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Online Education: Perceptions of Faculty and Administrators at Three Different Types of Institutions of Higher Education

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Online Education: Perceptions of Faculty and Administrators at Three Different Types of

Institutions of Higher Education

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by

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ABSTRACT

Online Education: Perceptions of Faculty and Administrators at Three Different Types of

Institutions of Higher Education

by

Sneha E. Abraham

The purpose of this study was to investigate faculty and administrator perceptions of online

learning compared to traditional face-to-face instruction by exploring the factors that impact

online instruction. Strategies that can lead to effective online learning environments were

explored. Faculty and administrators working with online education at 6 traditional, regionally

accredited, degree granting higher education institutions were included in the study.

The number of participants consisted of 169 from the public university, 98 from the private

institutions, and 33 from the community college. The survey used a Likert-type scale, and had 4

dimensions (student engagement, student-student interactions, faculty engagement, and academic

dishonesty) to measure faculty and administrator perceptions of online education. It contained 17

statements and 9 demographic questions.

Statistical analyses of the data revealed: (1) No significant difference in the perceptions of

faculty and administrators as measured by mean scores on the 4 dimensions of the survey by type

of higher education institution, (2) No significant difference in the perceptions on the 4

dimensions of the survey between administrators and faculty, (3) No significant relationship in

participants' years of service and mean scores on the 4 dimensions of the survey, (4) No

significant difference in the perceptions on the student-student interactions dimension between faculty who teach primarily online and those who teach primarily face-to-face, and a significant difference in the perceptions on the other 3 dimensions, (5) A significant difference in the perceptions of faculty towards academic dishonesty dimension depending on the percentage of online classes taught by the faculty (25% or less, about 50%, about 75%, and 100%). Group 1 (25% or less) had significantly lower mean score than the groups 2 (about 50%), 3 (about 75%), and 4 (100%), (6) A significant positive relationship in the perceptions on the academic dishonesty dimension based on the number of years teaching online courses, (7) No significant difference in participants' mean scores on the 4 dimensions based on faculty members' and administrators' age, and (8) The perceptions of male faculty and administrators on student engagement tended to be significantly higher than the perceptions of female faculty and administrators.

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DEDICATION

To my Lord and Savior Jesus Christ, thank you for loving me unconditionally. Thank you for being my ever-faithful friend and for helping me to push forward through all uncertainties in life. I love you, Lord, and I will always lift my voice to worship you.

To my daddy (Abraham Thomas) and mommy (Valsa Abraham), thank you so much for EVERYTHING. Words cannot express how much I love you. Thank you so much for making this dream come true for me. I am blessed to have parents who love me this much. Thank you so much for helping me study, motivating me to push myself forward to reach my goals, and for sacrificing so much time and energy for Aiden and me. Thank you for being the best grandparents in the world. I truly see God's helping hands through both of you, and I am forever grateful.

To my best friend and my baby sister (Dr. Stephie Abraham), thank you so much and I love you to the bottom of my heart. Thank you so much for being my strong pillar and for helping me to believe in myself constantly. I don't know what I would do without you. Thank you very much sis for everything.

To my baby, Aiden, you are my little angel, my inspiration in life, and God's gracious blessing. I thank God every day for blessing and making me your mommy. I love you with all my heart.

To my church family at Boones Creek Christian Church, thank you so much for all the love and support you have given me. I love you all very much. Thank you for everything.

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CHAPTER 1

INTRODUCTION

The developments in computer technology has tremendously transformed instructional

delivery and learning in higher education institutions. This was made possible by the growing

number of technological applications that paved the way for online education. Online education

has revolutionized higher education altogether. Mayadas, Bourne, and Bacsich (2009) declared

that "online education is established, growing, and here to stay" (p. 49). Faculty face

fundamental changes as they transition from teaching face-to-face courses to fully online

instruction (Harasim, 2000). Therefore, to ensure the success of online education at higher

education institutions, it is important to understand the various factors that facilitate or inhibit

effective instruction in online learning environments.

Several authors have declared online education to be one of the rapidly growing areas of

the educational field in the United States (McCann & Holt, 2009; Wickersham & McElhany,

2010). As each year passes, the technological advancements are numerous and are continuously

changing online education. Casey (2008) reported that:

> Distance education flourished in the United States for three main reason: (1) the great
> distances of citizens from educational institutions, both geographically and socio-
> economically; (2) the thirst for education; and (3) the rapid advancement of
> technology…the significant parallels between the development of distance learning and
> the expanding role of technology in mass communication suggests that technology is the
> most compelling developmental factor. (p. 45)

As a result it is imperative that faculty members become well acquainted with the

technological applications used for instructing online students. Technology literacy is a critical

skill for faculty and administrators. According to the U.S. Department of Education, technology

literacy is defined as: "computer skills and the ability to use computers and other technologies to

improve learning, productivity, and performance has become as fundamental to a person's ability to navigate through society as traditional skills like reading, writing, and arithmetic" (Georgina & Olson, 2008, p. 1).

Two factors that paved the way to increased technology literacy and opened more opportunities for the growth of online education are broadband connections and Web 2.0 applications. Broadband connections, defined as the advanced telecommunication system providing high speed transmission of data, voice, and video, opened doors for finding and exchanging information (Hurst, 2010). A theory that supports the function of the Web 2.0 applications in online education is the social learning theory: "students learn when they interact, collaborate, and cooperate in their learning" (Meyer, 2010, p. 226). Meyer further demonstrates the influence of this theory and the Web 2.0 applications on online education through portraying the use of these applications from the early part of the 21st century and their capabilities to successfully "carry out interactions on the web possible, collaboration easier, information sharing the norm, and the creation of web content by groups of students a reality" (p. 177). As the technological applications continue to change and as online programs continue to increase and transform higher education institutions, administrators need to continuously equip and train faculty members. This will enable faculty to increase competency in the newest technological adaptations (Jamil & Shah, 2011; Koehler & Mishra, 2005).

The continuous growth of student enrollment in the online courses is an important factor involving higher education institutions. In 2002 the number of online students was 1,600,000 (Yick, Patrick, & Costin, 2005). In 2006 this number grew to over 3,000,000 (Hiltz, Shea, & Kim, 2007). In 2007 the number of online students further increased to 3,900,000 (Wickersham & McElhany, 2010). Batts, Pagliari, and McFadden (2010) reported the growth of online

education with over 4,000,000 students in the U.S. enrolled in at least one online course. If the enrollment number of online students continues its growth pattern, by the year 2014 there will be an estimated 18,500,000 online students (Neely & Tucker, 2010). Therefore, it is important that the different aspects of this transformational phenomenon be closely observed and studied.

According to Monolescu, Schifter, and Greenwood (2004) faculty members often become aware of the process of initiation and the changes in online programs after the administrative decisions (regarding the online course delivery at the institution) are made. Along with the challenges of establishing online course materials and online instruction, the increased workloads and the demand to work longer hours makes faculty members prone to burnout (Hogan & McKnight, 2007; McCann & Holt, 2009). With the continuous growth of online education, there are changes in the work atmosphere and the preparation of the curriculum and assessment methods for faculty members. As a result this has effected the professional identities of faculty. An increased awareness of the different motivators and demotivators has become important as faculty and administrators work toward the successful growth of online programs. This awareness will help reduce the chances of faculty burnout; resultantly more faculty members can be retained (McShane, 2004).

Faculty burnout is defined as faculty members' feelings of emotional exhaustion, depersonalization, and lack of accomplishments (McCann & Holt, 2009). Understanding the key factors that would facilitate or inhibit the successful delivery of instruction by faculty is an important step that administrators need to take to avoid faculty burnout (Lesht & Windes, 2011). According to Berridge et al. (2012), "A kaleidoscope of viewpoints exists about online learning" (p. 120), and these viewpoints vary in accordance with the different modes of delivery in online

learning: technology-enhanced courses, hybrid courses, and blended programs or degrees (Whalen, 2009).

Higher education institutions need to make it a priority to stay current in updating and adopting the various technological tools. A clear understanding of the many challenges associated with online learning environments is also vital for the successful functioning of online programs. Institutions face challenges with the budget in relation to online courses. There are also challenges in relation to staying current with the many technological changes (McGee & Diaz, 2007). To maintain error-free functioning online learning environments, reliability, durability, integrity, and serviceability are key aspects of instructional technology. Without the proper functioning of these components, students and faculty members alike are prone to question the quality for online courses. It is also important for the online environment to stay secure and free of malicious attacks of the files and data (Scigliano & Dringus, 2000).

Administrators and faculty awareness of the factors that enhance student engagement and interaction in online learning environments aid the development of self-directed learning. Through online learning students become self-directed learners. To be successful in the online courses they have to properly engage with the courses and must interact with other students as well as with faculty (Parker, Robinson, & Hannafin, 2007-2008). The existence of a positive relationship among the students and between the student and faculty is an important ingredient for effective learning and in the overall success of the online courses (Batts et al., 2010; Siedlaczek, 2004; Yu & Brandenburg, 2006).

Administrators have to continuously remain aware of the different factors to increase faculty members' motivation and engagement. Faculty engagement in online courses can be improved significantly through attending various training sessions. Such training will help

faculty members to better adapt to the changing system of online education and to use this

information for creating effective online learning environments. The higher education

institutions also must ensure ease of access for faculty members to the technology support offices

so that they can receive support in the form of documentations, tutorials, and demonstrations to

assist faculty (Lieblein, 2000; MacKeogh & Fox, 2009). According to Scigliano and Dringus

(2000) effective online learning environments are both easily accessible and intuitive. The

success of online education at higher education institutions depend on the ability of all units

(such as the library, student services, computer services, registrar's office, financial aid office,

human resources, etc.) to work together as one (MacKeogh & Fox, 2009).

The following are motivating factors that influence faculty members engagement in

online learning environments and are stress reducers: (1) flexibility in work schedule, (2)

opportunity to work with new pedagogy and new technology, (3) natural curiosity and options

available to display skills, (4) opportunity to share knowledge and for career development, (5)

familiarity with the content management formats (such as BlackBoard®, Desire2Learn®,

eCollege®, or Angel®), (6) student motivation, and (7) convenience of working from home

(Greene, Alejandro, & Brown, 2009, p. 2; McCann & Holt, 2009, p. 106-107). To engage and

retain more faculty members involved with online instruction, administrators should identify and

take the appropriate steps to eliminate demotivating factors (Hiltz et al., 2007; Hughes & Hagie,

2005). The following are demotivating factors that affect faculty members teaching online

courses: (1) demand placed faculty to be constantly available and responsive to the students

emails and assignments, (2) increased amount of time spent in written responses to students

compared to oral responding to oral responses, (3) lack of pay for any extra work done towards

the course, (4) lack of proper administrative and technical support, (5) difficulty of facilitating

student adjustments to online learning, (6) low student ratings for the online courses, and (7) lack of recognition from administrators and peers (Hiltz et al., 2007).

Maslow's hierarchy of needs, Vroom's expectancy theory, and Herzberg's motivator-hygiene theory support the factors that promote faculty job satisfaction (McLawhon & Cutright, 2012). These three theories form the conceptual framework of this study. According to Maslow's hierarchy of needs, faculty job satisfaction can be obtained "when the job and its environment meet the needs of the individual" (McLawhon & Cutright, 2012, p. 342). Vroom's expectancy theory adds to Maslow's theory the matter of human choice and that decisions are made using the following three variables: expectancy, instrumentality, and valence. Herzberg's model helps to identify the purpose of categorizing contributors for faculty satisfaction. Through categorizing the motivators and demotivators affecting faculty members, both faculty members and administrators can understand the ingredients that would promote faculty satisfaction levels for online instruction.

Statement of the Problem

The demand for online education is rapidly growing and higher education institutions are increasing their involvement with the formulation of various online degree programs and online courses. Consequently faculty members are strongly encouraged to teach online courses. With changes in the technology of online education each academic year, faculty members are faced with new challenges. It is important for faculty members and administrators to understand these challenges and implement strategies that aid and enhance support for faculty.

The purpose of this study was to investigate the perceptions of faculty members and administrators of online learning environments compared to traditional face-to-face instruction

by exploring the factors that impact online instruction. Strategies that can lead to effective online learning environments (at 4-year public and 4-year private higher education institutions and 2-year public community college) were explored. Faculty members and administrators working with online education at six traditional, regionally accredited, degree granting higher education institutions were included in the study.

Research Questions

The research questions guiding this inquiry were developed using the following dimensions: student engagement, student-student interaction, faculty engagement, and academic dishonesty. The following research questions, derived from the purpose statement, were addressed in this study:

Dimension 1: Student Engagement

Research Question 1: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public)?

Research Question 2: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members?

Research Question 3: Is there a significant relationship in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of the faculty members and administrators?

Research Question 4: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face?

Research Question 5: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%)?

Research Question 6: Is there a significant relationship in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses?

Research Question 7: Is there a significant relationship in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory based on the age of faculty members and administrators?

Research Question 8: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory between males and females?

Dimension 2: Student – Student Interaction

Research Question 9: Is there a significant difference in participants' mean scores on the student – student interaction dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public)?

Research Question 10: Is there a significant difference in participants' mean scores on the student – student interaction dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members?

Research Question 11: Is there a significant relationship in participants' mean scores on the student – student interaction dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators?

Research Question 12: Is there a significant difference in participants' mean scores on the student – student interaction dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face?

Research Question 13: Is there a significant difference in participants' mean scores on the student – student interaction dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%)?

Research Question 14: Is there a significant relationship in participants' mean scores on the student – student interaction dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses?

Research Question 15: Is there a significant relationship in participants' mean scores on the student – student interaction dimension of the Perceptions of Online Learning Environment Inventory based on the age of faculty members and administrators?

Research Question 16: Is there a significant difference in participants' mean scores on the student – student interaction dimension of the Perceptions of Online Learning Environment Inventory between males and females?

Dimension 3: Faculty Engagement

Research Question 17: Is there a significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public)?

Research Question 18: Is there a significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members?

Research Question 19: Is there a significant relationship in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators?

Research Question 20: Is there a significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face?

Research Question 21: Is there a significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%)?

Research Question 22: Is there a significant relationship in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses?

Research Question 23: Is there a significant relationship in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory based on the age of faculty members and administrators?

Research Question 24: Is there a significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between males and females?

Dimension 4: Academic Dishonesty

Research Question 25: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public)?

Research Question 26: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members?

Research Question 27: Is there a significant relationship in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators?

Research Question 28: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face?

Research Question 29: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory

among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%)?

Research Question 30: Is there a significant relationship in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses?

Research Question 31: Is there a significant relationship in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory based on the age of faculty members and administrators?

Research Question 32: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between males and females?

Significance of the Study

With the continuous changes and developments of online applications, it is crucial that higher education institutions equip their faculty members with strategies that help them maintain effective online learning environments. Each semester faculty members are faced with new challenges through online instruction. If these challenges are not taken into consideration by the institution and the necessary steps are not taken to help faculty find solutions for the emerging challenges, faculty retention will be affected negatively, and the risks for faculty burnout will be on the rise.

According to Huang and Hsiao (2012) although there are many studies on the various aspects of online education and its effects on students and students' attitudes towards online education, there are few widely distributed studies on the perceptions of faculty members and the

administrators who are involved with online education. Lieblein (2000) reported that faculty members are often reluctant to teach online courses because they are either terrified of using the various technological applications or they do not agree with the online pedagogical framework. Batts et al. (2010) agreed with this thought and stated that the administrators need to be constantly aware of the needs of faculty (needs that are in relation to teaching online courses), and faculty need to remain current in their online instructional skills (to create student-centered lessons). The faculty members' willingness to participate in the online courses is an important aspect that would lead to the success of the online learning environments (Siragusa & Dixon, 2006). The positive attitudes and the willingness to instruct online courses is directly related to the existence of a positive satisfaction level in faculty members, which according to Xu and Meyer (2007) is closely connected to student learning and the interaction level with students in the online learning environments.

Faculty satisfaction, as defined by Bolliger and Wasilik (2009), is the faculty members' perception that teaching online will be effective and professionally beneficial. Through understanding faculty's satisfaction levels, institutions can understand how effective their online programs are. According to the National Education Association findings from the year 2000, 75% of faculty found online education to be positive. Additional data from the same year indicated that 83.4% of faculty felt satisfied with teaching online, and 93.6% showed willingness to continue teaching online courses (Bolliger & Wasilik, 2009, p. 105). This heightens the need and the significance of this study. Through this study the various aspects that affect faculty members' online instruction, both positively and negatively, can be better understood to promote the continual success of online learning environments.

Definitions of Terms

The following are important terms that are directly connected to this study. These definitions are included to provide greater clarity.

Faculty burnout: Faculty members' feelings of emotional exhaustion, depersonalization, and lack of accomplishments (McCann & Holt, 2009).

Faculty members: Faculty members as higher education professors or instructors.

Herzberg's motivator-hygiene theory: This theory was developed by Herzberg and colleagues in 1957. In order to formulate this theory, they asked the following question – "What do people want from their jobs?" (Nicholson, Schuler, Van de Ven, & Blackwell, 1998, p. 338). According to this theory "good working conditions (hygiene) and good work (motivator) are needed to affect job satisfaction" (Nicholson et al., 1998, p. 338).

Maslow's hierarchy of needs: This theory was developed by more than 50 years ago. According to this theory of human needs and motivation, "people fulfilled physical, security, social, esteem, and self-actualization needs in an orderly, ascending fashion. Depicted as a closed triangle, this model espoused that individuals may never satisfy all of their needs, especially needs at the highest level" (Kiel, 1999, p. 167).

Organizational culture: According to Schein (2004) organizational culture is defined as:

> A pattern of shared basic assumptions that a group has learned as it solved its problems of external adaptations and internal integration, that has worked well enough to be valid and therefore to be taught to new members as the correct way to perceive, think, and feel in relation to those problems (p.17).

Online education: Curricula that are entirely delivered with the availability of the internet (Yick et al., 2005).

Vroom's expectancy theory: Malouff and Sims (1996) describes Vroom's expectancy theory as:

> Employees perform best when they expect their assigned work to be feasible and to lead to outcomes that they value. Inherent in the model is the requirement that the employees understand how to do their assigned work…Vroom's model also postulates that expecting a particular type of work to be difficult and likely to lead to personally meaningful negative consequences makes it less likely that employees will carry out the work (p. 7258).

Delimitations and Limitations of the Study

In alignment with the purpose of this study, the subjects are delimited to faculty members and administrators from four private higher education institutions, a public university, and a community college. These institutions are located in Tennessee and North Carolina. Therefore, the results may not be generalizable to higher education faculty and administrators responses at-large.

The second delimitation is in relation to the overall response of faculty members and administrators. Although the survey was sent to 1,436 faculty members and administrators, the analyses may not represent the perceptions of all faculty members and administrators. A third delimitation would be in relation to the variations in the perceptions of faculty and administrators towards online education because of the organizational culture they are engaged in. The organizational culture would vary, especially in the manner by which they promote and work with online education, when comparing 4-year private higher education institutions, a 4-year public university and a 2-year public community college.

The first limitation in this study is in relation to the assumption that the theoretical framework (Maslow's hierarchy of needs, Vroom's expectancy theory, and Herzberg's motivator-hygiene theory) that is chosen is appropriate in creating the survey for measuring the perceptions of faculty members and administrators on the various aspects of online education. Another limitation is connected to the assumptions that the survey used for this study is valid and

reliable and that the methodology used adequately addresses the research questions of this study. The statistical tests that are chosen to analyze the results are assumed to be appropriate and to possess the power to detect the various differences in the variables.

Summary

As online education continues to grow, faculty and administrators play a key role in the success of effective online learning. The purpose of this study was to investigate the perception of faculty and administrators of online learning environments as compared to traditional face-to-face instruction by exploring the factors that impact online instruction. Strategies that can lead to effective online learning environments and successful online programs for the institutions (2- and 4- year higher education institutions) were explored.

This study has been organized into five chapters. Chapter 1 includes introduction, statement of the problem, research questions, significance of the study, definition of terms, and delimitations and limitations of the study. Chapter 2 contains a review of the literature to the study. Chapter 3 presents the methodology used in the study. Chapter 4 reports the findings of the data analyses. Chapter 5 incorporates the summary, findings, conclusions, and recommendations for this study.

CHAPTER 2

REVIEW OF LITERATURE

Higher education institutions are rapidly changing the general mode of instructional delivery with an increased number of courses and degree programs being offered through the Internet (Hiltz et al., 2007; McShane, 2004; Rovai, 2000; Smith, Samors, & Mayadas, 2008; Taft, Perkowski, & Martin 2011). With the growth in wireless communications and the World Wide Web, higher education institutions are faced with the challenge of creating and maintaining the online learning environments that are easily accessible, useable, and flexible (Berridge et al., 2012; Scigliano & Dringus, 2000). The Sloan Consortium report provided evidence for the growth in online student enrollment (between fall semester 2002 and fall 2010 online enrollment grew at an annualized rate of 18.3%) (Hoffman, 2013; Moloney & Oakley, 2010). Therefore, higher education institutions nationwide are working hard to stay current, maintain good standing, meet the needs of the growing number of online students, and retain and encourage faculty members teaching online.

According to McCann and Holt (2009), "Online learning is the fastest growing segment in the American educational marketplace" (p. 97). Other researchers have also noted the continuous growth of online education (Casey, 2008; Lesht & Windes, 2011; Wickersham & McElhany, 2010). The increasing trend in online education is evident through studying the enrollment figures. Yick et al. (2005) estimated that in 2002, the number of students enrolled in online courses was 1,600,000. In 2006 this number grew to over 3,000,000. This was a compound growth of 21.5 % from the year 2002 (Hiltz et al., 2007; McCann & Holt, 2009). In 2006 20% of all students enrolled in higher education institutions were enrolled in at least one

online course, and 35% of higher education institutions offered entire programs online (Bolliger & Wasilik, 2009). Shattuck, Dubins, and Zilberman (2011) documented a 22% increase in student enrollment at community colleges between fall semester 2007 and fall semester 2008.

Hurst (2010) reported that close to 90% of higher education institutions in the nation offered online courses in the fall of 2005 (p. 32). Batts et al. (2010) also informed the growth of online education with over 4,000,000 students in the U.S. enrolled in at least one online course. Of these, over 50% attended the online courses through community college. By the year 2007 the number of online students had grown to over 3,900,000 (Wickersham & McElhany, 2010). This number continued to grow with the passing of each academic year. During the 2007-2008 academic year, there was a 12% increase in students enrolled in at least one online course. Survey data from students attending 2,535 institutions in the nation were collected by the Sloan Consortium. The results of the survey revealed that more than two thirds of the institutions programs were offered fully online, and 20% of all the students attending these institutions were taking at least one online course (Green, Alejandro, & Brown, 2009). If the enrollment number of online students continues its growth pattern, by the year 2014 there will be an estimated 18,500,000 online students (Neely & Tucker, 2010). Therefore, it is important that the different aspects of this transformational phenomenon be closely studied.

The Development of Online Education

Understanding the growth and development of online education is a vital ingredient in becoming more acquainted with online instruction for faculty members and administrators. It is important for online faculty members to stay current in their knowledge of technological applications related to online instruction. Georgina and Olson cited the U.S. Department of

Education's definition of technology literacy as: "computer skills and the ability to use computers and other technologies to improve learning, productivity, and performance has become as fundamental to a person's ability to navigate through society as traditional skills like reading, writing, and arithmetic" (p. 1). Harasim (2000) further confirmed that:

> As access to computers and networks continued to grow, educators recognized that cyberspace could be shaped for a wide range of users…Their activities led to path breaking new approaches for networked collaboration that helped to define both online education and online collaboration (p. 45).

In the mid-1970s universities began offering courses via email and computer conferencing. The first totally online course (in adult education) was taught in 1981, and the first totally online program (in executive education) began in 1982 (Harasim, 2000). Although the Internet was launched in 1989, it was with the invention of the World Wide Web (1992), developed by Tim Berners-Lee, that online education entered a new phase in its development (Casey, 2008; Harasim, 2000). A major transformation occurred to the traditional concepts of education with the increased amount of computer use in education from 1991 to 1994. With the emergence of internet and communication technologies (ICT) the concept of 'learning by doing' changed to 'doing and making to learn with technology'. This idea of ICT actually encouraged the students to move along in the online learning environment at their own pace (Jamil & Shah, 2011).

The 1990s also witnessed an increase in the use of email as a means of communication between instructors and the students (McGee & Diaz, 2007). Singh and Pan (2004) in addition discovered an increase in the number of higher education institutions offering online education: from 93insitutions (1993) to 762 institutions (1997). There was also an increase in the revenues obtained from web-based training ($550 million in 1998 to $11.4 billion in 2003).

Understanding the various factors that promote the existence and the continuous growth of online education is crucial. The influences made by Web 2.0 applications and broadband connections are numerous. McGee and Diaz (2007) discussed the general make-up of the technological tools known as Web 2.0 applications. These technological applications are totally web-based, free, supportive, and responsive. Social learning theory supports the function of Web 2.0 applications in online education (McGee & Diaz, 2007). According to Meyer (2010), "Social learning theory posits that students learn when they interact, collaborate, and cooperate in their learning" (p. 226). The following consists of the various Web 2.0 applications (McGee & Diaz, 2007):

- Communicative type tools: Blogs, audioblogs, videoblogs, IM-type tools, podcasts, and webcams;

- Collaborative type tools: editing/writing tools, virtual communities of practice (VCOPs), and wikis;

- Documentative type tools: Blogs, videoblogs and e-portfolios;

- Generative type tools: Mashups, VCOPs, and Virtual Learning Worlds (VLWs); and

- Interactive type tools: Learning objectives, social bookmarking, VCOPs, and VLWs (p. 32).

From the early part of the 21st century Web 2.0 tools have been used in education to successfully promote scholarly communications and are known for their capability to "carry out interactions on the web possible, collaboration easier, information sharing the norm, and the creation of web content by groups of students a reality" (Meyer, 2010, p. 177). Thus, with the help of such interactive web technologies, it became possible for learners to be more self-directed (Ulrich & Karvonen, 2011).

Broadband is another important tool for finding educational information. Broadband has enhanced the ways by which people exchange information. Broadband technology is defined as advanced telecommunication system that provides high speed transmission of data, voice, and video (Hurst, 2010). Hurst further emphasized the development of E-Learning from broadband connections. E-Learning came to be known as blended learning because of its use of more than one learning medium. This portrayed the combined involvement of online instructors and internet components in classes. Through blended learning, a mixture of web-based technologies were used including virtual classroom, self-paced instruction, collaborative learning, streaming video, audio, and text.

Yet another development that occurred in relation to the growth of online education was in relation to the establishment of the National Commission on Online Learning (Smith et al. 2008). Due to the continuous improvements technological applications became more and more user friendly. This lead to changes in the existing negative attitudes towards technology and online education among faculty members as well as students. As a result of this growth in online education, an increasing number of institutions initiated and adopted online programs making the online realm a common place (which would indicate normality and acceptability) (Yick et al., 2005).

Jamil and Shah (2011) further revealed that "Recent innovative changes in higher educational institutions are due to the expansions of the applications of technological approaches in teaching and learning" (p. 39). With such increased use of computers and technology, there was an increased percentage of students graduating from universities (Jamil & Shah, 2011). This places an increased importance on paying close attention to enrollment numbers and the number of faculty members teaching online courses by the administrators (Prins, 2009).

Flowers and Baltzer (2006) reported that faculty members retiring in recent years has led to an increased number of faculty entering online instruction. This increase was evident in the United States Bureau of Labor and Statistics data, where the number of online jobs was expected to rise from 1,600,000 in 2004 to 2,032,000 or more by the year 2014. With such continuous changes in online learning and in the number of faculty members there are possibilities for attitude changes in faculty toward online learning and instruction (Flowers & Baltzer, 2006). Therefore, higher education administrators have to continuously equip and train faculty in online instructions and the newest technological adaptations (Jamil & Shah, 2011; Koehler & Mishra, 2005).

Aspects that Define Online Education

Distance education is defined as learning environments where educators and students are separated by distance or time (Bolliger & Wasilik, 2009). This term was first developed in 1972 by the International Council for Correspondence Education (Crews, Wilkinson, Hemby, McCannon, & Wiedmaier, 2008). Derrick (2003) mapped the evolution of distance education in the 1700s in the form of postal delivery correspondence. According to Crews et al. (2008) distance education has transformed to its current state of online education. Web-based online instruction is the fastest growing segment of distance education (Huang & Hsiao, 2012). Online education is defined as curricula that are entirely delivered and accessible with the use of the internet (Yick et al., 2005). In other words, students and educators use internet-based technologies for learning and instruction (Bolliger & Wasilik, 2009; Moore, Dickson-Deane, & Galyen, 2011).

Factors That Impact Online Learning

According to Berridge, Penney, and Wells (2012), "A kaleidoscope of viewpoints exists about online learning" (p. 120). These viewpoints vary in accordance with the varying modes of delivery in online learning. The three main types of online learning in higher education are: technology-enhanced courses, hybrid courses, and blended programs or degrees. Among these, hybrid courses reduce the amount of face-to-face time (Whalen, 2009).

Among the various areas of growth and development, higher education institutions need to make continuous updating and adopting of various technological tools a priority for effective online instruction. This need likely will continue to increase. Taft et al. (2009) identified the following factors to be main reasons for the fast growth of online education: "the information revolution, competitive forces in higher education; changes in student lifestyles and characteristics, and the rising imperative for expanded educational access for students of all nationalities, geographic locations, and personal circumstances" (p. 181). According to Harasim (2000) the following are new learning domains that form the conceptual framework of online courses:

1. Group communication: Through group communication, educators can promote an environment where information is shared continuously, new perspectives are identified, and encourages to work through difference to arrive at an intellectual convergence;

2. Place independence and time-independence: With time and place independence, educators have 24-hour access to respond to students, and have access to the resources through the Web; and

3. Enhanced by multiple media, and computer-based messaging: Promotes a variety of methods that instructors use to communicate and teach students.

In order to implement online learning environments successfully, faculty and administrators need to have a clear understanding of the many potential challenges. Online learning environments consist of online courses and activities that provide instructions for the appropriate use of instructional and communication technology tools. Online learning environments need to be easily accessible at any time and from any location (Scigliano & Dringus, 2000). Otherwise, both instruction and learning are affected. Institutions face financial challenges to support online courses and faculty members. Another challenge is in relation to staying up-to-date with technological changes, which can occur daily. This can become a difficult task with budget limitations (McGee & Diaz, 2007).

In order to be effective both in instruction and learning, faculty and students alike need to understand the various properties needed to be successful with their involvement in online learning environments. Reliability, durability, integrity, and serviceability are important information technology aspects that are necessary for the error-free functioning of online learning environments. Without the proper functioning of these components, students and faculty are prone to lose respect of online courses. According to Scigliano and Dringus (2000) the online learning environments also need to be secure and free of malicious software that could attack files and data.

Visibility is an important aspect for faculty members because it can help create a positive introduction to online courses. The online learning environments should support the learner-centered and resource-oriented approach (Scigliano & Dringus, 2000). Online courses provide students with the opportunity to be self-directed learners. Through the online course website the students are able to access all the required course materials (Parker et al., 2008). Yu and Brandenburg (2006) discussed the importance of the existence of a positive relationship between

student and faculty members on overall quality of the online courses. Siedlaczek (2004) also pointed out the importance of student-student interaction and student-teacher interaction for effective learning to occur. Batts et al. (2010) confirmed this statement (in relation to faculty-student interaction) and provide additional benefits of distance education (more specifically online learning) including (1) increasing the interaction between faculty members and students, (2) making online learning available for a greater number of learners, and (3) being able to meet the needs of traditional students who attend the courses while already working and taking care of their family.

Support from the government can be encouraging for faculty members to obtain more training in online education. Borthwick et al. (2004) explained the influence made by Preparing Tomorrow's Teachers to Use Technology (PT3). PT3 is an important federal funding initiative designed to educate future teachers who are learning about incorporating online learning into the K-12 classrooms. These educators are given the opportunity to attend summer courses, fall and spring workshops, online modules, winter session workshops, and model lessons (Borthwick et al., 2004).

It is important that faculty obtain such training to help them adapt to evolving online education systems. However, it is also important that any help needed is readily available from the university's technology support office at all times in the form of documentations, tutorials, and demonstrations to assist faculty members (Lieblein, 2000; MacKeogh & Fox, 2009). MacKeogh and Fox (2009) documented the importance of the ability of all units of the institution (such as the library, student services, computer services, registrar's office, financial aid office, human resources, etc.) being able to work together to increase the success rate in online

education at the institution. Effective online learning environments are models that are both easily learnable and accessible (Scigliano & Dringus, 2000).

According to the Telecommunication Act of 1996 the telecommunication systems can be easily accessible for people with disabilities. Keener (2004) found that the enrollment of students with disabilities in online courses is lower compared to those without disabilities. It was also revealed that to be successful in the online courses, students with disabilities need the same skills, abilities, and knowledge as those without disabilities. This shows the need for increased faculty members' awareness on how to better plan instruction to meet the needs of students with disabilities (Keener, 2004).

Synchronous vs. Asynchronous

Online learning environments may be synchronous or asynchronous. Synchronous online courses have live lectures and chat room sessions (Lieblein, 2000). Synchronous communication is also supported by instant messaging, or web conferencing. Examples of these adaptations include Blackboard, Collaborate, and Adobe Connect. Through this type of learning environment faculty members and students can interact more (Huang & Hsiao, 2012).

Asynchronous learning environments, on the other hand, do not require students to be logged in and attending the class all at the same time, as required by the synchronous courses (Lieblein, 2000). According to Moloney and Oakley (2010) during the 2003-04 academic year, nearly 2,000,000 learners were engaged in asynchronous learning though online courses. The tools that are generally used in an asynchronous environment to communicate include email, discussion boards, blogs, wikis, and video and audio recordings. Because there exists extra time for students to reflect in these learning environments, critical thinking and in-depth learning are

encouraged. However, a disadvantage of such an environment is the lack of opportunities for social interactions, which could create a gap between faculty members and the students (Huang & Hsiao, 2012).

When students are registered to the online course from a widespread area, there may be issues in having them all present for the synchronous course meetings at the same time of the day. This is when professors need to practice recording the lectures and making them available in the course's main site so that these students can access it at a later time. No matter what the course environment (synchronous or asynchronous), faculty members should always be prepared to guide their students through the course framework to help the students smoothly navigate through the course (Lieblein, 2000).

Threaded discussion boards are found to be a popular part of both synchronous and asynchronous courses (Baglione & Nastanski 2007; Lieblein, 2000). In an asynchronous course, the threaded discussion boards are effective because of the convenience it provides for the faculty members and students to participate at their own paces. The discussion boards also work well for students who are a bit shy and will help them participate more (Lieblein, 2000). Baglione and Nastanski (2007) provided the following definition for the threaded discussion boards: "Threaded discussion uses a portion of the class website in a 'bulletin board' environment where the faculty member presents a questions or topic for discussion and students can read and comment on a topic under discussion at their leisure" (p. 139). These discussion boards are collaborative tools that promote interactions and improve feedback (Bonnel & Boehm, 2011).

Active participation is a requirement for success in the threaded discussion boards. The students should be required to write their responses, take the time to interact, and discuss with

the other students. Students should also think critically and analytically in these asynchronous discussion boards. A general drawback to this threaded discussion is the limitation in communication dynamics. For instance, the body language of the students and the instructors are not visible. This could negatively affect learning. However, these discussion boards provide students more time to reflect and express their thoughts and to discuss more freely. There is also decreased inhibition and gender barriers in the threaded discussion boards. Students as a result tend to respond more than they would in a face-to-face class environment (Baglione & Nastanski, 2007).

Smith et al. (2008) noted (from interviewing various presidents of higher education institutions) the following policy areas to be making an impact on online learning:

- increased access of online learning systems;
- increased number of student recruitment;
- improvements in student retention due to more flexibility with time and place;
- more diversity in student enrollment;
- opportunities for late-degree students to complete their requirements;
- faster initiation process compared to traditional courses and programs;
- making sure the proper function of the online learning environments for student even during non-institution hours;
- increased expectations towards the on-campus technology and also on the interaction levels between the faculty members and students;
- the effects of blended courses and programs, and continuing and professional education and certification on online learning;
- the quality and cost of instruction;
- expectation of constantly upgrading the technology infrastructure;
- online delivery allowed for more effective utilization of classrooms, physical facilities, and faculty and staff;
- development of new partnerships with other institutions and organizations , nationally or internationally;
- positive impact on the recruitment and retention of faculty and staff; and
- increased political, and alumni and donor outreach. (p. 93)

For online educational programs to continue their growth in a successful manner, it is important that the administrators and faculty members become more aware of the factors that are both motivating and demotivating. This will assist in gaining knowledge of the factors that could

lead to faculty burnout. Herman (2012) emphasized the growth of online education to be "one of the most pressing and rapidly changing issues faced by faculty members and administrators in higher education" (p. 87). With the growth and success of online learning environments, an increasing stress was placed on both administrators and faculty members (Sellani & Harrington, 2002). McShane (2004) acknowledged that faculty members' professional identities are challenged because of changes in the work atmosphere, general student body, and in the curriculum and assessment as a whole. This was further emphasized by Monolescu et al. (2004) by revealing the increasing demands in distance education and how online programs are initially put into place through administrative decisions after which the faculty members are informed of this decision. Therefore, faculty members are often forced into teaching online courses and are thus faced with many challenges to maintain a successful online learning environment. With increased workloads and the demands placed on the faculty members to work longer hours with the online courses, there are chances for faculty members to experience burnout (Bolliger & Wasilik, 2009; Hogan & McKnight, 2007; McCann & Holt, 2009).

Faculty burnout is an important issue for administrators. This is because of the continuous increase in the number of online faculty members (Baghdadi, 2011). Faculty members are stressed and at times reluctant to work with online education (Yick et al., 2005). According to Lesht and Windes (2011) to avoid faculty burnout and to promote successful online learning environment administrators should understand the key factors that impact online learning environments. The factors include those that facilitate and inhibit the successful delivery of instruction (Lesht & Windes, 2011). McCann and Holt (2009) defined faculty burnout as "feelings of emotional exhaustion, depersonalization, and lack of personal accomplishments". (p.

99) According to McCann and Holt (2009) there are six factors that are connected with faculty burnout:

- workload;
- lack of control of day-to-day activities;
- lack of rewards for performance;
- feelings associated with relationships being undermined;
- feelings that occur when respect, fairness and openness are missing; and
- feelings associated with missions or core values being in conflict with decisions made by management. (p. 99)

Attitudes Toward Online Education

With the revolutionary shift that occurred in education, faculty members have faced a tremendous amount of change from teaching traditional (face-to-face courses) to teaching fully online courses (Harasim, 2000). To stay competent not only at the national level, but also globally, it has become necessary for the institutions to constantly monitor and improve their standards of teaching and learning. This means that the faculty should stay connected to this changing pace as well (Jamil & Shah, 2011; Koehler & Mishra, 2005). Hence, the development of a high-quality online learning environment depends not only on the administrators of the institution but also on faculty members, and the growth of online learning programs will depend strongly on the positive attitudes of the institutions' faculty members (Bolliger & Wasilik, 2009; Lan et al., 2003; Smith et al., 2008).

Positive attitude needs to be demonstrated through all areas of online learning and instruction by the faculty members. Cardwell-Hampton (2008) uncovered the results of a study conducted in relation to faculty members' perceptions of online instruction. The results showed that the female faculty and faculty members with 1-9 years or with 10-19 years of experience displayed more positive attitude towards online instruction. McQuiggan (2012) reported a study that surveyed teachers of both online and face-to-face classes. McQuiggan stated that 75% of the

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teachers reported a positive effect on their experience teaching online courses. Mitchell and Geva-May (2009) found that there was only a mid-level resistance towards online learning as expressed by the five different universities and colleges they chose for their study. Of these five, faculty at three institutions revealed no significant difference in their attitude towards online education and face-to-face education.

Lieblein (2000) declared that faculty members are often reluctant to teach courses online because they are either terrified of using technology, or they do not agree with the online pedagogical framework. Batts et al. (2010) stated that the administrators need to be constantly aware of the needs of the faculty (needs that are in relation to teaching online courses), and the faculty members should remain current in their online instructional skills (in order to create student-centered lessons). According to the findings of the study conducted by Mitchell and Geva-May (2009), faculty members have a higher degree of concern about online learning environments than administrators. The same study also revealed years of experience in online instruction had no effect on the attitudes about online learning environments. Ali et al. (2005) found that faculty members with online instructional experience identified themselves as advanced beginners or competent, while faculty with no online instructional experience stated themselves to be at the novice or advanced beginners.

Mitchell (2009) discusses that community colleges have always maintained a consistent growth in online education. The results of the study conducted at a community college displayed faculty members and administrators both agreeing to the fact that online education is reshaping the future of education. Faculty members and administrators felt their roles to have changed because of the increased establishment of online education at their institution. Administrators found this change to be procedural and faculty members identified their changing role in online

education as facilitators. Administrators found it important to grow in online education and to stay current and informed of the many aspects to be successful in online education at their institution. Faculty members reported the importance of mentorship in the study. Being a mentor to new online instructors is a helpful strategy to promote successful online learning environments.

The positive attitudes and the willingness to instruct online courses is directly related to the existence of a positive satisfaction level in the faculty members, which according to Xu and Meyer (2007), is closely related to student learning and the interaction level with students in the online learning environments. Faculty satisfaction, as defined by Bolliger and Wasilik (2009), is the faculty members' perceptions that teaching online will be effective and professionally beneficial. Measuring the faculty members' satisfaction levels is a good strategy for institutions to monitor the effectiveness of the online programs. According to the National Education Association findings from the year 2000, 75% of the faculty members found online education to be positive. Other data from the same year reported that 83.4% of the faculty members felt satisfied with teaching online, and 93.6% showed willingness to continue teaching online courses (Bolliger & Wasilik, 2009).

Faculty members' job satisfaction when related to Maslow's hierarchy of needs, Vroom's expectancy theory, and Herzberg's motivator-hygiene theory provides an understanding from a theoretical perspective what factors contribute to their job satisfaction (McLawhon & Cutright, 2012). With Maslow's hierarchy of needs, "job satisfaction is attained when the job and its environment meet the needs of the individual" (p. 342). The needs, hierarchically, consists of physiological, safety, belongingness, and love. Vroom's expectancy theory adds to Maslow's theory the level of human choice and the decisions are made based on the following three

variables: expectancy, instrumentality, and valence. Herzberg's model helps to identify the triggers and mediators that affect job satisfaction. Here trigger is defined as a significant event that may or may not be related to the job, and mediators can either be motivators or demotivators. Maslow's theory and Vroom's theory both support the concept of motivation when relating to the job satisfaction of the faculty members.

Faculty Members Facing Role Shifts

Changes and developments with information and communication technology in the online learning environments continuously affects the role of the faculty members in the higher education institutions (Jamil & Shah, 2011; Koehler & Mishra, 2005). As discussed by many researchers, educators are becoming managers or facilitators of learning (Baghdadi, 2011; Baglione & Nastanski, 2007; Boling, Hough, Krinsky, Saleem, & Stevens, 2012; Gonzalez, 2010; Howell, Saba, Lindsay, & Williams, 2004; Jackson, Jones, & Rodriguez, 2010; Koehler & Mishra, 2005; McShane, 2004). An example of how the faculty members' role becomes that of a facilitator is evident through the threaded discussion boards. As the facilitator, the faculty members "specify the number of posts required between students, number of interactions required between students, and depth and substance within each post" (Baglione & Nastanski, 2007, p. 141). The role of the faculty is therefore transformed into one where they are responsible for "uploading lecture notes, select websites, and/online materials which reflect their own understanding of what is being taught" (Gonzalez, 2010, p. 69). One of their main functions, as a result, becomes that of designers of online learning environments.

McShane (2004) also examined the role shift in faculty members and pointed out that "In online communication-based learning environments, teachers become learners, and learners

become teachers" (p. 4). The learner-centered instruction consists of instruction that focuses on the learners' needs and goals that in turn leads to more student-centered learning (McQuiggan, 2012). According to Gallini and Barron (2002) such learner-centered environments will be the ones that promote faculty-student interactions and student-student interaction.

Faculty members who teach online reflect on their face-to-face teaching strategies and experiences when they plan for instruction in online courses. However, online instruction usually requires completely different instructional planning. This is mainly because online instruction has shifted into becoming more student-centered (McQuiggan, 2012). Jackson et al. (2010) emphasized that, "The role of the online professor is defined by the needs of learners, including monitoring interactions between students, guiding discussions, and providing interactive online learning activities" (p. 80). Siragusa and Dixon (2006) listed the following as the five important roles of faculty members that lead to the success of an online learning environment: (1) faculty members' perceptions of their students learning using the online learning environment, (2) skills and knowledge of the faculty members to use the various technologies, (3) technical support opportunities for the faculty members, (4) faculty members involvement with the decision making process associated with developments in online learning, and (5) faculty members involvement with developing successful online courses.

Shelton (2010) emphasized the close relationship of this list to faculty members' satisfaction. Faculty members' satisfaction is related to the enhancement of the online course through the betterment of the technological framework (Shelton, 2010). The general role changes of the online faculty members are classified into three categories (Hiltz et al., 2007):

1. Cognitive role: Mental processes of learning, information storage, and thinking;

2. Affective role: Influencing the relationships between students, the instructor and the

classroom atmosphere, requires faculty members to find new tools to express

emotions; and

3. Managerial role: Class and course management, and to the work done on the course

structure and the faculty members' attention to detail. (p. 109)

Concerning Factors and Challenges of Online Instruction

Because of the growing trend in online learning environments faculty members teaching

online courses are faced with new challenges every semester. There are many factors of concern

in online education that could affect the quality of instruction. The more in-depth knowledge of

the many factors that become motivating and demotivating factors for the faculty members

becomes important information for the higher education administrators. All of this information

will become essential tools and guidelines to maintain a positive and effective online learning

environment.

One of the reasons that prevents faculty members from placing the same amount of

prestige on distance education, compared to the traditional courses, is mainly because the tenure

and promotion requirements may not recognize faculty members' performance in distance

education (Howell et al., 2004; Yick et al., 2005). This is aligned with another concern of faculty

members: academic freedom. The lack of tenure opportunities decreases faculty members'

ability to be protected by academic freedom (Yick et al. 2005). Yick et al. also affirmed that a

nontenure system is a discouragement to academic activity.

Schmidt (2004) found that faculty members may find the increased number of teaching

strategies for online instruction a bit challenging. Another challenge is in relation to faculty

turnover (mainly among part-time and adjunct faculty members). According to Green et al.

(2009) faculty turnover can be expensive for the institutions and the cost is generally associated with course adaption and redevelopment, faculty training, and increased staff support. Faculty turnover may also negatively affect the reputation of the institution.

Depending on the subject of the online courses, online learning can also at times be challenging, especially when there needs to be hands-on or practical experience (Clary & Wandersee, 2009). However, according to Vitale (2010), "the American Association of Colleges of Nursing (2001) suggested that the distance learning initiatives will continue to be powerful educational strategies to attract, retain, and graduate professional nurses" (p. 549). Vitale (2010) also revealed that it is vital for educators of nursing courses to be experienced in the continuously changing online pedagogy.

According to Mitchell and Geva-May (2009) the faculty members' willingness to accept online learning "is influenced by attitudes related to four variables that affect practice change: intellectual reluctance, support, change and cost benefit." (p. 71) Intellectual reluctance occurs when the faculty members beliefs and values becomes incompatible with those of online learning in general. Lack of support and assistance (for resources, technical help, and training) from the department and the administration could lead to an increase in faculty members' resistance in being involved with online learning (Mitchell & Geva-May, 2009). McGee and Diaz (2007) identified the instructional technology challenges as (1) changes in the technological tools and the lack of adequate information in regard to the tools that assist the faculty members, (2) emerging tools such as blogs, wikis, and podcasting having not been integrated into the course managements systems leads to the multiple log-ins, data input, and results tracking by the faculty members, (3) students' changing expectations leaves faculty members struggling with the need to choose the right technology for instruction, (4) as the institutions review and change the

course management systems every 5 years, and (5) the faculty members face challenges to incorporate and adjust to the new technologies.

Time management is another challenge faced by the faculty members in online education. Faculty members face the challenge of creating the right balance between the time needed to assist and interact with students and the time needed for class management and other tasks (online and office related) (Yu & Brandenburg, 2006).Another matter of concern is in relation to student retention. Administrators can help increase student interest and interaction by increasing their sense of belonging to the institution as a whole. Other areas concerns affecting faculty are in relation to security, testing, and academic dishonesty (Wickersham & McElhany, 2010).

According to Edwards and O'Connor (2011), "Students do not have the knowledge to navigate through databases for information needed" (p. 4). Conversely, McGee and Diaz (2007) discussed the existence of a gap, which keeps widening, between students and faculty members. This is in relation to students being far more technically equipped and knowledgeable. McGee and Diaz (2007) stated that:

> The digital divide focused on access and socioeconomics just ten years ago, but today we see a widening divide between parent and child, teacher and learners, and employer and employee…Today most students own a computer, use multifunction mobile technologies, have ubiquitous access to the Internet, regularly use course management systems for coursework, and incessantly IM and text-message. (p. 30)

Therefore, it is not surprising why students today, who are highly skilled and increasingly aware of the use of technology, continuously have high expectations for online learning environments. Students also have expectations of their faculty and their teaching abilities (McGee & Diaz, 2007). There are concerns in relation to the lack of computer knowledge of faculty members. Faculty members, therefore, need to be well-equipped and highly aware of online technological applications to integrate technology successfully with the instructional

materials (Edwards & O'Connor, 2011). Hiltz et al. (2007) identified the following challenges

that are faced by prospective faculty members especially for those who are transitioning into

teaching online courses: (1) changes in the organization and in the general structure of the

administration, (2) lack of technical assistance, and (3) difficulties with the opportunities for

social interaction. Crews et al. (2008) articulated the importance of strategies that help reduce the

work load as the online courses are designed and planned. The following list consist of a few

such strategies: clarifying students' skills, developing detailed dynamic syllabi, and establishing

learning management systems. The instructional delivery of online courses can have an impact

on student satisfaction levels.

Motivators or Positive Perceptions of Teaching Online

Hiltz et al. (2007) mapped the following as motivators of faculty members in teaching

online courses: (1) more flexibility in time and place to access the course materials and student

interactions, (2) online classroom assists students for whom English is a second language

especially in the threaded discussion assignments, (3) online courses reach more diverse students

(which according to the online participants increases its value), and (4) more effective

management of course materials and student participation. Bolliger and Wasilik (2009) also

confirmed the increased faculty members' interest in teaching online courses because of the

opportunity to teach a more diverse student population. The following are important findings

from a survey conducted in relation to online learning environments and the faculty members'

attitudes and responses (Hiltz et al., 2007):

1. A higher level of satisfaction existed in faculty members when they found that their
   online students' performance was improving;

2. A majority of faculty members found a higher level of student interaction;

3. A higher level of satisfaction existed with teaching online;

4. Only a few faculty members expressed concerns from technical difficulties; and

5. A majority insisted more experience with designing and teaching online courses. (p. 110)

Bolliger and Wasilik (2009) emphasized the interest in using technology to be an intrinsic motivator. Koehler and Mishra (2005) stressed the importance of the faculty members' participation and their willingness to learn about specific hardware and software skills needed for developing a successful online learning environment. Clary and Wandersee (2009) discovered through different surveys that the faculty members consider convenience in online learning to be the primary motivator.

According to Irlbeck (2008) an online learning environment is sure to become a success through the positive interactions and relationships of the faculty members and the students. Irlbeck also discovered that, "A truly effective focus on the teaching-learning relationship, from an organization-wide perspective, needs to be fully supported by the organizations, communicated through the administration to faculty members, and translated by the development team" (p. 26). Berridge et al. (2012) stressed the importance of faculty members' ability to maintain a positive motivation level. To be successful in maintaining such positive motivation levels in students, faculty members also need to feel encouraged and motivated about their instructional ability. Administrators can play a key role in encouraging and motivating faculty members by supporting their ideas and the pedagogical framework, involving the faculty members in the creation of the online courses, and through clearly communicating with them the general process for online course set up (Irlbeck, 2008).

As the faculty members prepare for an online course they need to keep in mind the usability issues, the general navigation, and the interactions (student-teacher, teachers-student, and student-student) in online learning environments (Scigliano & Dringus, 2000). Irlbeck (2008) identified the following additional ways by which faculty members are finding success in teaching online courses: (1) develop instruction after obtaining and understanding the learners, (2) effective use of the online course room, (3) existence of a positive faculty-learner relationship, (4) maintenance of flexibility and responsiveness of various learning styles, and (5) demonstrate competence in the professional discipline and in professional development. (p.28)

Another motivating factor is in relation to the number of students in the online courses. Lieblein (2000) discussed the importance of maintaining a small class size (15-20 being the optimal number) to help faculty members in successfully handling the online course environment. Taft et al. (2011) found that more than 30 students in an online course leads to a negative effect on student learning. For online discussions to be successful the number of students needs to be in the range of 6-10 (Taft et al., 2011).

McShane (2004) studied faculty experiences with teaching in the online realm. He found improvements in the relationships with the students. He also mentioned the existence of less age and generation barriers and more interaction between students. These are all motivating factors for the faculty members. The faculty members also found another positive side to online instructions, which is the opportunity to teach and communicate while the professors are travelling. The educators also added to the list the benefit of responding to their students at a much quicker pace (McShane, 2004). University sponsored incentives and policies are yet another motivator for the faculty members (Green et al., 2009). According to Green et al. (2009) there are three main types of incentives: (1) Situational aspects of the work environment (e.g.

technological training and assistance, adequate support system, and departmental commitment to online education) that help promote participation, (2) Inducements (e.g. salary raise, promotion, and tenure) from the institution, and (3) Intrinsic rewards (e.g. positive satisfaction, professional growth, and career advancement). (p.2)

A number of motivating factors influence faculty members: (1) flexible scheduling, (2) opportunity to experiment with new pedagogy, (3) computing skill level and opportunity to learn new technology, (4) natural curiosity, (5) marketability of skills, (6) opportunity to share knowledge, and (7) career development (Green et al., 2009, p. 2). The following are potential stress reducers that can also act as motivators for the faculty members: (1) familiarity with the content management formats (such as BlackBoard®, Desire2Learn®, eCollege®, or Angel®), (2) student motivation, and (3) convenience of working from home (McCann & Holt, 2009). With the use of familiar online content management technologies, faculty members can feel more at ease. This holds true especially when they need to work at different institutions (McGee & Diaz, 2007; Paechter & Maier, 2010).

As students continue to remain positively motivated in the online courses, instructors can focus more on the course content. The level of motivation increases as the students' progress from undergraduate to graduate-level courses. Time is an important factor that is connected with faculty members' ability to work from home when needed and provides them with the option of working with online instruction even after retirement age (McCann & Holt, 2009).

According to Baghdadi (2011) regular communication and interaction between the faculty members and the institution in general is important for promoting and maintaining faculty motivation. Jackson et al. (2010) also reported the faculty members' ability to interact more with the students through the online courses as a motivating factor for the faculty members.

Another important aspect that promotes faculty members' motivation to teach online courses is in relation to professional development activities. The professional development activities inform and equip them more about the latest adaptations and developments in online learning environments. Obtaining positive feedback is also a motivator. Therefore, it is important for the administration to provide timely feedback of the faculty members work and achievement levels while instructing online students. This would also help to communicate concerns and in attaining solutions to issues at a much faster pace (Baghdadi, 2011; Wickersham & McElhany, 2010).

The interactions between faculty members was a motivating factor in the study of Green et al. (2009). Supportive and effective department chairs add to the encouragement of the faculty members. Adjunct professors are motivated to teach online course because of the need for teaching experience and the additional income. Faculty members, in general, are motivated to teach online courses if this work counts toward their promotion and tenure track experiences (Green et al., 2009).

Demotivators or Negative Perceptions of Teaching Online

Administrators should identify and take the appropriate steps to eliminate demotivating factors before they affect instruction and learning. This will ultimately help to engage and retain a large number of online instructors (Hiltz et al., 2007). Hiltz et al. uncovered the following demotivating factors for the faculty members teaching online courses: (1) demand placed on the faculty members to be constantly available and responsive to the students emails and assignments, (2) the increased amount of time spent to respond to students compared to responding to them orally (3) lack of pay for any extra work done towards the course, (4) lack of proper administrative and technical support, (5) online learning environments may be difficult

for some students to adjust, (6) low student ratings for the online courses, and (7) lack of recognition from administrators and their peers. Lan, Tallent-Runnels, Fryer, Thomas, Cooper, and Wang (2003) also emphasized the lack of adequate technical support from the institution as a key demotivating factor affecting faculty members.

Student ratings, according to Hiltz et al. (2007), could negatively affect the professors' promotion, tenure, merit raises, and recognition. This becomes a matter of concern for the faculty members. McShane (2004) discussed the matter of reflexive awareness practiced and experienced by faculty members teaching in the online classes, which is yet another issue that could negatively affect online educators. According to McShane (2004) the faculty members "are aware that their students will read and scrutinize their online subject sites and posts, and that other unknown eyes (including friends and relatives of their students, web site designers and administrators) may examine their materials and messages" (p. 12).

The absence of institutional fit is an important reason for creating a discouraging factor in the faculty members' attitude towards teaching online. To prevent this, leaders should have to explain how the implementation of technology and online education fits into their institutions' mission and goals and take steps to assure that the technology is reliable. According to McShane (2004) there are educators who favor the lecturing aspect of the face-to-face courses. Some consider face-to-face lecturing to be more "real" teaching, a form of communication that is more direct, and where there is more immediacy and physical proximity. To other educators lecturing is closely related to performance, which can be done better in a face-to-face course. Another demotivator, as reported by Jackson et al. (2010), is that the faculty members tend to have the perception that online course planning and instruction would require a lot more work than the face-to-face courses.

The concerns of faculty members are more or less the same no matter the institution. Faculty members are, in general, concerned about the time it takes to 'design, develop, and then teach a course online' and the decreased amount of student interaction as compared to face-to-face courses (Wickersham & McElhany, 2010). Bolliger and Wasilik (2009) detected the following concerns of faculty members teaching online course: limited student interactions, technological difficulties, and workload issues. According to Jackson et al. (2010), "The greatest challenge to online education is not the technology, but the identification and implementation of strategies and techniques which match the learners with effective learning opportunities." (p. 80)

Formulating Online Courses

An in-depth study of the different aspects that constitute online courses could help to develop online strategies. Through the review of the literature in relation to these different areas, faculty and administrators of higher education institutions could develop a deeper understanding of these aspects that will in turn assist them as they plan the creation of effective online learning environments. This will also promote the development of strategies that would become motivators for faculty members.

Pedagogical Framework

The pedagogical framework has a strong influence on the success of the courses and in creating a positive learning environment. A conflict of ideas exists as some faculty members favor live lectures in online classes, while others value more student involvement in learning over the idea of live lectures. According to Taft et al. (2011), "Three dominant educational frameworks - the objectivist-constructivist continuum, the Community of Inquiry model, and

Bloom's taxonomy are important pedagogical frameworks that will provide the proper guidance for the online course to be a success for the faculty members and the students" (p. 194). The following are some of the different pedagogical dimensions in online education (Hamid, 2001):

1. Constructivist approach: Faculty members should plan different problem-based learning activities for online students;

2. Self-directed learning: Instruction should include the use of a course structure map that clearly outlines course competencies, self-assessments, and formative assessments;

3. Evoke intrinsic motivation: Learners frustration need to be reduced by the faculty members by incorporating support and feedback features, such as chat rooms and active links, in the online learning environments;

4. Reflective approach: Online learning environment provides learners with all the necessary elements for reflection;

5. Individual learning styles: The activities need to be designed in accordance with the learning styles of the students, so that it complements the students' intelligence, preferred pace, and preferred degree of orderliness;

6. Experiential learning: The online courses need be sure to preserve the action and experience elements for the learners;

7. Learning both a private and social activity: To promote the learners private side, the courses need to be planned to include the following factors - search out, sort, and evaluate information. To accommodate the learners' social activity side, the courses need to contain discussion boards and presentation spaces; and

8. Learning is not linear: Instruction that makes use of a spiral path provides learners with the opportunity to learn at an in-depth and detailed level. (pp. 314-315)

With proper planning online courses can directly affect the institution's reach and its stature (Monolescu et al., 2004). Each course environment should provide a welcoming atmosphere starting with a clear introduction and instructions page from the faculty members (in the form of a syllabus and the other general course materials). It is also important to provide the students with the information of the electronic library and may help to locate course tools such as the discussion boards, chat rooms, online exams, and an up-to-date record of their grades (Lieblein, 2000).

Bailey and Card (2009) addressed the importance of connecting online instructional planning with the following pedagogical theories: andragogy, constructivism, and transformational learning. The knowledge and use of the andragogy theory will help aid the faculty members in creating an environment with more flexibility for the learner. The constructivist theory promotes the exploration of multiple perspectives for active learning and assessment. Finally, the transformative theory encourages critical thinking (Bailey & Card, 2009). The transformative leadership theory, a theory that supports the characteristics of adult learning, could transform the teaching practices of faculty members (McQuiggan, 2012). McGee and Diaz (2007) listed the following five teaching styles that will help faculty members to decide their teaching styles:

1. Personal model: Instruction is mainly focused on modeling appropriate behavior and thinking and using personal examples and stories;

2. Experts: Faculty members being knowledge experts use direct instruction;

3. Formal authorities: Faculty members use more formal and traditional approaches of instruction;

4. Facilitators: This style involves interactive engagement; and

5. Delegators: Faculty members placing more responsibility on the learner.

The following are seven principles that are identified as effective pedagogical practices for online teaching: (1) Increased student-faculty interaction, (2) instruction planned in ways that promote team effort, (3) instruction encourages active learning (4) timely feedback from instructors on the students' performance levels, (5) using the available time wisely for instruction, (6) instructors' expression of higher expectations of learning from students, and (7) planning instruction so that there exists a diverse delivery system (Bailey & Card, 2009). In addition to the above list, these are tasks that online educators should perform to be successful in their instruction: (1) creating a structured learning content, (2) providing feedback in a timely fashion, (3) tending to student motivation levels, and (4) assisting students to engage more in the learning activities (Paechter & Maier, 2010). Paechter and Maier (2010) also emphasized the importance of interaction, both with the exchange of educational and socio-emotional information between the student and instructor in order to promote student engagement, motivation and retention. Another set of strategies for increased success in teaching online courses was provided by Baghdadi (2011):

1. A clear and well-developed syllabus;

2. A section for students to ask questions to the instructor as well as other students;

3. Monitor individual student progress regularly;

4. Establish a good system of communication that will continue to promote learning;

5. Attend the course at least once per week day and once per weekend; and

6. Avoid excessive delays in responding to students.

Collaborative learning is an important pedagogical tool. According to Brindley, Walti, and Blaschke (2009) collaborative learning is knowledge shared or transmitted among learners as they work towards common learning goals. This type of learning promotes an effective learning environment in the online classroom. An important matter to keep in mind is in relation to group projects in online courses. Students working in team-based environments could have negative feelings towards working and participating in groups because of a lack of confidence in their ability to participate, or due to a negative past experiences with working in groups (Brindley et al., 2009). The following consists of pedagogical benefits of collaborative learning:

1. Development of critical thinking skills;

2. Continuous generation of knowledge and meaning;

3. Reflection; and

4. Transformative learning. (p.2)

Yu and Brandenburg (2006) declared that distance education could acquire similar qualifications as the face-to-face classes when the faculty members plan the online instruction with a proper amount of student-faculty interactions levels, and further confirms that collaborative learning is an appropriate strategy to use for this purpose. Brindley et al. (2009) also endorsed the idea of engagement (student-faculty interactions, peer-to-peer collaboration, and active learning) and its positive relationship with promoting student learning. According to Yu and Brandenburg (2006), "the most effective online teaching materials require active learning", and active learning is directly connected with a positive level of student-faculty interaction levels (p. 45). Jackson et al. (2010) found that the maintenance of positive student-faculty interaction levels to be an important variable in the online class environments.

To maintain an effective online learning environment with the presence of active learning, the following factors need to be carefully tended to: (1) appearance of web pages, (2) class procedures and expectations, (3) hyperlinks and navigation, (4) online applications, (5) content delivery, and (6) instructor and peer interaction (Jackson et al., 2010, p. 81). The following is a list of best online practices that have been developed from the '10 Principles of Effective Online Teaching: Best Practices for Distance Education':

> show up and reach; practice proactive course management strategies; establish patterns of course activities; plan for the unplanned; request and expect responses; think before writing; help maintain forward progress; stay safe and secure; remember quality counts; and double click a mile on my connection. (Batts et al., 2010, p. 23)

Communication

According to Jackson et al. (2010), "Faculty members who are successful in the online learning environment are those who email their students frequently, respond to email messages promptly, hold regular and traditional office hours, and develop personal touches in the online environment" (p. 80). Schmidt (2004) also mentioned the importance of getting to know the students' perceptions regarding the online learning environments, as this feedback will help the faculty members and the administration to be more knowledgeable of what areas and factors of online learning need more improvement.

Online educators should consider the use of electric communication tools. They need to make sure these tools are being used properly especially in the planning of the course activities. The faculty members should also make sure that communication tools align with the course's learning objectives. The effective use of these communication tools can help with the promotion of interaction between the instructors and the students. However, for all of this to occur, faculty members need to be knowledgeable of how to use the different tools (word processor, online

editors, or browsers) on their PCs as well as in the online learning environments (Scigliano &

Dringus, 2000).

Lieblein (2000) found that, "Effective communication by the program office and the

faculty members can go a long way toward improving student retention" (p. 167). A

comprehensive guide in both hardcopy and online form needs to be easily available to the faculty

members and the students to move through the online course more smoothly. Faculty members

teaching online courses are more often in need of technical assistance and training (for areas like

web page design, instructional design, graphics development, presentation software, office

software, email, online pedagogical tools, etc.) (Lieblein, 2000).

Mentoring and Professional Development Activities

Faculty-to-faculty mentoring provides an opportunity for online instructors to become

more acquainted with teaching online courses (Bailey & Card, 2009; Batts et al., 2010; Wach,

Broughton, & Powers, 2011; Yick et al., 2005). More experienced faculty members provide

guidance, feedback, and support to those who are teaching the online courses for the first time

(Yick et al., 2005). Wach et al. (2011) classified mentoring to be a collaborative activity, and

encourages the spirit of faculty members. According to Wickersham and McElhany (2010) along

with faculty members' development sessions (that focus on the best practices for teaching

online), faculty also favored one-on-one sessions targeted at issues such as assessment and

evaluation, methods for student engagement, and incorporating other technologies such as Web

2.0 and synchronous and asynchronous communication technologies.

Another option to help release stress for online educators is to provide them graduate or

teaching assistant support (Wickersham & McElhany, 2010). To stay competent in instructing

online courses, faculty members should be adequately equipped and up to date with their skills and knowledge of the online instructional technologies. It is also important to increase the awareness of the administrators so that they are more aware of the specific needs of the individual faculty members teaching online (Batts et al., 2010).

Green et al. (2009) discussed the various ways by which the institution can help assist the adjunct faculty. The institution should arrange an orientation program for the adjunct faculty to become more acquainted with the institutional programs and policies (Green et al., 2009). The growth in the number of adjunct faculty is becoming a trend in online education. This is especially seen with the growing number of part-time faculty members in the community colleges (Shattuck et al., 2011). Adjunct faculty should be informed of available professional development activities. These activities will help the adjunct professors mingle with the full-time faculty members and establish mentors to help guide them as they begin their experience with online instruction. These professional development activities and mentoring opportunities will help to retain more faculty members involved with online education (Green et al., 2009).

Several authors have illustrated the need for professional development activities that would better prepare faculty members for online instruction (Ali et al., 2005; McQuiggan, 2012). At these activities the main focus would be the following topics: technology, pedagogy, and course content (Green et al., 2009; McQuiggan, 2012). McQuiggan (2012) noted that "Faculty development only recently has been addressed as adult learning, which focuses on the unique aspects of adults as learners" (p. 28). Therefore, to ensure the success of faculty professional development activities, the activities need to be planned in ways that will meet the needs of the faculty members as adult learners.

McQuiggan (2012) added that "Professional development for faculty members preparing to teach online presents a unique opportunity to assess previously held assumptions and beliefs about teaching" (p. 31). The professional development activities and workshops offered by the institutions should be made free of charge to attend for the faculty members. This step will help encourage the faculty members to attend the event (Green et al. 2009). Examples of faculty development activities conducted by institutions include: institutionally supported self-teaching opportunities, peer mentoring, collaborative course designs, workshops, online trainings, and quality assurance evaluation programs (Herman, 2012). According to McQuiggan (2012), the following characteristics needs to be taken into account by the institution's administration when planning professional development activities in order to ensure a positive impact on the faculty members as adult learners:

Faculty members:
1. Are self-directed and independent learners
2. Accumulate an ever-increasing reservoir of experiences that can be used within their learning
3. Exhibit readiness to learn associated with their social role as faculty members
4. Are problem centered learners with a desire to immediately apply what they learn
5. Respond most powerfully to internal motivation to feel competent about their learning
6. Value relevance to their discipline and their perception in their learning's immediate usefulness. (p. 32)

Course Materials

Online course development requires faculty members to prepare and upload all teaching materials before the first class. This provides more opportunity and time for the faculty members to interact with the students and to monitor individual student struggles and achievements (Baghdadi, 2011). Wickersham and McElhany (2010) stated that faculty members should be concerned about the quality of the design, development, and delivery of the online courses in order to make sure and attain a positive online learning environment. McGee and Diaz (2007)

wrote that faculty members should specify the communication protocols and any limitations clearly in the course syllabus.

According to Wach et al. (2011) as the faculty members prepare the materials for online instruction, they should follow the information listed in the following four guides: the contract, online teaching guide, unit planning guide, and the online course development checklist. Jackson et al. (2010) discussed the importance of the faculty members' ability to blend theoretically based learning principles with instructional strategies. Online instructors also should plan instruction in such a way that the course materials and instructions are easy to understand for all students and in a manner that combine different learning theories with new technology and solid instructional design (Jackson et al., 2010).

Assessment

Research points to the value of using a variety of assessments (for example essays, projects, and portfolios) to determine if students have learned the required objectives or standards for the course. Rovai (2000) found that, "A variety of assessment tasks are necessary to provide educators with a well-rounded view of what students know and can do" (p. 143). In a face-to-face learning environment, educators could observe and assess students learning and progress. Because online environments lack the face-to-face interactions, educators are faced with the challenge of finding a variety of ways to measure student learning (Rovai, 2000). Proctored testing and online discussions are assessment strategies that create variety in measuring student learning.

Academic Honesty

Rovai (2000) evaluated the importance of faculty members' ability to maintain an online classroom environment where academic honesty continuously persist. According to Davis (2011), "plagiarism does continue to invade the classrooms today" (p. 160). Faculty members, because of the process of monitoring plagiarism, could get the impression of being investigators rather than educators. However, it is important that they make the extra effort to communicate with their students about the consequences of academic dishonesty. Jocoy and DiBiase (2006) revealed that plagiarism is a matter of concern for both administrators and instructors.

The matter of plagiarism should be addressed the first day of class and in the course syllabus. Online students could take advantage of the online tutorials in relation to plagiarism to become better aware of this subject and to avoid affecting their class assignments. Another strategy that the faculty members may use to avoid academic dishonesty in their online students work is to make assignments that are personalized and unique (Davis, 2011). With the help of the internet, faculty members can check for copied phrases through google or through purchased software like turnitin® (Jocoy & DiBiase, 2006).

Time and Presence

Faculty members should keep in mind the importance of timing in an online course (Hislop & Ellis, 2004; McShane, 2004). According to Lieblein (2000), "Online students are ultrasensitive to the time it takes the professors to respond to their questions or provide them feedback" (p. 164). Lieblein (2000) recommended faculty members respond to students within 24 hours and no later than 48 hours. Lieblein also encouraged the online professor to create a teacher presence to avoid student frustrations.

It is also a good practice to discuss this matter in the syllabus so that the students can get a clear understanding of how soon they can expect their professors to respond. Time becomes an additional aspect or demand for the educators as they are faced with increased amount of time learning new technologies and planning and teaching a new curriculum (McShane, 2004). Yu and Brandenburg (2006) showed that lack of eye contact, body language, or voice inflection associated with student-faculty interactions are important reasons for making online communication and interaction one of the most time consuming tasks for the professor. Interpersonal connections are important in online learning. With this in mind the instructor should provide students with enough time to interact with their group members, thus leading to successful collaborative learnings and positive group interactions.

Course Evaluations

Through the online course evaluations faculty members are given the opportunity to find ways to improve their course teaching and delivery methods. The following were negative factors that students pointed out through course evaluations: (1) recurring technical problems, (2) challenges in communicating with professors and other students, (3) need for more face-to-face interaction time, (4) delays in feedback from professors, (5) confusing instructions for assignments, (6) unclear grading criteria, and (7) use of the same software management system for every course. Other challenges faced by professors in the online realm are with regards to the lack of students' knowledge as to how to react respectively to the professors (because they have never seen them face to face) (Berridge et al., 2012).

Summary

Yu and Brandenburg (2006) discussed the existence of challenges with distance education. However, no matter the challenges, online learning continues to grow, with the internet becoming one of the main educational tools for faculty members in creating effective online learning environments (Yu & Brandenburg, 2006). Higher education institutions are faced with the challenge of retaining faculty members (Huang & Hsiao, 2012), and there is an increased demand placed on the faculty members to be more involved with teaching online courses.

There are many studies on the various aspects of online education and its effects on students and students' attitudes towards online education. However, there are only a few studies conducted on the perceptions of faculty members and the administrators who are involved with online education (Huang & Hsiao, 2012). Studies in relation to faculty members and online education need to focus on the following topics (Huang & Hsiao, 2012): (1) faculty members' perceptions of online instruction, (2) faculty perceptions of communication through online course management systems, (3) what faculty believe about synchronous and asynchronous environments –advantages and disadvantages of both types of distance education, (4) factors that create faculty reluctance for online instruction, (5) strategies faculty use to effectively teach online courses, and (6) challenges faced by online faculty while teaching and in general communication.

Huang and Hsiao (2012) documented the importance of "understanding instructors' experiences and perceptions…because studies have shown that instructors' attitudes and acceptance of technology to a large degree determines how successful the use of technology is in teaching and learning" (p. 16). Baglione and Nastanski (2007) described the contagious effect of

faculty members' enthusiasm, which comes from their belief that online teaching is enjoyable. Understanding the perceptions towards online courses from various angles can help act as a guide for both administrators and faculty members to maintain and promote the growth of successful online learning environments.

CHAPTER 3

RESEARCH METHOD

The purpose of this study was to investigate the perception of faculty members and administrators of online learning environments compared to traditional face-to-face instruction by exploring the factors that impact online instruction. Strategies that can lead to effective online learning environments and successful online programs for the institutions (4-year public and 4-year private higher education institutions and 2-year public community colleges) were explored. Faculty and administrators working with online education at six traditional, regionally accredited, degree granting higher education institutions were included in this study. The research questions, null hypotheses, population, and information on the survey are described in this chapter. The data collection methods and the design for data analyses are also examined.

The research design for this study consists of a nonexperimental quantitative design. McMillan and Schumacher (2010) defined the nonexperimental research design to be one that "describes phenomena and examines relationships between different phenomena without any direct manipulation of conditions that are experienced" (p. 22). This study uses the survey design to collect information relevant to answering the research questions of the study. According to McMillan and Schumacher through survey research design the researcher is able to select the sample of subjects from whom the data are collected, either through questionnaires or interviews. A questionnaire was used in order to collect data from the subjects. Through the analysis of the data, the researcher desired to obtain a better understanding of the population (faculty members and administrators from every higher education institution in the United States) through

analyzing the responses obtained from the sample (faculty members and administrators from the six different higher education institutions chosen for the study).

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Research Questions and Null Hypotheses

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The research questions were designed to determine the faculty members' and administrators perceptions of online learning environments by measuring and analyzing the following dimensions: student engagement, student-student interaction, faculty engagement, and academic dishonesty. The following research questions and null hypotheses, derived from the purpose statement, were included in this study:

Dimension 1: Student Engagement

Research Question 1: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public)?

$H_0 1$: There is no significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public).

Research Question 2: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members?

$H_0 2$: There is no significant difference in participants' mean scores on the Student Engagement dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members.

Research Question 3: Is there a significant relationship in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators?

$H_0 3$: There is no significant relationship in participants' mean scores on the Student Engagement dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators.

Research Question 4: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face?

$H_0 4$: There is no significant difference in participants' mean scores on the Student Engagement dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face.

Research Question 5: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%)?

$H_0$5: There is no significant difference in participants' mean scores on the Student

Engagement dimension of the Perceptions of Online Learning Environment

Inventory among the four groups of percentage of online classes taught (25% or

less, about 50%, about 75%, or 100%).

Research Question 6: Is there a significant relationship in participants' mean scores on

the student engagement dimension of the Perceptions of Online Learning Environment

Inventory based on the number of years teaching online courses?

$H_0$6: There is no significant relationship in participants' mean scores on the

Student Engagement dimension of the Perceptions of Online Learning

Environment Inventory based on the number of years teaching online courses.

Research Question 7: Is there a significant relationship in participants' mean scores on

the student engagement dimension of the Perceptions of Online Learning Environment

Inventory based on the age of faculty members and administrators?

$H_0$7: There is no significant relationship in participants' mean scores on the

Student Engagement dimension of the Perceptions of Online Learning

Environment Inventory based on the age of faculty members and administrators.

Research Question 8: Is there a significant difference in participants' mean scores on the

student engagement dimension of the Perceptions of Online Learning Environment

Inventory between males and females?

$H_0$8: There is no significant difference in participants' mean scores on the Student

Engagement dimension of the Perceptions of Online Learning Environment

Inventory between males and females.

Dimension 2: Student – Student Interaction

Research Question 9: Is there a significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public)?

$H_0 9$: There is no significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public).

Research Question 10: Is there a significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members?

$H_0 10$: There is no significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members.

Research Question 11: Is there a significant relationship in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators?

$H_0 11$: There is no significant relationship in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning

Environment Inventory based on the years of work experience of faculty and administrators.

Research Question 12: Is there a significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face?

$H_0 12$: There is no significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face.

Research Question 13: Is there a significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%)?

$H_0 13$: There is no significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%).

Research Question 14: Is there a significant relationship in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses?

$H_0$14: There is no significant relationship in participants' mean scores on the

student-student interaction dimension of the Perceptions of Online Learning

Environment Inventory based on the number of years teaching online courses.

Research Question 15: Is there a significant relationship in participants' mean scores on

the student-student interaction dimension of the Perceptions of Online Learning

Environment Inventory based on the age of faculty members and administrators?

$H_0$15: There is no significant relationship in participants' mean scores on the

student-student interaction dimension of the Perceptions of Online Learning

Environment Inventory based on the age of faculty members and administrators.

Research Question 16: Is there a significant difference in participants' mean scores on the

student-student interaction dimension of the Perceptions of Online Learning Environment

Inventory between males and females?

$H_0$16: There is no significant difference in participants' mean scores on the

student-student interaction dimension of the Perceptions of Online Learning

Environment Inventory between males and females.

Dimension 3: Faculty Engagement

Research Question 17: Is there a significant difference in participants' mean scores on the

faculty engagement dimension of the Perceptions of Online Learning Environment

Inventory among faculty members and administrators by the type of higher education

institution (2-year public community college, 4-year privates, and 4-year public)?

$H_0$17: There is no significant difference in participants' mean scores on the

faculty engagement dimension of the Perceptions of Online Learning

Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public).

Research Question 18: Is there a significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members?

$H_0 18$: There is no significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members.

Research Question 19: Is there a significant relationship in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators?

$H_0 19$: There is no significant relationship in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators.

Research Question 20: Is there a significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face?

$H_0 20$: There is no significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning

Environment Inventory between faculty members who teach primarily online and

faculty members who teach primarily face-to-face.

Research Question 21: Is there a significant difference in participants' mean scores on the

faculty engagement dimension of the Perceptions of Online Learning Environment

Inventory among the four groups of percentage of online classes taught (25% or less,

about 50%, about 75%, or 100%)?

$H_0$21: There is no significant difference in participants' mean scores on the

faculty engagement dimension of the Perceptions of Online Learning

Environment Inventory among the four groups of percentage of online classes

taught (25% or less, about 50%, about 75%, or 100%).

Research Question 22: Is there a significant relationship in participants' mean scores on

the faculty engagement dimension of the Perceptions of Online Learning Environment

Inventory based on the number of years teaching online courses?

$H_0$22: There is no significant relationship in participants' mean scores on the

faculty engagement dimension of the Perceptions of Online Learning

Environment Inventory based on the number of years teaching online courses.

Research Question 23: Is there a significant relationship in participants' mean scores on

the faculty engagement dimension of the Perceptions of Online Learning Environment

Inventory based on the age of faculty members and administrators?

$H_0$23: There is no significant relationship in participants' mean scores on the

faculty engagement dimension of the Perceptions of Online Learning

Environment Inventory based on the age of faculty members and administrators.

Research Question 24: Is there a significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between males and females?

$H_0$24: There is no significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between males and females.

Dimension 4: Academic Dishonesty

Research Question 25: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public)?

$H_0$25: There is no significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public).

Research Question 26: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members?

$H_0$26: There is no significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members.

Research Question 27: Is there a significant relationship in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators?

$H_0 27$: There is no significant relationship in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators.

Research Question 28: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face?

$H_0 28$: There is no significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face.

Research Question 29: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%)?

$H_0 29$: There is no significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%).

Research Question 30: Is there a significant relationship in participants' mean scores on

the academic dishonesty dimension of the Perceptions of Online Learning Environment

Inventory based on the number of years teaching online courses?

$H_0 30$: There is no significant relationship in participants' mean scores on the

academic dishonesty dimension of the Perceptions of Online Learning

Environment Inventory based on the number of years teaching online courses.

Research Question 31: Is there a significant difference in participants' mean scores on the

academic dishonesty dimension of the Perceptions of Online Learning Environment

Inventory based on the age of faculty members and administrators?

$H_0 31$: There is no significant difference in participants' mean scores on the

academic dishonesty dimension of the Perceptions of Online Learning

Environment Inventory based on the age of faculty members and administrators.

Research Question 32: Is there a significant difference in participants' mean scores on the

academic dishonesty dimension of the Perceptions of Online Learning Environment

Inventory between males and females?

$H_0 32$: There is no significant difference in participants' mean scores on the

academic dishonesty dimension of the Perceptions of Online Learning

Environment Inventory between males and females.

Instrumentation

The data for this study were collected from six different higher education institutions

(four private colleges, one community college, and one public university). The survey

statements were divided into four dimensions (student engagement, student-student interactions,

faculty engagement, and academic dishonesty) to measure the perceptions of faculty members and administrators on the ever changing online education.

The statements that are formulated in the survey were collected through studying the literature available on the vastly developing online education and based on the purpose of this study. The statements were then organized into the four dimensions, and the survey used a Likert-type scale. The participants were given six respond options (strongly agree, agree, somewhat agree, somewhat disagree, disagree, and strongly disagree). The survey contained 17 statements. Included in the survey were 9 demographic questions. The introductory message to respondents assured that their responses, both for the statements and the demographic information, would remain confidential (Appendix C).

The survey was piloted by a group of faculty members to ensure clarity and appropriateness. Eight Educational Leadership Department faculty members reviewed the survey to help establish face validity. Responses from this group were also evaluated for reliability.

Sample

The higher education institutions that are included in this study are located in Tennessee and North Carolina. There six regional colleges and universities participating in this study: four 4-year private colleges, one 2-year public community college, and one 4-year public university. Table 1 provides a description of the number of faculty members and administrators working at each higher education institution:

Table 1

Demographics of the Faculty Members and Administrators

Institution	Type	Faculty members (Full-time)	Administrators (Total)
A	4-year Private College	71	7
B	4-year Private College	83	18
C	4-year Private College	113	8
D	4-year Private College	92	19
E	2-year Public Community College	116	12
F	4-year Public University	878	19

Data Collection

The researcher made contact with the appropriate administrators in the selected higher education institutions to seek permission to include them in this study. The Institutional Review Board (IRB) provided information regarding the procedure of obtaining permission. The researcher applied for and obtained permission from the IRB at the home institution. The permission was requested and granted from all other participating colleges and universities. The approval letters can be found in Appendix A. The email requesting participation and the introduction to the survey are located in Appendices B and C. The survey (Appendix D) was piloted by 12 faculty members (who would normally be a part of this study) prior to the formal survey being sent to the participating institutions. This step helped to ensure the clarity and appropriateness of the survey.

Data Analysis

The data gathered from faculty and administrators at the six higher education institutions were organized into a Statistical Package for Social Sciences (SPSS) version 21.0 data file for further statistical analysis. The main statistical tests chosen to analyze the research questions for this study are: one-way Analysis of Variance (ANOVA), Pearson product-moment correlation, and independent samples *t*-test. According to McMillan and Schumacher (2010) a one-way Analysis of Variance is "an inferential statistical procedure for determining the level of probability of rejecting the null hypothesis with two or more means." (p. 485) Pearson product-moment correlation is the most common correlation technique used in bivariate correlation analysis (where such an analysis studies the relationship between two variables) (McMillan & Schumacher, 2010) McMillan and Schumacher also defined the independent samples *t*-test as a test used to "determine if there is a statistically significant difference in the dependent variable between two different population subjects." (p. 300) All data were analyzed at the .05 level of significance. The following illustrates the statistical tests by which the research questions were analyzed:

-Research questions 1, 9, 17, and 25 were analyzed using a series of one-way analyses of variance (ANOVA). The grouping variable comprised of the four dimensions (student engagement, student-student interaction, faculty engagement, and academic dishonesty), and the dependent variable was the type of higher education institutions (2-year public community college, 4-year privates, and 4-year public).

-Research questions 2, 10, 18, and 26 were analyzed using a series of independent samples *t*-tests to compare the mean scores on the four dimensions between administrators and faculty members.

-Research questions 3, 11, 19, and 27 were analyzed using a series of correlation analyses. Here the scores on the four dimensions were compared based on the years of work experience of the faculty members and administrators in order to analyze and determine the extent of the type of relationship.

-Research questions 4, 12, 20, and 28 were analyzed using a series of independent samples t-tests to compare the mean scores of the four dimensions between faculty members who teach primarily online and faculty members who teach primarily face-to-face courses.

- Research questions 5, 13, 21, and 29 were analyzed using a series of one-way analyses of variance (ANOVA). The grouping variable comprised of the four dimensions (student engagement, student-student interaction, faculty engagement, and academic dishonesty), and the dependent variable was the four groups showing the percentage of online classes taught (25% or less, about 50%, about 75%, or 100%).

-Research questions 6, 14, 22, and 30 were analyzed using a series of correlation analyses. Here the scores of the four dimensions were compared based on the number of years teaching online courses in order to analyze and determine the extent of the type of relationship.

-Research questions 7, 15, 23, and 31 were analyzed using a series of correlation analyses. Here the scores of the four dimensions were compared based on the age of faculty members and administrators in order to analyze and determine the extent of the type of relationship.

-Research questions 8, 16, 24, and 32 were analyzed using a series of independent samples t-test to compare the mean scores of the four dimensions between males and females.

Summary

The methodology used in the study was reported in Chapter 3. The research design for this study, the research questions and null hypotheses, the population, and information on the survey were also described. The data collection methods and the design for data analyses were examined as well. The findings and the data analyses are presented in Chapter 4. Chapter 5 contains the summary, findings, conclusions, and recommendations from this study.

CHAPTER 4

FINDINGS

The purpose of this study was to investigate the perceptions of faculty members and

administrators of online learning environments compared to traditional face-to-face instruction

by exploring the factors that impact online instruction. Strategies that can lead to effective online

learning environments (4-year public and 4-year private higher education institutions and 2-year

public community college) were explored. Faculty members and administrators working with

online education at six traditional, regionally accredited, degree granting higher education

institutions were included in this study. This chapter shows the findings of this study.

The population of this study consisted of 1,436 full-time faculty members and

administrators working at six different regionally accredited higher education institutions (one 4-

year public and four 4-year private institutions as well as one 2-year public community college).

The total number of participants sampled from the public university was 169 (of which 117 were

faculty members, 27 were administrators, and 25 were individuals who work as both faculty and

administrative positions). At the private institutions, the total number of participants was 98 (76

were faculty members, 7 were administrators, and 15 held both faculty and administrative

positions). At the community college, the total number of participants was 33 (26 faculty

members, 3 administrators, and 4 held both faculty and administrative positions.

The survey was sent using an online survey program. The survey (Appendix D) used a

Likert-type scale (where the participants were asked to choose from one of the following for

each statement: Strongly agree, Agree, Somewhat agree, Somewhat disagree, Disagree, and

Strongly disagree), and used four dimensions (student engagement, student-student interactions,

faculty engagement, and academic dishonesty) to measure the perceptions of faculty members and administrators on the ever changing online education.

The survey contained 17 statements. Included in the survey were nine demographic questions. The introductory message to respondents assured that their responses, both for the statements and the demographic information, would remain anonymous (Appendix C).

Research Question 1

Research Question 1: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public)?

$H_0 1$: There is no significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public).

A one-way analysis of variance was conducted to evaluate the relationship between the perceptions of faculty members and administrators towards students' engagement in online learning environments and the type of higher education institution. The factor variable, type of higher education institutions, included three levels: 4-year public, 4-year private, and 2-year public community college. The dependent variable was student engagement. The ANOVA was not significant, $F(2, 277) = 1.32$, $p = .268$. Therefore, $H_0 1$ was retained. The strength of the relationship between the perceptions on student engagement and type of higher education institution as assessed by η^2 was small (.009). The results indicate that there is little significant

relationship between the perceptions of faculty and administrators towards student engagement in online learning environments and the type of higher education institutions (which can be seen in Figure 1). The means and standard deviations for the three groups are reported in Table 2.

Table 2

Institution Type and Student Engagement

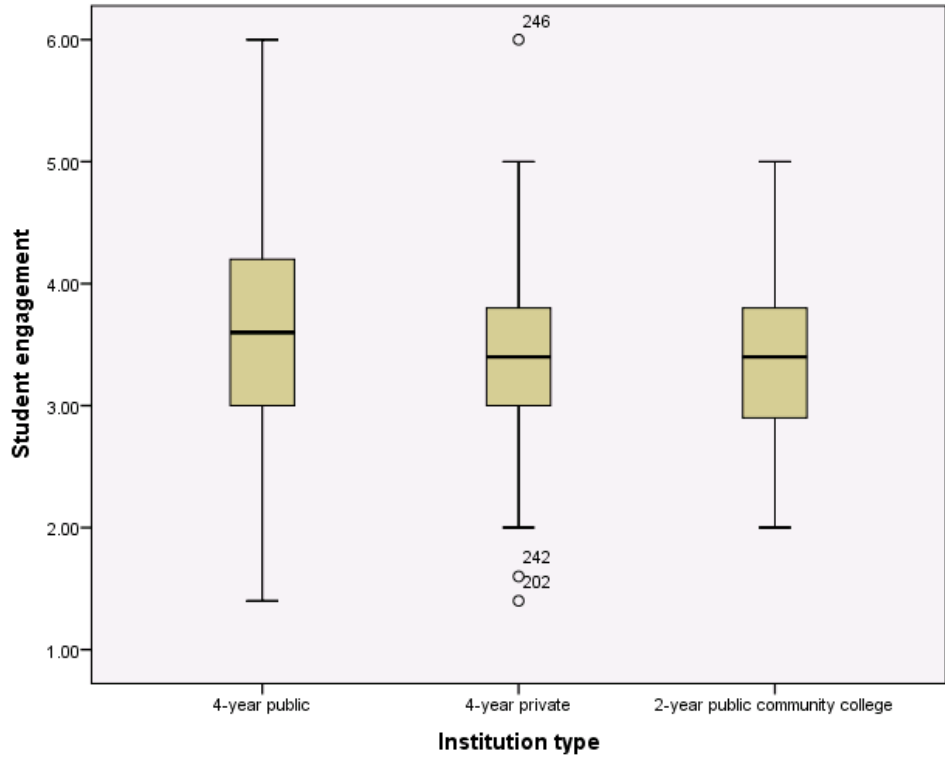| Type	N	M	SD
4-year Public	154	3.56	.83
4-year Private	94	3.46	.79
2-year Public Community College	32	3.33	.69

Figure 1. Faculty and administrators perceptions on student engagement and institution type. *Note.* Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.
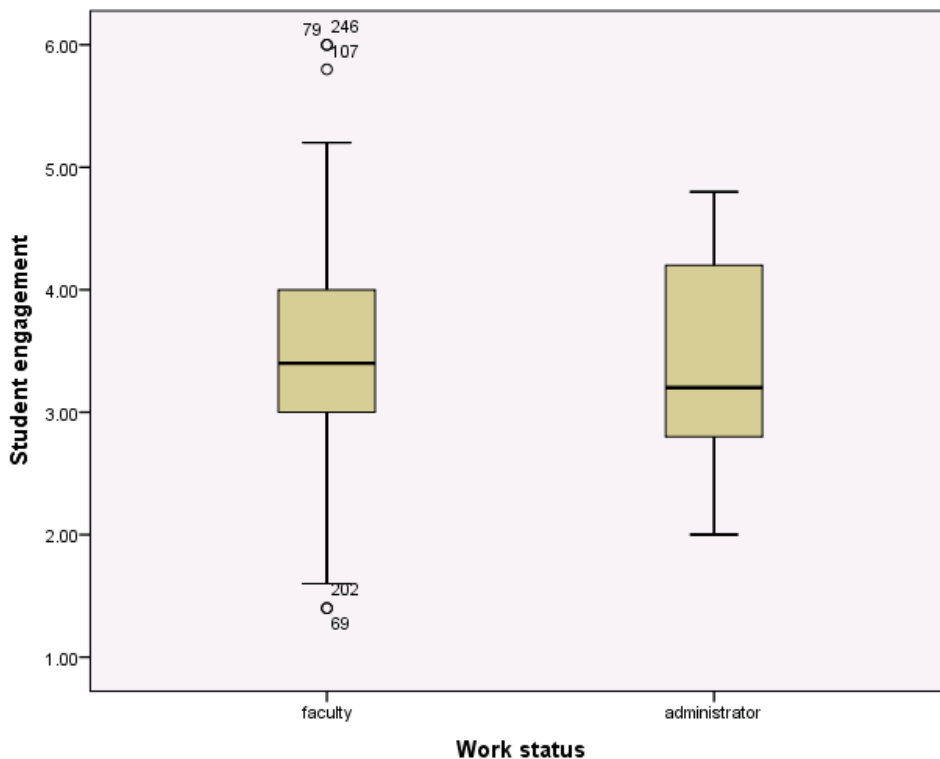
Research Question 2

Research Question 2: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members?

$H_0 2$: There is no significant difference in participants' mean scores on the Student Engagement dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members.

An independent-samples *t* test was conducted to evaluate whether the mean score of the perceptions towards student engagement in online learning environments was different between administrators and faculty members. The student engagement scores was the independent

variable and the grouping variable was administrator or faculty member. The data consisted of

participants who identified themselves as faculty members, administrators, and both. Due to the

low number of the participants identified as working in position that are both faculty and

administrative, this number was not used for the analysis of work status. The test was not

significant, $t(236) = .39$, $p = .695$. Therefore, H_02 was retained. The η^2 index was .001, which

indicated a very small effect size. The perceptions of faculty members on student engagement in

online courses ($M = 3.50$, $SD = .84$) tended to be approximately the same as the perceptions of

administrators working in higher education institutions ($M = 3.43$), $SD = .78$). The 95%

confidence interval for the difference in means was -.25 to .37. The distributions of scores for the

two groups are displayed in Figure 2.

Figure 2. Faculty and administrator perceptions on student engagement and work status.
Note. Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 3

Research Question 3: Is there a significant relationship in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of the faculty members and administrators?

$H_0 3$: There is no significant relationship in participants' mean scores on the Student Engagement dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of the faculty members and administrators.

A Pearson product-moment correlation was computed to test the relationship between the mean scores on the student engagement dimensions and the numbers of years of work experience of faculty and administrators. The results of the correlational analysis revealed no relationship between the perceptions on student engagement ($M = 3.50$, $SD = .81$) and the years of work experience of faculty and administrators ($M = 15.72$, $SD = 11.00$) scores and no statistically significant correlation [$r(275) = .06$, $p = .287$]. Therefore, $H_0 3$ was retained. In general, the results suggest that years of work experience has no significant relationship with the perceptions of faculty members and administrators on student engagement in online course. Figure 3 displays the bivariate scatterplot.
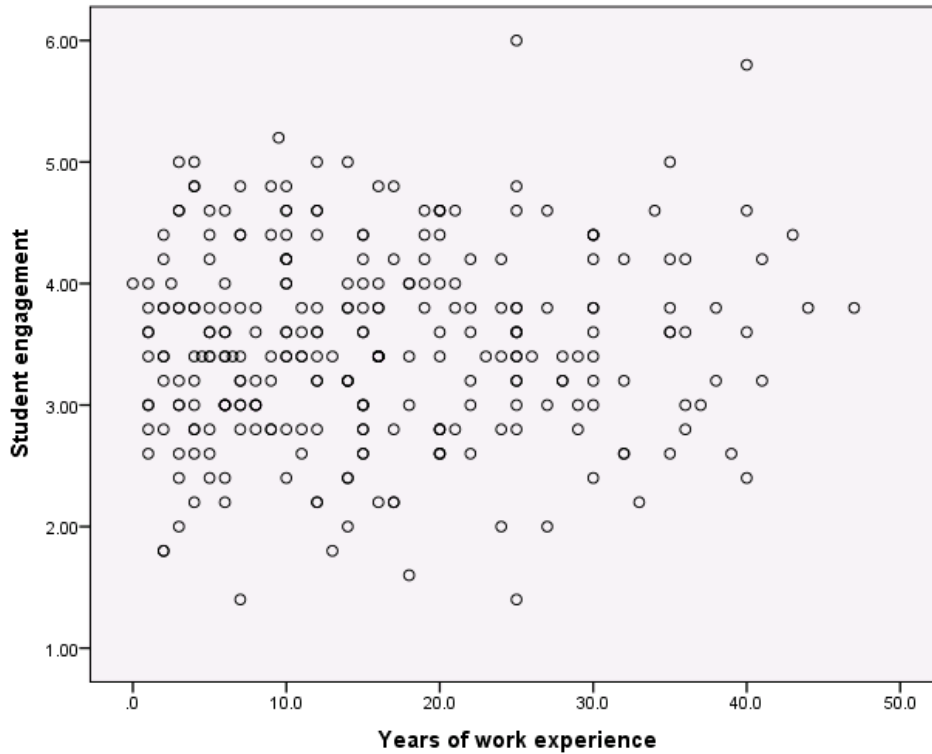
Figure 3. Bivariate correlation among variables (years of work experience and perceptions on student engagement).

Research Question 4

Research Question 4: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face?

H$_0$4: There is no significant difference in participants' mean scores on the Student Engagement dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face.

An independent-samples *t* test was conducted to evaluate whether the mean score of the perceptions towards student engagement in online learning environments was different between faculty who teach primarily online classes and the faculty who teach mainly face-to-face courses. The student engagement scores was the test variable and the grouping variable was faculty members teaching online and faculty members teaching face-to-face courses. The test was statistically significant, $t(276) = 3.76$, $p < .001$. Therefore, H_04 was rejected. The η^2 was .049, which indicated a very small effect size. The perceptions of faculty members teaching primarily online courses ($M = 3.33$, $SD = .77$) tended to be significantly lower than the perceptions of faculty who teach mainly face-to-face courses ($M = 3.68$, $SD = .80$). The 95% confidence interval for the difference in means was .17 to .54. The distributions of scores for the two groups are displayed in Figure 4.
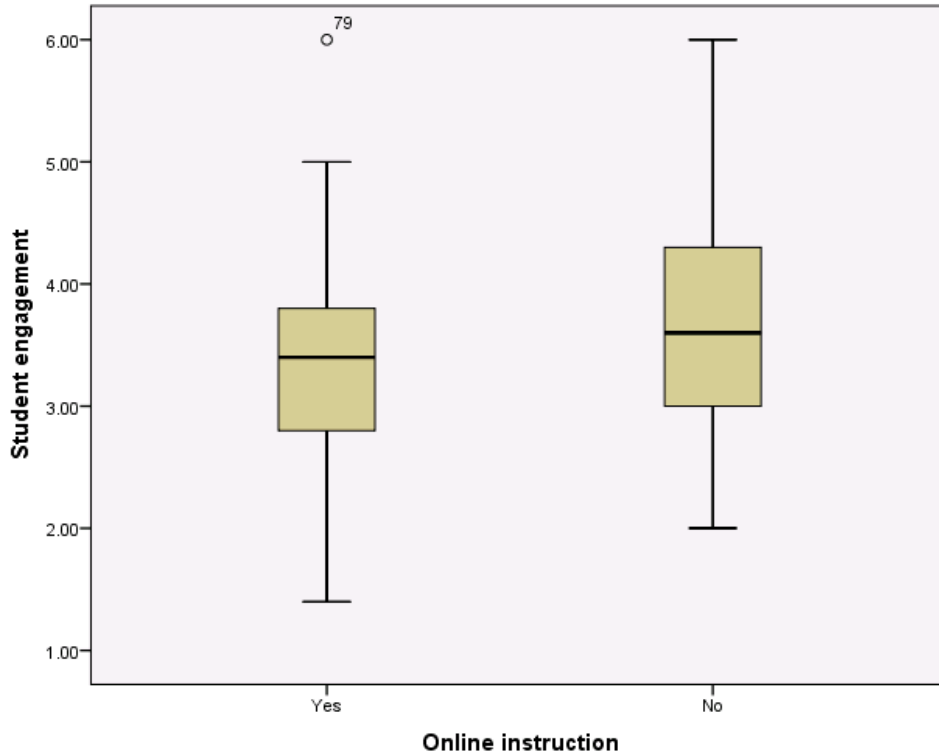
Figure 4. Faculty perceptions (instructing online and face-to-face courses) on student engagement.
Note. Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 5

Research Question 5: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%)?

H₀5: There is no significant difference in participants' mean scores on the Student Engagement dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%).

A one-way analysis of variance was conducted to evaluate the relationship between the perceptions of faculty members towards students' engagement in online learning environments and the percentage of online classes taught. The factor variable, percentage of online courses being taught, included four levels: 25% or less, about 50%, about 75%, and 100%. The dependent variable was student engagement. The ANOVA was not significant, $F(3, 145) = .40$, $p = .752$. Therefore, H_05 was retained. The strength of the relationship between student engagement and percentage of classes taught online as assessed by η^2 was small (.008). The results indicate that there is little relationship between the perceptions of faculty towards student engagement in online learning environments and the percentage of online classes' taught (which can be seen in Figure 5). The means and standard deviations for the four groups are reported in Table 3.

Table 3

Percentage of Classes Taught Online and Student Engagement

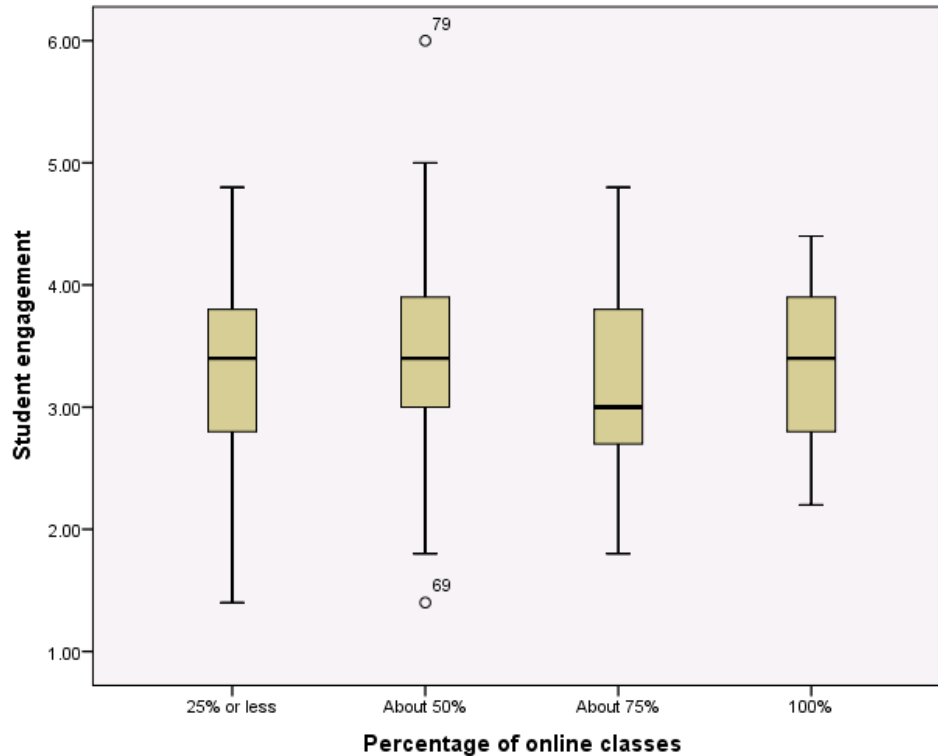| Type	N	M	SD
25% or less	90	3.35	.71
About 50%	28	3.41	.96
About 75%	15	3.15	.87
100%	16	3.35	.73

Figure 5. Perceptions of faculty on student engagement and percentage of online classes taught. Note: Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 6

Research Question 6: Is there a significant relationship in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses?

$H_0 6$: There is no significant relationship in participants' mean scores on the Student Engagement dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses.

A Pearson product moment correlation was computed to test the relationship between the mean scores on the student engagement dimensions and the numbers of years teaching online courses. The results of the correlational analysis revealed no relationship between the

perceptions on student engagement (M = 3.50, SD = .81) and the years of teaching online courses (M = 5.30, SD = 3.72) scores and no statistically significant correlation [$r(148)$ = -.16, p = .055]. Therefore, $H_0 6$ was retained. In general, the results suggest that the number of years teaching online courses has no significant relationship with the perceptions of faculty members on student engagement in online course. Figure 6 displays the bivariate scatterplot.
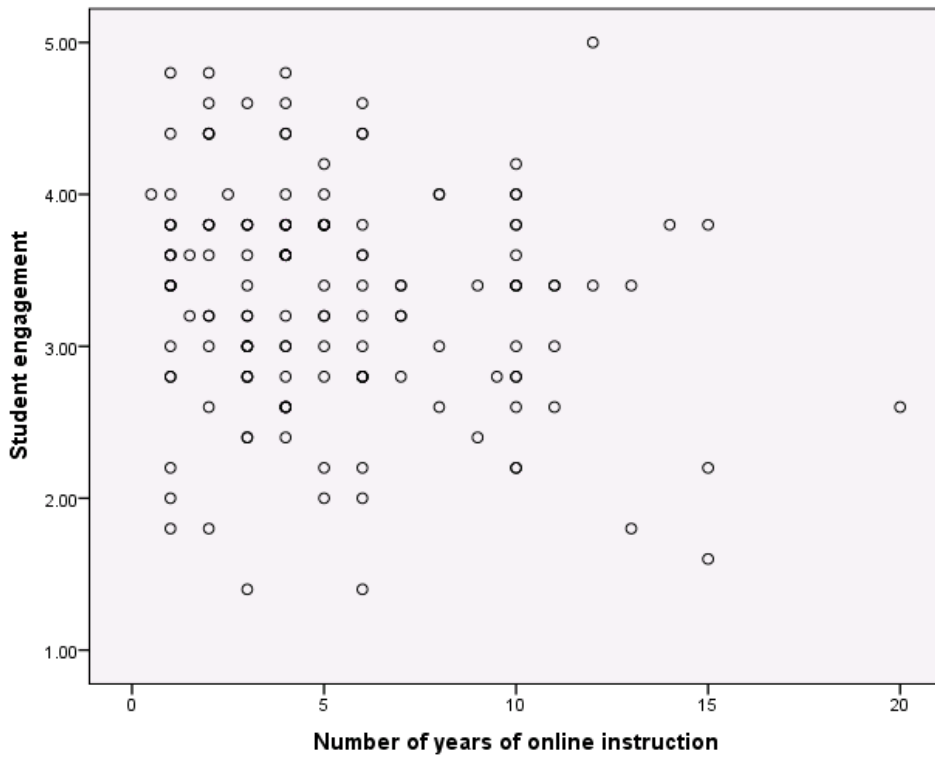

Figure 6. Bivariate correlation among variables (number of years of online instruction and perceptions on student engagement).

Research Question 7

Research Question 7: Is there a significant relationship in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory based on the age of faculty members and administrators?

H$_0$7: There is no significant relationship in participants' mean scores on the Student

Engagement dimension of the Perceptions of Online Learning Environment Inventory

based on the age of faculty members and administrators.

A Pearson product-moment correlation was computed to test the relationship between the

mean scores on the student engagement dimensions and the age of faculty and administrators.

The results of the correlational analysis revealed no relationship between the perceptions on

student engagement ($M = 3.50$, $SD = .81$) and the age of the faculty and administrators ($M =$

49.19, $SD = 11.95$) scores and no statistically significant correlation [$r(265) = -.07$, $p = .265$].

Therefore, H$_0$7 was retained. In general, the results suggest that the age of faculty and

administrators has no significant relationship with their perceptions of student engagement in

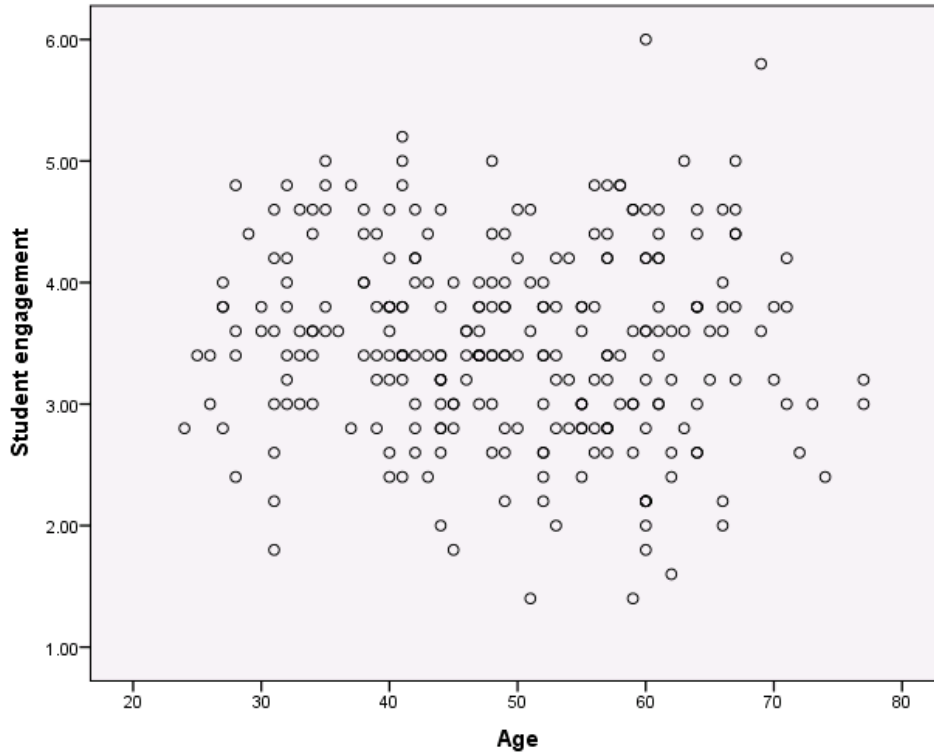online course. Figure 7 displays the bivariate scatterplot.

Figure 7. Age and perceptions of faculty and administrators on student engagement.

Research Question 8

Research Question 8: Is there a significant difference in participants' mean scores on the student engagement dimension of the Perceptions of Online Learning Environment Inventory between males and females?

H₀8: There is no significant difference in participants' mean scores on the Student
Engagement dimension of the Perceptions of Online Learning Environment Inventory
between males and females.

An independent-samples *t* test was conducted to evaluate whether the mean score of the perceptions towards student engagement in online learning environments was different between male and female faculty and administrators. The student engagement score was the test variable and the grouping variable was the gender. The data consisted of participants who identified

themselves as males and females. The test was significant, $t(273) = 2.93$, $p = .004$. Therefore, H_08 was rejected. The η^2 index was .031, which indicated a very small effect size. The perceptions of male faculty and administrators on student engagement ($M = 3.65$, $SD = .80$) tended to be higher than the perceptions of female faculty and administrators ($M = 3.37$, $SD = .77$). The 95% confidence interval for the difference in means was .09 to .47. The distributions of scores for the two groups are displayed in Figure 8.
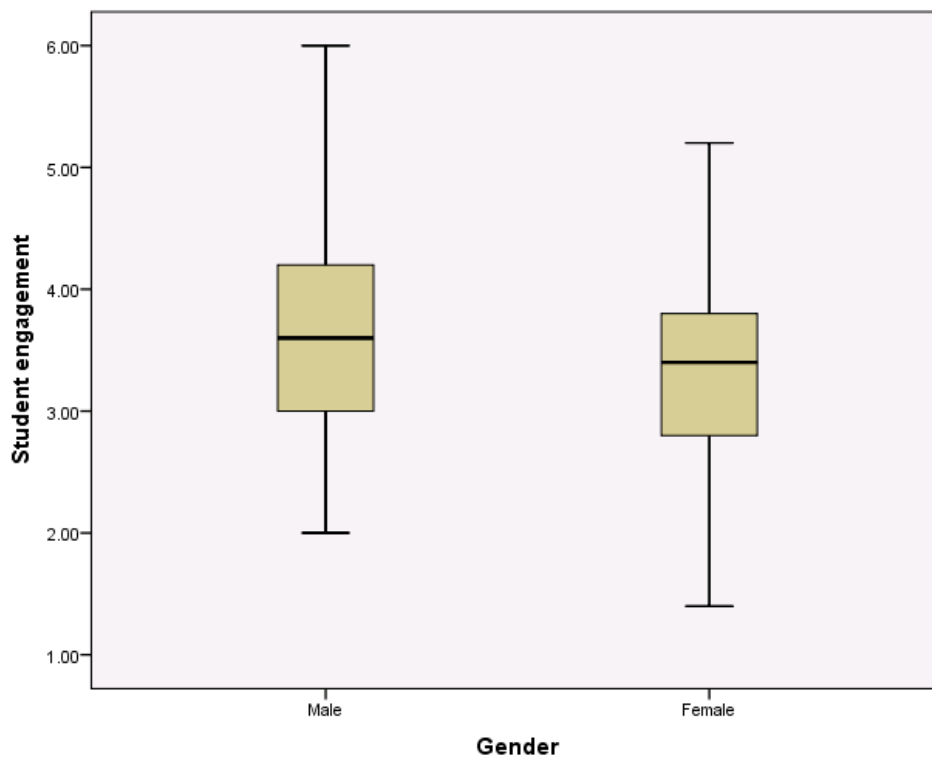

Figure 8. Gender and faculty and administrators perceptions on student engagement.

Research Question 9

Research Question 9: Is there a significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment

Inventory among faculty members and administrators by the type of higher education institution (2-year community college, 4-year privates, and 4-year public)?

> $H_0$9: There is no significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year community college, 4-year privates, and 4-year public).

A one-way analysis of variance was conducted to evaluate the relationship between the perceptions of faculty members and administrators towards student-student interaction in online learning environments and the type of higher education institution. The factor variable, type of higher education institutions, included three levels: 4-year public, 4-year private, and 2-year public community college. The dependent variable was student-student interaction. The ANOVA was not significant, $F(2, 268) = .77$, $p = .463$. Therefore, $H_0$9 was retained. The strength of the relationship between student engagement and type of higher education institution as assessed by η^2 was small (.006). The results indicate that there is little relationship between the perceptions of faculty and administrators towards student-student interaction in online learning environments and the type of higher education institutions (which can be seen in Figure 9). The means and standard deviations for the three groups are reported in Table 4.

Table 4

Institution Type and Student-student Interaction Dimension

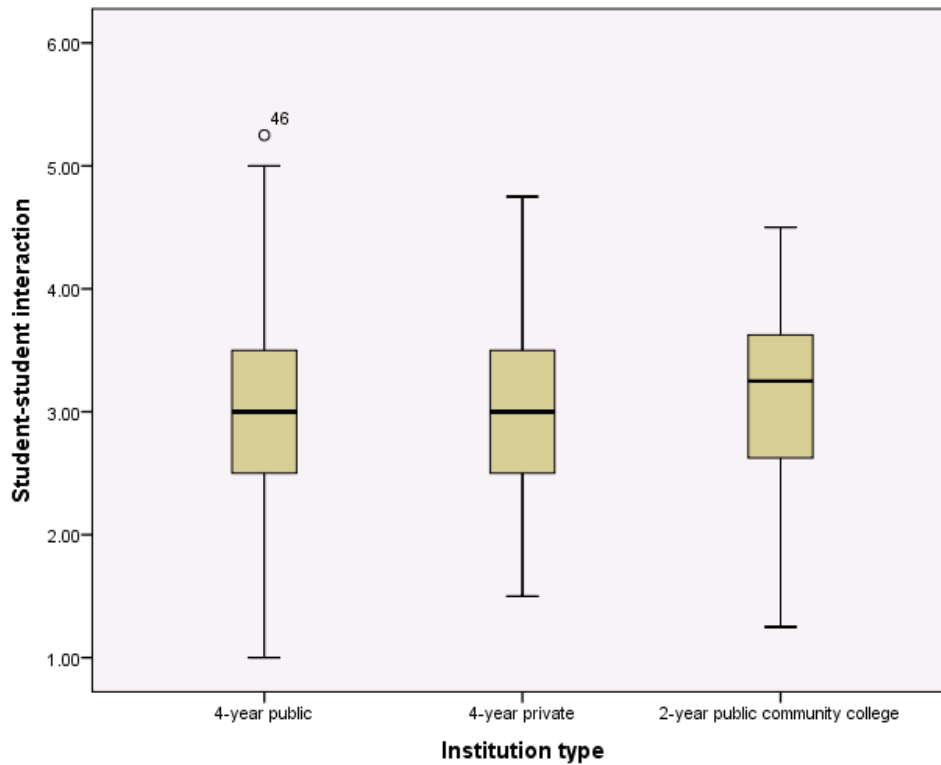| Type	N	M	SD
4-year Public	151	2.98	.76
4-year Private	88	3.01	.65
2-year Public Community College	32	3.16	.73

Figure 9. Faculty and administrators perceptions on student-student interaction and institution type.
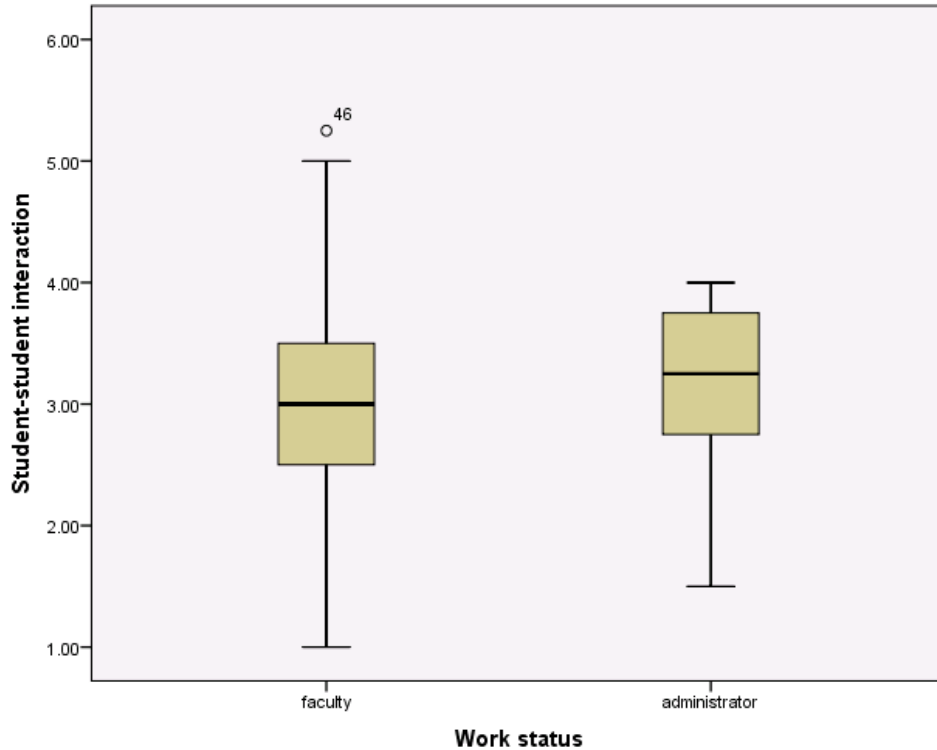*Note.* Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 10

Research Question 10: Is there a significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members?

$H_0 10$: There is no significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members.

An independent-samples t test was conducted to evaluate whether the mean score of the perceptions of faculty and administrators towards student-student interaction in online learning environments was different between administrators and faculty members. The student-student interaction scores was the test variable and the grouping variable was administrator or faculty member. The data consisted of participants who identified themselves as faculty members, administrators, and both. Due to the low number of the participants identified as working in positions that are both faculty and administrative, this number was not used for the analysis of work status. The test was not significant, $t(231) = .79$, $p = .428$. Therefore, $H_0 10$ was retained. The η^2 index was .003, which indicated a very small effect size. The perceptions of faculty members on student-student interaction in online courses ($M = 3.01$, $SD = .75$) tended to be about the same as the perceptions of administrators working in higher education institutions ($M = 3.12$, $SD = .67$). The 95% confidence interval for the difference in means was .16 to .38. The distributions of scores for the two groups are displayed in Figure 10.

Figure 10. Faculty and administrator perceptions on student-student interaction and work status. *Note.* Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 11

Research Question 11: Is there a significant relationship in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators?

$H_0 11$: There is no significant relationship in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators.

A Pearson product-moment correlation was computed to test the relationship between the mean scores on the student-student interaction dimensions and the numbers of years of work experience of faculty and administrators. The results of the correlational analysis revealed no

relationship between the perceptions on student-student interaction ($M = 3.01$, $SD = .72$) and the years of work experience of faculty and administrators ($M = 15.72$, $SD = 11.00$) scores and no statistically significant correlation [$r(266) = -.03$, $p = .673$]. Therefore, $H_0 11$ was retained. In general, the results suggest that years of work experience has no significant relationship with the perceptions of faculty members and administrators on student-student interaction in online course. Figure 11 displays the bivariate scatterplot.
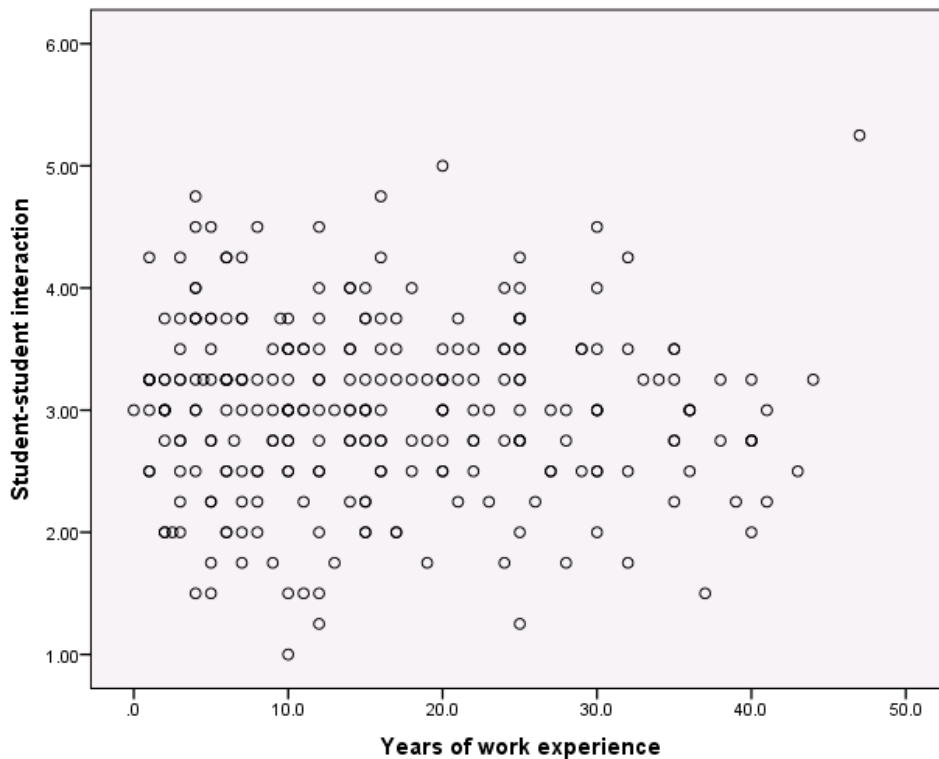

Figure 11. Bivariate correlation among variables (years of work experience and perceptions on student-student interaction).

Research Question 12

Research Question 12: Is there a significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment

Inventory between faculty members who teach primarily online and faculty members who teach

primarily face-to-face?

H₀12: There is no significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face.

An independent-samples *t* test was conducted to evaluate whether the mean score of the perceptions towards student-student interactions in online learning environments was different between faculty members who teach primarily online and faculty members who teach primarily face-to-face. The student-student interaction scores was the test variable and the grouping variable was faculty instruction online and faculty not instruction online courses. The test was not significant, $t(267) = 1.71$, $p = .088$. Therefore, H₀12 was retained. The η^2 index was .011, which indicated a very small effect size. The perceptions of faculty members, primarily teaching online courses, on student-student interaction ($M = 2.93$, $SD = .76$) tended to be about the same as the perceptions of faculty members who are not online instructors but are teaching face-to-face courses ($M = 3.08$), $SD = .67$). The 95% confidence interval for the difference in means was .02 to .32. The distributions of scores for the two groups are displayed in Figure 12.
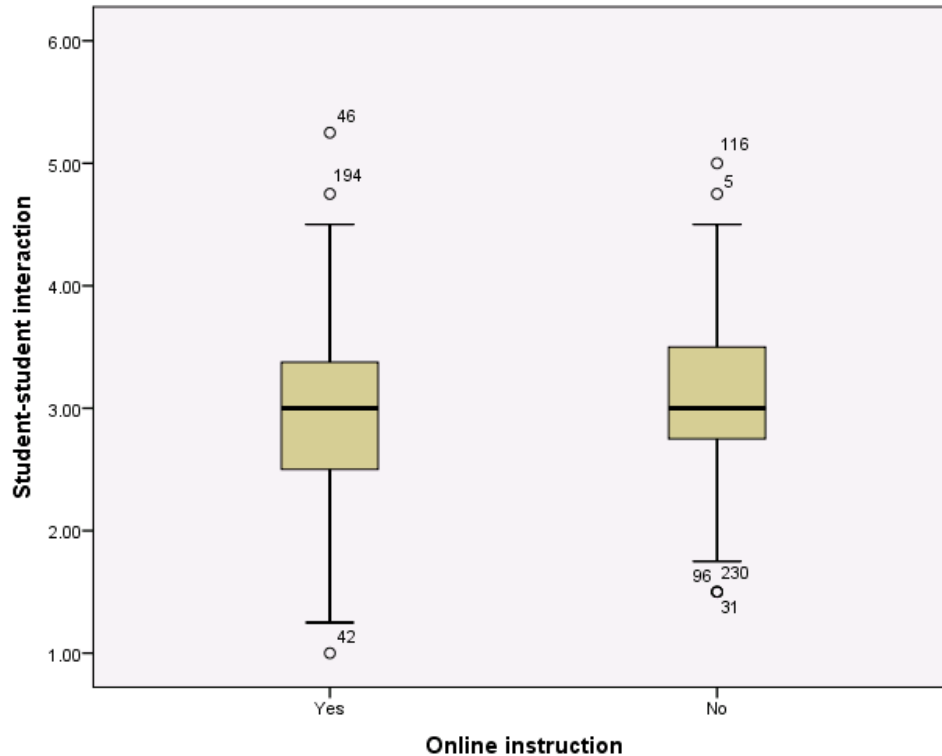
Figure 12. Faculty perceptions (instructing online and face-to-face courses) on student-student interaction.
Note. Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 13

Research Question 13: Is there a significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%)?

$H_0 13$: There is no significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%).

A one-way analysis of variance was conducted to evaluate the relationship between the perceptions of faculty members towards student-student interaction in online learning environments and the percentage of online classes taught. The factor variable, percentage of online courses being taught, included four levels: 25% or less, about 50%, about 75%, and 100%. The dependent variable was the scores on the perceptions on student-student interaction. The ANOVA was not significant, $F(3, 143) = .80$, $p = .496$. Therefore, $H_0 13$ was retained. The strength of the relationship between student-student interaction and percentage of classes taught online as assessed by η^2 was small (.016). The results indicate that there is little relationship between the perceptions of faculty towards student-student interaction in online learning environments and the percentage of online classes taught (which can be seen in Figure 13). The means and standard deviations for the four groups are reported in Table 5.

Table 5

Percentage of Classes Taught Online and Student-student interaction

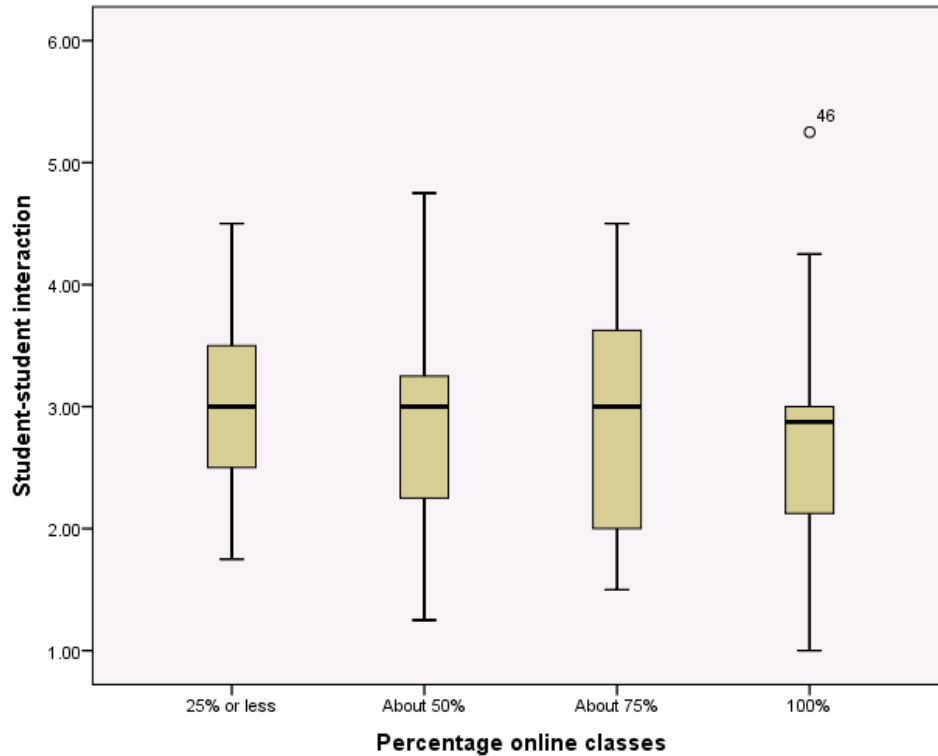| Type	N	M	SD
25% or less	87	3.03	.61
About 50%	29	2.83	.93
About 75%	15	2.93	.93
100%	16	2.78	.99

Figure 13. Perceptions of faculty on student-student interaction and percentage of online classes taught.
Note. Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 14

Research Question 14: Is there a significant relationship in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses?

$H_0$14: There is no significant relationship in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses.

A Pearson product-moment correlation was computed to test the relationship between the mean scores on the student-student interaction dimensions and the numbers of years teaching online courses. The results of the correlational analysis revealed no relationship between the

perceptions on student-student interaction ($M = 3.01$, $SD = .72$) and the years of teaching online courses ($M = 5.30$, $SD = 3.72$) scores and no statistically significant correlation [$r(146) = -.01$, $p = .904$]. Therefore, H_014 was retained. In general, the results suggest that the number of years teaching online courses has no significant relationship with the perceptions of faculty members on student-student interaction in online course. Figure 15 displays the bivariate scatterplot.

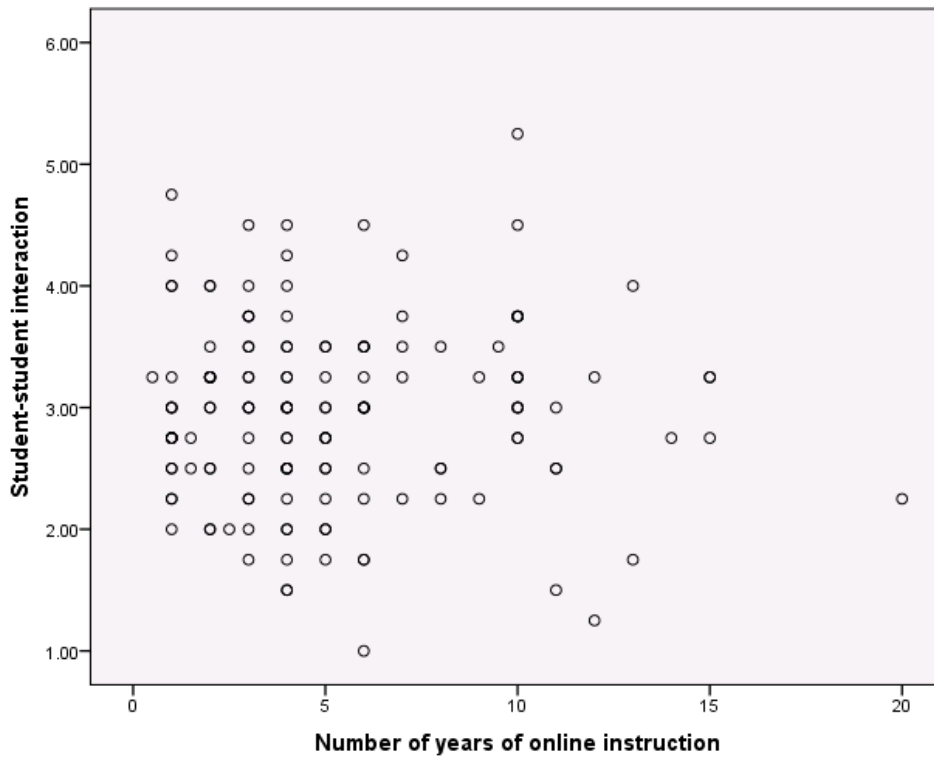*Figure 14.* Bivariate correlation among variables (number of years of online instruction and perceptions on student-student interaction).

Research Question 15

Research Question 15: Is there a significant relationship in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory based on the age of faculty members and administrators?

H₀15: There is no significant relationship in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory based on the age of faculty members and administrators.

A Pearson product-moment correlation was computed to test the relationship between the mean scores on the student-student interaction dimensions and the age of faculty and administrators. The results of the correlational analysis revealed no relationship between the perceptions on student-student interaction ($M = 3.01$, $SD = .72$) and the age of the faculty and administrators ($M = 49.19$, $SD = 11.95$) scores and no statistically significant correlation [$r(258) = .00$, $p = .997$]. Therefore, H₀15 was retained. In general, the results suggest that the age of faculty and administrators has no significant relationship with their perceptions of student-student interaction in online course. Figure 15 displays the bivariate scatterplot.
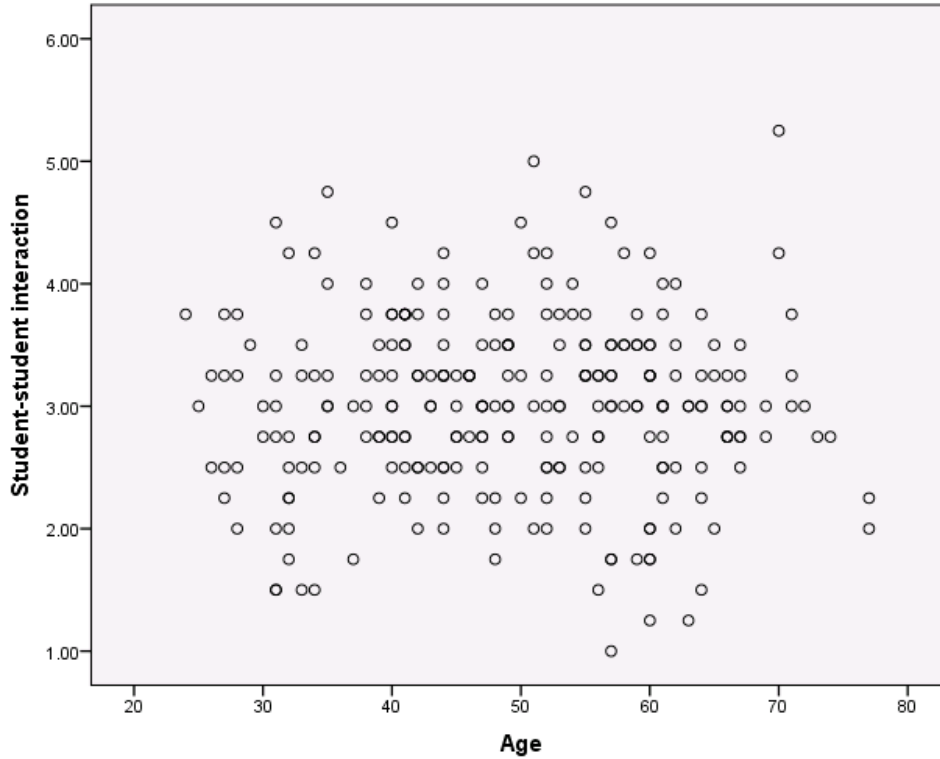
Figure 15. Age and perceptions of faculty and administrators on student-student interaction.

Research Question 16

Research Question 16: Is there a significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory between males and females?

$H_0$16: There is no significant difference in participants' mean scores on the student-student interaction dimension of the Perceptions of Online Learning Environment Inventory between males and females.

An independent-samples *t* test was conducted to evaluate whether the mean score of the perceptions towards student-student interaction in online learning environments was different between male and female faculty and administrators. The student-student interaction scores was the test variable and the grouping variable was the gender. The test was not significant, $t(265) =$

1.11, $p = .267$. Therefore, H_016 was retained. The η^2 index was .005, which indicated a very

small effect size. The perceptions of male faculty and administrators on student-student

interaction in online courses ($M = 3.07$, $SD = .76$) tended to be about the same as the perceptions

of female faculty and administrators ($M = 2.97$, $SD = .70$). The 95% confidence interval for the

difference in means was -.08 to .28. The distributions of scores for the two groups are displayed

in Figure 16.

Figure 16. Gender and faculty and administrators perceptions on student-student interaction.
Note: Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th
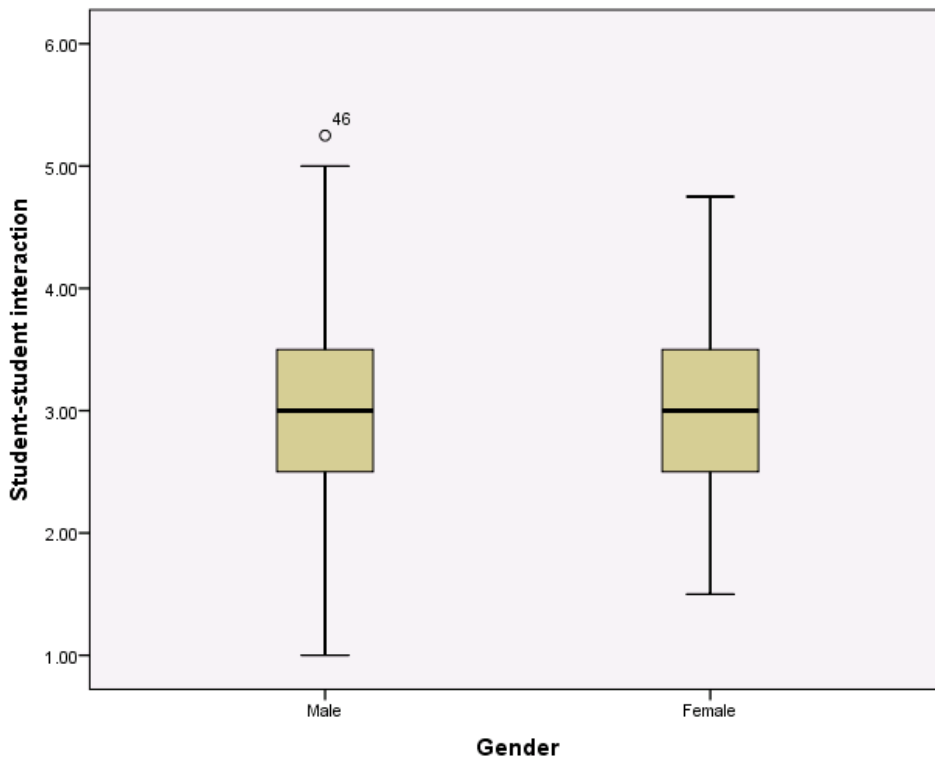percentile. Median of sample is reported for each category.

Research Question 17

Research Question 17: Is there a significant difference in participants' mean scores on the

faculty engagement dimension of the Perceptions of Online Learning Environment Inventory

among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public)?

H₀17: There is no significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public).

A one-way analysis of variance was conducted to evaluate the relationship between the perceptions of faculty members and administrators towards faculty engagement in online learning environments and the type of higher education institution. The factor variable, type of higher education institutions, included three levels: 4-year public, 4-year private, and 2-year public community college. The dependent variable was faculty engagement. The ANOVA was not significant, $F(2, 257) = .16$, $p = .850$. Therefore, H₀17 was retained. The strength of the relationship between faculty engagement and type of higher education institution as assessed by η^2 was small (.001). The results indicate that there is little relationship between the perceptions of faculty and administrators towards faculty engagement in online learning environments and the type of higher education institutions (which can be seen in Figure 17). The means and standard deviations for the three groups are reported in Table 6.

Table 6

Institution Type and Faculty Engagement Dimension

Type	N	M	SD
4-year Public	143	2.76	.70
4-year Private	87	2.71	.69
2-year Public Community College	30	2.69	.77

Figure 17. Faculty and administrators perceptions on faculty engagement and institution type. *Note.* Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 18

Research Question 18: Is there a significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members?
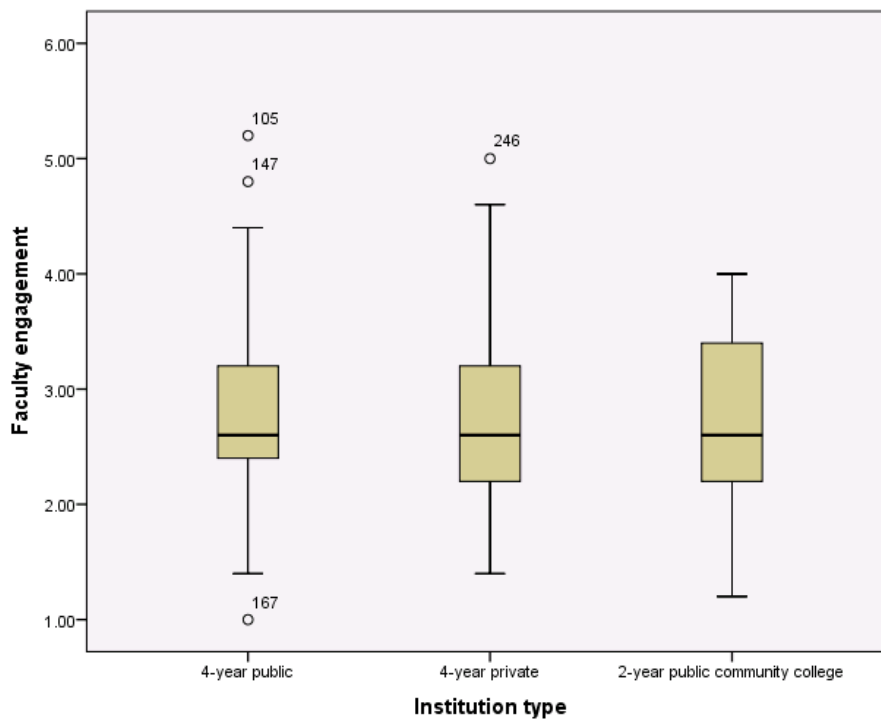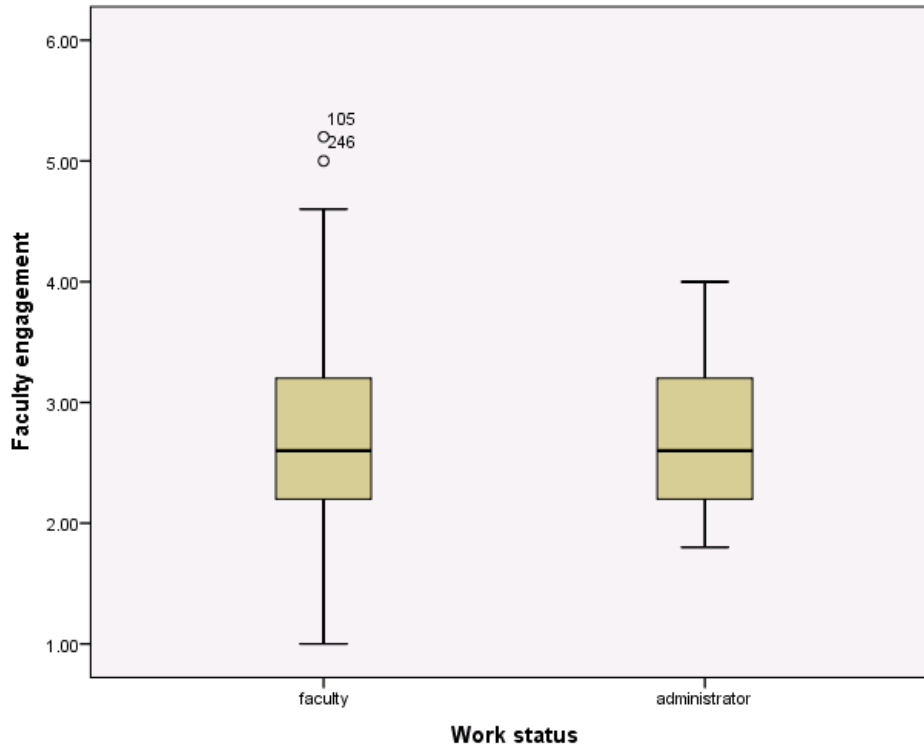
$H_0 18$: There is no significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members.

An independent-samples t test was conducted to evaluate whether the mean score of the perceptions of faculty and administrators towards faculty engagement in online learning environments was different between administrators and faculty members. The faculty engagement scores was the test variable and the grouping variable was administrator or faculty member. The data consisted of participants who identified themselves as faculty members, administrators, and both. Due to the low number of the participants identified as working in position that are both faculty and administrative, this number was not used for the analysis of work status. The test was not significant, $t(218) = .11$, $p = .912$. Therefore, $H_0 18$ was retained. The η^2 index was .0001, which indicated a very small effect size. The perceptions of faculty members on faculty engagement in online courses ($M = 2.72$, $SD = .70$) tended to be about the same as the perceptions of administrators working in higher education institutions ($M = 2.74$, $SD = .60$). The 95% confidence interval for the difference in means was .29 to .32. The distributions of scores for the two groups are displayed in Figure 18.

Figure18. Faculty and administrator perceptions on faculty engagement and work status. *Note.* Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 19

Research Question 19: Is there a significant relationship in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators?

$H_0$19: There is no significant relationship in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators.

A Pearson product-moment correlation was computed to test the relationship between the mean scores on the faculty engagement dimensions and the numbers of years of work experience of faculty and administrators. The results of the correlational analysis revealed no relationship between the perceptions on faculty engagement ($M = 2.73$, $SD = .70$) and the years of work

experience of faculty and administrators ($M = 15.72$, $SD = 11.00$) scores and no statistically significant correlation [$r(255) = .01$, $p = .895$]. Therefore, H_019 was retained. In general, the results suggest that years of work experience has no significant relationship with the perceptions of faculty members and administrators on faculty engagement in online courses. Figure 19 displays the bivariate scatterplot.

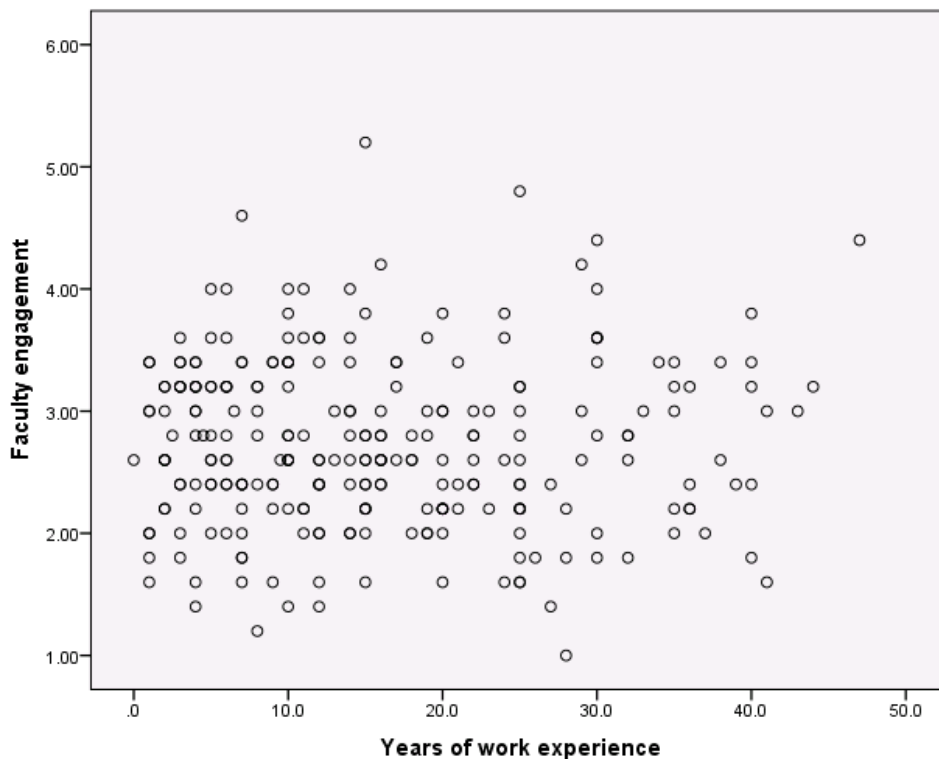*Figure 19.* Bivariate correlation among variables (years of work experience and perceptions on faculty engagement).

Research Question 20

Research Question 20: Is there a significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face?

H$_0$20: There is no significant difference in participants' mean scores on the faculty

engagement dimension of the Perceptions of Online Learning Environment Inventory

between faculty members who teach primarily online and faculty members who teach

primarily face-to-face.

An independent-samples *t* test was conducted to evaluate whether the mean score of the

perceptions towards faculty engagement in online learning environments was different between

faculty members who teach primarily online and faculty members who teach primarily face-to-

face. The faculty engagement scores was the test variable and the grouping variable was faculty

instruction online and faculty not instruction online courses. The test was significant, $t(256) =$

2.61, $p = .010$. Therefore, H$_0$20 was rejected. The η^2 index was .026, which indicated a very

small effect size. The perceptions of faculty members, primarily teaching online courses, on

faculty engagement ($M = 2.64$, $SD = .64$) tended to be significantly lower than the perceptions of

faculty members who are not online instructors but are teaching face-to-face courses ($M = 2,84$,

$SD = .77$). The 95% confidence interval for the difference in means was.06 to .40. The

distributions of scores for the two groups are displayed in Figure 20.
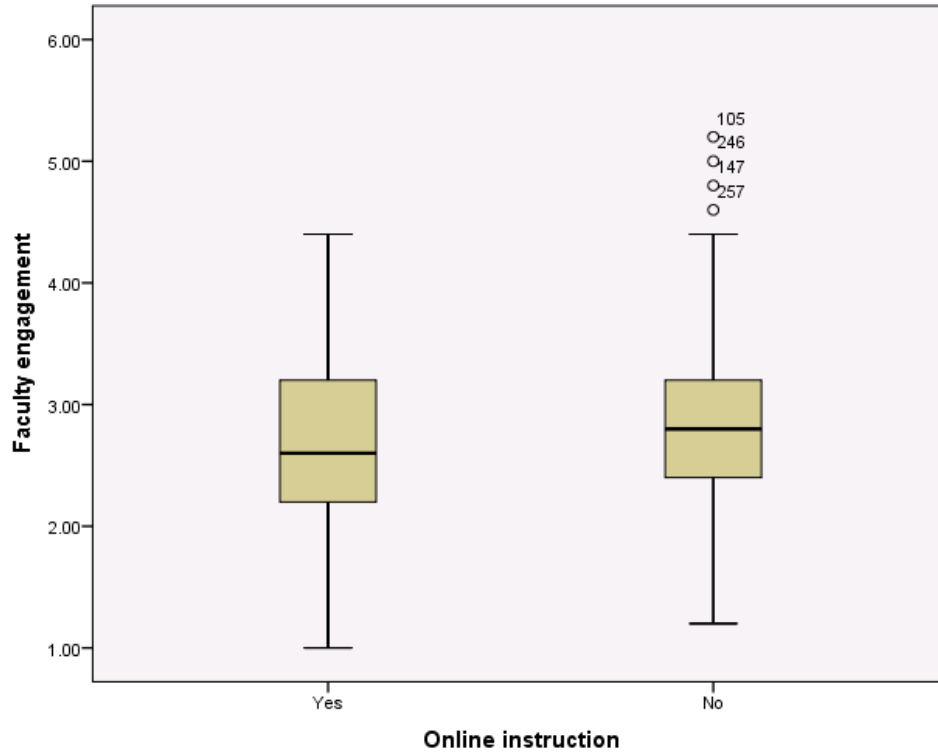
Figure 20. Faculty perceptions (instructing online and face-to-face courses) on faculty engagement.
Note. Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 21

Research Question 21: Is there a significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%)?

$H_0 21$: There is no significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%).

A one-way analysis of variance was conducted to evaluate the relationship between the perceptions of faculty members towards faculty engagement in online learning environments and the percentage of online classes taught. The factor variable, percentage of online courses being taught, included four levels: 25% or less, about 50%, about 75%, and 100%. The dependent variable was the scores on the perceptions on faculty engagement. The ANOVA was not significant, $F(3, 144) = .31$, $p = .817$. Therefore, H_021 was retained. The strength of the relationship between faculty engagement and percentage of classes taught online as assessed by η^2 was small (.006). The results indicate that there is little relationship between the perceptions of faculty towards faculty engagement in online learning environments and the percentage of online classes taught (which can be seen in Figure 21). The means and standard deviations for the four groups are reported in Table 7.

Table 7

Percentage of Classes Taught Online and Faculty Engagement

Type	N	M	SD
25% or less	88	2.63	.59
About 50%	28	2.71	.63
About 75%	15	2.67	.58
100%	17	2.53	.90
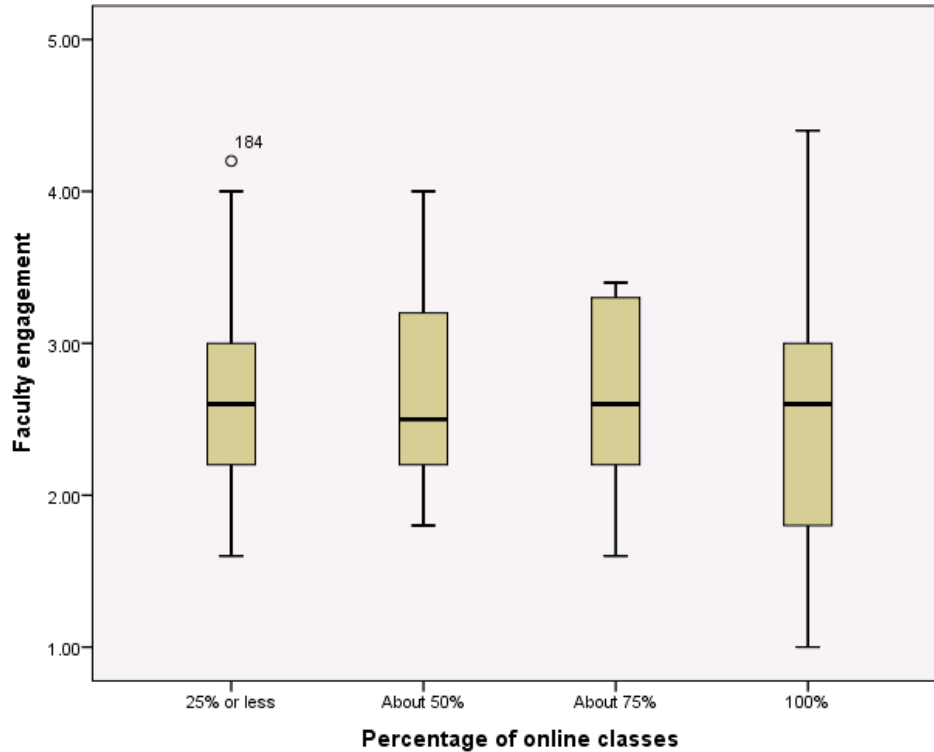
Figure 21. Perceptions of faculty on faculty engagement and percentage of online classes taught. *Note.* Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 22

Research Question 22: Is there a significant relationship in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses?

H022: There is no significant relationship in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses.

A Pearson product-moment correlation was computed to test the relationship between the mean scores on the faculty engagement dimensions and the numbers of years teaching online courses. The results of the correlational analysis revealed no relationship between the

perceptions on faculty engagement ($M = 2.71$, $SD = .71$) and the years of teaching online courses ($M = 5.30$, $SD = 3.72$) scores and no statistically significant correlation [$r(147) = .11$, $p = .168$]. Therefore, H_022 was retained. In general, the results suggest that the number of years teaching online courses has no significant relationship with the perceptions of faculty members on faculty engagement in online course. Figure 22 displays the bivariate scatterplot.

Figure 22. Bivariate correlation among variables (number of years of online instruction and perceptions on faculty engagement).

Research Question 23

Research Question 23: Is there a significant relationship in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory based on the age of faculty members and administrators?

H₀23: There is no significant relationship in participants' mean scores on the faculty

engagement dimension of the Perceptions of Online Learning Environment Inventory

based on the age of faculty members and administrators.

A Pearson product-moment correlation was computed to test the relationship between the

mean scores on the faculty engagement dimensions and the age of faculty and administrators.

The results of the correlational analysis revealed no relationship between the perceptions on

faculty engagement ($M = 2.74$, $SD = .71$) and the age of the faculty and administrators ($M =$

49.19, $SD = 11.95$) scores and no statistically significant correlation [$r(245) = -.06$, $p = .346$].

Therefore, H₀23 was retained. In general, the results suggest that the age of faculty and

administrators has no significant relationship with their perceptions of faculty engagement in

online course. Figure 23 displays the bivariate scatterplot.

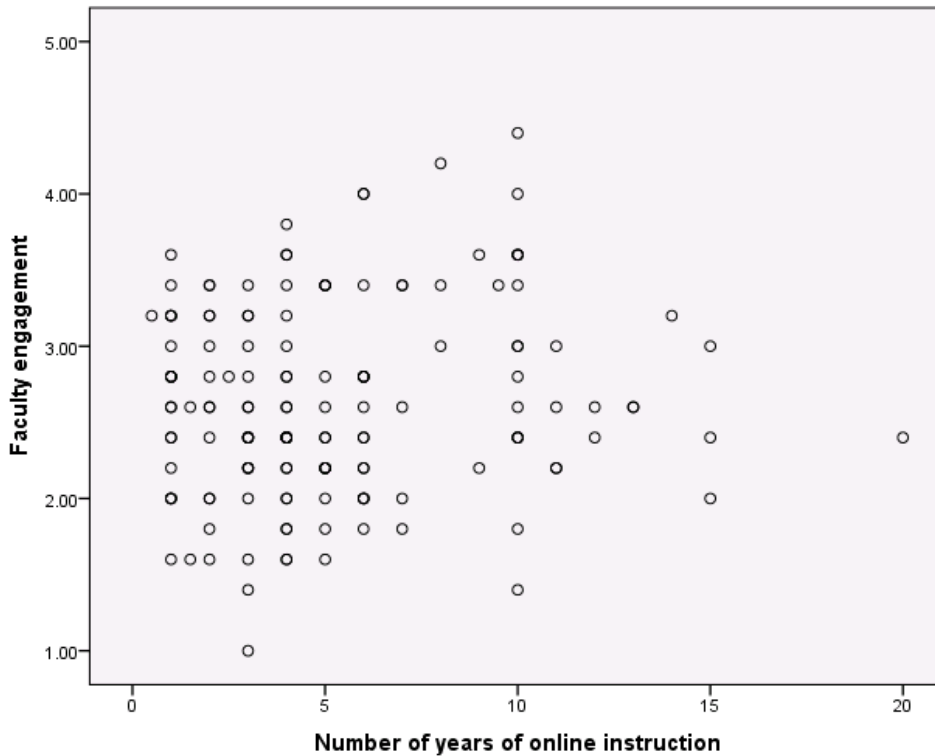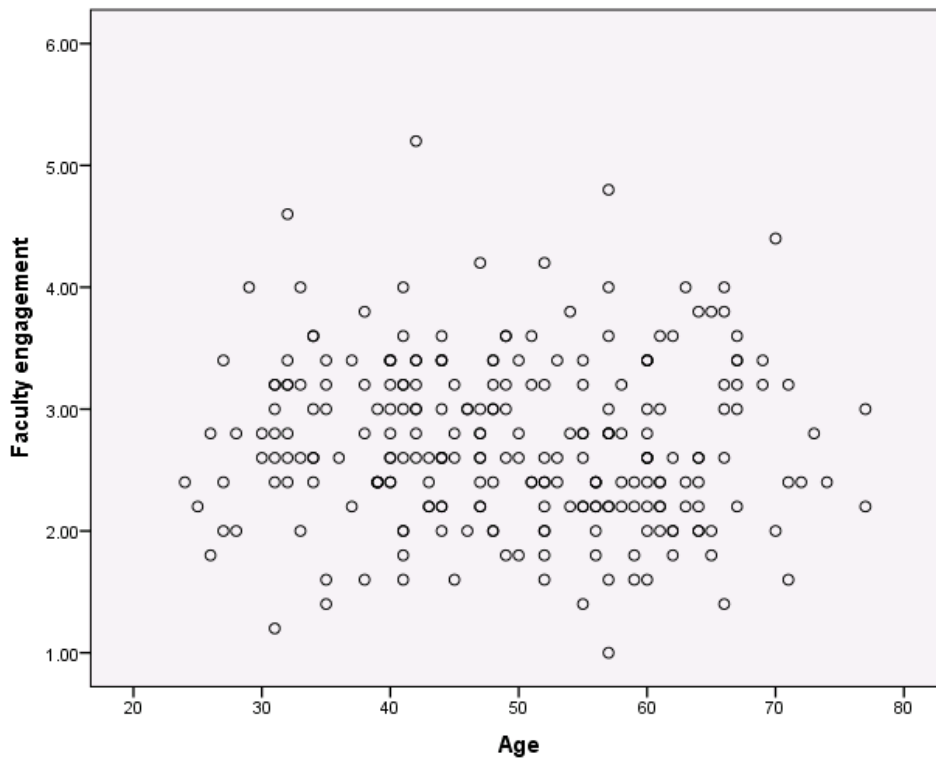*Figure 23.* Age and perceptions of faculty and administrators on faculty engagement..

Research Question 24

Research Question 24: Is there a significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between males and females?

H$_0$24: There is no significant difference in participants' mean scores on the faculty engagement dimension of the Perceptions of Online Learning Environment Inventory between males and females.

An independent-samples t test was conducted to evaluate whether the mean score of the perceptions towards faculty engagement in online learning environments was different between male and female faculty and administrators. The student-student interaction scores was the test variable and the grouping variable was the gender. The test was not significant, $t(253) = 1.59$, $p = .113$. Therefore, H$_0$24 was retained. The η^2 index was .001, which indicated a very small effect size. The perceptions of male faculty and administrators on faculty engagement in online courses ($M = 2.80$, $SD = .68$) tended to be about the same as the perceptions of female faculty and administrators ($M = 2.66$, $SD = .68$). The 95% confidence interval for the difference in means was -.03 to .31. The distributions of scores for the two groups are displayed in Figure 24.

Figure 24. Gender and faculty and administrators perceptions on faculty engagement. *Note.* Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.
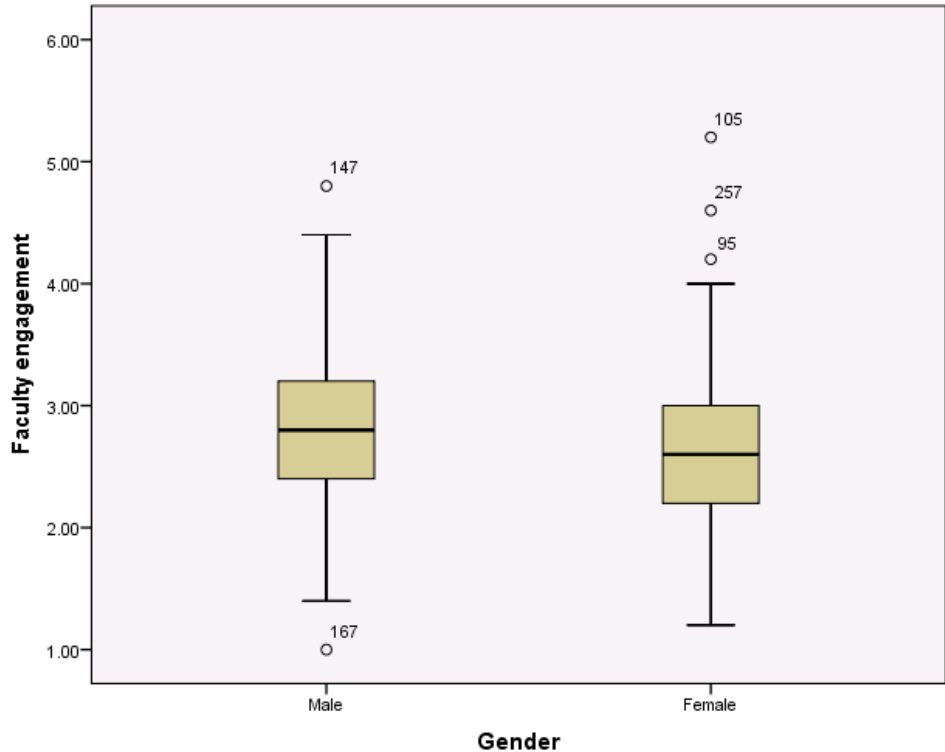
Research Question 25

Research Question 25: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public)?

H$_0$25: There is no significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type of higher education institution (2-year public community college, 4-year privates, and 4-year public).

A one-way analysis of variance was conducted to evaluate the relationship between the perceptions of faculty members and administrators towards academic dishonesty in online learning environments and the type of higher education institution. The factor variable, type of higher education institutions, included three levels: 4-year public, 4-year private, and 2-year public community college. The dependent variable was academic dishonesty. The ANOVA was not significant, $F(2, 277) = 1.26$, $p = .287$. Therefore, $H_0 25$ was retained. The strength of the relationship between academic dishonesty and type of higher education institution as assessed by η^2 was small (.009). The results indicate that there is little relationship between the perceptions of faculty and administrators towards academic dishonesty in online learning environments and the type of higher education institutions (which can be seen in Figure 25). The means and standard deviations for the three groups are reported in Table 8.

Table 8

Institution Type and Academic Dishonesty Dimension

Type	N	M	SD
4-year Public	153	2.84	1.24
4-year Private	94	2.60	1.19
2-year Public Community College	33	2.84	1.27
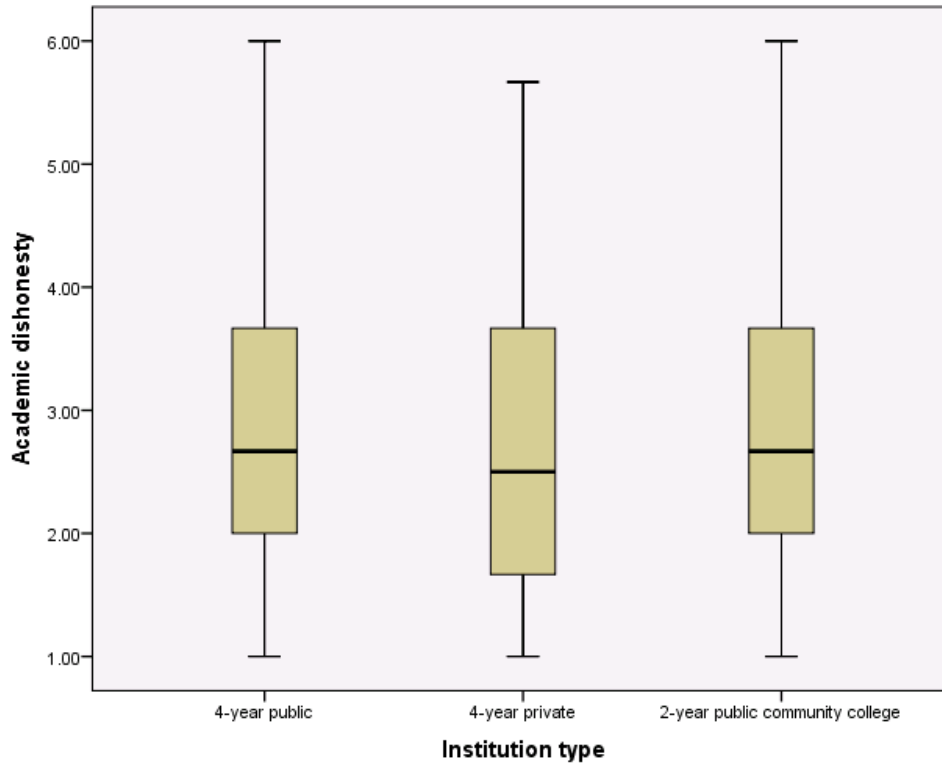
Figure 25. Faculty and administrators perceptions on academic dishonesty and institution type.

Research Question 26

Research Question 26: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members?

H$_0$26: There is no significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between administrators and faculty members.

An independent-samples *t* test was conducted to evaluate whether the mean score of the perceptions of faculty and administrators towards academic dishonesty in online learning environments was different between administrators and faculty members. The mean scores on the academic dishonesty dimension was the test variable and the grouping variable was

administrator or faculty member. The data consisted of participants who identified themselves as faculty members, administrators and both. Due to the low number of the participants identified as working in position that are both faculty and administrative, this number was not used for the analysis of work status. The test was not significant, $t(238) = 1.73$, $p = .085$. Therefore, $H_0 26$ was retained. The η^2 index was .012, which indicated a very small effect size. The perceptions of faculty members on academic dishonesty in online courses ($M = 2.71$, $SD = 1.22$) tended to be about the same as the perceptions of administrators working in higher education institutions ($M = 3.11$, $SD = 1.24$). The 95% confidence interval for the difference in means was .06 to .85. The distributions of scores for the two groups are displayed in Figure 26.
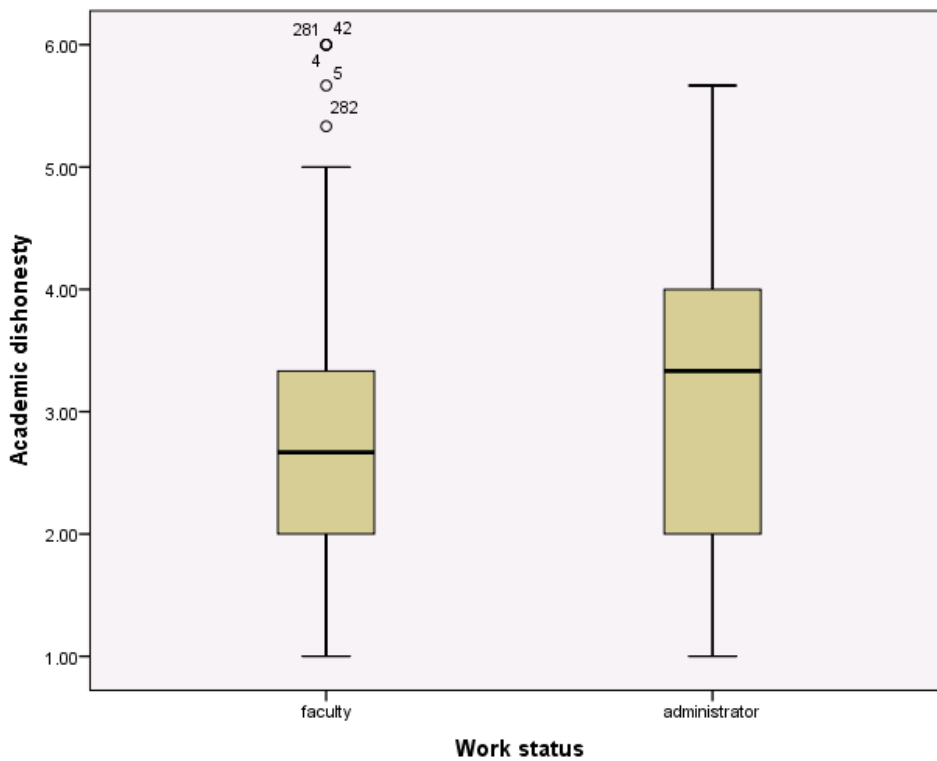
Figure 26. Faculty and administrator perceptions on academic dishonesty and work status.
Note. Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 27

Research Question 27: Is there a significant relationship in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators?

$H_0$27: There is no significant relationship in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory based on the years of work experience of faculty and administrators.

A Pearson product-moment correlation was computed to test the relationship between the mean scores on the academic dishonesty dimensions and the numbers of years of work experience of faculty and administrators. The results of the correlational analysis revealed no relationship between the perceptions on academic dishonesty ($M = 2.76$, $SD = 1.23$) and the years of work experience of faculty and administrators ($M = 15.72$, $SD = 11.00$) scores and no statistically significant correlation [$r(255) = .01$, $p = .895$]. Therefore, $H_0$27 was retained. In general, the results suggest that years of work experience has no significant relationship with the perceptions of faculty members and administrators on academic dishonesty in online courses. Figure 27 displays the bivariate scatterplot.
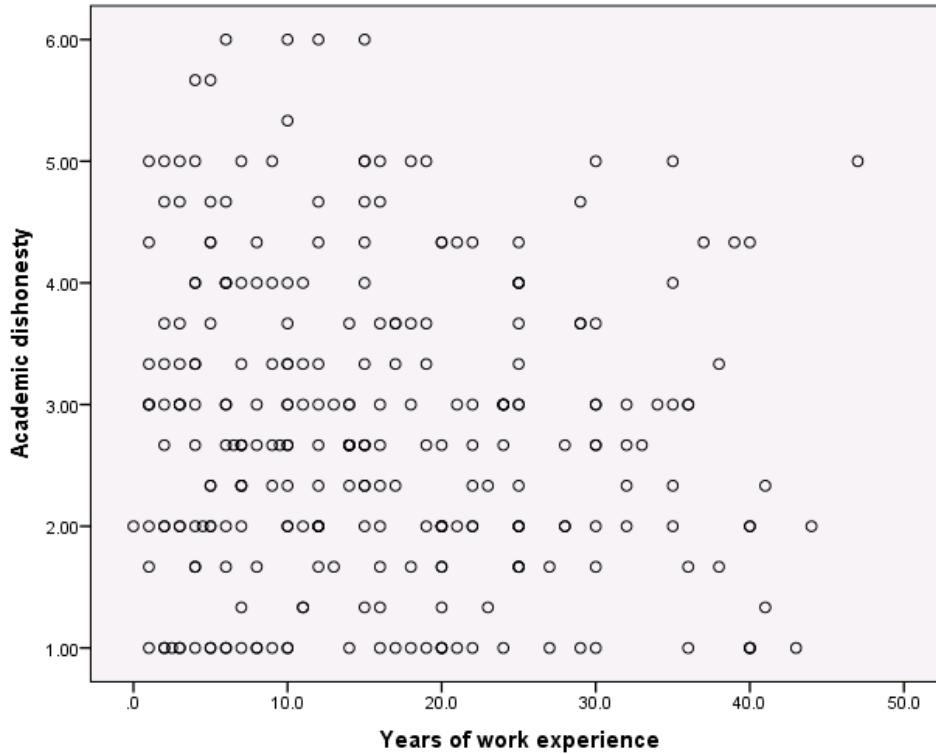
Figure 27. Bivariate correlation among variables (years of work experience and perceptions on academic dishonesty).

Research Question 28

Research Question 28: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face?

H$_0$28: There is no significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face.

An independent-samples *t* test was conducted to evaluate whether the mean score of the perceptions towards academic dishonesty in online learning environments was different between

faculty members who teach primarily online and faculty members who teach primarily face-to-face. The academic dishonesty scores was the test variable and the grouping variable was faculty instruction online and faculty not instruction online courses. The test was significant, $t(276) = 2.64$, $p = .009$. Therefore, $H_0 28$ was rejected. The η^2 index was .025, which indicated a very small effect size. The perceptions of faculty members, primarily teaching online courses, on academic dishonesty ($M = 2.94$, $SD = 1.23$) tended to be significantly higher than the perceptions of faculty members who are not online instructors but are teaching face-to-face courses ($M = 2.55$, $SD = 1.21$). The 95% confidence interval for the difference in means was .09 to .68. The distributions of scores for the two groups are displayed in Figure 28.

Figure 28. Faculty perceptions (instructing online and face-to-face courses) on academic dishonesty.
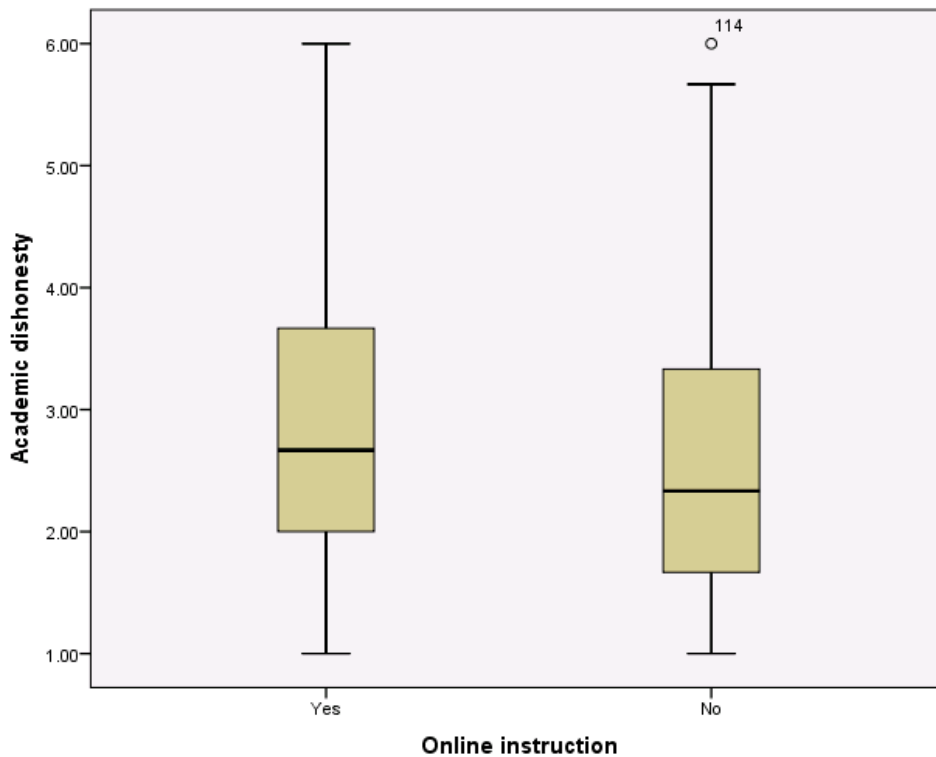*Note.* Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 29

Research Question 29: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%)?

H$_0$29: There is no significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory among the four groups of percentage of online classes taught (25% or less, about 50%, about 75%, or 100%).

A one-way analysis of variance was conducted to evaluate the relationship between the perceptions of faculty members towards academic dishonesty in online learning environments and the percentage of online classes taught. The factor variable, percentage of online courses being taught, included four levels: 25% or less, about 50%, about 75%, and 100%. The dependent variable was the scores on the perceptions on academic dishonesty. The ANOVA was significant, $F(3, 146) = 8.35$, $p < .001$. Therefore, H$_0$29 was rejected. The strength of the relationship between academic dishonesty and percentage of classes taught online as assessed by η^2 was small (.146). The results indicate that there is a significant difference in the perceptions of faculty towards academic dishonesty in online learning environments depending on the percentage of online classes taught by the faculty (which can be seen in Figure 29). Group 1 (25% or less) had significantly lower mean score than the groups 2 (about 50%), 3 (about 75%), and 4(100%). The means and standard deviations for the four groups are reported in Table 9.

Table 9

Percentage of Classes Taught Online and Academic Dishonesty

Type	N	M	SD
25% or less	90	2.56	1.13
About 50%	28	3.32	1.05
About 75%	15	3.73	1.23
100%	17	3.55	1.22
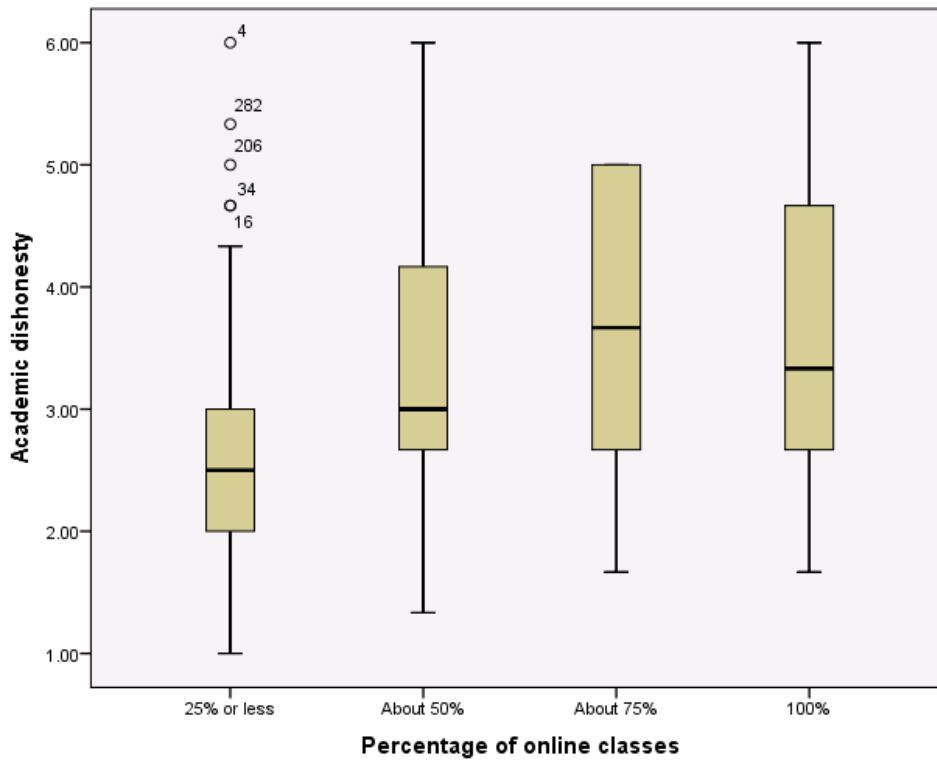
Figure 29. Perceptions of faculty on academic dishonesty and percentage of online classes taught.
Note. Outliers have been identified using SPSS guideline greater or less than 1.5 X the 50th percentile. Median of sample is reported for each category.

Research Question 30

Research Question 30: Is there a significant relationship in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses?

$H_0 30$: There is no significant relationship in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory based on the number of years teaching online courses.

A Pearson product-moment correlation was computed to test the relationship between the mean scores on the academic dishonesty dimensions and the numbers of years teaching online courses. The results of the correlational analysis revealed a relationship between the perceptions on academic dishonesty ($M = 2.76$, $SD = 1.23$) and the years of teaching online courses ($M = 5.30$, $SD = 3.72$) scores and a statistically significant correlation exists [$r(149) = .20$, $p = .013$]. Therefore, $H_0 30$ was rejected. In general, the results suggest that there is a significant positive relationship between the number of years teaching online courses and the perceptions of faculty members on academic dishonesty in online course. Figure 30 displays the bivariate scatterplot.
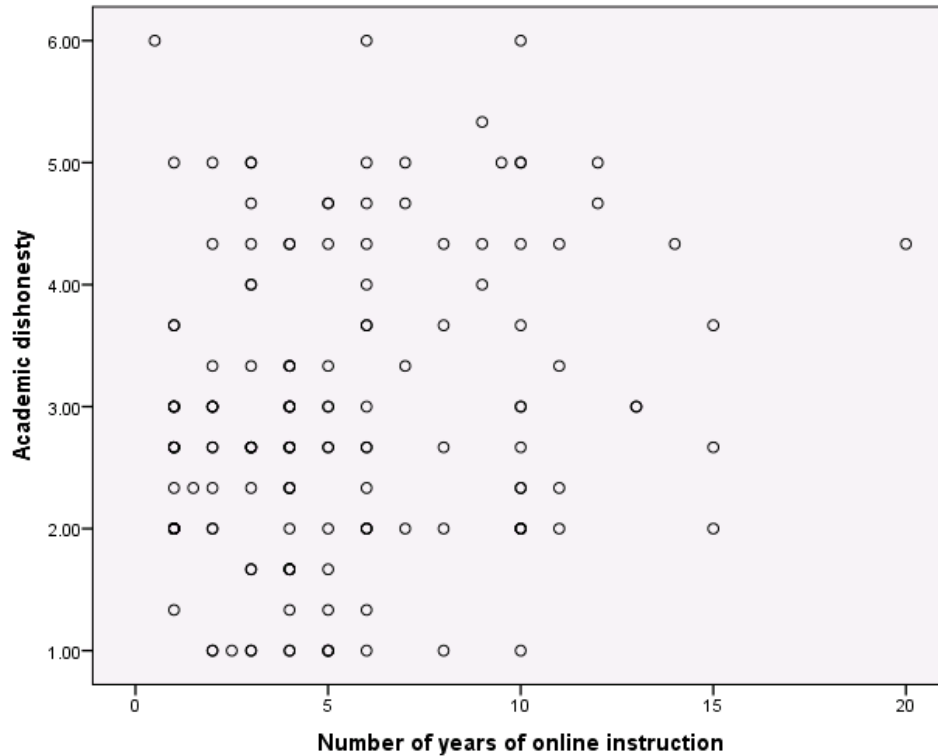
Figure 30. Bivariate correlation among variables (number of years of online instruction and perceptions on academic dishonesty).

Research Question 31

Research Question 31: Is there a significant relationship in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory based on the age of faculty members and administrators?

H$_0$31: There is no significant relationship in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory based on the age of faculty members and administrators.

A Pearson product-moment correlation was computed to test the relationship between the mean scores on the academic dishonesty dimensions and the age of faculty and administrators. The results of the correlational analysis revealed no relationship between the perceptions on academic dishonesty ($M = 2.76$, $SD = 1.23$) and the age of the faculty and administrators ($M =$

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49.19, $SD = 11.95$) scores and no statistically significant correlation [$r(266) = -.06, p = .374$].

Therefore, H_031 is retained. In general, the results suggest that the age of faculty and administrators has no significant relationship with their perceptions of academic dishonesty in online course. Figure 31 displays the bivariate scatterplot.
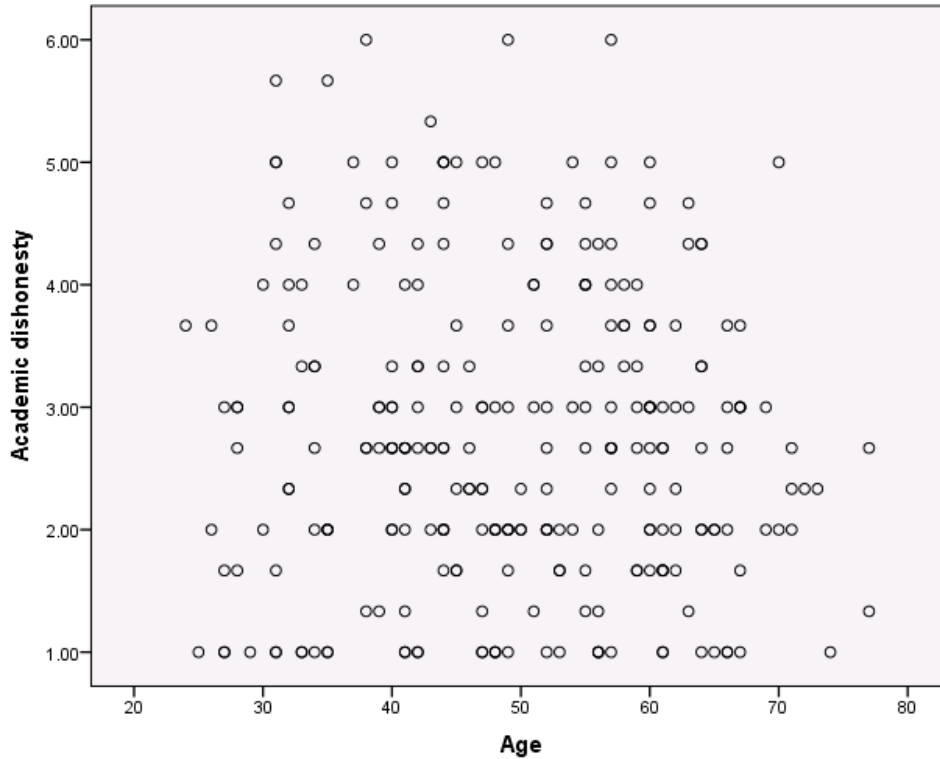
Figure 31. Age and perceptions of faculty and administrators on academic dishonesty.

Research Question 32

Research Question 32: Is there a significant difference in participants' mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between males and females?

H$_0$32: There is no significant difference in participants' mean scores on the academic

dishonesty dimension of the Perceptions of Online Learning Environment Inventory

between males and females.

An independent-samples *t* test was conducted to evaluate whether the mean score of the

perceptions towards academic dishonesty in online learning environments was different between

male and female faculty and administrators. The academic dishonesty scores was the test

variable and the grouping variable was the gender. The test was not significant, $t(274) = .043$, *p*

= .966. Therefore, H$_0$32 was retained. The η^2 index was <.001, which indicated a very small

effect size. The perceptions of male faculty and administrators on academic dishonesty in online

courses (*M* = 2.76, *SD* = 1.24) tended to be about the same as the perceptions of female faculty

and administrators (*M* = 2.75, *SD* = 1.21). The 95% confidence interval for the difference in

means was -.28 to .30. The distributions of scores for the two groups are displayed in Figure 32.
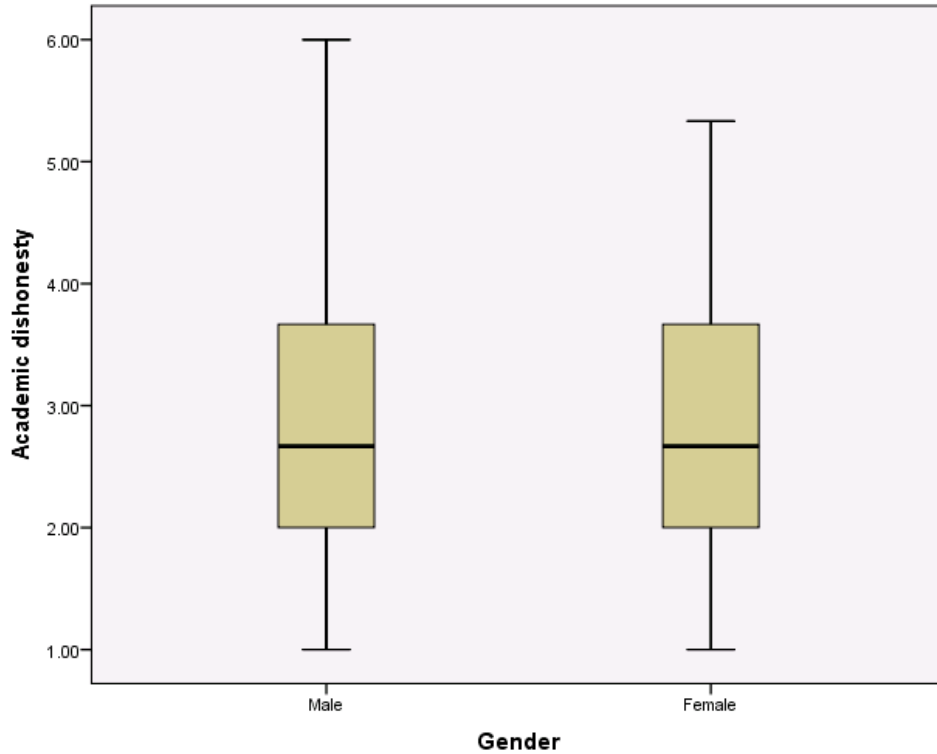
Figure 32. Gender and faculty and administrators perceptions on academic dishonesty.

Summary

The findings of this study were discussed in Chapter 4. The survey, containing 9 demographic questions and 17 statements, was distributed using an online program to six regionally accredited higher education institutions located in Tennessee and North Carolina. The total number of participants from the public university was 169 (of which 117 were faculty members, 27 were administrators, and 25 were individuals who work as both faculty and administrative positions). At the private institutions, the total number of participants was 98 (76 were faculty members, 7 were administrators, and the rest 15 held both faculty and administrative positions). At the community college, the total number of participants was 33 (26 faculty members, 3 administrators, and 4 held both faculty and administrative positions).

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to investigate the perceptions of faculty members and administrators of online learning environments compared to traditional face-to-face instruction by exploring the factors that impact online instruction. Strategies that can lead to effective online learning environments (4-year public and 4-year private higher education institutions and 2-year public community college) were explored. Faculty members and administrators working with online education at six traditional, regionally accredited, degree granting higher education institutions were included in this study. A summary and a conclusion to the study in relation to the perceptions of faculty and administrators towards student engagement, student-student interaction, faculty engagement, and academic dishonesty in online education can be found in this chapter. The recommendations for practice and for future research are also listed in this chapter.

Summary

The sample of this study consisted of full-time faculty members and administrators working at six regionally accredited higher education institutions (one 4-year public and four 4-year private institutions as well as one 2-year public community college). The number of participants from the public university was 169 (of which 117 were faculty members, 27 were administrators, and 25 were individuals who work as both faculty and administrative positions). At the private institutions, the total number of participants was 98 (76 were faculty members, 7 were administrators, and 15 held both faculty and administrative positions). At the 2-year public

community college, the total number of participants was 33 (26 faculty members, 3 administrators, and 4 held both faculty and administrative positions. The participants who identified themselves as both faculty member and administrator were not included in the analyses.

The survey was sent using an online survey program. The survey (Appendix D) used a Likert-type scale (where the participants had to choose from one of the following response options: Strongly agree, Agree, Somewhat agree, Somewhat disagree, Disagree, and Strongly disagree), and used four dimensions (student engagement, student-student interactions, faculty engagement, and academic dishonesty) to measure the perceptions of faculty members and administrators toward online education. The survey contained 17 statements. Included in the survey were nine demographic questions. The introductory message to respondents assured that their responses, both for the statements and the demographic information, would remain anonymous (Appendix C).

Conclusions

Research questions 1, 9, 17, and 25 were analyzed using one-way analysis of variance (ANOVA). The dependent variable was the mean score of the four dimensions (student engagement, student-student interaction, faculty engagement, and academic dishonesty), and the grouping variable was the type of higher education institutions (2-year public community college, 4-year privates, and 4-year public). For research question 1, 9, 17, and 25, there was no significant difference in participants' mean scores on the student engagement, student-student interactions, faculty engagement, and academic dishonesty dimensions of the Perceptions of Online Learning Environment Inventory among faculty members and administrators by the type

of higher education institution (2-year public community college, 4-year privates, and 4-year public).

The results indicated that there was very little difference between the perceptions of faculty and administrators towards student engagement, student-student interactions, faculty engagement, and academic dishonesty dimensions in online learning environments based on the type of higher education institutions. The faculty members and administrators at each of the participating institutions offered several online courses and online degree programs. They all have similar awareness and perceptions of the various areas comprising online learning environments. This may be the reason for the absence of any significant difference in their perceptions in the four dimensions of this study. An analogous study conducted by Mitchell and Geva-May (2009) found similar results in their study.

Research questions 2, 10, 18, and 26 were analyzed using independent samples t-tests to compare the mean scores on the four dimensions between the administrators and the faculty members. For research questions 2, 10, 18, and 26 there was no significant difference in participants' mean scores on the student engagement, student-student interaction, faculty engagement, and academic dishonesty dimensions of the Perceptions of Online Learning Environment Inventory between administrators and faculty members. The perceptions of faculty members on student engagement, student-student interaction, faculty engagement, and academic dishonesty dimensions in online courses tended to be about the same as the perceptions of administrators working in higher education institutions. In contrary to this result, the results of a comparable study conducted by Mitchell and Geva-May (2009) revealed that faculty members have a higher degree of concern about online learning environments than administrators.

Research questions 3, 11, 19, and 27 were analyzed using Pearson product-moment correlation. Here the scores on the four dimensions were compared based on the years of work experience of the faculty members and administrators. For research questions 3, 11, 19, and 27, there was no significant relationship in participants' years of service and the scores on the student engagement, student-student interaction, faculty engagement, and academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory. In general, the results (seen in Table 10) suggest that years of work experience has no relationship with the perceptions of faculty members and administrators on student engagement, student-student interaction, faculty engagement, and academic dishonesty in online course.

This result may have occurred because a majority of the faculty members and administrators who participated in this study are similar in the number of years of work experience. Mitchell and Geva-May (2009) revealed years of experience in online instruction having no effect on the attitudes of faculty and administrators towards online learning environments. However, another study by Cardwell-Hampton (2008) found faculty members with 1-9 years or 10-19 years of work experience to have more positive perceptions of online instruction.

Table 10

Bivariate Correlation among the Variables (Years of Service).

Dimension		Years of Service
Student engagement	Pearson Correlation	.064
	Sig. (2-tailed)	.287
	N	275
Student-student interaction	Pearson Correlation	-.026
	Sig. (2-tailed)	.673
	N	266
Faculty engagement	Pearson Correlation	.088
	Sig. (2-tailed)	.895
	N	255
Academic dishonesty	Pearson Correlation	-.095
	Sig. (2-tailed)	.117
	N	275

Research questions 4, 12, 20, and 28 were analyzed using independent samples t-tests to compare the mean scores of the four dimensions between faculty members who teach primarily online and faculty members who teach primarily face-to-face courses. For research questions 4, 20, and 28 there was a significant difference in participants' mean scores on the student engagement, faculty engagement, and academic dishonesty dimensions and no significant difference (for research question 12) in the participants mean scores on the student-student interactions dimension of the Perceptions of Online Learning Environment Inventory between faculty members who teach primarily online and faculty members who teach primarily face-to-face. In general, the results indicated that the perceptions of faculty members teaching primarily online courses on the student engagement, faculty engagement, and academic dishonesty dimensions tended to be lower than the perceptions of faculty who teach mainly face-to-face courses.

This may have occurred because the faculty instructing face-to-face courses may have had different perceptions towards certain statements of the student-student interaction dimension of the survey. McQuiggan (2012) reported in a similar a study of teachers of both online and face-to-face classes that 75% of the teachers had a positive effect on their face-to-face instruction from their online instructional experience. The study reported the teachers having improvements in their ability to design courses and with their communication skills.

Research questions 5, 13, 21, and 29 were analyzed using one-way analysis of variance (ANOVA). The dependent variable comprised of the four dimensions (student engagement, student-student interaction, faculty engagement, and academic dishonesty), and the grouping variable was the four groups showing the percentage of online classes taught (25% or less, about 50%, about 75%, and 100%). For research questions 5, 13, and 21 there was no significant difference in participants' mean scores on the student engagement, student-student interaction, and academic dishonesty dimension. However, there was a significant difference in the participants mean scores on the academic dishonesty dimension of the Perceptions of Online Learning Environment Inventory between the four groups showing the percentage of online classes taught (25% or less, about 50%, about 75%, and 100%) (for research question 29). Group 1 (25% or less) had significantly lower mean score than the groups 2 (about 50%), 3 (about 75%), and 4(100%). An exhaustive amount of research was performed to search for other related studies. However, the researcher was unable to find similar studies in relation to the perceptions of faculty and administrators and the percentage of online courses taught by faculty.

Research questions 6, 14, 22, and 30 were analyzed using Pearson product-moment correlation. The scores of the four dimensions were compared based on the number of years teaching online courses in order to analyze and deduce the existence of the type of relationship.

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For research questions 6, 14, and 22 there was no significant relationship in participants' scores on the student engagement, student-student interaction, and faculty engagement dimensions. But a significant positive relationship was found for research question 30 (in the participants scores on the academic dishonesty dimension based on the number of years teaching online courses). This may be because the difference in experience and opinions of the faculty from teaching online courses on the various factors associated with academic dishonesty in the online classroom.

In general the results of this study (Table 11) show that the number of years teaching online courses have a relationship with the perceptions on the academic dishonesty dimension, and having no relationship with the perceptions of faculty members and administrators on student engagement, student-student interaction, and faculty engagement dimensions in online courses. The findings of a similar study by Ali et al. (2005) found that faculty members with online instructional experience identified themselves as advanced beginners or competent, while faculty with no online instructional experience self-identified themselves as novices or advanced beginners.

Table 11

Bivariate Correlation among the Variables (Number of Years Teaching Online Courses).

Dimensions		Number of Years Teaching Online
Student engagement	Pearson Correlation	-.158
	Sig. (2-tailed)	.055
	N	148
Student-student interaction	Pearson Correlation	-.010
	Sig. (2-tailed)	.904
	N	146
Faculty engagement	Pearson Correlation	.114
	Sig. (2-tailed)	.168
	N	147
Academic dishonesty	Pearson Correlation	.204
	Sig. (2-tailed)	.013
	N	149

Research questions 7, 15, 23, and 31 were analyzed using Pearson product-moment correlation. Here the scores of the four dimensions were compared based on the age of faculty members and administrators in order to analyze and deduce the existence of the type of relationship. For research questions 7, 15, 23, and 31 there was no significant relationship in participants' mean scores on the student engagement, student-student interaction, faculty engagement, and academic dishonesty dimensions of the Perceptions of Online Learning Environment Inventory based on the age of faculty members and administrators. In general the results (as seen in Table 12) suggest that the age of faculty and administrators has no relationship with their perceptions of student engagement, student-student interaction, faculty engagement, and academic dishonesty dimensions in online course. An exhaustive amount of research was performed to search for other related studies. However, the researcher was unable to find similar

studies in relation to the perceptions of faculty and administrators and the percentage of online

courses taught by faculty.

Table 12

Bivariate Correlation among the Variables (Age).

Dimensions		Age
Student engagement	Pearson Correlation	-.069
	Sig. (2-tailed)	.265
	N	265
Student-student interaction	Pearson Correlation	-.069
	Sig. (2-tailed)	.265
	N	265
Faculty engagement	Pearson Correlation	-.060
	Sig. (2-tailed)	.346
	N	245
Academic dishonesty	Pearson Correlation	-.055
	Sig. (2-tailed)	.374
	N	266

Research questions 8, 16, 24, and 32 were analyzed using independent samples *t*-test to

compare the mean scores of the four dimensions between males and females. The null hypothesis

for research question 8 was rejected and the null hypotheses for research questions 6, 24, and 32

were retained. Therefore, there was a significant difference in the participants' mean scores on

the student engagement dimension and no significant difference on the student-student

interaction, faculty engagement, and academic dishonesty dimensions of the Perceptions of

Online Learning Environment Inventory between males and females. The perceptions of male

faculty members and administrators on student engagement in online courses tended to differ

significantly and on the rest of the dimensions tended to be about the same as the perceptions of

female faculty members and administrators. Cardwell-Hampton (2008) uncovered the results conducted in relation to faculty members' perceptions of online instruction. The results showed that the female instructors displayed more positive attitude towards online instruction.

Recommendations for Practice

The following are recommendations for practice:

1. The similar perceptions of faculty members and administrators on the four dimensions of the survey related to online learning environments at the different higher education institutions may point to more opportunities for a variety of institutions to work together. Faculty and administrators working at the different institutions could collaborate on best practices that may strengthen the online learning environments through common developmental activities.

2. Faculty members teaching face-to-face course are recommended to participate in online courses. Administrators should take the initiative to point out the positives of participation to the faculty, as research points out online instruction could help improve the faculty members' ability to design courses, provide more ideas to improve communication between faculty and students, and encourage students to turn in more reflective assignments.

3. Faculty with advanced experience could act as mentors for the new faculty to help them gain more expertise with improving student engagement, student-student interactions, and faculty engagement in the online learning environments. Departments could focus on creating opportunities for seminars where experienced faculty with high pedagogical knowledge would take turns to train the other faculty members. Attending meetings and

seminars would also be an opportunity for administrators to stay current along with the faculty members, so that they can remain aware of current and future needs of online faculty as well as online students.

4. The significant difference in the academic dishonesty dimension between the faculty perceptions based on the number of years of teaching online displays the existence of differences in opinions toward academic dishonesty in the online courses. This opens up opportunities for new faculty and for more experienced faculty who teach online to share ideas and strategies to create stronger online learning environment with less possibilities for academic dishonesty.

5. Creating online seminar recordings would be a way for all faculty and administrators to share ideas for online learning environments.

Recommendations for Future Research

The following are recommended for further research:

1. Using a larger sample including more higher education institutions would provide a wider opportunity to study the perceptions of a larger number of faculty and administrations.

2. A quantitative study could be conducted on the perceptions of faculty and administrator on online education within the three different types (4-year private, 4-year public, and 2-year public community college) of higher education institutions.

3. A qualitative study could be conducted by future researchers. Interviewing students, faculty members, and administrators would be a good way to obtain more in-depth information regarding their perceptions of online education.

4. Future researchers could also consider conducting a comparative study by comparing the similarities and differences in the perceptions faculty and administrators over a particular time period.

5. A comparative study of the perceptions of online students and online faculty members would be an informative study for both faculty and administrators to understand what is working and what needs improvements to make online learning environments more efficient and effective.

6. Future researchers could add more dimensions to the instrument for more elaborate analysis. Examples of such dimensions could include faculty interaction with students, faculty-administrator interaction, faculty interests towards technology development activities, and faculty and administrator perceptions on mentorship in online education.

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APPENDICES

Appendix A

Permission to Conduct the Research

<u>ETSU IRB Final Approval Letter</u>

IRB APPROVAL -Initial Exempt

February 7, 2014

Sneha Abraham

RE: The Increasing Demands in Online Education: The Perceptions of Faculty Members and Administrators at a Four Year Public University, Four Year Private Colleges and a Two Year Community College

IRB#:
c1213.16e
ORSPA#:

On February 6, 2014, an exempt approval was granted in accordance with 45 CFR 46. 101(b)(2). It is understood this project will be conducted in full accordance with all applicable sections of the IRB Policies. No continuing review is required. The exempt approval will be reported to the convened board on the next agenda.

• xform New Protocol Submission; Survey Introduction Letter; Survey; References; Resume
Projects involving Mountain States Health Alliance must also be approved by MSHA following IRB approval prior to initiating the study.

Unanticipated Problems Involving Risks to Subjects or Others must be reported to the IRB (and VA R&D if applicable) within 10 working days.
Proposed changes in approved research cannot be initiated without IRB review and approval. The only exception to this rule is that a change can be made prior to IRB approval when necessary to eliminate apparent immediate hazards to the research subjects [21 CFR 56.108 (a)(4)]. In such a case, the IRB must be promptly informed of the change following its implementation (within 10 working days) on Form 109 (www.etsu.edu/irb). The IRB will review the change to determine that it is consistent with ensuring the subject's continued welfare.

Sincerely,
Chris Ayres, Chair

ETSU Campus IRB

Approval emails from Other Institutions:

Northeast State Community College

From: Church, Connie R <CRCHURCH@northeaststate.edu>
Date: Fri, Jan 24, 2014 at 5:32 PM
Subject: RE: IRB application - Sneha Abraham (ETSU)
To: Sneha Abraham <zsea10@goldmail.etsu.edu>
Cc: "Graybeal, Susan" <segraybeal@northeaststate.edu>

Good Afternoon Sneha,
Both Dr. Janice Gilliam, Northeast State President, and Dr. Allana Hamilton, Vice President for
Academic Affairs, have approved your survey request via email (see below).
Please provide us with a finalized copy of your ETSU IRB approval, prior to beginning the
survey.
Have a terrific week-end!
Smiles, Connie

Connie Church
Director of Research and External Reporting
Office of Institutional Effectiveness
Northeast State Community College
CRChurch@NortheastState.edu
Phone 423.323.3191 ext. 3478

From: Hamilton, Allana
Sent: Wednesday, January 22, 2014 6:53 PM
Subject: RE: IRB application - Sneha Abraham (ETSU)

I have reviewed and have no questions regarding the proposal. However, I would like for the
ETSU doctoral fellow to provide us a copy of the ETSU IRB approval prior to surveying
Northeast State faculty.
Lana

From: Gilliam Janice H.
Sent: Friday, January 24, 2014 4:14 PM
Cc: Jones, Megan A; Cox, Kathy L.; zsea10@goldmail.etsu.edu; Graybeal, Susan
Subject: RE: IRB application - Sneha Abraham (ETSU)
I approve.
Thanks

From: Young, Garland <RGYoung@milligan.edu>
Date: Mon, Jan 13, 2014 at 4:34 PM
Subject: RE: Survey for Doctoral dissertation
To: IRB <IRB@milligan.edu>, Sneha Abraham <zsea10@goldmail.etsu.edu>
Cc: Academic Committee <AcademicCommittee@milligan.edu>

Jeff and Sneha:
I approve the participation of our faculty in this study. I am copying Academic Committee on this so that they will know.
Thanks,
Garland
R. Garland Young
Vice President for Academic Affairs and Dean
Milligan College
P.O. Box 52
Milligan College, TN 37682
423-461-8720
rgyoung@milligan.edu

From: IRB
Sent: Monday, January 13, 2014 3:35 PM
To: Sneha Abraham
Cc: Young, Garland
Subject: RE: Survey for Doctoral dissertation
Hello Sneha,
I have reviewed your request and I have no problem with this survey being sent out to Milligan faculty community pending final approval from Dr. Garland Young, Vice President of Academic Affairs. I have included Dr. Young in this email so he is aware.
Sincerely,
Jeff Snodgrass
Chair, Institution Review Board
Milligan College

Tusculum College

From: Melanie Narkawicz <mnarkawicz@tusculum.edu>
Date: Sun, Jan 19, 2014 at 1:51 AM
Subject: RE: IRB application - Sneha Abraham (ETSU)
To: Sneha Abraham <zsea10@goldmail.etsu.edu>
Cc: Melinda Dukes <mdukes@tusculum.edu>

The Tusculum College IRB has approved your exempt request. Please let me know if you have
any questions or if there are any changes to your study.

Dr. Melanie Narkawicz
Professor of Research and
Director of Research for Graduate and Professional Studies/IRB Director
Tusculum College, P.O. Box 5004, 60 Shiloh Road, Greeneville, TN 37743
Telephone <u>888-488-7285, ext. 5606</u> -- OR -- 423-636-7300, ext. 5606
Email: <u>mnarkawicz@tusculum.edu</u> ~ Fax: 423-636-5087
Webpage: http://sites.google.com/site/drnarkawicz/

Carson-Newman University

From: **Greg Casalenuovo** <gcasalenuovo@cn.edu>
Date: Mon, Feb 3, 2014 at 1:43 PM
Subject: RE: IRB application - Sneha Abraham (ETSU)
To: Sneha Abraham <zsea10@goldmail.etsu.edu>

Sneha,

I got you voice mail – yes, the snow created a little challenge last week – you are approved to begin your study – if you study extends beyond this academic year, please resubmit for reapproval – best wishes in your research endeavors

In His service,

Gregory A. Casalenuovo, PhD, RN
Associate Professor, Nursing
Carson-Newman University
C-N Box 71883
Jefferson City, TN 37760

Office: Pedersen #1
Phones: (865) 471-3236, office; (865) 471-4574, fax

"Managers do things right, while leaders do the right thing(s)" - Warren Bennis

Mars Hill University

From: **irb** <irb@mhu.edu>
Date: Wednesday, February 5, 2014
Subject: Fwd: IRB application - Sneha Abraham (ETSU)
To: Sneha Abraham <zsea10@goldmail.etsu.edu>

Dear Ms. Abraham,
Your IRB proposal titled *"The Increasing Demands in Online Education: The Perceptions of Faculty Members and Administrators at a Four Year Public University, Four Year Private Colleges and a Two Year Community College"* has reviewed and the proposed data collection has been approved by the MHU IRB. You can now begin data collection on our campus.

Your project is approved for one calendar year. You should submit a report on your progress and a reapplication if your project continues beyond one year.

Please let us know if you have any questions or if the ETSU IRB needs any additional documentation from us.

Good luck with your data collection!

****

This message is sent on behalf of the 2013-2014 IRB Committee: Laura Adams (Chair), Ron Collins, Kathy Meacham, Matt Milnes, Deb Myers, Tony Smith, Jessica VanCleave, Laura Whitaker-Lea
All correspondance to the IRB should be sent to: irb@mhc.edu

Appendix B

Email Sent Requesting Participation with the Survey

Dear Faculty Members and Administrators:

I am a doctoral candidate currently working on my dissertation (The Increasing Demands in Online Education: The Perceptions of Faculty Members and Administrators at Two- and Four-Year Public and Private Colleges and Universities).

Please take a few minutes to participate in this electronic survey, which will take 5- 10 minutes of your time. Here is the link that will take you to the survey: https://www.surveymonkey.com/s/H5X59SG.

Please note that by completing this survey you are giving consent to participate in this study.

Participants must be adults over the age of 18. Faculty members participating in this survey must be full time faculty members. Participation in this survey is voluntary and you may discontinue participation at any point in the survey. Your responses will remain anonymous and will be stored in a safe and secure place.

Thank you very much for participating in this survey. If you have any questions please feel free to contact me at the email address or phone number listed below.

Sincerely

Sneha Abraham, Doctoral Candidate
ELPA, East Tennessee State University
Email: zsea10@goldmail.etsu.edu
Cell: 423-794-0682.

Dissertation Committee Chair:
Dr. James Lampley
Email: lampley@etsu.edu
Phone: 423-439-7619

ETSU IRB: ETSU Office for the Protection of Human Research Subjects,
            Ross Hall, Fourth Floor,
            Box 70565 Johnson City, TN 37614
            Phone: (423)439-6053
            Fax: (423)439-6060

Appendix C

Introduction to the Survey

Dear Faculty member and Administrator:

I am a Doctoral candidate currently working on my dissertation. The title of my dissertation is: The Increasing Demands in Online Education: The Perceptions of Faculty Members and Administrators at Two- and Four- Year Public and Private Colleges and Universities.

Thank you for taking the time to participate in this electronic survey, which is estimated to take 5-10 minutes of your time. Please note that by completing this survey you are giving consent to participate in this study. Participants must be adults over the age of 18. Faculty members participating in this survey must be full time faculty members.

This survey is conducted for research purposes as part of a dissertation in the Department of Educational Leadership and Policy Analysis at ETSU. This survey is about your perceptions of the growing trends in online education. The purpose of this study is to investigate the perception of faculty members and administrators of online learning environments compared to traditional face-to-face instruction by exploring the factors that impact online instruction. The questions are in relation to online learning environments: student engagement, student-student interactions, faculty engagements and academic dishonesty. The survey also contains a few demographic questions.

Participation in this survey is voluntary and you may discontinue participation at any point in the survey. Your responses will remain anonymous and will be stored in a safe and secure place.

Thank you very much for participating in this survey. If you have any questions please feel free to contact me at the email address or phone number listed below.

Sincerely

Sneha Abraham, Doctoral Candidate

ELPA, East Tennessee State University

Email: zsea10@goldmail.etsu.edu

Cell: 423-794-0682.

Dissertation Committee Chair:

Dr. James Lampley

Email: lampley@etsu.edu

Phone: 423-439-7619

ETSU IRB: ETSU Office for the Protection of Human Research Subjects,

Ross Hall, Fourth Floor,

Box 70565 Johnson City, TN 37614

Phone: (423)439-6053

Fax: (423)439-6060

Appendix D

Survey

➢ Please select the options that best describe you:

1. Type of higher education institution:

___4 year Private ___ 4 year Public ___Community College

2. What is you work status: ___Faculty member ___Administrator ___Both

3. If you are an administrator, please indicate your area.

___ Academic unit ___Auxiliary unit

4. **Years of work experience**: _____

5. Do you teach online? ___ Yes ___ No

6. If you teach online, what percentage of your classes are online.

___ 25% or less ___ About 50% ___About 75% ___ 100%

7. If you teach online how many years have you taught online? _____

8. Age: ____

9. Gender: ___M ___F

➢ Please respond to the following statements based on your perceptions of online education by

indicating your level of agreement or disagreement (Strongly Agree, Agree, Somewhat

Agree, Somewhat Disagree, Disagree, Strongly Disagree):

1. Students have more opportunity to submit well-written reflective assignments in an online

learning environment than through face-to-face courses.

2. Students have a greater role in the learning process in the online courses compared to the face-

to-face courses.

3. Online students expect quicker feedback than face-to-face students.

4. Students are more engaged with learning in the online classroom compared to the face-to-face classroom.

5. Online courses provide less variety for measuring student learning compared to face-to-face courses.

6. A sense of group exists among students in the online courses.

7. A basic introduction thread in the discussion board can help reduce anonymity among students in the online learning environment.

8. High student-instructor ratio negatively affects the student-student interaction levels in online courses.

9. High student-instructor ratio negatively affects the sense of community in online courses.

10. Fear of technology is a factor that creates reluctance in faculty members to teach online courses.

11. Faculty members' role has shifted from being instructors to facilitators of learning in online courses.

12. Teaching online gives me less professional satisfaction than face-to-face teaching.

13. Online courses requires more preparation time from faculty members than face-to-face classes.

14. Faculty members need to attend ongoing professional development activities to stay current with the technological advancements for effective online instruction.

15. There are more opportunities for academic dishonesty in online courses compared to face-to-face courses.

16. I think there is more academic dishonesty in online courses than face-to-face courses.

17. Checking for academic dishonesty is more difficult in online courses compared to face-to-face courses.

VITA

SNEHA ELIZABETH ABRAHAM

Education: Ed.D. Educational Leadership, East Tennessee State University, Johnson

City, Tennessee, 2014

M.S. Biological Sciences, East Tennessee State University, Johnson City,

Tennessee, 2010

M.Ed. Secondary Education, Milligan College, Milligan, Tennessee, 2007

B.S. Biology, Milligan College, Milligan, Tennessee, 2006

Professional Experience:

Doctoral Fellow, East Tennessee State University, Johnson City,

Tennessee, 2012-2014

Graduate Assistant, East Tennessee State University, Johnson City,

Tennessee, 2007-2012

Conference Presentations:

Lampley, J., Good, D. W., Abraham, S., & Sharma, P. (2012, November).

Expectations and experiences of doctoral students enrolled in a totally

online Ed.D. program. Mid-South Educational Research Association.

Lexington, KY.

Honors and Awards:

Educational Leadership Lighthouse Award – Educational Leadership and

Policy Analysis – East Tennessee State University - 2012

Certificate of Leadership - Educational Leadership and Policy Analysis –

East Tennessee State University - 2012

Educational Leadership Association - Educational Leadership and Policy

Analysis – East Tennessee State University – 2012-2014

Golden Key International Honor Society – 2011-2014

Kappa Delta Pi – International Honor Society in Education – 2010-2014

National Education Association – 2007

Tennessee Education Association – 2007