation of the ANOVA value. ANOVA values of $p < .05$ were considered an indicator of model fitness for predictive purposes. The assumption of independence of error was assessed through the interpretation of the Durbin-Watson value. Values between 1.0 and 3.0 were considered as fulfilling the assumption of independence of error. The Durbin-Watson test revealed multilinear autocorrelation regression interpretations of different variables examined in the present study. The four constructs, or factors, examined were: (a) student level of involvement in the course, (b) effective instructor communication, (c) instructor specification of class assignments, and (d) instructor effectively integrated faith and learning. The present study determined which of the four constructs was the best predictor of
student satisfaction and knowledge gained for an online business course versus face-to-face instruction of the same course. The Durbin-Watson test revealed results of these four constructs, from highest to lowest predictor rankings, in relationship to statistical significance.

**Limitations**

Although this research successfully met the intended goals, there were limitations. First, the research took place in a single Christian university. Generalizing the results from a small population may not reflect the overall generic university population, especially secular colleges (Elzinga, 2012; Powell & Boyington, 2017; Reisberg, 1999). Therefore, the results of the present study may need to be replicated using the same survey instrument at more than one university to research other types of colleges in addition to faith-based, Christian universities. The present study was performed using data from only one college course and for entering freshmen. Also, this course was mandatory. The results may be different if the course was not mandatory.

**Definition of Key Terms**

**Student Satisfaction**

Defining student satisfaction in academic research is complex. For example, the “happy-productive” student theory (Cotton, Dollard, & De Jonge, 2002) suggests that student satisfaction is supported by psychosocial factors such as coping, stress, and well-being. Student satisfaction is achieved “when actual (university) performance meets or exceeds the student’s expectations” (Elliott & Healey, 2001, p.1). Student satisfaction is a widely accepted benchmark for most universities’ insight of their teachers, departments, curriculum and instruction programs, and overall college structure (Senior, Moores, & Burgess, 2017). Kuh et al., (2006) reported that student satisfaction measurement is an essential element of ongoing student retention and
persistence along with Kuh, Kinzie, Schuh, and Whitt (2005); and Suhre, Jansen, and Harskamp (2007). For the present study, student satisfaction was determined by the students’ survey satisfaction ratings of the personal finance business course and the students’ ratings of the professor.

**Knowledge Gained**

The Merriam-Webster Dictionary defines *knowledge* as “the fact or condition of knowing something with familiarity gained through experience or association” (Knowledge, 2018). The university student survey asked students “How much knowledge have you gained from this course?” The course survey choices were the following: (a) none, (b) some knowledge, (c) a great deal. Student answers were derived from a Likert scale, and knowledge gained was directly measured in the present study.

**Student Engagement**

Miller (2011) defined student engagement as a student’s propensity to actively participate in the learning process and capacity to persevere. Student engagement is based on survey on survey questions. The terms student involvement and student engagement have been used interchangeably in the research literature. Student engagement refers to “a range of educationally productive activities, including academic effort (study time), academic integration, active and collaborative learning, interaction with faculty members, diversity-related activities, and the extent to which classes emphasize higher order thinking” (Zhao & Kuh, 2004, p. 119).

**Instructor Communication**

Communication is interaction that occurs between the student and the course facilitator. Forms of communication include email, lectures, texting, online videos, oral and written discussions, and sharing of documents (Parker, 2012). Communication is also referred to as
discussion between two or more people. For the present study, effective communication was defined by the students from their survey responses regarding the extent to which they were satisfied with the information delivered by the instructor in the business course. The question from the course survey asked students if the instructor effectively communicated the course material.

**Clearly Specified Assignments**

To communicate college assignments effectively, an instructor should guide students. Instructors are expected to deliver effective communication, clearly explain course expectations, ensure assignment clarity from the syllabus, provide timely responses to calls and emails, and administer timely graded coursework. Several ways instructors can clearly specify class assignments are through rubrics and syllabi related to student learning outcomes.

The factor of *clearly specified assignments* is measured by students’ responses from their course evaluation regarding the extent to which they were satisfied with the assignment information delivered by the instructor in the financial literacy business course. The course evaluation asked students to consider their experiences in the course and rate whether the instructor provided clear instructions for course work.

**Faith Integration**

Faith integration in a Christian university entails preparing students to go into the world as servant leader influencers in their careers and their communities. According to the Asuza Pacific Integration Handbook, to teach Christianity is to assist, direct, and create discernment. Within a Christian scholarly university setting, instructors should emulate and demonstrate Christ as they teach and communicate with students. The instructor’s role is to increase faith integration and the holistic formation of the learners (Asuza Pacific Faculty Senate, 2013).
Another example of faith integration can be found at Liberty University, which emphasizes a holistic worldview as well. The integration of faith and learning involves components that are critical to a Christian classroom. Faith integration distinguishes how God's brilliant plan is found over all disciplines and how biblical scripture impacts students’ knowledge about the nature of God, man, creation, reason, redemption, and salvation. Faith integration is essential in guiding a student's heart for truth, reason, and ethical values as well as the student's scholastic, social, and Christian worldviews (Liberty University, 2018). For the present study, faith integration is measured by students’ responses from the course evaluation regarding the extent to which they perceived that the instructor successfully incorporated faith and learning in the traditional classroom or online.

**Student Involvement**

*Student involvement* refers to the “amount of physical and psychological energy that the student devotes to the academic experience” (Astin, 1984, p. 518). Pascarella and Terenzini (2005) stated that student involvement “is largely determined by individual effort and involvement in the academic, interpersonal, and extracurricular offerings on a campus” (p. 602). Alexander and Murphy’s (2006) study supports Astin’s definition, explaining that student involvement involves the vast amount of time and effort students invest into studying and other education-related activities.

Researchers agree that student involvement is complex and active, encompassing emotional, psychological, and spiritual dimensions of the student experience (Astin, 1984; Pascarella & Terenzini, 2005); as Kuh et al., (2006) asserted, student involvement is critical to student college success. Student involvement in this present study includes time studying, psychological communication between the student and the instructor, and perceptions of faith
integration in the classroom. Student involvement also encompasses interpersonal interactions and the determination to persist and overcome obstacles to successfully finish their financial literacy course.
II. REVIEW OF LITERATURE

The chapter outlines a review of literature on student satisfaction with college courses and student perceptions of knowledge gained in college courses. Educators have investigated key determinants of student satisfaction and their metrics, measuring student satisfaction in college, online learning, traditional learning, effective student engagement, and student involvement. Researchers have asserted that emotional, psychological, and spiritual dimensions of the student experience are complex (Astin, 1999; Tinto, 1993; Kuh et al., 2006).

The student college experience is complex as the university prepares students for real-world experiences. Arum and Roska (2011) researched real-world expectations in relationship to college student involvement and employer expectations. Their book *Academically Adrift* posed the question: What are undergraduate students learning while in college? Findings from the researchers’ results, which included over 2,300 undergraduates at 24 institutions, showed that 45% of these students revealed no significant improvement in three primary skills—including “written communication, critical thinking, and problem solving” (p. 52). Meanwhile, 90% of employers surveyed stressed the importance of the three skills as essential for “job success new market entrants” (Arum & Roska, 2011, p. 52).

In their study, Arum and Roska (2011) chronicled the pervasiveness that some students have become drifting dreamers who are ambitious but lack direction in life. According to Arum and Roska (2011), potential employers view students as incompetent and lacking the skills in the real-world but having high expectations to be successful in their future careers. Students are
more likely to achieve academic skills and student involvement goals when their grades are above average, they are satisfied with their courses, and they have gained knowledge in their academic programs (Arum & Roska, 2011). The authors also noted that all faculty members and employers in their research unanimously agreed that critical thinking skills are essential for their students’ future survival skills and should be taught in college (Arum & Roska, 2011).

**Student Involvement Research**

A review of Astin (1999) and Lewin (1951) supports Chickering and Gamson (1987) and Reisser’s (1993) theory on competence development and Pace’s (1982) theory on student development in college. Astin (1999) characterized the term involvement as “the sum of physical and mental vitality that the understudy gives to the scholarly experience” (p. 297). Researcher Lewin (1951) developed an equation to provide scholarly insight about the interaction of college students and their environment. Astin (1999) also developed an equation that complements Lewin’s (1951) theory. These equations became the foundation of student development and involvement. The models assist researchers and higher education administrators how to better understand student involvement (Evans, Forney, Guido, Patton, & Renn, 2010).

Dr. Alexander Astin is a higher education expert and the founding director of the Higher Education Research Institute at UCLA. He is also the founding director of the Cooperative Institutional Research Program (CIRP), an ongoing national study of some 15 million students, 300,000 faculty and staff, and 1,800 higher education institutions (Astin, Oseguera, Sax, & Korn, 2002). Many researchers use his framework to guide articles and research questions (Appleton-Knapp & Krentler, 2006; Berger & Milem, 1999; Webber et al., 2013; Zhao & Kuh, 2004).
Astin (1999) explored the impact of student involvement on student outcomes in college. Student involvement and learning relates to Astin’s (1999) framework of input, output, and environment associated with student learning, background, personal development, and the student environment. One of his critical claims was that students must be actively engaged in their surroundings to learn and thrive in college (Evans et al., 2010). Astin’s (1999) theory stressed that student involvement is mainly based on actions and the students’ behavior, including physical, psychological, psychosocial actions and conduct (Evans et al., 2010).

Alexander Astin (1977) wrote the seminal book *Four Critical Years: Effects of College on Beliefs, Attitudes, and Knowledge*. His original study implemented ten years of longitudinal data with more than 200,000 students and 300 postsecondary universities, utilizing measures for more than 80 student outcomes (Astin, 1977). Astin’s (1977) study explored what factors influenced change in college students such as student achievement, competency, and student satisfaction connected with student involvement. Astin’s (1977) research demonstrated how student outcomes were affected by various student characteristics influencing college success. Astin’s (1999) student involvement theory is the guiding framework for several assessments in higher education which includes three constructs related to student characteristics and student experiences: input, environment, and output (I-E-O). Each construct refers to a guiding framework related to student involvement. The term input (I) refers to those personal qualities of the individual student including demographics, personal beliefs, religion, and past experiences that the student brings initially to the educational institution (Astin, 1984). The next construct is called environment (E), which entails the students’ actual experiences during the college program, and the third construct is called output (O), which refers to the expertise instructors are trying to develop in their curriculum and development (Astin, 1993). Outputs are outcome
variables including characteristics, knowledge, attitudes, beliefs, and values that are expressed after a student finishes a course (Astin, 1993).

Astin (1999) developed the interaction input, environment, and output equation that draws on the parallel of person and environment interactions like Lewin’s (1951) interaction of college students and their environment theory. Astin’s (1999) student involvement framework focused on the complexities of the student experience. From Astin’s input-output-environment (I-E-O) framework, the students are viewed holistically. The development of Astin’s (1999) I-E-O model is seminal and other researchers have added to this lens of study to understand the student experience and what matters the most to students involving student satisfaction (Elliott, 2002; Kuh, 2006). The I-E-O theory relates to student involvement today in both traditional and online classrooms according to Fernandez, Garcia, Serés and Bosch (2018). Lewin modified the psychological Gestalt principle which focuses on perceptions and learning (Gershwin, 1994) by theorizing that researchers should view students from a holistic approach. Lewin studied students and their environment, and some of his work was published as early as 1951 (Gershwin, 1994). Lewin's holistic approach developed a concept to better understand people as a whole system and examine each person as a set of unique human behavior patterns (Gershwin, 1994).

Lewin further applied the Gestalt personality principle and developed the interactionist perspective which influenced student development (Evans, Forney, Guido, Patton, & Renn, 2010). In the early 1900s, Lewin adapted the Gestalt philosophy and refined it into a social experience where students were viewed holistically. He explained that a student is viewed as a whole system consisting of subsystems that are somewhat separate yet are still capable of interacting with each other (Gershwin, 1994). Lewin suggested that the development of an individual was the product of the interaction between inborn predispositions (nature) and life
experiences (nurture) (Gershwin, 1994). His interaction concept was created in the form of a mathematical equation known as Lewin’s equation for behavior, asserting that behavior is the function of the person interacting within his environment: \( B = f(P, E) \). Lewin’s seminal equation is one of the cornerstones for understanding student development.

Alexander Astin’s research was influenced by Lewin’s work. He theorized a parallel equation related to Lewin known as Astin’s (1999) input-output-environment student framework for behavior (\( B \)) as a function (\( f \)) of the interaction (\( X \)) of person (\( P \)) and environment (\( E \)). The two equations help researchers and higher education administrators understand student behavior associated with student involvement (Evans et al., 2010).

Recent literature findings underscore the importance of student involvement related to the student experience (Carroll, 2011; Fernandez, et al., 2018). Various aspects of student involvement contribute to learning and satisfaction. Wang and Shiveley (2009) conducted research at California State University, Sacramento, to examine statistical significance between extracurricular activities and student retention. The researchers found that students who participated in extracurricular activities achieved higher rates of retention than students not performing in activities, were more likely to graduate and enjoyed improved GPAs (Wang & Shiveley, 2009). The researchers studied student involvement and recommended that California State University, Sacramento, leadership stakeholders provide more resources in support of student extracurricular activities to increase the reach and impact of academic programs (Wang and Shiveley, 2009, p. 16).

**Student Involvement**

Many student involvement studies originated from the work of Alexander Astin (1984). His theory addresses the issues of student involvement and student engagement. The general
concept is that if students become involved in class discussions, student activities, and student programs, they will become more engaged with other students and professors (Astin, 1977). The amount of student learning and personal development associated with educational programs is directly proportional to the quality and quantity of student involvement in that program (Astin, 1977).

Research conducted by Webber et al., (2013) found that student engagement in educationally purposeful activities had a strong effect on student-reported gains. Webber et al., (2013) also revealed that characteristics of the campus environment can influence what and how efficiently students learn. Webber et al.,’s (2013) conclusions support the concept that student involvement and quality of engagement can enhance the collegiate environment and student experience associated with student activities.

Likewise, when students lack academic skills and are not involved, they are less satisfied and usually their grades are below average (Korobova & Starobin, 2015). Dissatisfaction for students and employers has propelled the movement for experiential learning in traditional and online courses (Bonesso, Gerli, & Pizzi, 2015).

Real-world apprenticeship encourages mastery of concepts, learning, and student development. Research findings show when students are involved in extracurricular activities such as student government associations or debate teams, their test scores and overall college satisfaction increases (Astin, 1999).

 Extracurricular activity explanations established by leading modern educational thinkers provide evidence to support student involvement. According to Wang and Shiveley (2009), extracurricular activities include all activities both inside and outside the classroom that develop students’ distinctive interests and traits. Extracurricular activities may also target the
university’s objectives, such as team building which creates a sense of belonging during the students’ college experience, along with helping maintain a positive impact on student retention and student involvement (Astin, 1999). As campuses are growing, becoming more inclusive demographically, and offering an assortment of extracurricular activities, students feel a sense of belonging with their peers and within the college environment (Astin, 1999). Tinto’s (1987) research revealed that students who feel connected through academic and social interactions will persist in college.

Collaborative activities also provide a place for students to gather for a common cause such as the debate team or ministry work, which can accomplish common objectives (Astin, 1999). Within this college unity, students feel a strong sense of belonging as learning and development are strengthened (Astin, 1999). Through participation in extracurricular activities, students frequently interact with peers who have similar interests, thus promoting social integration within the college environment. When students become more involved, they are more likely to perceive their college environment positively, which also raises the probability that they will have a more satisfying student experience (Astin, 1999).

Student involvement is also enhanced by the implementation of extracurricular activities for the undergraduates’ college experience. According to Hawkins (2010), extracurricular student involvement may lead to the advancement of better leadership skills, better satisfaction with college, better insight into course curriculum, higher retention rates, and future success after college. Student learning and student engagement were increased when students participated in activities such as debate teams or science competitions (Kuh, 2008). Kuh (2008) also explored how extracurricular events may improve educational practices and student involvement within a university.
Extracurricular activities also focus on cognitive characteristics that assist in student learning and intellectual development (Billah, 2017). For example, extracurricular and co-curricular activities strengthen student satisfaction and their college experience when students feel a heightened sense of competitiveness, excellence, achievement, innovation, and passion (Billah, 2017).

**Student Satisfaction**

Student satisfaction is important for the vitality of universities to remain solvent and actively attract students (Elliott & Healy, 2008). Researchers have examined the reasons for students' satisfaction or dissatisfaction with their higher educational experience. For example, a study by Duckworth, Peterson, Matthews, and Kelly (2007) found that grit, which they define as “perseverance and passion for long-term goals” (p. 1087), helps students stay the course in their educational endeavors and persist to graduation. In their conclusions regarding education, Duckworth et al., (2007) stated that “more educated adults were higher in grit than were less educated adults of equal age” (p. 1091).

Moon Suk Ko (2011) surmised that student satisfaction is a combination of perceived performance coupled with attainment of moderating higher expectations over the college student’s experience. Bean and Bradley (1986) define student satisfaction as "a pleasurable emotional state resulting from a person's enactment of the role of being a student" (p. 398). Elliott and Healy (2008) define student satisfaction as a "short-term attitude resulting from an evaluation of the student's educational experience" (p. 2). Letcher and Neves (2010) hypothesize that student satisfaction is best thought of as the "favourability [sic] of a student's subjective evaluations of the various outcomes and experiences associated with education" (p. 3). Student satisfaction is a complex construct consisting of multiple dimensions that incorporate many
subjective assessments (Hunt, 1977; Oliver, 1989). Consequently, addressing student satisfaction requires a multi-dimensional lens, which necessitates that satisfaction will be viewed through numerous aspects and characteristics (Elliott and Healey, 2008; Senior et al., 2017).

Elliott and Healey (2008) stated that the three major characteristics of an educational program that were commonly found to be important predictors of student satisfaction were “student centered-ness (feeling welcome and valued), campus climate, and instructional effectiveness” (p. 7). According to research findings by Senior et al., (2017), educational program predictors have a strong impact on how satisfied students are with their overall college experience. When university leaders understand the importance of student satisfaction, a positive school climate is created within the college that adds a richer student college experience (Senior et al., 2017).

Critics have argued that the concept of student satisfaction is not well understood and is hard to measure since there are so many diverse factors related to its complexity (Senior et al., 2017). They also say that not only is student satisfaction difficult to measure but little is known about the concept (Senior et al., 2017).

An article written by Allen Gibson (2010) reviewed major themes that influenced students' perceptions of overall satisfaction with specific focus on business students' satisfaction. Gibson (2010) found academic factors such as the quality of teaching, skills and knowledge acquired, and the curriculum itself are the most significant factors of overall student satisfaction. Furthermore, several other contributing factors, such as the students' sense of “belonging” and perceptions of the institution's responsiveness and concern, also significantly influenced students’ overall satisfaction (Gibson, 2010). Research performed by Thomas and Galambos (2004) using exploratory data mining determined there are three general student satisfaction
measures: overall satisfaction with their college, overall college re-enrollment, and overall impression of educational quality. Results from a decision tree showed that of the students reporting very large intellectual growth \((n = 324)\), “91% rated the quality of education good or excellent” (Thomas & Galambos, 2004, p. 260). Lastly, students reported that a sense of belonging was the most important predictor for the non-academic satisfaction variables (Thomas & Galambos, 2004).

**Online vs. Traditional Courses**

According to the authors of the National Center for Education Statistics (NCES, 2018) online learning has become a fast-growing education environment, and enrollment has stayed constant (Ginder, Kelly-Reid, & Mann, 2017; National Center for Education Statistics Institute of Education Sciences, 2018). Online students in higher education are enjoying new opportunities that were previously not available to them due to geographic reasons, time constraints, family, and work balance (Ginder et al., 2017). Online education affords busy undergraduate students the opportunity to balance school, work, family, and other obligations (Bartley & Golek, 2004). Researchers describe online learning as “education that uses one or more technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or asynchronously” (Allen & Seaman, 2017, p. 6).

According to Allen and Seaman (2017), in 2015, distance education enrollment increased by approximately 4.0% with six million students enrolled in online distance education courses. Allen and Seaman (2017) support Moore and Kearsley’s (2005) research, which characterized distance education as a multi-dimensional platform where instruction and learning occur in different places. Effective distance education requires effective communication through
technologies as well as special institutional organization and infrastructure (Moore & Kearsley, 2005). The researchers also noted that there is a difference between distance education and the use of technology in the classroom (Moore & Kearsley, 2005). Distance education depends (emphasis added) on technology where classrooms that infuse technology use additional technology that complements (emphasis added) part of their teaching (Moore & Kearsley, 2005). In distance education, the students purposely try to learn and are guided by the instructor, who intentionally creates curriculum and instruction to assist their ability to gain knowledge (Moore & Kearsley, 2005).

Rovai, Ponton, Wighting, and Baker (2007) conducted a study at Regent University that focused on the differences between traditional classroom learning and e-learning courses. The researchers used a multivariate analysis of variance to determine if there were differences in seven diverse areas of motivation between 12 traditional classes and 12 online undergraduate classes surveying 353 students. Rovai et al., discovered that online students possess stronger internal motivation than traditional students on three motivational measures: to know, to accomplish things, and to experience stimulation (Rovai et al., 2007). Furthermore, graduate students reported stronger intrinsic motivation than undergraduate students with both online and traditional classes (Rovai et al., 2007).

Summers, Waigandt, and Whittaker (2005) examined the differences between online distance education and traditional classroom learning for an introductory undergraduate statistics course. Two factors were measured: students’ final grades and student satisfaction with the course (Summers et al., 2005). Independent sample t tests were used in the study design (Summers et al., 2005), and the results revealed that there were no significant differences in grades between the online and traditional classroom settings. However, students enrolled in the
online course were significantly less satisfied than those enrolled in the traditional classroom (Summers et al., 2005).

Smart and Cappel (2006) also conducted a study that compared traditional and online courses in relationship to student satisfaction. The study examined students’ perceptions of integrating online components in two undergraduate business courses, and participating students completed online learning modules before class discussion. Overall, students in the elective course rated the online courses somewhat positive while those in the required course rated them somewhat negative (Smart & Cappel, 2006). The researchers suggested that future research studies should explore how to design online course units that take less time for students to complete with e-learning segments. The researchers also suggested the need for future studies about how students’ perceptions and prior experience with online courses affects their attitudes towards e-learning.

Based on Smart and Cappel’s (2006) research findings for student involvement characteristics, the integration of course content and student learning context should be planned. For example, the researchers (Smart & Cappel, 2006) explored ways to successfully integrate online technology into the classroom learning environment and how students perceive online learning. Smart and Cappel (2006) found that 30% of students perceived that eight hours to complete a single homework unit was too much time for the intended learning outcome. For most students (83%) of the 2006 study, this was their first experience completing an online learning class module. In addition, the largest student dissatisfaction was the time required to complete the online classes. The researchers stated, “the completion of the online units may have seemed like a lengthy, solitary experience” (Smart & Cappel, 2006, p. 214). Smart and Cappel (2006) concluded that instructors should be selective in the way they integrate online courses
from traditional classroom-delivered courses. Smart and Cappel’s (2006) research findings provided greater insight into online learning, student success, and student satisfaction.

According to research by Kuo, Walker, Beland, and Schroeder (2013) comparing an online student satisfaction study of predictive factors, they found social interaction between instructor and students was an important factor for satisfactory online learning. Also, the instructor was instrumental in facilitating an inclusive online learning environment (Kuo et al., 2013).

In a study that examined the relationship between students’ characteristics, self-regulated learning, technology self-efficacy, and course outcomes in online learning settings by Wang, Shannon, and Ross (2013), results revealed that students with prior online learning experience tend to demonstrate better study habits and time management skills. Wang et al., (2013) found that students with prior online learning experience had higher levels of motivation and engagement in their online courses. Wang et al. (2013) ascertained the student group with previous online learning displayed higher levels of technology skills and course satisfaction.

Hasegawa, Ugurlu, and Sakuta (2013) conducted a study in Japan regarding new technology approaches that were used in five courses. A sample of 41 students were enrolled in traditional courses, and 29 students were enrolled in e-learning courses (Hasegawa et al., 2013). Traditional courses were lecture-based only, and e-learning courses were taught in a blended format. Intrinsic motivation was examined on various topics of interest to students. Hasegawa et al., (2013) concluded that interest of topic and intrinsic motivation were highly correlated for the distance-learning platform and were the primary driving forces for increased academic performance. Hasegawa et al.’s (2013) findings suggest that if e-learning courses are of interest to students, then students would be motivated, and they would be more likely to use multiple
modes of technology. Hasegawa et al., (2013) also suggested that students may obtain better grades and enroll in future e-learning courses.

**Student Engagement**

Student engagement refers to students taking more responsibility of their coursework and own the learning process (Park, 2003). When students are actively involved in their studies, they retain more information, are satisfied with their classes and instructors, and are more likely to have gained knowledge in their college courses (Park, 2003). Student engagement is important to undergraduate students’ learning, skill development, and interests through active learning. Mazur’s (2014) research encourages students to learn interactively through in class testing, reading, and quizzes instead of lecture style. Mazur (2014) concluded that when students actively learn, they retain new knowledge through his incremental testing and active learning style.

Typically, when students are inspired and curious, they are considered engaged students (Wiggins & McTighe, 1998). When students become bored and unmotivated, they often struggle with mastering skills and become dissatisfied (Wiggins & McTighe, 1998). Students who are engaged in classes generally do well academically and are more likely to be satisfied in their academic studies (Kuh, 2008; Wiggins et al., 1998). Student engagement is important for students as they actively learn, and it is important for instructor and university long-term goals (Kuh, 2008; Mazur, 2014; Wiggins et al., 1998).

Current research highlights the plasticity of student engagement (Liem & Chong, 2017). Newmann (1992) proposed student engagement is influenced by personal motivation and interest. Newmann (1992) stressed that student engagement increases learning, motivation, and student success, and highlighted why student engagement is critical for student success in
learning. According to Newmann (1992) student engagement is the level of participation and personal interest that a student demonstrates in school. When students are internally motivated, they are fostering a climate for their own student engagement and college success (Liem & Chong, 2017).

Liem and Chong (2017), found when instructors form positive classroom environments and implement educational best practices, student and instructor relationships are established. Students who enjoy their professors and feel liked and respected have the propensity to become active learners within their classroom environment (Tomlinson, 2011). When instructors foster student learning, students are more likely to become champions in their learning process (Tomlinson, 2011). Personal motivation and interest also influence student engagement, as technology and e-learning influence intrinsic motivation and academic performance (Hasegawa et al., 2013).

According to research conducted by the National Survey of Student Engagement (NSSE) under the leadership of their director, George Kuh (2008), the top three specific measures of student engagement are: time spent studying, participating in co-curricular activities, and active engagement in their education. Kuh (2008) determined these three student activities are an essential part of the student involvement educational process. He stressed time spent studying for courses increased academic performance, critical thinking skills, and knowledge gained (Kuh, 2008). Kuh (2008) found time spent in co-curricular activities enriched the student’s experience and increased student satisfaction.

Kuh’s (2008) findings are grounded in the work of Lev Vygotsky, a psychologist and professor who established the term zone of proximal development (ZPD) (Rousseau, 2018). Vygotsky theorized that learning is most effective when the learning process brings students to
new learning levels (Rousseau, 2018). Educators need to incorporate new ideas in their lessons that activate critical thinking skills (Shabani et al., 2010). To successfully bring students to the next learning level, teachers need to bridge the gap between current student development and potential student development (Shabani, Khatib, & Ebadi, 2010). The proximal development stage can be accomplished by encouraging students to solve problems and learn new concepts that support the educational learning goals (Shabani et al., 2010). Effective instruction fosters active learning and includes clarity, task orientation, and flexibility that encourages student engagement (Tomlinson & Allan, 2000). Educational practitioners organize content by scaffolding student ideas and instructional content to promote active learning (Wahlberg & Paik, 2000). Kuh’s (2008) student engagement research emphasized sequencing of lessons by scaffolding new content.


**Active Learning**

Active learning strategies are ways for instructors to encourage and enrich classroom student involvement, critical thinking skills, and student engagement. Engaged active learning
helps students get to the “aha moment,” also known as the watershed moment of students’ learning (Lieberman, 2016).

Astin’s (1999) active learning theory has resulted in much new research and strong support for enhancing student engagement. Fayombo (2012) conducted a study about active learning in a university setting in Barbados. Her study explored the relationships between the active learning strategies (discussion, video clip simulations, game shows, role plays, five-minute papers, clarification pauses, group work) and the students’ learning outcomes (SLOs) among a sample of 158 undergraduate psychology students at the University of the West Indies, Barbados. The students responded to an active learning strategies questionnaire and student learning outcomes assessment scale. Fayombo’s (2012) research results revealed statistically significant positive correlations between active learning strategies and student learning outcomes, and the active learning strategies contributed to 14% of the variance accounted for from student learning outcomes. Additionally, video clip simulation appeared to be the best active learning strategy and had the highest correlation with student learning outcomes (Fayombo, 2012). The findings are consistent with the existing literature in the field related to the learning activities and outcomes that promote thoughtful engagement on the part of the student (Wiggins & McTighe, 1998). Fayombo’s (2012) findings underscore the importance of encouraging students to think about what they are learning in relation to the instructional active learning practices that engage students in the learning process (Ruhl, Hughes, & Schloss, 1987).

Winterbottom (2012) described active learning as a scaffolding process associated with knowledge gained. The active learning process is considered student-centered learning and is a form of understanding new information instead of written memorization. Researchers hypothesized that problem solving helps promote active learning (Reed, 1993; Singley &
Active learning helps students prepare for quizzes and tests as new knowledge is acquired and equips them for future success in college (Winterbottom, 2012).

Kolb (2015) explored active learning and its relationship to experiential learning. He found that most scholars wrestle with one definition because experiential learning is a complex theory. Kolb described experiential learning as a lifelong process and stated that students learn from their experiences because learning is “formed and reformed through experience” (2015, p. 28). With over 50 years’ experience studying experiential learning from innovative scholars on the topics of learning and development, Kolb (2015) advocated that experiential learning fosters knowledge development that enables students to master learning outcomes.

“Active learning engages students in the process of learning through activities and/or discussion in class, as opposed to passively listening to an expert” (Freeman et al., 2014, p. 1). Freeman et al., (2014) found the lecturing style of instruction at the university level has been dominant in education for many years. They performed a study comparing active and passive learning. Freeman et al., conducted a meta-analysis study comparing lecture style, or passive learning, to the constructive style, or active learning, by analyzing 225 studies that reported data on examination scores or failure rates when comparing student performance in traditional lecturing versus active learning. Freeman et al., (2014) found 158 active learning studies and 67 traditional lecture studies. They discovered that average examination scores improved by 6% in active learning sections, whereas students in the traditional lecture-style class settings were 1.5 times more likely to fail compared to students in active learning classes. Freeman et al., supported active learning as the preferred, empirically-validated teaching practice in regular classrooms.
Freeman et al.’s (2014) research highlights the importance of students’ active involvement in the learning process. An example of a specific research-based active learning strategy is the “minute paper” concept which helps students demonstrate comprehension. The task may include writing or presenting key takeaway points during the day’s lesson. The minute paper technique requires that students write down a brief synopsis about the main points regarding the specific assignment or unit. Minute papers are used as critical thinking and reflection before the end of class (Holtzman, 2007). The one-minute in-class exercise also serves as the attendance roll call, can encourage class participation, and allows the professor to observe active learning or identify student deficiencies (Holtzman, 2007). The reflection exercise encourages improved writing, comprehension, and time-on-task skills (Holtzman, 2007).

Since the mid-1990s, instructors from the University of Michigan math department have been effectively teaching calculus courses using active learning strategies (Berrett, 2012). According to Karen Rhea, the director of the introductory mathematics program, Michigan offers over 60 introductory small calculus classes that meet for 80 minutes three days per week (Berrett, 2012). Rhea explains that when the students are actively trying to solve their calculus problems in the classroom, the instructor walks around the room and can see who might be struggling. Active learning allows students to effectively and actively comprehend concepts because instructors can correct student work immediately in class (Berrett, 2012). Therefore, students are more likely to actively comprehend new calculus concepts.

Effective Communication

Effective communication between the student and the instructor is important (Hubley, 2005). Effective instructor communication refers to instructor expectations, assignment clarity from the syllabus, responses to calls and emails, and timely graded coursework (Hubley, 2005).
The syllabus is utilized as the primary communication tool that administers critical information for students’ expected outcomes and how they will be evaluated (Habanek, 2005). Allen (2014) posited that “rubrics can be used to clarify expectations to students, to provide formative feedback to students, to grade students, and/or to assess courses and programs” (p. 1). Also, rubrics enable instructors “to give detailed formative feedback to students” (Allen, 2014, p. 5). Timely formative and summative communication are important for students’ reflection and academic growth (Haley-Speca, 2016). Pascarella, Salisbury, and Blaich (2011) support that effective instructor communication in both traditional and online classrooms is significant, as it affects student satisfaction and motivation.

Pascarella et al., (2011) found the validity of students’ perceptions related to effective teaching is complex. The researchers (Pascarella et al., 2011) revealed the quality of undergraduate student learning was mediated primarily through student satisfaction perceptions (Pascarella et al., 2011). According to Pascarella et al., (2011), the three most robust predictors related to student perceptions of teaching are: “organization/preparation (use of course objectives, effective use of class time), instructional clarity (clear explanations, effective use of samples), and teacher expressiveness (eye contact, speaking emphatically)” (p. 2). Pascarella et al., (2011) concluded “exposure to organized and clear instruction enhances student satisfaction with the overall college experience, which in turn increases the likelihood of re-enrolling for the second year of college” (p. 2).

A close relationship between teaching and communication exists as instructors disseminate new knowledge and information. Various forms of communication may occur such as via email, lectures, texting, online videos, oral and written discussions, and sharing of documents (Parker, 2012). If the instructor does not clearly express course expectations and
assignments, miscommunication can occur (Parker, 2012). The instructor is responsible for
decreasing interruptions that could potentially decrease knowledge gained and student
satisfaction. Instructors should encourage best practices for behavioral classroom management
and university online etiquette so that students can actively learn and engage in their coursework
(Parker, 2012). Non-verbal communication is also important in the traditional classroom and
virtual meetings where participants can be seen on camera (Parker, 2012). Hand-movement,
posture, eye contact, and facial expressions are all examples of non-verbal communication.
Body language is important as students discern whether the instructors are confident and
enthusiastic about their content area.

Pascarella et al., (2011) concluded that instructor communication in the traditional
classroom significantly affects student satisfaction and motivation related to professor clarity.
The Pascarella et al., (2010) study focused on instructor clarity and students’ persistence from
first year into second year of college retention. Pascarella et al. (2011) pinpointed the net effects
to students’ exposure to effective instruction and student persistence. Pascarella et al., (2011)
found statistically significant results ($p < .001$) when students were given “organized and clear
instruction” (p. 16).

Redfern and Naughton (2002) studied effective communication with new technology
using collaborative virtual environments (CVEs), which are computer-enabled. Redfern and
Naughton (2002) stated that planning a CVE should be based on the academic requirements of
the college environment which implements three distinct types of virtual space: “collaborative
zones, common student campus, and lecture rooms” (p. 1). With appropriate strategies, a CVE
should greatly enhance the development of effective communication as both instructors and
students join the learning community in which students’ “social, academic, and collaborative needs” are addressed (Redfern & Naughton, 2002, p. 1).

Chickering and Gamson’s (1987) seminal paper entitled “Seven Principles for Good Practice in Undergraduate Education” encourages effective teaching and active learning. Chickering and Gamson discuss the importance of instructor and student communication, feedback, and active learning. They said:

Learning is not a spectator sport. Students do not learn much just by sitting in classes listening to teachers, memorizing prepackaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives. (Chickering & Gamson, 1987, p. 4)

Chickering and Gamson (1987) promote effective teaching and engaged learning. Their seven principles are guidelines intended for faculty members, students, and administrators to improve teaching and learning outcomes. The first principle is to encourage contact between students and faculty. Frequent interaction between faculty and their students is conducive to establishing a strong learning environment, better communication, and mutual trust (Chickering & Gamson, 1987). Communication is essential between professors and students. Both should be held accountable to create an effective communication relationship at the university. Also, when instructors utilize effective communication tools and clearly communicate course expectations, students begin to learn and thrive (Watson, Domizi, & Clouser, 2017). O’donovan, Price, and Rust (2004) stressed that instructors should “be transparent and demonstrably known and trusted by all stakeholders” (p. 3). Professors need to provide and attend office hours, answer students’ questions and concerns, and respond to emails in a timely manner (Chickering & Gamson, 1987).
Faculty development and effective communication are directly connected to student satisfaction and retention (Pascarella et al., 2011). Pascarella et al., (2011) found that exposure to well-planned and clear instruction enhances student satisfaction with their overall college experience, which also increases the probability of freshman students’ persistence and retention by re-enrolling for the sophomore year of college. Complementing the earlier findings of Pascarella et al., (2011) about clear communication and instruction, Blaich, Wise, Pascarella and Roksa (2016) found that if an instructor is not clear and is disorganized, these circumstances can be detrimental for students’ success and learning. Kelly’s (2018) behavioral nudging model research underscores the importance of instructor communication and utilization of technology to build student success, satisfaction, and retention.

Weimer and Lenze (1997) found that skills and behaviors for implementing clear and effective communication can be learned by students to successfully execute and create a satisfactory learning environment. Pascarella et al., (2011) stressed the importance of faculty development linked to student satisfaction and retention. Pascarella et al., also identified that faculty classroom teaching behavior contributes to student persistence, which was also tied to student satisfaction and students’ overall college experience.

The second guideline for faculty members, students, and administrators to improve teaching and learning outcomes from Chickering and Gamson’s (1987) research is to develop reciprocity and cooperation among students. Some examples of activities that enhance student involvement and communication are open class discussions, small group discussions, the one-minute paper, small group projects, think-pair-share activities, individual presentations, read-aloud, Socratic questioning, flipping the classroom, “pass the chalk,” and student-peer
evaluations (Yee, 2018). Chickering and Gamson (1987) have proposed that student reciprocity and extensive communication heightens student engagement.

The third principle of engaged learning is to encourage active learning (Chickering & Gamson, 1987). Students need to become more familiar with what they are learning by applying it to their daily lives, speaking about it, and learning to use their new knowledge and skills.

The fourth principle is giving prompt feedback (Chickering & Gamson, 1987). When students need guidance on their performance and as time passes without appropriate and timely communication, dissatisfaction increases, and frustration may occur. When professors build relationships with students and give prompt feedback, students are more likely to improve their performance. Additionally, students are more likely to retain information and learn when professors give timely and detailed comments for the intended learning objectives (Chickering & Gamson, 1987). Researchers found that prompt feedback and clearly explained intended learning goals positively influence student satisfaction (Brockbank & McGill, 1998; Irons, 2007; Kolb, 1982; Mendes, Thomas & Cleaver, 2011; Norton & Crowley, 2007; Ramsden, 2007). Denmore (2017) concluded when instructors use various types of positive communication through consistent feedback and clear learning objectives, students are satisfied.

Denmore (2017) stated that timely feedback and standard assessment help faculty measure learning outcomes and student assessments through course and program objectives. Furthermore, Denmore (2017) emphasized a growing need for explicit and consistent standards that provide clear direction of the intended learning outcomes. Professors who seek higher quality student effort should encourage “tacit and explicit knowledge transfer processes” via specific rubrics to assess knowledge gained and learning outcomes (Price, O’Donovan, & Rust, 2007, p. 144).
Principle five of the seven principles to improve teaching and learning outcomes emphasizes time-on-task activities (Chickering & Gamson, 1987), which promotes good time management in the classroom that enhances quality learning (Chickering & Gamson, 1987). Principle six relates to communicating high expectations set by the instructor and the university (Chickering & Gamson, 1987). Researchers found when instructors display confidence in their students, learners are more likely to be academically successful and satisfied in their courses (Cherif, Adams, Movahedzadeh, Martyn, & Dunning, 2014).

Chickering and Gamson’s (1987) last principle of the seven principles to improve teaching and learning outcomes addresses diverse talents and different ways of learning. When professors adapt their teaching styles to fit multiple ways of learning, students have the propensity to learn more effectively. Educational excellence begins with agreement about critical thinking and learning outcomes for student success. When professors challenge students to think critically, they empower learners to actively explore new learning processes, and students may feel like they have more control over their learning experience (Watson et al., 2017).

**Technology**

Corlett, Sharples, Bull, and Chan (2005) conducted a study of mobile learning for university students which resulted in increased student satisfaction, better communication, and effective learning. The primary uses of the mobile devices were for increased communication, better time management, and improved access to course content (Corlett et al., 2005). Results from the Corlett et al., (2005) study demonstrated that when the professor is continuously communicating with the students through mobile devices, he or she can successfully employ the learning tools for “increased transparency” (Rust, et al., 2004, p. 3) and for heightened
communication, better learning, and higher satisfaction with their students (Corlett et al., 2005). The application tools can enhance knowledge gained by students, improve student satisfaction outcomes, and successfully support instructional objectives (Paolini, 2017). The results from questionnaire surveys and focus groups indicated there was a demand for institutional support of mobile learning to provide course content, course clarity of assignments, and better time management (Corlett et al., 2005). The authors of the study concluded that technology was important to students, and that students saw learning benefits as they invested time in developing projects for coursework (Corlett et al., 2005). Students also thought that the design of the course and teaching materials impacted how they worked and communicated with their peers and instructors (Corlett et al., 2005). Application technology issues related to the hardware and software had a considerable impact on the students' mobile device engagement and student satisfaction with online technology (Corlett et al., 2005).

As millennials communicate with their peers and instructors, researchers (Straus, 2014; Grinols & Rajesh, 2014; Stephens & Pantoja, 2016) found that the use of technology in traditional classrooms may be an effective tool for increased knowledge and learning.

Technology research data continue to reveal positive student satisfaction due to increased engagement and effective communication (Kelly, 2018; Stephens & Pantoja, 2016). Millennials are also known as the “Texting Generation” (Crosswhite, Rice, & Asay, 2014). This generation of students is constantly connected with their cell phones in the online and traditional classrooms. Researchers, Stephens, and Pantoja (2016) conducted a study about texting in the classroom and found that millennials are internally motivated and actively engaged in class using laptops and mobile devices which can create a positive classroom environment.
Kelly (2018) found when technology was introduced into the traditional classroom, improvement for student success and retention was evident. Approximately 2,000 students from four U.S. community colleges participated in the technology study (Kelly, 2018). The researchers in the study used personalized text messages called “nudges.” The nudges were delivered with artificial intelligence (AI) software that responded to real-time student feedback, ensuring that students received different types of support. The AI nudging technology was designed to help students effectively communicate with faculty and the university to complete their STEM college degree. Due to the positive results of the study, the behavioral nudging model has quickly gained attention within the college community.

The original test group consisted of 2,000 students at four community colleges during the Summer of 2017 (Kelly, 2018). The positive results from the Summer of 2017 AI technology nudging technique research were encouraging. The second phase of research results were also a success, representing an increase to over 10,000 students (Kelly, 2018). The instructor can use the latest mobile applications to successfully integrate hands-on technology into the coursework curriculum to foster more strategic communication and higher student satisfaction (Corlett et al., 2005). The results of the Kelly (2018) study showed the positive impact of AI technology text message communications on college completion, retention, and student success. According to the behavioral nudging model research findings, students were satisfied with the use of technology and nudges; and were more likely to remain in school because they felt empowered to finish their degrees (Kelly, 2018).

**Assignment Clarity**

The importance of assignment clarity was discussed by Dougherty (2012) who stated, “Assignments may well be the missing link in school reform efforts to improve student
Although creating a well-crafted and more focused assignment may be difficult and time consuming for instructors, the outcome for students is critical for learning. According to Dougherty (2012), “a quality assignment is the hallmark of effective instruction” (p.9). Teachers should be more deliberate and intentional when crafting their assignments to enhance student learning outcomes that stick. Clarity of assignments helps to raise the expectations for higher achievement. Clear assignments should be molded with “more content, context, and charge involved” (Dougherty, 2012, p. 7). Setting higher goals and expectations begets higher achievement as “task predicts performance” (Dougherty, 2012, p. 7). Conversely, poor assignment clarity begets lower expectations which leads to frustration and wasted energy from the students, through lack of assignment understanding, wasted time, and the meaning of the assignment is lost and diminished (Dougherty, 2012).

Assignment discussions keep students engaged with the relevant content and provide an opportunity for students to receive and give immediate feedback (Kane, Shaw, Pang, Salley, & Snider, 2016). Group assignments are used in both settings to encourage peer to peer collaboration, time management, and teamwork skills (Kane, et al., 2016). Educators should strive to plan assignments in a way that encourage student participation, increase student engagement, increase knowledge gained, and increase student satisfaction (Kane et al., 2016). Organization, preparation, and assignment clarity are important for re-enrollment, student satisfaction, and student achievement (Blaisch, Wise, Pascarella, & Roska, 2016; Pascarella, Salisbury, & Blaich, 2011). Teaching and learning are visible when the learning goal is not only challenging but explicit (Hattie, 2010). According to Hattie (2010) when the instructor clearly specifies assignments in the traditional classroom, students perceive satisfaction and knowledge gained. Hattie’s theory about visible learning contends that instructors should see learning from
their students’ perspective, and college students need to see learning as the key to their ongoing success. Hattie (2010) asserted that students should be held accountable for their own learning, and theorized that when learning is visible, students understand what is expected of them. Hattie (2010) supported that students should master the concept of visible learning, and successfully try to understand important concepts. For teachers to effectively communicate learning intentions to students, instructors must disseminate clarity in their communication and transfer clear learning expectations to enhance their students’ learning (Hattie, 2010).

Syllabi are as quintessential to any college curriculum and just as important to the university setting as are the students and faculty, college books, lesson plans, and university strategic mission (Fink, 2012). The syllabus is an integral part of college experience, which effectively lays down the course bylaws and instructor expectations of the college course (Mocek, 2017). The syllabus is a fundamental and anticipated feature of the college process (Mocek, 2017). The college syllabus process is important for communication, planning and structure, expectations, and student learning outcomes ("Setting Learning Outcomes | Center for Teaching Innovation," 2018). Professors need to be cognizant that online and traditional coursework assignments and guidelines should be detailed and available for students so that they can be academically successful (Kane et al., 2016). According to Kane et al., (2016) there are four effective ways to deliver content for online and traditional settings; they are scaffolding, assignment discussion, group assignments, and creating engaging coursework.
**The Importance of Instructor Feedback**

Hattie and Timperley (2007) stated that instructor feedback is “one of the most powerful influences on learning and achievement” (Hattie & Timperley, 2007, p. 81). Hattie and Clarke (2018) found that feedback is a positive and effective way to communicate and fill the gap. The best way that feedback will motivate students is by focusing on the quality of the students’ work, explaining specific ways the student can improve their work, and noting improvements made by the student that are different from previous work (Hattie & Clarke, 2018).

**Integrated Faith and Learning**

In their seminal seven-year study, which was published in the book, *Cultivating the Spirit,* Astin, Astin, and Lindholm (2011) studied college students’ spiritual growth. They stated there was a gap in the literature exploring spirituality, especially for college students (Astin, Astin, & Lindholm, 2011). Their overall study results are directly related to students’ personal qualities such as “self-understanding, empathy, caring and social responsibility” (Astin, et al., 2011, p. 1). In their findings, the researchers concluded students remain interested in their spiritual growth with four out of five students stating they “have an interest in spirituality” (2011, p. 3). Until the mid-1980s, little research existed that successfully reviewed faith-based learning, spirituality, and students’ perceptions at Christian colleges (Astin, Astin, & Lindholm, 2011). Often students’ faith-based learning perceptions rely on their professors’ Christ-like attitudes and holistic method of instruction (Gonyea, 2006). Research by Burton and Nwosu (2002), found students expressed the importance that the instructor's role plays in faith-based learning. According to Burton and Nwosu’s (2002) research findings, students stated the two most valued faith-based learning attributes are “professors’ caring attitudes” and “professors’ exemplary life” (p. 18).
Burton and Nwosu (2002) conducted a qualitative study in a Christian teacher education program, entitled *Student Perceptions of the Integration of Faith, Learning, and Practice in a Selected Education Course*. In their study, 46 students participated in the three classes, two students chose to opt out, while 44 students (95.7%) chose to join. According to Burton and Nwosu (2002), their faith-based Christian education study concluded that students were satisfied with their knowledge gained course outcomes when Christian curriculum principles were introduced in the class. The researchers explained that successful faith integration should include faith-based curriculum planning, time management, and active learning techniques (Burton & Nwosu, 2002).

Astin and Lindholm (2011) supported spiritual development as an integral part of faith-based learning in Christian higher education. Spiritual development can be described as how students assimilate meaning, purpose, and values in their lives related to their faith and religious background (Astin & Lindholm, 2011). Astin and Lindholm (2011) concluded instructors and administrators who teach should be more cognizant of students’ inner values related to spiritual development.

In 2008, Walvoord conducted a spiritual development study involving 12,000 students and 66 instructors who taught introductory theology and religion courses; only 42% of instructors surveyed stated that religious/spiritual development for college students was “essential” or “very important” for course outcomes (p. 18). In contrast, nearly 75% of college students believe that spiritual formation is important in their college courses in a religious institution (Walvoord, 2008). Walvoord (2008) found many instructors focus on critical thinking skills as a top priority, rather than faith-formation. Walvoord (2008) discovered a gap in alignment between instructor ability to teach spiritual formation and the students’ expectations.
related to their spiritual development in college courses. It is critical for Christian educators to meet the needs of students intellectually and spiritually (Gonyea, 2006).

Researchers from the Cooperative Institutional Research Program (CIRP, 2005) conducted a study that examined the perceptions of what first year college students thought about meaning in their life. The CIRP team (2005) concluded that today’s curious students were drawn to college for a search for meaning. They also reported that 67% of first-year college students consider it “very important” that their university supports the advancement of their personal values, and 48% perceived it “very important” that their instructor encourages faith integration and spirituality within the classroom (CIRP, 2005).

According to (Quinlan, 2011), faith-based learning encourages a holistic focus to college students’ education and incorporates a sharper emphasis that is clear, open, and informed by evidence as students actively use their intellect and compassion for others. Instructors should focus their teaching energy to encourage higher-order critical thinking, citizenship, and leadership skills so that students can make the world a better place (Elzinga, 2012).

“Christian higher education is defined by a core of faculty who believe that Jesus is the way, the truth, and the life (John 14:16), and that every thought is to be captive to Him, and they, the faculty, are not ashamed of the Gospel” (Elzinga, 2012, p. 12).

A Regent University study by Ripley and Dwiwardani (2014) investigated faith integration. The investigators found that integrating faith in research was enriching for students looking at both devotional discussions and learning opportunities. Ripley and Dwiwardani stated keeping Christ at the center of everything and the heart pointed towards God was essential for faith integration. In research courses, they discussed student attitudes towards research with
respect of their faith and cultural traditions. “The integration of faith and learning in research begins with the question of why: From a biblical perspective, why does it matter that one learns about research?” Dwiwardani starts with Psalm 19:1-4 (NIV) at the beginning of the semester in research design to facilitate the question about faith integration and research:

1 The heavens declare the glory of God;
the skies proclaim the work of his hands.
2 Day after day they pour forth speech;
night after night they reveal knowledge.
3 They have no speech, they use no words;
no sound is heard from them.
4 Yet their voice goes out into all the earth,
their words to the ends of the world.

In the class discussion is encouraged on general revelation of knowing God from a biblical perspective and a research perspective.

**The Imperfect World of Research**

Astin (1999) stated that some previous research was confusing related to specific terminology such as student involvement and student satisfaction. Astin’s research on student involvement and student engagement contributed to the body of literature; he argued the term *student satisfaction* does not have a universal definition and believed that the previous research was unclear. He asserted, “I would like to bring some order into the chaos of the literature” (Astin, 1999, p. 518). Although written twenty years ago, Astin’s (1999) review of the scholarly literature uncovers a recurring theme: the imperfect world of academic research.
Kolb (2015) also expressed concern and agreed with Astin (1999) that the existing scholarly research on student engagement and student involvement was inconsistent, therefore an academic limitation. For example, the terms student engagement and student involvement were used interchangeably (Astin, 1999).

Summary

This chapter included a literature review. The purpose of the present study is to explore undergraduate students’ satisfaction and perception of knowledge gained in a freshman level finance class at a private Christian liberal arts university. To study student satisfaction and knowledge gained, several factors were examined for traditional and online delivery formats. Based upon student self-reported data, the predictive factors included student involvement in the course, effective instructor communication, instructor specification of assignments, and the instructor effectively integrating faith and learning. Bell and Brookes (2018) analyzed student satisfaction, and their study found that what drives student satisfaction was effective teaching and effective communication along with course organization.

As discussed in Chapters I and II, student satisfaction and knowledge gained is complex. In order to better understand the intricacies, a quantitative study was performed using student course evaluations for freshmen level students. The next chapter will discuss the method involved in this present study including the sample study, demographics, research instrumentation, data analysis, research questions, and anticipated outcomes.
III. METHOD

Introduction

The study was broadly quantitative and non-experimental and, more specifically, course evaluation research by method. A summative, causal-comparative evaluation method was used to analyze the perceptions of undergraduate student satisfaction and knowledge gained by students taking a financial literacy course. Student satisfaction and knowledge gained were examined for online and traditional courses in relation to the following factors: (a) student level of involvement in the course, (b) effectiveness instructor communication, (c) instructor clearly specified assignments, and (d) instructors effectively integrated faith and learning. The present study was performed at a Christian liberal arts university using a validated and vetted student satisfaction course evaluation instrument. The course evaluation was identified and characterized as a summative evaluation for students enrolled in both face-to-face and online course offerings. This course evaluation was submitted to all freshmen college students near the end of each financial literacy course via email from Spring 2014 through Fall 2016. When the students responded, their answers were kept anonymous. The course evaluations are attached in Appendix A for traditional courses and Appendix B for online courses.

The present study was descriptive in nature for identifying the study’s predictive factors for student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, for undergraduate students in the freshmen year program using a research instrument course evaluation. The present study method is exploratory in nature and is designed to examine
essential questionnaire items by two course versions, traditional or online, and the dependent variables, which are the students’ overall satisfaction with the financial literacy course and knowledge gained. The principal research instrument contained both quantitative and qualitative measures; however, only the quantitative measures were used for measuring purposes while answering the present study’s research questions and hypotheses. The quantitative course evaluation section was derived from a Likert-type course evaluation instrument.

**Context**

The present study was conducted within the College of Business in a Christian university located in Central Florida. The primary purpose of the study was to determine students’ perceptions of overall satisfaction and knowledge gained. The course evaluations were administered to freshmen students taking either traditional or online courses, both of which were examined in the present study.

**Sample Selection**

The sample of student participants included in the study attended a small-sized, Christian liberal arts university located contiguously to a metropolitan area in Central Florida. More than half of the undergraduate student population consisted of majority groups with demographic representation as follows: Caucasian (57%), African American (15%), Hispanic/Latino (18%), Asian (2%), nonresident alien (2%), Native Hawaiian (1%), and ethnicity unknown (5%) ("National Center for Education Statistics," 2018). The sample is broadly considered non-probability and, more specifically, convenient and purposive.

The study’s sample of students was chosen from the business program for research convenience and access purposes. Most students were of traditional age (18 to 24) and attended full time. Students who indicated that they worked were employed part-time. The sample size
consisted of 670 students for the online version of the course delivery and 579 for the traditional method of course delivery, with an aggregate total of 1,249 students. The participants completed student course evaluations online at the end of each term during the time frame of Summer term 2014 through Fall term 2016. Their responses were captured anonymously.

**Research Instrumentation**

The College of Business course evaluations were used as the primary source of data for analytical purposes in the present study. The course evaluation data (archival) was obtained through the course evaluation process and was used to determine student level satisfaction and amount of knowledge gained related to the instructor and the course. The university currently uses two different student evaluations to collect data for the two delivery models. The online student course evaluation consists of 35 questions, whereas the traditional student course evaluation consists of 21 questions (see Appendices A and B for course evaluations). The College of Business course evaluations were specifically designed to align with traditional and online student evaluation questions with the instructor and the course. Overall student satisfaction and amount of knowledge gained was evaluated via the relationship between the variables: student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning.

The Institutional Effectiveness Department of the participant university emailed students a Likert-style student course evaluation near the completion of each course term. A third-party data collection service captured student demographics, course level, delivery type, and course grades, all of which were utilized in this research analysis. The internal reliability of participant response to the study’s research instrument was assessed using the Cronbach’s alpha (a) test.
Data Analyses

Preliminary Analyses

Prior to addressing the study’s formally stated research questions, preliminary analyses were conducted. Specifically, missing data, internal consistency (reliability) of participant response to the research instrument course evaluation items, and essential comparative information were evaluated using both descriptive and inferential statistical techniques. Missing data were evaluated using frequency counts (\(n\)) and percentages. The randomness of missing data was assessed using Little’s MCAR test statistic. MCAR values of \(p > .05\) were considered indicative of sufficiently random missing data. The internal consistency (reliability) of participant response was evaluated using the Cronbach’s alpha \(a\) test statistic. Alpha \(a\) values of \(\geq .80\) were considered indicative of high levels of internal reliability. The statistical significance of internal reliability levels was evaluated using the \(F\) test. \(F\) test values of \(p < .05\) were statistically significant.

Using the Cronbach’s alpha \((a)\) test statistic, the internal consistency (reliability) of participant response to the study’s research instrument course evaluation items within respective course versions and the combination of course versions (composite) were evaluated. Internal reliability values for all three evaluations were considered high \((a \geq .80)\). The highest degree of internal reliability of participant response was manifested within the traditional version of the course. Table 1 contains a summary of findings for the internal reliability of participant response.
to course evaluation items of the study’s research instrument across the three respective course versions.

Research instrument course evaluations considered central to the study were assessed in a comparative fashion according to respective version of the course. Both descriptive and inferential statistical techniques were used to assess differences in participant response to the essential course evaluation items and to examine differences in the respective course versions. The $t$ test of independent means was used to evaluate the statistical significance of mean score differences between groups, with the concomitant magnitude of effect (effect size) in the comparisons assessed using Hedges $g$ to account for sample size differences in the two groups being compared. Hedges $g$ values of $\geq .80$ were large effect sizes, whereas $g$ values of $\geq 1.30$ were very large magnitudes of effect.

**Analyses by Research Question**

The study’s five formally stated research questions were all predictive in nature, employing multiple independent predictor variables or covariates. As such, the multiple linear regression test statistic was used to evaluate the predictive robustness of respective independent predictor variables simultaneously within one model. Predictive model fitness was evaluated using the ANOVA Table findings. ANOVA $F$ values of $p < .05$ were considered indicative of model viability in predicting the respective dependent variable in each of the study’s five research questions. All assumptions related to the use of multiple linear regression modeling were evaluated either through visual inspection (linearity and homoscedasticity) or statistical means (multicollinearity, independence of error, normality of residuals, and outliers). The magnitude of predictive effect (effect size) was evaluated using the formula: $R^2 / 1 - R^2$. Predictive effect sizes of $\geq .35$ were considered large.
Research Questions

The present study addressed the following research questions:

Research Question 1: Based upon student self-reported data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of the amount of knowledge gained by students enrolled in the online version of the financial literacy course?

Research Question 2: Based upon student self-reported data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of the amount of knowledge gained by students enrolled in the traditional version of the financial literacy course?

Research Question 3: Based upon student self-reported data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of student satisfaction for an online version of the financial literacy course?

Research Question 4: Based upon student self-reported data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of student satisfaction for a traditional version of the financial literacy course?

Research Question 5: Based upon student self-reported data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of overall satisfaction and knowledge gained for both face-to-face and online financial literacy courses?
Anticipated Outcomes

The researcher anticipated that student satisfaction levels and amount of knowledge gained would be statistically significant for both delivery models but might result in higher results for the traditional model in each proxy variable created. Further, the analysis of students' responses from the course evaluations are discussed in Chapter IV in greater detail regarding the students' perceptions for both online and traditional courses. The research findings are discussed in greater detail in Chapter V.

Summary

Chapter three reviewed the methodology of the present study. First, the overall research design was discussed. After this, the chapter contained the five research questions and the results of this present study. Chapter III explained the method for determining the undergraduate students’ perceptions regarding student satisfaction and knowledge gained relating to the four factors in the course. The four factors in the course were effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning and their relationship to the dependent variables knowledge gained and student satisfaction. Chapter IV goes over the results of the quantitative tables depicting the five research questions and the students’ responses to the course evaluations for each research question.
IV. RESULTS

The purpose of the present study was to investigate undergraduate students’ satisfaction and perception of knowledge gained in a freshman level finance class at a private Christian liberal arts university. The two constructs were measured and examined with four predictor variables: student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning. Student perceptions of overall student satisfaction and knowledge gained for undergraduates enrolled in a private Christian university were examined for traditional and online courses. The course evaluation participants were all freshmen undergraduate students enrolled in a mandatory financial literacy business class for online and traditional courses. Two different delivery models were examined, online and traditional courses, to determine if a perceived difference in course delivery format exists for student satisfaction and knowledge gained.

Preliminary Analyses

Prior to addressing the study’s formally stated research question, preliminary analyses were conducted. Specifically, missing data, internal consistency (reliability) of participant response to the research instrument’s survey items, and essential comparative information were evaluated using both descriptive and inferential statistical techniques.
Missing Data

The study’s data set was considerably intact, manifesting minimal evidence of missing data \((n = 88)\) at 0.87%. Moreover, the data set’s missing data were considered sufficiently random (Little’s MCAR x\(^2\) (73) = 81.74, \(p = .23\)). As such, imputation of missing data using expectancy maximization (EM) and multiple imputations (MI) was not considered necessary for subsequent analytic purposes.

Internal Reliability

Using the Cronbach’s alpha \((a)\) test statistic, the internal consistency (reliability) of participant response to the study’s research instrument course evaluation items within respective course versions and the combination of course versions (composite) were evaluated. Internal reliability values for all three evaluations were considered high \((a \geq .80)\). The highest degree of internal reliability of participant response was manifested within the traditional version of the course. Table 1 contains a summary of findings for the internal reliability of participant response to course evaluation items of the study’s research instrument across the three respective course versions.

Table 1
Internal Reliability of Participant Response by Course Version

<table>
<thead>
<tr>
<th>Course version</th>
<th>(a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online</td>
<td>.81***</td>
</tr>
<tr>
<td>Traditional</td>
<td>.90***</td>
</tr>
<tr>
<td>Composite</td>
<td>.85***</td>
</tr>
</tbody>
</table>

***\(p < .001\)
Table 2 contains a complete summary of finding for the comparison of essential survey items by course version for online and traditional enrollment.

Table 2

*Comparison of Essential Survey Items by Course Version*

<table>
<thead>
<tr>
<th>Survey Item Comparison</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective Communication of Course Material (Online)</td>
<td>670</td>
<td>4.14</td>
<td>1.01</td>
<td>6.50***</td>
<td>0.43</td>
</tr>
<tr>
<td>Effective Communication of Course Material (Traditional)</td>
<td>579</td>
<td>3.70</td>
<td>1.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Faith Integration (Online)</td>
<td>680</td>
<td>4.46</td>
<td>0.83</td>
<td>6.72***</td>
<td>0.44</td>
</tr>
<tr>
<td>Effective Faith Integration (Traditional)</td>
<td>579</td>
<td>4.09</td>
<td>1.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of Involvement (Online)</td>
<td>692</td>
<td>2.17</td>
<td>0.68</td>
<td>3.78***</td>
<td>0.19</td>
</tr>
<tr>
<td>Level of Involvement (Traditional)</td>
<td>566</td>
<td>2.04</td>
<td>0.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear Specification of Assignments (Online)</td>
<td>684</td>
<td>4.14</td>
<td>1.07</td>
<td>6.70***</td>
<td>0.44</td>
</tr>
<tr>
<td>Clear Specification of Assignments (Traditional)</td>
<td>579</td>
<td>3.67</td>
<td>1.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount of Knowledge Gained (Online)</td>
<td>692</td>
<td>2.43</td>
<td>0.57</td>
<td>5.90***</td>
<td>0.37</td>
</tr>
<tr>
<td>Amount of Knowledge Gained (Traditional)</td>
<td>566</td>
<td>2.21</td>
<td>0.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Course Satisfaction (Online)</td>
<td>691</td>
<td>1.95</td>
<td>0.25</td>
<td>24.30***</td>
<td>5.61^a</td>
</tr>
<tr>
<td>Overall Course Satisfaction (Traditional)</td>
<td>579</td>
<td>3.52</td>
<td>1.53</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***p < .001  *Very Large Effect Size (g ≥ 1.30)
Essential Course Evaluation Item Comparisons

Research instrument course evaluation items considered central to the study were evaluated in a comparative fashion by respective versions of the course. Both descriptive and inferential statistical techniques were used to assess differences in participant responses to the essential course evaluation items by respective course version, either traditional or online. Using the \( t \) test of independent means to evaluate the statistical significance of mean score difference, in nearly all the comparisons, mean scores were significantly higher for participants enrolled in the online version of the course.

The magnitude of effect (effect size) in the comparisons of the assessed group using Hedges \( g \) to account for sample size differences in the two groups was generally observed. The \( g \) sample size was approaching a moderate or medium level effect size, except for the small effect noted in the comparison of the course evaluation item level of involvement \((g = .19)\). The only comparison favoring the perceptions of participants enrolled in the traditional version of the course was manifested in the course evaluation item overall course satisfaction. The difference in mean scores was at a statistically significant level, with a concomitant effect size considered to be very large \((g \geq 1.30)\).

**Analyses/Findings by Research Question**

**Research Question 1:** Based upon student self-report data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of the amount of knowledge gained by students enrolled in the online version of the financial literacy course?

Using the multiple linear regression test statistic for predictive purposes, two of the four independent predictor variables represented statistically significant predictors of the amount of
knowledge students gained in the online version of the course: effective communication of the course material and student involvement level in the course. Of the two statistically significant predictor variables, effective communication of the course material represented the most robust predictor of study participant perceived knowledge gained in the online course, accounting for 13% of the explained variance and exerting an effect size approaching a moderate level (d = .30) in the dependent variable of knowledge gained. The second statistically significant predictor variable attributed 4% to the variable student involvement level for predicting participant knowledge gained for the online course platform.

The predictive model was viable ($F_{(4, 652)} = 40.78; p < .001$), with the confluence of independent predictor variables reflecting a mathematical relationship ($R$) of .45 with the dependent variable, and thus accounting for a combined 20% of the explained variance in the dependent variable of knowledge gained. The model’s predictive effect is considered moderate ($d = .50$). Table 3 contains a complete summary of findings for the predictive effects of independent variables associated with the dependent variable knowledge gained for participants enrolled in the online version of the course.

Table 3

Predicting Participant Knowledge Gained: Online Course Version

<table>
<thead>
<tr>
<th>Model</th>
<th>$\beta$</th>
<th>SE</th>
<th>Standardized $\beta$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.22</td>
<td>0.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Communication of Material</td>
<td>0.20</td>
<td>0.04</td>
<td>.35***</td>
<td>.13</td>
</tr>
<tr>
<td>Effective Faith Integration</td>
<td>-0.03</td>
<td>0.03</td>
<td>-.04</td>
<td>.00</td>
</tr>
<tr>
<td>Level of Involvement</td>
<td>0.18</td>
<td>0.03</td>
<td>.21***</td>
<td>.04</td>
</tr>
<tr>
<td>Clearly Specified Assignments</td>
<td>0.03</td>
<td>0.04</td>
<td>.06</td>
<td>.00</td>
</tr>
</tbody>
</table>

***$p < .001$
Research Question 2: Based upon student self-report data, of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of the amount of knowledge gained by students enrolled in the traditional version of the financial literacy course?

Using the multiple linear regression test statistic for predictive purposes, three of the four independent predictor variables represented statistically significant predictors of the amount of knowledge students gained in the traditional version of the course: effective communication of the course material, student involvement level, and clearly specified assignments in the course. Of the three statistically significant predictor variables, effective communication of the course material represents the most robust predictor of study participant perceived knowledge gained in the traditional course by accounting for 24% of the explained variance, exerting an effect size approaching a large level \( (d = .64) \) in the dependent variable of knowledge gained, as opposed to the 3% attributed to both the student involvement level and clearly specified assignments variables and the p-value at \( p < .001 \).

The predictive model was viable \( (F(4, 561) = 173.91; p < .001) \), with the confluence of independent predictor variables reflecting a strong mathematical relationship \( (R) \) of .74 with the dependent variable, and thus accounting for a combined 55% of the explained variance in the dependent of knowledge gained. The model’s predictive effect (effect size) is considered very large \( (d = 2.42) \). Table 4 contains a complete summary of finding for the predictive effects of independent variables associated with the dependent variable knowledge gained for participants enrolled in the traditional version of the course.
Table 4

*Predicting Participant Knowledge Gained: Traditional Course Version*

<table>
<thead>
<tr>
<th>Model</th>
<th>$\beta$</th>
<th>SE</th>
<th>Standardized $\beta$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.40</td>
<td>0.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Communication of Material</td>
<td>0.25</td>
<td>0.03</td>
<td>.49***</td>
<td>.24</td>
</tr>
<tr>
<td>Effective Faith Integration</td>
<td>0.05</td>
<td>0.03</td>
<td>.07</td>
<td>.00</td>
</tr>
<tr>
<td>Level of Involvement</td>
<td>0.20</td>
<td>0.03</td>
<td>.17***</td>
<td>.03</td>
</tr>
<tr>
<td>Clearly Specified Assignments</td>
<td>0.08</td>
<td>0.03</td>
<td>.16***</td>
<td>.00</td>
</tr>
</tbody>
</table>

***$p \leq .001$***

**Research Question 3:** Based upon student self-report data, of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of student satisfaction for an online version of the financial literacy course?

Using the multiple linear regression test statistic for predictive purposes, none of the four independent predictor variables represented statistically significant predictors of overall satisfaction in the online version of the course. Clearly specified assignments represent the most robust predictor of study participant perceived overall satisfaction with the online version.

The predictive model was not viable ($F_{(4,651)} = 0.23; p = .92$), with the confluence of independent predictor variables reflecting a very weak mathematical relationship ($R$) of .04 with the dependent variable, and thus accounting for a combined .10% of the explained variance in the dependent of overall satisfaction. The model’s predictive effect (effect size) is considered very small. Table 5 contains a complete summary of finding for the predictive effects of independent variables associated with the dependent variable overall satisfaction for participants enrolled in the online version of the course.
Table 5

*Predicting Participant Overall Satisfaction: Online Course Version*

<table>
<thead>
<tr>
<th>Model</th>
<th>β</th>
<th>SE</th>
<th>Standardized β</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.99</td>
<td>0.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Communication of Material</td>
<td>-0.01</td>
<td>0.02</td>
<td>-.03</td>
<td>.00</td>
</tr>
<tr>
<td>Effective Faith Integration</td>
<td>-0.01</td>
<td>0.02</td>
<td>-.03</td>
<td>.00</td>
</tr>
<tr>
<td>Level of Involvement</td>
<td>0.01</td>
<td>0.02</td>
<td>.05</td>
<td>.00</td>
</tr>
<tr>
<td>Clearly Specified Assignments</td>
<td>-0.01</td>
<td>0.02</td>
<td>-.02</td>
<td>.00</td>
</tr>
</tbody>
</table>

**Research Question 4:** Based upon student self-report data, of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of student satisfaction for a traditional version of the financial literacy course?

Using the multiple linear regression test statistic for predictive purposes, three of the four independent predictor variables represented statistically significant predictors of overall satisfaction with the course in the traditional version of the course. However, of the three variables, effective communication represents the most robust predictor of study participant perceived overall satisfaction with the traditional version of the course amongst the four independent predictor variables in the model, accounting for 41% of the explained variance in the dependent variable of overall satisfaction with the course. The predictive effect of effective communication is considered very large (d = 1.38).

The predictive model was viable ($F_{(4, 561)} = 727.22; p < .001$), with the confluence of independent predictor variables reflecting a very strong mathematical relationship ($R$) of .92 with
the dependent variable, and thus accounting for a combined 84% of the explained variance in the dependent variable of overall satisfaction. The model’s predictive effect (effect size) is considered very large ($d = 10.50$). Table 6 contains a complete summary of finding for the predictive effects of independent variables associated with the dependent variable overall satisfaction with the course for participants enrolled in the Traditional version of the course.

Table 6

*Predicting Participant Overall Satisfaction: Traditional Course Version*

<table>
<thead>
<tr>
<th>Model</th>
<th>$\beta$</th>
<th>SE</th>
<th>Standardized $\beta$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.86</td>
<td>0.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Communication of Material</td>
<td>0.73</td>
<td>0.03</td>
<td>.64***</td>
<td>.41</td>
</tr>
<tr>
<td>Effective Faith Integration</td>
<td>0.18</td>
<td>0.04</td>
<td>.13***</td>
<td>.02</td>
</tr>
<tr>
<td>Level of Involvement</td>
<td>0.06</td>
<td>0.05</td>
<td>.02</td>
<td>.00</td>
</tr>
<tr>
<td>Clearly Specified Assignments</td>
<td>0.23</td>
<td>0.03</td>
<td>.20***</td>
<td>.04</td>
</tr>
</tbody>
</table>

***$p < .001$***

**Research Question 5:** Based upon student self-report data, of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of overall satisfaction and knowledge gained for both face-to-face and online financial literacy courses?

Using the multiple linear regression test statistic for predictive purposes, three of the four independent predictor variables represented statistically significant predictors of knowledge gained with the combined version of the course (online and traditional). Effective communication represents the most robust predictor of study participant perceived overall satisfaction amongst the four independent predictor variables in the model, accounting for 20%
of the explained variance in the dependent variable of knowledge gained with the course. The predictive effect of effective communication is considered moderate ($d = .50$).

The predictive model was viable ($F_{(4, 1218)} = 199.13; p < .001$), with the confluence of independent predictor variables reflecting a very strong mathematical relationship ($R$) of .63 with the dependent variable, and thus accounting for a combined 39% of the explained variance in the dependent of knowledge gained. The model’s predictive effect (effect size) is considered approaching large ($d = 1.28$). Table 7 contains a complete summary of finding for the predictive effects of independent variables associated with the dependent variable knowledge gained for participants enrolled in both versions of the course (online and traditional).

Table 7

*Predicting Participant Knowledge Gained: Combined Course Version*

<table>
<thead>
<tr>
<th>Model</th>
<th>β</th>
<th>SE</th>
<th>Standardized β</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
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<td>0.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Communication of Material</td>
<td>0.24</td>
<td>0.02</td>
<td>.45***</td>
<td>.20</td>
</tr>
<tr>
<td>Effective Faith Integration</td>
<td>0.02</td>
<td>0.02</td>
<td>.03</td>
<td>.00</td>
</tr>
<tr>
<td>Level of Involvement</td>
<td>0.19</td>
<td>0.02</td>
<td>.19***</td>
<td>.04</td>
</tr>
<tr>
<td>Clearly Specified Assignments</td>
<td>0.06</td>
<td>0.02</td>
<td>.11**</td>
<td>.01</td>
</tr>
</tbody>
</table>

**$p = .006$  ***$p < .001$**

Using the multiple linear regression test statistic for predictive purposes, one of the four independent predictor variables represented statistically significant predictors of overall satisfaction when the results from online courses and traditional courses were combined (online and traditional). Effective communication represents the most robust statistically significant predictor of study participant perceived overall satisfaction amongst the four independent predictor variables in the model, accounting for 17% of the explained variance in
the dependent variable of overall satisfaction with the course. The predictive effect of effective communication is considered approaching a moderate level \((d = .40)\).

The predictive model was viable \((F (4, 1217) = 72.83; \ p < .001)\), with the confluence of independent predictor variables reflecting a very strong mathematical relationship \((R)\) of .44 with the dependent variable knowledge gained, and thus accounting for a combined 19% of the explained variance in the dependent of overall satisfaction with the course. The model’s predictive effect (effect size) is considered approaching moderate level \((d = .46)\). Table 8 contains a complete summary of finding for the predictive effects of independent variables associated with the dependent variable overall satisfaction with the course for participants enrolled in both versions of the course (online and traditional).

<table>
<thead>
<tr>
<th>Table 8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Predicting Participant Overall Satisfaction: Combined Course Version</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>(\beta)</th>
<th>SE</th>
<th>Standardized (\beta)</th>
<th>(R^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.70</td>
<td>0.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Communication of Material</td>
<td>0.45</td>
<td>0.05</td>
<td>0.41***</td>
<td>0.17</td>
</tr>
<tr>
<td>Effective Faith Integration</td>
<td>0.04</td>
<td>0.05</td>
<td>0.03</td>
<td>0.00</td>
</tr>
<tr>
<td>Level of Involvement</td>
<td>-0.05</td>
<td>0.05</td>
<td>0.03</td>
<td>0.00</td>
</tr>
<tr>
<td>Clearly Specified Assignments</td>
<td>0.02</td>
<td>0.05</td>
<td>0.02</td>
<td>0.01</td>
</tr>
</tbody>
</table>

***\(p < .001\)
Overall Satisfaction Comparison for Traditional/Online Courses

Table 9

Overall Satisfaction Comparison by Instructional Setting

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>579</td>
<td>3.52</td>
<td>1.53</td>
<td>24.30***</td>
<td>1.84a</td>
</tr>
<tr>
<td>On-Line</td>
<td>692</td>
<td>1.95</td>
<td>0.25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***p < .001  a Very Large Effect Size (g ≥ 1.30)

Considering overall course satisfaction comparison, a participant mean score difference of 1.56 favoring the traditional setting was manifested at a statistically significant level (p < .001). Moreover, the magnitude of effect of the mean score difference favoring the traditional setting is considered very large (g ≥ 1.30).

Summary

As previously stated, the purpose of the present study was to examine undergraduate students’ satisfaction and perceptions of knowledge gained in a freshman level finance class at a private Christian liberal arts university. Effective communication represents the most robust statistically significant predictor of study participant perceived overall satisfaction and knowledge gained amongst the four independent predictor variables in the model. Chapter V provides a more detailed discussion of the findings. Implications for policy and practice are considered as the researcher reflects how faculty can address the findings from the present study for undergraduate freshmen level students. Discussion of the results, their implications, and recommendations for future research in the area of student satisfaction and knowledge gained are examined in the next chapter.
V. DISCUSSION

Introduction

The purpose of the present study was to investigate undergraduate students’ satisfaction and perception of knowledge gained in a freshman level finance class at a private Christian liberal arts university. The present study compared traditional and online formats. The financial literacy course and students were chosen from the university’s college of business program due to convenience, accessibility, and the researcher’s financial literacy background. A focus on four different factors revealed that effective communication was the most robust predictor of student satisfaction and knowledge gained in both formats. The present results can inform university leadership on how to improve undergraduate business college courses and increase student success.

Statement of the Problem

The purpose of this quantitative study was to examine the effectiveness of the educational practices at a Christian university related to undergraduate student perceptions of effective student engagement, effective teaching, faith-based learning, and student satisfaction. Many institutions of higher education are seeking ways to understand and increase student satisfaction and knowledge gained.

Review of Method

The quantitative study relied on archived student data from end-of-course evaluations at the subject university from Spring 2014 through Fall 2016. The data set questions focused on knowledge gained and student satisfaction. The sample size consisted of 670 students in online
courses and 579 students in traditional classes, representing 1,249 total students. The course evaluation participants were all freshmen undergraduate students enrolled in a mandatory financial literacy business class for online and traditional courses. Students completed student course evaluation online at the end of each course during the Spring 2014 through Fall 2016 terms. Their responses were recorded anonymously, and the sample size was reasonable for the purposes of hypothesis testing.

The researcher’s primary source of data consisted of 35 online student evaluation questions and 21 traditional student course evaluation questions, and they were collected from the completed (archived) course evaluation and were compiled initially in an Excel spreadsheet. Missing data, reliability of participant response to the research instrument’s course evaluation items, and comparative information were evaluated using both descriptive and inferential statistical techniques to examine the online versus traditional student satisfaction and knowledge gained differences. The study’s five questions were predictive in nature; multiple linear regression statistic tests were used to evaluate the predictive robustness of respective independent predictor variables simultaneously, and a predictive model fitness was evaluated using the ANOVA table findings. The statistical significance of the mathematical relationship between variables related to all research questions utilized the .05 alpha level as the threshold for statistical significance.

**Interpretation of Findings**

Student perceptions revealed more overall student satisfaction and knowledge gained in traditional courses than online courses. Student perceptions were not statistically significant for faith integration. Throughout the study, participants’ rating of communication was found to be the most robust predictor of student satisfaction and knowledge gained in both traditional and
online financial literacy college courses. The researcher examined undergraduate students’ perceptions of knowledge gained and overall student satisfaction in traditional and online delivery models. In the current study, the researcher evaluated students in the financial literacy undergraduate course, which was offered in the traditional classroom and online.

Effective communication was the most robust predictor for student satisfaction for the online course delivery. Effective communication was the most robust predictor for knowledge gained for the analysis of combining courses (online and traditional). The results of the multiple linear regression tests for each of the five research questions revealed that perceived student satisfaction with the analysis of combining the online and traditional courses was from the predictor effective communication. The other factor variables that were significant in the study were instructor clearly specified class assignments and student level of involvement, whereas faith integration was only found to be statistically significant related to participant overall satisfaction in the traditional course model.

The results of the present study indicate that students will perceive higher satisfaction and knowledge gained when communication is effective, student level of involvement is high, and assignments are communicated effectively using a straightforward and easy to understand approach. Satisfied students can be expected to persist in classes and continue to enroll in future terms through improved student satisfaction.

**Research Question 1:** Based upon student self-report data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of the amount of knowledge gained by students enrolled in the online version of the financial literacy course?
The two predictor variables that showed a significant relationship with student perception of knowledge gained were effective communication of the course material and student involvement level in the course. However, students perceived effective communication of the course material to be a more important predictor than student involvement. Effective communication was the most robust predictor for Research Question 1. Therefore, the null hypothesis was rejected. Clearly communicating learning outcomes to students is important for their learning success. Researchers have stated that “Communication skills tend to decline with time unless they are regularly recalled and practiced” (Perron, Sommer, Louis-Simonet, & Nendaz, 2012, p. 1). Effective communication encourages a feeling of community in online courses and will ensure that the learning experience is more meaningful for online students. Effective communication with students in online courses is essential and assists them in satisfaction and learning retention (Perron et al., 2012). Providing students with a sense of communication and engagement in online courses alleviates their feeling of isolation that some online students may experience (Perron et al., 2012). The objectives of online communication should mirror traditional face-to-face communication through open exchange, sharing of information, and ensuring students’ voices are heard and learning outcomes are understood. Encouraging a feeling of community in online course will ensure that the learning experience is more meaningful for online students and help them stay connected (Perron et al., 2012).

Effective communication and feedback from instructors help students complete their assignments (Haley-Speca, 2016). Effective instructor communication refers to instructor expectations, assignment clarity from the syllabus, timely responses to calls and emails, as well as timely graded coursework (Hubley, 2005). Hubley (2005) found a close relationship exists between teaching and communication as instructors disseminate new knowledge and information.
because effective instructor communication is critical to student success. Blaich et al., (2016) explained that if instructors are not clear in communicating with students, outcomes of student success can be negative. Weimer and Lenze (1997) found that effective clear instruction and communication can create a satisfactory learning environment.

Research Question 2: Based upon student self-report data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of the amount of knowledge gained by students enrolled in the traditional version of the financial literacy course?

Using the multiple linear regression test statistic for predictive purposes, three out of the four independent variables represented statistically significant findings; therefore, the null hypothesis was rejected for knowledge gained in the traditional version of the course: effective communication of the course material, student involvement level in the course, and clearly specified assignments. The strongest predictor was effective communication of the course material. Effective communication of the course material, student involvement level in the course, and clearly specified assignments are three predictors that align with research by Tinto (1993), Astin (1999), and Braxton, Hirschy, and McClendon (2004) that examined student success, satisfaction, persistence, and retention in higher education.

Clearly specified assignments are also important and significant to a student’s knowledge gained in a course (Fink, 2012). Improving the quality of learning in courses involves more than determining if students have mastered content at the end of the course. Instructors also need to assess whether knowledge is gained throughout the course (National Institute for Science Education, 2001b). Effective instructor communication improves the quality of learning, and the importance of effective communication of course materials is not a new development (McArthur,
2013). For example, communication of course materials with detailed rubrics is universally used by educators to guide students to achieve program objectives (McArthur, 2013). Brookhart (2013) and McArthur (2013) found that clearly specified assignments are important to a student’s knowledge gained in a course.

**Research Question 3:** Based upon student self-report data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of student satisfaction for an online version of the financial literacy course?

Student satisfaction for the online format was examined in relation to the four predictor variables: student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning and the null hypothesis is accepted. Although no statistically significant relationship was found between student satisfaction and all four independent variables in the online model, the independent variable for instructor clearly specified class assignments was the strongest predictor of student satisfaction with the online version of the course among the four independent predictor variables in the study. Students need to understand the course expectations. Occhipinti (2017) found “in online courses, there is little to no immediate feedback, which makes the psychological and communication gap between the student and the instructor constant” (p. 91). The Occhipinti (2017) study aligns with the present study regarding the online model.

Similarly, Gray and DiLoreto (2016) found that one of the main challenges of online learning is that students feel isolated and disconnected from their college peers and professor. Results from Research Question 3 suggest that students remained neutral associated with online student satisfaction. Richardson and Swan’s (2003) research focused on social presence in the
online setting that influenced student perceptions and satisfaction with the course. Richardson and Swan examined a total of 97 students from Empire State College in online learning courses in the spring of 2000 using student surveys. Their study found that students with high overall perceptions of social presence also scored high in terms of perceived knowledge gained and perceived satisfaction with the instructor. Richardson and Swan’s (2003) research reported that instructor immediate feedback and presence of others are important factors to consider when delivering online education. The Summers et al., (2005) research also aligned with the importance of effective communication as it impacts perceived satisfaction and knowledge gained. As discussed previously, final grades and student satisfaction were measured in the course using independent sample t tests in the study design (Summers et al., 2005). Results revealed that there were no significant differences in grades between the online and traditional classroom settings. However, students enrolled in the online course were significantly less satisfied than those enrolled in the traditional classroom (Summers et al., 2005).

Mark Edmundson (2012), an English professor at the University of Virginia, asserted that online education creates more of a monologue instead of a student-instructor dialogue in a traditional classroom setting. Communication is part of building relationships with instructors and peers in both online and traditional environments, but relationships are obtained more easily in traditional classrooms (Edmundson, 2012). The results of the present study may simply demonstrate that when students are enrolled in the traditional class, the instructor’s presence and live student-instructor dialogue instills a feeling of higher satisfaction for students than the online delivery model, a perspective which closely aligns with the current literature.

In Chickering and Gamson’s (1987) Seven Principles for Good Practice in Undergraduate Education, the first principle relates to traditional classroom good practices that encourage
communication between students and instructors. Students perceive higher satisfaction in traditional courses as more communication and immediate feedback occurs (Candido, Murman, & McManus, 2014).

**Research Question 4:** Based upon student self-report data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of student satisfaction for a traditional version of the financial literacy course?

The results of the present study indicate that students’ perceptions for effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning were all statistically significant predictors of overall student satisfaction with the course in the traditional format. Therefore, the null hypothesis was rejected and the factor that was not statistically significant was student level of involvement.

Clarity of assignments was a statistically significant finding regarding student satisfaction in traditional courses. John Hattie, a professor of education and director of Visible Learning Labs, conducted 15 years of research and synthesized over 800 meta-analyses. Hattie wrote a seminal book entitled Visible Learning where he wrote about teaching and exclaimed, “excellence is attainable” (2010, p. IX). From Hattie’s (2010) extensive research, one of his most important findings was that instructors should be clear about course expectations for student success in learning. Hattie’s findings closely align with this present dissertation study relating to clarity of assignments and instructor expectations in the classroom. Hattie (2010) suggested that instructors should continuously strive to ensure how lessons are received by their students.
In the financial literacy traditional course, faith integration was found to be a statistically significant predictor of student satisfaction. “Characteristics such as the integration of faith and learning and providing spiritual mentors are unique to faith-based institutions and allow them to play an important role in the faith development of college students” (Davignon, 2014, p. 81).

Similar to business courses, research courses might be perceived as somewhat difficult topically for faith integration. While research and design courses compared to some other subfields such as psychology or sociology may present more challenges to the project of faith and learning, studies present strategies for learning more about the ways of thinking and basic truths. Through teaching students how to be aware of their soul in research and science, Poelstra (2009) instructs students how to turn their hearts, actions, and minds by God including faith integration in all domains of life. Dwiwardani explained that encouraging students to become aware of the state of their hearts, Christ is invited into the learning and faith process by allowing Christ to do a work in each person (Ripley & Dwiwardani, 2014). Ripley and Dwiwardani (2014) emphasized faith integration was about being united with Christ in everything that is done (John 15, NIV).

**Research Question 5:** Based upon student self-report data of student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning, which is the best predictor of overall satisfaction and knowledge gained for both face-to-face and online financial literacy courses?

When measuring the student satisfaction relationship with the four predictor variables—student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning—traditional and online formats measured knowledge gained and student satisfaction. Of the four predictor
variables: student level of involvement in the course, effective instructor communication, instructor clearly specified class assignments, and instructor effectively integrated faith and learning were measured with the dependent variable: student satisfaction for the combined online and traditional course. Using the multiple linear regression test statistic for predictive purposes, one of the four independent predictor variables represented statistically significant predictors of overall satisfaction with the combined version of the course for analytical purposes (online and traditional). Only effective instructor communication represents the most robust statistically significant predictor of study participant perceived overall satisfaction amongst the four independent predictor variables in the model, accounting for 17% of the explained variance in the dependent variable of overall satisfaction with the course. Moreover, the predictive effect (effect size) the variable of effective communication of course material is considered large at eta square = .20/ d = 1.00. Therefore, the null hypothesis was rejected and effective instructor communication was the most robust predictor for student satisfaction when the online and traditional courses were combined for analysis purposes.

As described by Palloff and Pratt (2013), the online classroom is a potentially powerful teaching and learning arena in which new practices and new relationships can make significant contributions to learning. Instructors must be trained not only to use technology but to shift the ways in which they organize and deliver material. Making this shift can increase the potential for learners to take charge of their own learning process and facilitate the development of a sense of community among them (Palloff & Pratt, 2013).

In a study conducted by Li, Qi, Wang, and Wang (2014), results suggested there were no significant differences between active learning with online and traditional environments, yet significant differences were found on higher-level learning of innovative and critical thinking for
online learning students. Li et al.’s (2014) findings also suggested that students’ behavioral engagements in traditional versus online environments had no significant advantage over the other, but online learning facilitated higher-levels of critical thinking.

The second analysis for Research Question 5 looked at the relationship between overall student satisfaction with knowledge gained and both delivery models (online and traditional). Using the multiple linear regression test statistic for predictive purposes, three of the four independent predictor variables represented statistically significant predictors of knowledge gained with the combined version of the course (online and traditional). Effective communication represents the most robust predictor of study participant perceived overall satisfaction amongst the four independent predictor variables in the model, accounting for 20% of the explained variance in the dependent variable of knowledge gained with the course. Moreover, the predictive effect (effect size) for the variable of effective communication of course material is considered large at eta square = .25/ d = 1.16. Only one of the four independent variables was found to be statistically significant: effective communication of course material. The best predictor of overall student satisfaction and for knowledge gained in the traditional and online formats was effective instructor communication of course material. Based on the findings for this current study for student satisfaction and knowledge gained, effective instructor communication of course material was the most robust predictor for measuring students’ perceptions for the combined version of the course for both traditional and online settings.

The results align with relevant literature relating to effective communication and student learning (Astin, 1984; Franklin & Peat, 2001; Kuh et al., 2006). The findings from this current study revealed that students perceive effective instructor communication as the most influential
factor relating to overall student satisfaction and knowledge gained for both traditional and online environments.

According to Blaich et al., (2016), sometimes less is more, as effective communication is essential for student learning. The researchers (Blaich et al., 2016) stated, “Sometimes in this sea of information we lose sight of the fact that there is another way to sharpen teaching and strengthen the educational impact of our institutions—improving the clarity and organization of our classes.” Blaich et al., (2016) stated that although effective communication may not seem groundbreaking compared to other learning “pedagogies, it turns out to be very important for student learning, and it can pay dividends regardless of whether it is applied with these innovative pedagogies and practices or used on its own” (p. 7).

Instructor presence in online delivery formats is perceived as very important for student satisfaction. In a mixed method study conducted by Young (2006), students explained that effective teachers should adapt to students’ needs, make learning fun, demonstrate a caring attitude, maintain a presence, should actively participate in the learning process, display hard work, establish trusting relationships, design course material that requires high-quality work, and provide a structured yet flexible classroom environment.

Yet, online courses may miss this immediate classroom interactive dynamic. With the online course format, the students are interacting with a variety of online learning resources rather than an instructor’s physical presence in the classroom ("Innovative Learning Institute | RIT," 2014). Students may feel disconnected if instructors do not communicate materials effectively or if they do not create meaningful interactions through a physical teaching presence with students.
To complete the present study, a $t$ test was conducted to further explore if there was a statistical difference for student satisfaction between online and traditional course delivery formats. As mentioned previously, undergraduate freshmen students who participated in the current study preferred traditional courses and were more satisfied with traditional course delivery than online course delivery.

**The Research Findings Related to the Literature**

A review of the literature revealed that effective communication, student level involvement, clarity of assignments, and faith integration were important related to a student’s academic experience (Astin, 1984; Dockery & Gushee, 1999; Gonyea, 2006; Kuh et al., 2006). However, effective communication was found to be the most important construct for students in both traditional and online formats in this present study. In contrast, the other predictive variables were mixed. For example, students’ perceptions of knowledge gained and overall student satisfaction may be due to differences in course delivery format. One possible reason that effective communication for this current study was the most robust predictor may be because it is one of the most important skills to use for students while in school. Results revealed that effective communication of materials and communication from the instructor was most important in the traditional and online models for both student satisfaction and knowledge gained.

As previously noted in chapter four, using the multiple linear regression test statistic for predictive purposes, three of the four independent predictor variables represented statistically significant student satisfaction and knowledge gained with the combined version of the course (online and traditional). Effective communication represents the most robust predictor of study participant perceived overall satisfaction amongst the four independent predictor variables in the
model, accounting for 20% of the explained variance in the dependent variable of knowledge gained with the course. Students in the undergraduate business class indicated that effective communication of materials and communication from the instructor were critical issues to students compared to student level of involvement, instructor clarity of assignments, and faith integration in relationship to overall satisfaction in the course, regardless of delivery format.

The instructor is predominantly the focus in the classroom, teaching lessons, questioning, answering, giving feedback, and actively exchanging information with students. Arbaugh (2001) and Eom and Ashill (2016) both reported that the role of the instructor within the course interactions is the most critical element for student success. Furthermore, an active presence on the part of the professor—one in which the instructor guides and organizes the discourse—relates positively to a student’s sense of connectedness and learning (Shea, Li, & Pickett, 2006). Stronge (2002) asserted that “teachers have a powerful, long lasting influence on their students” (p. 3).

Results from this research study suggest that, regardless of delivery format, students perceive consistent communication related to the materials in class and effective communication from the instructor as vastly important to their satisfaction and knowledge gained. Effective communication was supported by Shea et al.,’s (2006) conclusions; they asserted communication is vital. While instructors can achieve effective communication through text-based tools in online formats and more easily connect with students in the traditional classroom, they may want to master how to use video, real-time conferencing, and other communication technologies to increase online interaction with students to improve overall knowledge gained and overall student satisfaction related to their academic experience.
Limitations

Limitations are inevitable in research. Although the present study successfully met the intended goals, there were limitations. First, this research took place at a single Christian university located in Central Florida. Generalizing the results from a single university population may not reflect the overall general university population. Therefore, the results of the present study would need to be replicated using the same course evaluation instrument at more than one university to examine other types of schools in addition to faith-based Christian universities.

Another noteworthy limitation is that this research was performed using data from only one college course for entering freshmen. An additional suggestion would be to review the same set of students when they are seniors and make a longitudinal follow-up study to discern if there are any significant changes over time. Another consideration is to study freshmen students in other freshman-level courses, within the college with the freshmen level to determine if there are differences to compare. Although data were collected over a two-year period, the study is not considered longitudinal, and that may also be considered a limitation. The traditional and online course evaluation questions were different which resulted in difficult question interpretation.

Implications for Practice

The present study examined student perceptions of satisfaction and knowledge gained. Findings from the present study added to the body of literature concerning several factors that students perceive about undergraduate satisfaction and knowledge gained. The present study also examined how students perceive satisfaction and knowledge gained between online courses and traditional courses. Student satisfaction and knowledge gained are universally accepted research factors; scholars have found that striving for high levels of satisfaction may directly
impact a student’s probability that he or she will continue to enroll in future courses and be more likely to successfully finish with his or her studies toward graduation (Kauffman, 2015).

Richardson, Maeda, Lv, and Caskurlu’s (2017) research shows that communication and student satisfaction are significant and effective in online courses. Richardson et al., (2017) found a strong positive relationship between online social presence with student satisfaction and students’ perceived learning.

Since some variables were statistically significant, such as student level of involvement, clarity of assignments, and effective instructor communication for both undergraduate traditional and online courses, the results may indicate strong faculty presence in both delivery formats. Effective communication between students and faculty and detailed syllabi and rubrics facilitate student learning outcomes.

The findings related to the four predictor variables involving student satisfaction and knowledge gained may be a guideline for future research. Furthermore, findings from this body of research may add to the existing literature about student satisfaction, enabling faculty and leadership to have a better understanding of how students perceive satisfaction and knowledge gained related to their college experience. In reflection of the study’s findings, university leaders and faculty may decide to shift their focus to pursue more effective ways to communicate course expectations and course delivery of lessons for both online and traditional delivery formats. Faculty and university leadership should strive to provide effective communication, the strongest predictor variable for undergraduate students in the financial literacy course, and develop updated programs and recommendations for the undergraduate students.

Student involvement was also a weak predictor in the present research study. According to the literature, student involvement is an integral part of satisfaction and learning, which is also
tied to retention and vitality of the university (Kuh et al., 2006). There are many advantages of students joining a student organization. Experts on student involvement believe that interactions with faculty and staff and participation in university activities contribute to overall student satisfaction and success in school (Anthanasiou, 2018). Student involvement organizations and communities within universities help students’ network, hone their communication skills, and learn about leadership opportunities as well as learn how to manage time more effectively (Anthanasiou, 2018). Furthermore, when instructors help students become more involved in the college experience, student achievement is enhanced. Faculty and leadership are central to student engagement. Students are more likely to thrive when they are involved in challenging activities that promote critical thinking. Educator professional development is important for overall student satisfaction and success in the university setting (Stephens, 2015).

Ultimately, university leadership, administrators, and faculty hold the highest regard for student learning. By providing clear expectations and communication across all departments and platforms, college leadership will encourage and ensure that student satisfaction, knowledge gained, and faculty support are top priorities for students’ overall positive college experience.

**Recommendations for Future Research**

After examining the some of the constructs that comprised the undergraduate student experience, leaders at educational institutions and their stakeholders may glean a better understanding about factors that positively influence students’ perceptions of satisfaction and knowledge gained. Effective communication flow is important, too. Professors and students alike should ensure that all correspondence is consistent and clear. In the current study, the researcher found strong statistical significance related to effective communication as the most robust predictor of student satisfaction and knowledge gained.
As rapid growth for online course offerings continues, especially within this university, professors should be provided with relevant teaching tools to enable more effective instructor communication. Further consideration for research should encompass how instructors can effectively communicate for both traditional and online courses to increase overall student satisfaction and student success.

The present study was conducted at a faith-based Christian university. Overall, faith integration was one of the weakest predictor variables for this present study. Since the university is a Christianity-based university, the researcher recommends performing a separate qualitative study directly addressing the topic of faith-based learning.

Another suggestion would be to perform a qualitative study to investigate student perceptions about the other topics covered in the present study. A qualitative section that reviews students’ perceptions related to the topics within the present study would provide a more robust and holistic view of the student experience.

**Summary**

As high standards and expectations related to student satisfaction and knowledge gained persist, university staff should continuously strive to deliver a positive school experience for students using a variety of methods and instruction for the online and traditional formats. Educators should continue to develop and sharpen the necessary skills that will enable students to be successful. University leaders will need to invest in ongoing professional development and implement effective strategies related to the technological evolution in online learning that administrators, instructors, and students can use to effectively communicate with each other. For example, students look to professors for essential information in their courses. Lifelong learning is essential for both students and instructors. Just as professors are held responsible for teaching
and communicating effectively, students should also take on the responsibility to communicate with their professors for their continued success and overall college experience.

With the use of innovative technology, course information can be delivered more than one way. Lectures, although still prevalent, should be used in conjunction with other methods of teaching style in the traditional classroom. For online courses, employing additional state-of-the-art ways to effectively communicate is essential for student success and satisfaction. Educators, as lifelong learners, should strive to teach more effectively, utilize the latest forms of technology, remain relevant, and orchestrate dynamic scholarly discussions that frame the ever-changing university setting. Ongoing educational workshops should empower instructors to understand what helps students engage in more meaningful learning opportunities.

Lifelong learning is beneficial to both instructors and students. As professors continuously expand their learning skill sets and heighten their performance, they will be better equipped to guide their students. When professors adopt a lifelong learning mindset, they will continuously develop their professional skills. Administrative stakeholders should also encourage their teaching staff to master essential advanced teaching tools and to utilize cutting-edge technology for better teaching that enriches their students’ college experience. Both traditional teaching methods and online learning have their place in education. Instructors are expected to provide a variety of ways to increase student satisfaction, teach with an array of instructional methods, and determine which approach is most effective for the objectives of the course. In this way, students will have a well-rounded positive education experience and be better equipped for the future.
REFERENCES


Fernández, E., García, A., Serés, E., & Bosch, F. (2018). Students’ satisfaction and perceived impact on knowledge, attitudes, and skills aftera2-

Fink, S. (2012). The many purposes of course syllabi: Which are essential and useful? Retrieved from


APPENDICES
Appendix A
Q1 - 1.1 The course is:

(a) a requirement for my major [Alternate Code = 1]
(b) a requirement for my minor [Alternate Code = 2]
(c) my choice for a general elective [Alternate Code = 3]
(d) my choice for a general elective in my major [Alternate Code = 4]
(e) simply a course in which I was interested but was not required in any way [Alternate Code = 5]
(f) a graduate course [Alternate Code = 6]

Required answers: 1  Allowed Answers: 1

Q2 - 1.2 Rate the amount of work you did:

(a) less than what was assigned [Alternate Code = 1]
(b) what was assigned [Alternate Code = 2]
(c) more than just what was assigned [Alternate Code = 3]

Required answers: 1  Allowed Answers: 1

Q3 - 1.3 Rate the level of your involvement in the activities of this course:

(a) very uninvolved [Alternate Code = 1]
(b) somewhat involved [Alternate Code = 2]
(c) enthusiastically involved [Alternate Code = 3]

Required answers: 1  Allowed Answers: 1

Q4 - 1.4 How much knowledge have you gained from this course?

(a) none [Alternate Code = 1]
(b) some knowledge [Alternate Code = 2]
### Page 2 - Section 2. Instructor

Rate the following statements from 1 = strongly disagree to 5 = strongly agree.

<table>
<thead>
<tr>
<th>Q5 - 2.1 The instructor effectively communicated the subject matter.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
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<tr>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
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<tr>
<td>Not Applicable [Alternate Code = 0]</td>
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<tr>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q6 - 2.2 The instructor demonstrated a thorough knowledge of the subject.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
</tr>
<tr>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
</tr>
<tr>
<td>Not Applicable [Alternate Code = 0]</td>
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<tr>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q7 - 2.3 The instructor provided clear instructors and examples in the course.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
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<tr>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td>Q8 - 2.4 The instructor facilitated discussion in the course and made the content engaging.</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
</tr>
<tr>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
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<tr>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
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<tr>
<td>Required answers: 1 Allowed Answers: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q9 - 2.5 The instructor adequately answered questions raised by students.</th>
</tr>
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<tbody>
<tr>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
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<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
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<tr>
<td>Required answers: 1 Allowed Answers: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q10 - 2.6 The instructor assessed my work fairly, used grading rubrics and provided corrective feedback I could use in the next assignment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
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<tr>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
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<tr>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
</tr>
<tr>
<td>Not Applicable [Alternate Code = 0]</td>
</tr>
<tr>
<td>Required answers: 1 Allowed Answers: 1</td>
</tr>
</tbody>
</table>
Q11 - 2.7 The instructor provided timely feedback to my questions (within 24 hours).

<table>
<thead>
<tr>
<th>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
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<tr>
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<tr>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
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<tr>
<td>Not Applicable [Alternate Code = 0]</td>
</tr>
<tr>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
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</table>

Q12 - 2.8 The instructor returned graded assignments and/or posted test grades within a reasonable amount of time.

<table>
<thead>
<tr>
<th>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
</tr>
<tr>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
</tr>
<tr>
<td>Not Applicable [Alternate Code = 0]</td>
</tr>
<tr>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

Q13 - 2.9 The instructor effectively used MyFire and incorporated appropriate technology in the course.

<table>
<thead>
<tr>
<th>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
</tr>
<tr>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
</tr>
<tr>
<td>Not Applicable [Alternate Code = 0]</td>
</tr>
<tr>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

Q14 - 2.10 The instructor effectively integrated faith and learning in this online course.

| Strongly Disagree [Alternate Code = 1] [Numeric Value = 1] |
111

Disagree [Alternate Code = 2] [Numeric Value = 2]
Neutral [Alternate Code = 3] [Numeric Value = 3]
Agree [Alternate Code = 4] [Numeric Value = 4]
Strongly Agree [Alternate Code = 5] [Numeric Value = 5]
Not Applicable [Alternate Code = 0]
Required answers: 1  Allowed Answers: 1

Q15 - 2.11 I would recommend this instructor to the other online students.
Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]
Disagree [Alternate Code = 2] [Numeric Value = 2]
Neutral [Alternate Code = 3] [Numeric Value = 3]
Agree [Alternate Code = 4] [Numeric Value = 4]
Strongly Agree [Alternate Code = 5] [ Numeric Value = 5]
Not Applicable [Alternate Code = 0]
Required answers: 1  Allowed Answers: 1

Next Page: Sequential

Page 3 - Section 3. Course

Rate the following statements from 1 = strongly disagree to 5 = strongly agree.

Q16 - 3.1 This online course covered the information listed in the Course Catalog.
Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]
Disagree [Alternate Code = 2] [Numeric Value = 2]
Neutral [Alternate Code = 3] [Numeric Value = 3]
Agree [Alternate Code = 4] [Numeric Value = 4]
Strongly Agree [Alternate Code = 5] [Numeric Value = 5]
Not Applicable [Alternate Code = 0]
Required answers: 1  Allowed Answers: 1
Q17 - 3.2 The Course Syllabus and Course Chart explained what I was expected to do in this online course, when assignments were due, and how my grade would be calculated.

Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]
Disagree [Alternate Code = 2] [Numeric Value = 2]
Neutral [Alternate Code = 3] [Numeric Value = 3]
Agree [Alternate Code = 4] [Numeric Value = 4]
Strongly Agree [Alternate Code = 5] [Numeric Value = 5]
Not Applicable [Alternate Code = 0]
Required answers: 1  Allowed Answers: 1

Q18 - 3.3 The assigned readings, assignments, and discussions helped me acquire a better understanding of the subject.

Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]
Disagree [Alternate Code = 2] [Numeric Value = 2]
Neutral [Alternate Code = 3] [Numeric Value = 3]
Agree [Alternate Code = 4] [Numeric Value = 4]
Strongly Agree [Alternate Code = 5] [Numeric Value = 5]
Not Applicable [Alternate Code = 0]
Required answers: 1  Allowed Answers: 1

Q19 - 3.4 The exams and other course assessments reflected what was taught in the course material.

Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]
Disagree [Alternate Code = 2] [Numeric Value = 2]
Neutral [Alternate Code = 3] [Numeric Value = 3]
Agree [Alternate Code = 4] [Numeric Value = 4]
Strongly Agree [Alternate Code = 5] [Numeric Value = 5]
Not Applicable [Alternate Code = 0]
Required answers: 1  Allowed Answers: 1

Q20 - 3.5 I believe the time required to complete the work in this online course was appropriate for the topic and intended learning outcomes.
<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q21</td>
<td>I believe I learned things in this online course that I will be able to use in other courses and beyond.</td>
</tr>
<tr>
<td>Q22</td>
<td>This online course was well-organized and easy to navigate.</td>
</tr>
<tr>
<td>Q23</td>
<td>I enjoyed the discussion and teamwork in this online course.</td>
</tr>
</tbody>
</table>

**Likert Scale:**
- Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]
- Disagree [Alternate Code = 2] [Numeric Value = 2]
- Neutral [Alternate Code = 3] [Numeric Value = 3]
- Agree [Alternate Code = 4] [Numeric Value = 4]
- Strongly Agree [Alternate Code = 5] [Numeric Value = 5]
- Not Applicable [Alternate Code = 0]

**Required answers:** 1  **Allowed Answers:** 1
<table>
<thead>
<tr>
<th>Agree [Alternate Code = 4] [Numeric Value = 4]</th>
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<tbody>
<tr>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
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<td>Not Applicable [Alternate Code = 0]</td>
</tr>
<tr>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

Q24 - 3.9 MyFire made it easy for me to access my course materials, communicate with the instructor and other students, and submit my assignments.

| Strongly Disagree [Alternate Code = 1] [Numeric Value = 1] |
| Disagree [Alternate Code = 2] [Numeric Value = 2] |
| Neutral [Alternate Code = 3] [Numeric Value = 3] |
| Agree [Alternate Code = 4] [Numeric Value = 4] |
| Strongly Agree [Alternate Code = 5] [Numeric Value = 5] |
| Not Applicable [Alternate Code = 0] |
| Required answers: 1  Allowed Answers: 1 |

Q25 - 3.10 I was able to easily access help with MyFire and other technology when I needed it during the course.

| Strongly Disagree [Alternate Code = 1] [Numeric Value = 1] |
| Disagree [Alternate Code = 2] [Numeric Value = 2] |
| Neutral [Alternate Code = 3] [Numeric Value = 3] |
| Agree [Alternate Code = 4] [Numeric Value = 4] |
| Strongly Agree [Alternate Code = 5] [Numeric Value = 5] |
| Not Applicable [Alternate Code = 0] |
| Required answers: 1  Allowed Answers: 1 |

Q26 - 3.11 Overall, I was satisfied with this online course.

<p>| Strongly Disagree [Alternate Code = 1] [Numeric Value = 1] |
| Disagree [Alternate Code = 2] [Numeric Value = 2] |
| Neutral [Alternate Code = 3] [Numeric Value = 3] |
| Agree [Alternate Code = 4] [Numeric Value = 4] |
| Strongly Agree [Alternate Code = 5] [Numeric Value = 5] |</p>
<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required answers:</td>
<td>1</td>
</tr>
</tbody>
</table>

| Required answers: | 1 | Allowed Answers: | 1 |

| Q29 - Did you use the SEU IT Help Desk during your course (Password resets only) | Yes [Alternate Code = 1] | No [Alternate Code = 2] |
| Required answers: | 1 | Allowed Answers: | 1 |

<p>| Q30 - Did you use the 24/7 Help Center during your course - 1 (800) 985-9781 - (MyFire/technology support) | Yes [Alternate Code = 1] | No [Alternate Code = 2] |
| Required answers: | 1 | Allowed Answers: | 1 |</p>
<table>
<thead>
<tr>
<th>Q35-</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3 Do you have any other comments that you would like to make about this course and/or instructor?</td>
</tr>
</tbody>
</table>

| Required answers: 0 | Allowed answers: 1 |
### Appendix B

#### Page 1

<table>
<thead>
<tr>
<th>Q1 - 1.1 The course is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) a requirement for my major [Alternate Code = 1]</td>
</tr>
<tr>
<td>(b) a requirement for my minor [Alternate Code = 2]</td>
</tr>
<tr>
<td>(c) my choice for a general elective [Alternate Code = 3]</td>
</tr>
<tr>
<td>(d) my choice for a general elective in my major [Alternate Code = 4]</td>
</tr>
<tr>
<td>(e) simply a course in which I was interested but was not required in any way [Alternate Code = 5]</td>
</tr>
<tr>
<td>(f) a graduate course [Alternate Code = 6]</td>
</tr>
<tr>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q2 - 1.2 Rate the amount of work you did:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) less than what was assigned [Alternate Code = 1]</td>
</tr>
<tr>
<td>(b) what was assigned [Alternate Code = 2]</td>
</tr>
<tr>
<td>(c) more than just what was assigned [Alternate Code = 3]</td>
</tr>
<tr>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q3 - 1.3 Rate the level of your involvement in the activities of this course:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) very uninvolved [Alternate Code = 1]</td>
</tr>
<tr>
<td>(b) somewhat involved [Alternate Code = 2]</td>
</tr>
<tr>
<td>(c) enthusiastically involved [Alternate Code = 3]</td>
</tr>
<tr>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q4 - 1.4 How much knowledge have you gained from this course?</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) none [Alternate Code = 1]</td>
</tr>
<tr>
<td>(b) some knowledge [Alternate Code = 2]</td>
</tr>
</tbody>
</table>
### Page 2 - Section 2. Instructor

Rate the following statements from 1 = strongly disagree to 5 = strongly agree.

<table>
<thead>
<tr>
<th>Q5 - 2.1 The instructor effectively communicated the subject matter.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
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<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
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<tr>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
</tr>
<tr>
<td>Not Applicable [Alternate Code = 0]</td>
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<tr>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q6 - 2.2 The instructor seemed genuinely interested in what he/she was teaching.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
</tr>
<tr>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
</tr>
<tr>
<td>Not Applicable [Alternate Code = 0]</td>
</tr>
<tr>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q7 - 2.3 The instructor clearly specified course assignments.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
</tr>
<tr>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Q8 - 2.4</td>
</tr>
<tr>
<td>Q9 - 2.5</td>
</tr>
<tr>
<td>Q10 - 2.6</td>
</tr>
</tbody>
</table>

Required answers: 1  Allowed Answers: 1
<table>
<thead>
<tr>
<th>Q11</th>
<th>The instructor treats the students with respect.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td></td>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td></td>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
</tr>
<tr>
<td></td>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td></td>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
</tr>
<tr>
<td></td>
<td>Not Applicable [Alternate Code = 0]</td>
</tr>
<tr>
<td></td>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q12</th>
<th>The instructor is helpful and responsive to students.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td></td>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td></td>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
</tr>
<tr>
<td></td>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td></td>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
</tr>
<tr>
<td></td>
<td>Not Applicable [Alternate Code = 0]</td>
</tr>
<tr>
<td></td>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q13</th>
<th>The instructor effectively integrated faith and learning in the class.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td></td>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td></td>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
</tr>
<tr>
<td></td>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td></td>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
</tr>
<tr>
<td></td>
<td>Not Applicable [Alternate Code = 0]</td>
</tr>
<tr>
<td></td>
<td>Required answers: 1  Allowed Answers: 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q14</th>
<th>I would recommend this instructor to a fellow student.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</td>
</tr>
<tr>
<td></td>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td></td>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
</tr>
</tbody>
</table>
Page 3 - Section 3. Course

Rate the following statements from 1 = strongly disagree to 5 = strongly agree.

Q15 - 3.1 The assigned reading/assignments were helpful in acquiring a better understanding of the course.

| Agree [Alternate Code = 4] [Numeric Value = 4] |
| Strongly Agree [Alternate Code = 5] [Numeric Value = 5] |
| Not Applicable [Alternate Code = 0] |
| Required answers: 1  Allowed Answers: 1 |

Q16 - 3.2 Course assessments and grades were fair and reflected the course material.

| Strongly Disagree [Alternate Code = 1] [Numeric Value = 1] |
| Disagree [Alternate Code = 2] [Numeric Value = 2] |
| Neutral [Alternate Code = 3] [Numeric Value = 3] |
| Agree [Alternate Code = 4] [Numeric Value = 4] |
| Strongly Agree [Alternate Code = 5] [Numeric Value = 5] |
| Not Applicable [Alternate Code = 0] |
| Required answers: 1  Allowed Answers: 1 |

Q17 - 3.3 This course was well organized.
<table>
<thead>
<tr>
<th>Strongly Disagree [Alternate Code = 1] [Numeric Value = 1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree [Alternate Code = 2] [Numeric Value = 2]</td>
</tr>
<tr>
<td>Neutral [Alternate Code = 3] [Numeric Value = 3]</td>
</tr>
<tr>
<td>Agree [Alternate Code = 4] [Numeric Value = 4]</td>
</tr>
<tr>
<td>Strongly Agree [Alternate Code = 5] [Numeric Value = 5]</td>
</tr>
<tr>
<td>Not Applicable [Alternate Code = 0]</td>
</tr>
</tbody>
</table>

**Required answers: 1  Allowed Answers: 1**

---

Q18 - 3.4 What method of instruction was most effective (i.e. Lectures, Class Discussions, Exams, etc.)?

<table>
<thead>
<tr>
<th>(a) Lectures [Alternate Code = 1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Class Discussions [Alternate Code = 2]</td>
</tr>
<tr>
<td>(c) Exams [Alternate Code = 3]</td>
</tr>
<tr>
<td>(d) Other, specify. [Alternate Code = 4] [Textbox]</td>
</tr>
</tbody>
</table>

**Required answers: 1  Allowed Answers: 1**

*Next Page: Sequential*
<table>
<thead>
<tr>
<th>Question</th>
<th>Textbox</th>
<th>Required answers</th>
<th>Allowed answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q19-4.1 What did you find most helpful about this course or what did you like best about this course?</td>
<td>[AlternateCode=1]</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Q20-4.2 What suggestions, if any, do you have about how the course might be improved?</td>
<td>[AlternateCode=1]</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Q21-4.3 Do you have any other comments that you would like to make about this course and/or the instructor?</td>
<td>[AlternateCode=1]</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Next Page: Sequential