ONLINE EDUCATION, EMOTIONAL INTELLIGENCE, 
AND INTERPERSONAL SKILLS FOR THE 
21ST CENTURY WORKFORCE

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ABSTRACT

The purpose of this descriptive, cross-sectional, quantitative study was to compare the interpersonal abilities of online students to traditional students by evaluating their Emotional Intelligence (EI) through the Situational Test of Emotional Management (STEM). The study also sought to determine if there is a relationship between various demographic data and number of online courses completed and EI abilities of online students.

The data collection occurred by utilizing a situational judgment test known as the Situational Test for Emotional Management (STEM) with additional questions added for the collection of demographic data. The sample for this study included 865 students comprised of 765 undergraduate business majors and 91 undergraduate business minors.

While the study found no significant difference existed in the EI scores of students in the online and traditional environment, one of the most interesting findings to emerge from the data was the significant difference of EI scores surrounding the number of online courses completed. Students who completed at least one online course scored significantly higher on the STEM survey than their counterparts who had not completed any online courses. This finding implies that students might benefit from the time, training, experience, and practice of interpersonal skills in an online environment. Furthermore, the results demonstrated a significant difference in the emotional intelligence of students on the basis of gender. Females notably outscored males on the STEM survey.
DEDICATION

This dissertation is dedicated to my children, Ryan and Kyler. There are times in my life when I think I cannot possibly love you more, and then I do. You will always be my greatest accomplishment. As your mother, it is my job to teach you about life; however, it is you who have taught me what life is all about. Remember to dream big, love deeply, laugh often, be slow to anger, quick to forgive, and always have faith. Finally, be determined in every way, even when you don’t feel like it.

“Trust in the Lord with all your heart; and lean not on your own understanding. In all your ways acknowledge Him and He will make your path straight.” Proverbs 3:5-6
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“A good dissertation is a done dissertation.” - Ancient Grad Student Proverb

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CHAPTER I:
INTRODUCTION

Introduction

As the trend of online education expands, professors have questioned whether an online education provides students with the proper development of interpersonal relationships and social skills (Allen & Seaman, 2011). At a time when education is vital to economic success, there is growing evidence of a skills gap which suggests that young adults lack interpersonal skills needed for success in today’s marketplace (Glenn, 2003; Harvard, 2011; James & James, 2004; Perreault, 2004; Sharma, 2009; Wilhelm, 2004). With such a tremendous use of online resources for communicating in not only social settings, but also in the educational realm, one might question whether interpersonal skills gaps are more likely to occur with online college students rather than those participating in the traditional college experience. Students completing courses online are not studying in a traditional classroom and might miss face-to-face (FtF) time with other students. This experience might deprive students of networking opportunities as well as basic social interactions.

Research has shown that employers want new hires to possess strong interpersonal skills (Glenn, 2003; Harvard, 2011; James & James, 2004; Mitchell, Skinner & White, 2010; Perreault, 2004; Sharma, 2009; Wilhelm, 2004). “Interpersonal skills are tied to social conscientiousness and interpersonal relationships and measure the extent to which users know how to recognize the emotions and feelings of others, and their ability to establish and maintain cooperative and satisfying relationships” (Casale, Tella & Fioravanti, 2013, p. 525). Emotion is defined as, “a
conscious mental reaction (as anger or fear) subjectively experienced as strong feeling usually
directed toward a specific object and typically accompanied by physiological and behavioral
changes in the body” (Merriam-Webster, 2012, ¶1). It has previously been identified as a critical
component of social interaction within the field of communication (Andersen & Guerrero, 1998;
Burleson & Planalp, 2000; Planalp & Fitness, 1999). Within the academic settings, emotions
help shape student engagement and learning (Linnenbrink-Garcia & Pekrun, 2011). By
understanding and managing emotions, individuals are able to regulate personal intellectual
growth and social relational growth (Mayer & Salovey, 1997).

Emotional intelligence (EI) is a salient theme in a diverse array of circles including the
scientific, education, and business realms that addresses elements of interpersonal skills. The
term is defined by Mayer and Salovey (1990) as “the subset of social intelligence that involves
the ability to monitor one's own and others' feelings and emotions, to discriminate among them
and to use this information to guide one's thinking and actions” (p. 185). Later, the definition
was revised as follows:

Emotional intelligence involves the ability to perceive accurately, appraise and express
emotion; the ability to access and/or generate feelings when they facilitate thought; the
ability to understand emotion and emotional knowledge, and the ability to regulate
emotions to promote emotional and intellectual growth. (Mayer & Salovey, 1997, p. 10)

Daniel Goldman furthered momentum related to this concept upon publishing a best
seller, Emotional Intelligence, in which he argued that EI was sometimes more significant than
Intelligence Quotients (IQ) and strongly linked to job performance (Goleman, 1995). Media
outlets such as Time and USA Today Weekend Magazine bestowed EI stories with publications
and pronounced it to be a strong predictor of school, work performance and life success. EI is
the ability to acquire and apply knowledge related to one’s emotions and the emotions of others
utilizing interpersonal skills and social interactions (Sen, 2008).
Statement of the Problem

Academic leaders at institutions with online offerings currently hold a more favorable opinion of the learning outcomes of online education than academic leaders at institutions that do not currently provide online educational opportunities (Allen & Seaman, 2011). Furthermore, over two-thirds of post-secondary professors rate the online educational environment to be either the same or superior to the traditional face-to-face setting. While many of the academic leaders perceive online education to be at least as good as face-to-face instruction, one dimension falls short of this attitude. Interpersonal skills are perceived to be inferior in the online atmosphere when compared with the FtF environment (Allen & Seaman, 2011). With the understanding that colleges must better prepare tomorrow’s workforce, it is essential to explore whether or not online education diminishes students’ interpersonal skills. However, there is no measure to assess these skills within the online environment (Loader, 2007).

Interpersonal skills research rarely occurs despite its significance to the individual’s life as it is difficult to distinguish interpersonal skills from other cognitive, psychomotor, or affective components like personalities (Doo, 2006). Additionally, some individuals are likely to presume that interpersonal skills will not increase through educational opportunities. Personality and interpersonal or social skills are related, yet, personality is not easily changed while interpersonal skills can be developed and improved upon through training (Ferris, Whitt, & Hochwarter, 2001; Geher, 2004). Interpersonal skills are one of the factors present in the analyses of the social aspect of learning, and are closely related to communication skills. They are integral to interpersonal interaction and precede the emergence of social presence. In 1999, Gardner explained that “interpersonal intelligence denotes a person’s capacity to understand the intentions, motivations, and desires of other people and, consequently, to work effectively with
others” (p. 43). Improving interpersonal skills/intelligence helps enrich individuals’ relationships, cope better at work and in social situations, and especially when dealing with difficult or challenging individuals. Some faculty question whether an online education provides students with the proper development of interpersonal relationships and social skills (Allen & Seaman, 2011). Individuals who have a self-perception of social incompetence demonstrate a preference for online social interaction (POSI) (Casale, Tella & Fioravanti, 2012). POSI is defined as, “a cognitive individual difference construct characterized by beliefs that one is safer, more efficacious, more confident, and more comfortable within online interpersonal interactions and relationships then with traditional FtF social activities” (Caplan, 2003, p. 629). One research study’s results illustrated, “Self-reported emotional intelligence (both Intrapersonal and Interpersonal component) is negatively associated with the preference for online social interaction” (Casale, Tella, & Fioravanti, 2013). Turkle (2011) described today’s connective technologies as a means to promote always being elsewhere emotionally and socially. Online interpersonal interactions offer the perception of decreased social threats and increase the tendency to escape from FtF interactions (Amichai-Hamburger & Furnham, 2007).

Graduates must display foresight in navigating a rapidly shifting economic landscape. They will need to reassess the skills they need and quickly put together the right resources to develop and update skill sets (Glenn, 2003; Harvard, 2011; James & James, 2004; League for Innovation in the Community College, 1995; Mitchell, Skinner & White, 2010; Perreault, 2004; Sharma, 2009; Wilhelm, 2004). The career-minded graduate is one who can adapt, manage stress, incorporate teamwork, and help others. Yet, a 2010 University of Michigan study collecting data from fourteen thousand college students over the past thirty years, from 1979 through 2009, has shown that over the past nine years, young people have demonstrated a
dramatic decline in interest in other people (University of Michigan, 2010). Additionally, the report suggested that college students do not understand the value of viewing a situation from another person’s perspective.

Individuals with good interpersonal skills are more likely to improve their ability to determine appropriate self-behavior, cope with undesirable behavior, absorb stress, deal with ambiguity, structure social interaction, share responsibility, and interact more easily with others (Bar-On, 2005). An individual’s ability to be a team player, to collaborate with individuals from different cultures and backgrounds, to interact with diverse personalities, and to work on projects with strict deadlines is required in the marketplace. EI has been found to gauge the skills necessary to safeguard interpersonal relationships as they are related to social adaptation within the environment (Bar-On, 2005). Furthermore, EI predicts positive relations with others and is negatively associated with interpersonal problems (Ghiabi & Ali Besharat, 2011).

**Purpose of the Study**

The purpose of this study was to compare the interpersonal abilities of online students to traditional students by evaluating their EI through the Situational Test of Emotional Management (STEM). The study sought to determine if there is a relationship between the number of online courses completed and EI abilities of students. Additionally, the study examined demographic data such as age, gender and classification for any relationships associated with EI abilities of students. Finally, the study evaluated whether a relationship exists between teamwork components of courses and students’ EI abilities.

**Significance of the Study**

Interpersonal skills research rarely occurs; as such, this study was unique in that it examined whether or not there is a relationship between online education and interpersonal skills.
of students. Pedagogical practices associated with interpersonal skills and online education could be improved upon to help individuals cultivate relationships, and cope better at work and in social situations based on the results of this study. Additionally, this research endeavor has the potential to add to scholarly literature as it is the first in a new line of studies.

**Research Questions**

There are several research questions addressed within this study:

1) Is there a significant difference in the emotional intelligence of online students and traditional students;

2) Is there a significant difference in the emotional intelligence of students based on the number of online courses completed;

3) Is there a significant difference in the emotional intelligence of students on the basis of age;

4) Is there a significant difference in the emotional intelligence of students on the basis of gender;

5) Is there a significant difference between EI abilities of students based on student classifications;

6) Is there a significant difference in the EI abilities of students who participate in course teamwork activities and those who do not; and

7) Is there a significant difference in the EI abilities of students among the four departments within the college of business?
Theoretical Framework

The concept of EI began with the works of Thorndike (1920) in the form of “social intelligence” and the ability to get along with others. Wechsler (1935) furthered suggested that affective components of intelligence were likely to life success. Maslow (1959) described the ability of people to build emotional strength. In 1975, Gardner introduced the concept of multiple intelligences and Wayne Payne introduced the actual term EI in his doctoral dissertation in 1985. One of the most significant moments in EI occurred in 1990 with the work of Mayer and Salovey. However, it was the work of Daniel Goldman in 1995 that popularized the overall concept of EI.

While there are a variety of constructs associated with models of EI, this research will follow the theoretical framework of the Ability Model of EI as developed by Mayer, Salovey and Caruso that demonstrates an individual’s ability to reason with and about emotions (2004). EI is defined by Salovey and Mayer (1997) as,

The ability to perceive accurately, appraise and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge, and the ability to regulate emotions to promote emotional and intellectual growth. (p. 10)

They identified EI as a form of pure intelligence or cognitive ability. Their theory combines elements from the fields of intelligence and emotion. Emotions serve as signals that express reliable and palpable meanings about relationships as many emotions are universal. Intelligence incorporates the ability to carry out abstract reasoning (Mayer & Salovey, 1990; Mayer, Salovey & Caruso, 2002).

The Ability Model of EI as developed by Mayer, Salovey, and Caruso demonstrates an individual’s ability to reason with and about emotions (2004). The Ability Model is broken down into two areas of Experiential and Strategic Emotional Intelligence. Experiential EI
provides information on the ability to perceive emotional information, relate it to other sensations and then use EI to facilitate thought. Strategic EI relates to the ability to understand emotional information and use it strategically for planning and self-management. These two areas are comprised of the four branches which incorporate the ability to a) perceive emotion; b) use emotion to facilitate thought; c) understand emotions; and d) manage emotion (Mayer, Salovey & Caruso, 2004) (see Figure 1).

Figure 1. The Ability Model of Emotional Intelligence (Rossen, Kranzler, Algina, 2008).

The branches are listed in succession from perception to management and represent the degree to which the ability is intermingled within one’s personality (Mayer, 1998, 2001). The four branches of their model are

…arranged from more basic psychological processes to higher, more psychologically integrated processes. For example, the lowest branch concerns the (relatively) simple abilities of perceiving and expressing emotion; in contrast, the highest level branch concerns the conscious, reflective regulation of emotion. (Mayer & Salovey, 1997, p. 36)

The areas associated with perceiving emotion and using emotion to facilitate thought are discrete areas of information processing that are bound within the emotional system. The first step in understanding emotions is to accurately perceive them. In many situations this incorporates the use of body language, facial expressions, and intonation that are absent within
the online environment. These components are clues and insights into the emotional outlook of others. Pentland (2008) has suggested that our communication technologies treat people like, “cogs in an information-processing machine” rather than as humans (p. 96). Perceiving emotions relies on the ability to correctly identify the feelings of others. One must be aware of their emotions to accurately evaluate their surroundings, which is also a key component of working well with others (Mayer & Salovey, 1997; Mayer, Salovey & Caruso, 2004). Using emotions to facilitate thought focuses on the concept that individual emotions affect thought. As such, individuals should link emotions and thinking for creative ideas, planning and interpersonal relationships (Mayer & Salovey, 1997; Mayer, Salovey & Caruso, 2004). Reasoning with emotions through the facilitation of thought helps individuals prioritize and react effectively to others.

Area three, understanding emotions, reflects the capacity to analyze emotions, appreciate their probable trends over time, and understand their outcomes. Emotional understanding is insight to the self and others and requires emotional knowledge. It is this knowledge that assists folks in understanding others better (Mayer & Salovey, 1997; Mayer, Salovey & Caruso, 2004). The emotions we perceive can carry a wide variety of meanings, if someone is expressing frustration, the observer must interpret the cause of their irritation and what it might mean. Insights in the self and others require emotional knowledge that helps one understand people better.

Finally, managing emotions is the ability to manage emotions in context of individual goals, self-knowledge, and social awareness. Regulating emotions, responding appropriately, and responding to the emotions of others are all key ingredients of emotional management. To be emotionally intelligent, individuals must be aware of their emotions and then use them to solve
problems for more positive outcomes (Mayer & Salovey, 1997; Mayer, Salovey & Caruso, 2004).

Managing emotions is area four. The ability to manage emotions is a key component of EI. Regulating emotions, replying appropriately and responding to the emotions of others are all important aspects of emotional management and effective interpersonal skills. While this model incorporates two areas and four branches, this study will focus on the area of Strategic EI and focus specifically on the fourth branch of managing emotions.

Assumptions of the Study

Assumptions associated within this study are discussed within this portion of the paper. The researcher assumed that participants answered the situational judgment test with sincerity. It was also assumed that participants answered the situational judgment test with honesty.

Limitations of the Study

There were several limitations for consideration in association with this study. The initial research occurred within one college at one regional university within the southeastern United States. Additionally, data were collected from students only. Therefore generalizations about the results of this study are only be referenced at the student level of this university. Since the research was conducted within only one college of the university the sample size associated with the study was also a limitation. Furthermore, the sample logic relied upon self-selection to participate by the student, which might potentially bias the sample. Likewise, all demographic data reported within this study were self-reported. The study did not follow an experimental design, and therefore, cannot control for extraneous issues surrounding the participants. Additionally, the underclassmen (freshmen and sophomores) are underrepresented in comparison to the upperclassmen (juniors and seniors) in this study due to admissions requirements of the
business school. Within the college many faculty taught both online and through traditional means while others only taught in the traditional format. Another limitation was the variation of pedagogical practices with individual professors, resulting in a variation of classroom experiences from the students’ perspective. Additionally, some departments within the college studied have a heavier online presence than their counterparts.

**Operational Definition of Terms**

For the purposes of the study, the following operational terms are defined below.

Emotion is “a conscious mental reaction (as anger or fear) subjectively experienced as strong feeling usually directed toward a specific object and typically accompanied by physiological and behavioral changes in the body” (Merriam-Webster, 2012, ¶1).

Emotional intelligence is

…the ability to perceive accurately, appraise and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge, and the ability to regulate emotions to promote emotional and intellectual growth. (Mayer & Salovey, 1997, p. 10)

Interpersonal skills are a measure of how proficient one is at interacting with others. Some examples of interpersonal skills include but are not limited to a) comprehending what others say; b) voicing your thoughts effectively; c) giving and receiving constructive criticism for others; d) being influential to others; e) initiating proper conflict resolution; f) working with others; and g) changing pace when unproductiveness occurs (Pennsylvania Department of Education, 2012).

Online courses refer to classes in which interaction may be synchronous (facilitated in real time) or asynchronous (self-paced) through web-based technologies. Students are not required to appear in a classroom at scheduled times for lectures or other teaching centered
activities. However, students may be required to sit for proctored exams through web-based technologies or on-campus proctors.

Traditional or face-to-face courses require students to appear in classrooms at scheduled times for lectures or other teaching centered activities. These courses may or may not include enhanced teaching and learning components via web-based technologies. Any technological enhancements are at the discretion of the individual professor.

Traditional and non-traditional students refer to the age of the individual student. According to the National Center for Education Statistics, age is the most frequent defining characteristic of the non-traditional population as follows:

Most often age (especially being over the age of 24) has been the defining characteristic for this population. Age acts as a surrogate variable that captures a large, heterogeneous population of adult students who often have family and work responsibilities as well as other life circumstances that can interfere with successful completion of educational objectives. Other variables typically used to characterize nontraditional students are associated with their background (race and gender), residence (not on campus), and level of employment (especially working fulltime). For this study, non-traditional students will be identified by age alone. (U. S. Department of Education Institute of Education Sciences National Center for Education Statistics, 2013)

Non-traditional students are those who are twenty-five years of age and older. Traditional students are those under the age of 24.

Student classifications fall into four categories: a) freshmen; b) sophomores; c) juniors; and d) seniors. To move from one classification to another, students must successfully complete a specified set of course hours. Freshmen students are those who have completed between zero and 31 hours of coursework. Students completing 32-63 hours of course work are identified as sophomores. Students who have finalized between 64 and 95 hours are juniors, while seniors have successfully fulfilled 96 or more hours of college credit.
CHAPTER II:

REVIEW OF LITERATURE

Introduction

Today’s employers do not have confidence in the abilities of the 21st century college graduates. In order for the U.S. to compete in a global economy, college graduates must be prepared for the 21st century workplace. The future of American business competitiveness is directly tied to the quality and skills of the current and incoming workforce; in fact, one survey reports that 97% of business leaders consider workforce readiness of new hires a critical business imperative (Corporate Voices for Working Families, 2010). Yet, within the United States, employers are complaining that today’s college graduates are not equipped with the necessary interpersonal skills they need to succeed (Glenn, 2003; Harvard, 2011; James & James, 2004; Perreault, 2004; Sharma, 2009; Wilhelm, 2004).

Interpersonal skills measure how proficient one is at interacting with others. Some examples of interpersonal skills include but are not limited to a) comprehending what others say; b) voicing your thoughts effectively; c) giving and receiving constructive criticism for others; d) being influential to others; e) initiating proper conflict resolution; f) working with others; and g) changing pace when unproductiveness occurs (Pennsylvania Department of Education, 2012). These skill sets are sometimes referred to as “soft skills,” “life skills,” “non-cognitive skills,” and “21st century skills.” Regardless of the terminology used, students who develop these competencies will be at an even greater advantage in work and life (Huffcutt, Conway, Roth & Stone, 2001; Klein, DeRouin & Salas, 2006). Howard Gardner’s (1983) Theory of Multiple
Intelligences refers to interpersonal intelligence as a person's ability to interact with and understand other people and social situations. According to Perreault (2004), interpersonal proficiencies are identified as character traits and the echelon of commitment that an individual possesses which distinguishes him or her from others with similar skill sets and experience. Additionally, these “soft skills" portray a set of abilities or talents that an individual brings to the workplace such as team skills, communication skills, leadership skills, customer service skills, and problem solving skills (James & James, 2004).

**Marketplace Needs**

A Woods-Bagot (2011) Research Study of 500 elite business executives found that 40% of Chief Executive Officers (CEO), Chief Financial Officers (CFO), and Chief Operating Officers (COO), known as the C-level or C-suite executives, consider college graduates completely unprepared for the workplace. Business elites are defined as decision-makers who a) hold the title of Principal, CEO, CFO, COO, Managing Director, Vice President (79%), or senior level employees who ranked in the top 25% of company hierarchy (21%); b) work at companies with 100 or more employees (one-quarter (24%) work at companies with more than 10,000 employees); c) work at companies where at least 25% of the workforce was comprised of salaried employees; d) have decision-making authority when it comes to things like company strategy, personnel oversight; e) earn upwards of $100,000 annually; and f) are at least 35 years of age (Woods-Bagot, 2011). Additionally, the study found that approximately 47% of the C-suite executives deem that less than one fourth of college graduates vying for positions within their companies encompass the essential skills to advance past entry level positions (Woods-Bagot, 2011).
According to the National Business Education Association (NBEA), the shortage of skills falls within the emotional-social realm of human relations (Policies Commission for Business and Economic Education [PCBEE], 2000). In a 2004 survey from the Information Technology Association of America (ITAA), interpersonal skills were the highest rated attribute in a potential employee.

Students can no longer expect to obtain jobs where simple repetition breeds success. Instead, they must be able to communicate, share and use information to solve complex problems; and adapt and innovate in response to new demands and constantly changing circumstances (Pennsylvania Department of Education, 2012). Jobs that existed ten years ago do not exist today; jobs that exist today did not exist ten years ago; and there will be jobs in the future that have not been invented yet. In fact, the top ten jobs in 2012 did not exist in 2004 (Fisch, McLeod, Brenman & Lednicky, 2012).

**Interpersonal Skills**

Interpersonal skills have become extremely important in all types of occupations. In fact, these skills are so important that employers identify them as “the number one differentiator” for job applicants in all types of industries (Sutton, 2002). Hiring individuals who possess interpersonal skills is instrumental for high-performing organizations to retain a competitive edge (Glenn, 2003). Additionally, employers rate soft skills highest in importance for entry-level success in the workplace (Wilhelm, 2004).

According to North Carolina State University’s Student Health Center (2012), “People learn interpersonal skills by interacting with family members, going to school, and socializing with their peers. Healthy interpersonal skills reduce stress, resolve conflict, improve communication, enhance intimacy, increase understanding, and promote joy” (¶ 1). However,
the developments of the Internet and Web 2.0 technologies have implications that challenge, both locally and globally, this understanding of citizenship and engagement (Loader, 2007).

To effectively utilize interpersonal skills one most often must participate in direct involvement with others, whether in group projects, schools, or within the larger community. Interpersonal skills are stimulated by dialog, regarding others’ opinions and preferences, and reading people. Concerns have been raised about the importance of interacting with others to gain social competence as individuals who form “electronic friendships” with computers instead of social relationships might be hindered in developing their interpersonal skills (Turkle, 2011). Furthermore, computers are often used in solitude, robbing individuals of time for other social activities and interfering with the development and maintenance of social relationships (Turkle, 2011). According to the video, Did You Know, one in eight marriages during 2012 were with couples who met online; Facebook has 845 million active users; there are 50 million tweets daily; and the number of text messages sent and received everyday exceeds the total population of the planet (Fisch et al., 2012).

**Emotional Intelligence**

“Emotions are brought into play most often by the actions of others, and, once aroused, emotions influence the course of interpersonal transactions” (Ekman & Davidson, 1994, p. 139). They have strong effects on subsequent behavior by influencing behavioral tendencies and their motivational underpinnings (Scherer, 2005). Emotions also play an important role in the coordination of social interactions and relationships (Keltner & Haidt, 2001) and serve important communicative functions (Elfenbein, Foo, White, Tan, & Aik, 2007) by providing information about thoughts and intentions and the probable behavior of interaction partners. To benefit from
this information, emotions have to be processed as optimally as possible (Mayer & Salovey, 1997).

**Trait vs. Ability Emotional Intelligence**

The two types of EI are conceptually distinctive based on measurement methods used to operationalize the constructs (Petrides & Furnham, 2001). Cognitive-Emotional Ability also known as Ability EI involves the actual ability to perceive, process and utilize affect-laden information. This construct refers to the field of cognitive ability and should be gauged utilizing maximum-performance tests (Petrides & Furnham, 2001; Petrides, Perez-Gonzalez & Furnham, 2007). Trait EI also known as emotional self-efficacy relates to self-perceptions and dispositions. This construct is measured by self-report questionnaires and is based primarily on one’s personality. Ability and trait EI are two different constructs that utilize different construct measurements (Copestake, Gray & Snowden, 2013; Petrides & Furnham, 2001; Petrides, Perez-Gonzalez & Furnham, 2007). Several studies have found non-significant or low correlations between trait and ability EI. These results support that the two types are conceptually dissimilar (Bracket, Rivers Shifffman, Lerner & Salovey, 2006; Engelberg & Sjoberg, 2004; O’Conner & Little, 2003; Warwick & Nettelbeck, 2004). However, there are also a number of researchers who believe the two models of trait and ability can coexist (Bar-On, 1995; Goleman, 1995; Tett, Fox & Wang, 2005). Other researchers want to maintain the differences (Mayer et al., 2008).

**Models of Emotional Intelligence**

There are three competing models of EI that utilize different approaches and measurements found in the literature and scholarly research today. Each of these models conceptualized EI in one of two perspectives: ability or mixed model. Ability models focus on EI as a pure form of mental intelligence (Mayer, 1999). Mixed models, on the other hand, utilize
both mental ability and personality traits (Bar-On, 2002). To date, the literature proposes one ability model of EI by Mayer and Salovey and two mixed models of EI as suggested by Reuven Bar-On and Daniel Goleman (Bar-On, 2002; Goldman, 2001).

**Salovey, Mayer, and Caruso’s Model of Emotional Intelligence.** EI is defined by Salovey and Mayer (1997) as

> The ability to perceive accurately, appraise and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge, and the ability to regulate emotions to promote emotional and intellectual growth. (p. 10)

They identified EI as a form of pure intelligence or cognitive ability. Their theory combines elements from the fields of intelligence and emotion. Emotions serve as signals that express reliable and palpable meanings about relationships as many emotions are universal. Intelligence incorporates the ability to carry out abstract reasoning (Mayer & Salovey, 1990; Mayer, Salovey & Caruso, 2002).

The Ability Model of EI as developed by Mayer, Salovey, and Caruso (2004) demonstrates an individual’s ability to reason with and about emotions. The Ability Model is broken down into two areas of experiential and strategic emotional intelligence. Experiential EI provides information on the ability to perceive emotional information, relate it to other sensations and then use EI to facilitate thought. Strategic EI relates to the ability to understand emotional information and use it strategically for planning and self-management. These two areas are comprised of the four branches which incorporate the ability to a) perceive emotion, b) use emotion to facilitate thought, c) understand emotions, and d) manage emotion (Mayer, Salovey, & Caruso, 2004). See Figure 1.

These four branches are listed in succession from perception to management and represent the degree to which the ability is more complex (Mayer, 1998, 2001) (see Figure 2).
The four branches of their model are

…arranged from more basic psychological processes to higher, more psychologically integrated processes. For example, the lowest branch concerns the (relatively) simple abilities of perceiving and expressing emotion; in contrast, the highest level branch concerns the conscious, reflective regulation of emotion. (Salovey & Mayer, 1997, p. 36)

Figure 2. The Hierarchical Model of Emotional Intelligence (Wiegand, 2007).

The areas associated with perceiving emotion and using emotion to facilitate thought are discrete areas of information processing that are bound within the emotional system. The first step in understanding emotions is to accurately perceive them. In many situations this incorporates the use of body language, facial expressions and intonation that are absent within the online environment. These components are clues and insights into the emotional outlook of others. Pentland (2008) suggested that our communication technologies treat people like, “cogs
in an information-processing machine” rather than as humans (p. 96). Perceiving emotions relies on the ability to correctly identify the feelings of others. Individuals must be aware of their emotions to accurately evaluate their surroundings that is also a key component of working well with others (Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2004). Using emotions to facilitate thought focuses on the concept that individual emotions affect thought. As such, individuals should link emotions and thinking for creative ideas, planning and interpersonal relationships. Reasoning with emotions through the facilitation of thought helps individuals prioritize and react effectively to others (Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2004).

Area three, understanding emotions, reflects the capacity to analyze emotions, appreciate their probable trends overtime, and understand their outcomes. Emotional understanding is insight to the self and others and requires emotional knowledge. It is this knowledge that assists folks in understanding others better (Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2004). The emotions one perceives can carry a wide variety of meanings, if someone is expressing frustration, the observer must interpret the cause of their irritation and what it might mean. Insights in the self and others require emotional knowledge that helps one understand people better.

Finally, managing emotions is the ability to manage emotions in the context of individual goals, self-knowledge and social awareness. Regulating emotions, responding appropriately and responding to the emotions of others are all key ingredients of emotional management. To be emotionally intelligent, individuals must be aware of their emotions and then use them to solve problems for more positive outcomes (Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2004). The ability to manage emotions is a key component of EI. Regulating emotions, replying
appropriately, and responding to the emotions of others are all important aspects of emotional management and effective interpersonal skills.

The current measure of Mayer and Salovey’s ability model of EI is the Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT V2.0). The test was designed for individuals aged 17 or older. The initial sample for normative data was collected from 5,000 participants. Reliability scores for the MSCEIT V2.0 are $r = .91$ for the full scale expert scoring, and $r = .93$ for consensus scoring (Mayer, Salovey, & Caruso, 2004). Overall full-scale reliability is .91 with experiential reliability of .91, strategic reliability of .85 and branch score reliabilities ranging from .74 to .89 (Mayer, 2002). Face validity was excellent for the MSCEIT V1.1. However, the data for V2.0 has not been made publically available (Mayer et al., 2002).

Discriminant validity correlations were made between the MSCEIT and Bar-On Eq-I tests as well as other personality tests with all being less than .25, suggesting the tests are unrelated to minimally unrelated (Mayer et al., 2002). The MSCEIT V2.0 contains 141-items which utilize a Likert scale and takes approximately 30-45 minutes to complete. It produces 15 total scores: a) an overall score, b) two area scores, c) four branch scores and d) eight task scores (Mayer et al. 2002). This test is proprietary in nature and offered by the Multi-Health Systems (MHS) Corporation. The cost associated with completing the MSCEIT test is approximately $110 (Mayer, Salovey, & Caruso, 2013).

From an organizational perspective, human resources areas such as hiring, promotion, alignment, and succession planning benefit from employees completing the MSCEIT V2.0 test as it provides direct, objective measures of actual EI functioning. It has been suggested the MSCEIT V2.0 test renders employee recruitment and selection more efficient and reliable, increases the efficacy of leadership development and other types of training, as well as
improving upon group processes (Multi-Health Systems Corporation, 2011). The MSCEIT V2.0 accelerates the coaching process by identifying needs early. As an individual, the MSCEIT 2.0 promotes self awareness, places current performance levels into perspective, and offers a practical guide for improvement (Mayer, Salovey, & Caruso, 2013).

Assessment results are presented in a comprehensive Personal Summary Report that offers graphical representations of the 15 separate EI scores as well as a detailed explanation of the scores’ meaning. The test participants are asked to identify emotions expressed by a face or in design, generate a mood and solve problems with the mood, define the causes of different emotions, understand the progression of emotions and determine how to best include emotion in situations which involve themselves and others. The abilities are measured through specific tasks. For example, perception of emotion is measured by rating the extent and type of emotion expressed on different types of pictures. Facilitation of thought is measured by asking people to draw parallels between emotion and physical sensations (light, temperature, and color) as well as emotional thoughts. Understanding is measured by asking the subject to explain how emotions can blend from other emotions (i.e., how anger evolves into rage). Regulation or management of emotions is measured by having people choose effective self and other management techniques (Bracket & Mayer, 2003). Testing occurs through both the traditional paper and pencil test and online testing. In the online version, scoring is automatic. In the traditional paper and pencil test, the score sheet is mailed or faxed to the test publisher for scoring purposes.

The MSCEIT scores are reported like traditional intelligence scales so that the average score is 100 and the standard deviation is 15. If a person obtains a MSCEIT score around 100, then they are in the average range of emotional intelligence. A person obtaining a MSCEIT score of 115 is one standard deviation above the mean, or at the 84th percentile. If someone obtains an overall MSCEIT score of 85, they are one standard deviation below the mean, or at the 16th percentile. Area, branch and task level results are scored in the same manner. As with all test, the MSCEIT compares individuals against the
normative sample, not with the population in general. (Mayer, Salovey & Caruso, 2002b, p. 71)

**Bar-On’s Model of Emotional Intelligence.** The Bar-On Model of Emotional-Social Intelligence (ESI) stresses the importance of emotional expression and views the outcome of emotionally and socially intelligent behavior out of the works of Charles Darwin’s effective adaptation. Charles Darwin published the first known work in the wider area of emotional-social intelligence when he discussed the importance of emotional expression for survival and adaptation (1872/1965). Additional influence is found from the aspects of Thorndike’s description of social intelligence and its importance for human performance (1920). Bar-On (2005) stated

> From Darwin to the present, most descriptions, definitions and conceptualizations of emotional-social intelligence have included one or more of the following key components: a) the ability to recognize, understand and express emotions and feelings; b) the ability to understand how others feel and relate with them; c) the ability to manage and control emotions; d) the ability to manage change, adapt and solve problems of a personal and interpersonal nature; and e) the ability to generate positive affect and be self-motivated. (p. 3)

The Bar-On model identified “Social-Emotional Intelligence is a cross-section of interrelated emotional and social competencies’ that determine how effectively individuals understand and express themselves, understand others, relate with them, and cope with daily demands” (p. 3). To be emotionally and socially intelligent requires that an individual, “express oneself, relate well with others, and to successfully cope with daily demands, challenges and pressures” (p. 3). At an interpersonal level, being emotionally and socially competent results in the ability to effectively manage change by realistically and flexibly coping with the immediate situation, solving problems and making decisions. To allow emotions to work “for us and not against us” they must be managed effectively (Bar-On, 2005). Bar-On lists five meta factors and 15 conceptual components of emotional intelligence. The meta factors include intrapersonal,
interpersonal, stress management, adaptability, and general mood. Each of these meta factors are made up of a number of closely related competencies, skills and facilitators including self-regard, emotional self-awareness, assertiveness, interdependence, self-actualization, empathy, social responsibility, interpersonal relationships, reality testing, flexibility, problem solving, stress tolerance, impulse control, optimism and happiness (2004, 2007).

The relationship between the Bar-On model and performance in the workplace has been identified through at least four studies (Bar-On, 1997, 2004; Bar-On et al., 2005; Handley, 1997). Based on the findings within these studies,

The most powerful ESI contributors to occupational performance are: (a) the ability to be aware of and accept oneself; (b) the ability to be aware of others’ feelings, concerns and needs; (c) the ability to manage emotions; (d) the ability to be realistic and put things into perspective; and (e) the ability to have a positive disposition. (Bar-On, 2005, p. 16)

Scholars have shifted their attention from describing and assessing social intelligence to understanding the purpose of interpersonal behavior and the role it plays in effective adaptability (Zirkel, 2000). This line of research helped define human effectiveness from the social perspective. Reuven BarOn’s work in EI has been used it to create his Emotional Quotient Inventory (EQ-i). According to Multi-Health Systems Inc., BarOn’s (2004) research intent...was to create a predictor of success. This self-assessment pinpoints the traits that allow a person to succeed and those that stand in the way of progress. For this reason the tool is particularly useful in personal and professional development. The EQ-i was the first scientifically validated self-report measure of Emotional Intelligence, and it is still one of the most widely used assessments for gauging EI. Research has demonstrated that an individual's Emotional Intelligence is often a more accurate predictor of success than the individual's IQ. No matter how intellectually intelligent someone is, their success is still governed by how well they communicate their ideas and interact with their peers. (¶ 3)

This emotional intelligence approach addresses individual differences in emotional processing (i.e., the ability to recognize, understand, use and regulate emotions) and assures that one can process emotions in a more or less appropriate way (Mayer & Salovey, 1997).
The EQ-I v2.0 is the recognized psychometric test for incorporating Bar-On’s Model of Emotional and Social Intelligence. The test consists of 133 items and takes approximately 40 minutes to complete. The test does provide four validity indices. This measurement is used in clinical, educational, forensic, medical, corporate, human resources and research settings. It is also administered through MHS Corporation as a proprietary test (Multi-Health Systems Corporation, 2011).

**Goleman’s Model of Emotional and Social Competence Intelligence (ESCI).**

Upon publishing a best seller, *Emotional Intelligence*, Daniel Goleman (1995) argued that EI was sometimes more significant that Intelligence Quotients (IQ) and strongly linked to job performance. He describes emotional intelligence as a total of personal and social competences. Personal competence determines how we manage ourselves, whereas social competence determines how we handle our interpersonal relationships (Goleman, 1995).

Media outlets such as Time and USA Today Weekend Magazine bestowed EI stories with publications and pronounced it to be a strong predictor of school, work performance and life success. Goleman’s Model measures 18 competencies organized into four clusters: a) self-awareness, b) self-management, c) social awareness, and d) relationship management. Self-awareness is the capacity for understanding one’s emotions, strengths, and weaknesses. Self-management is the capacity for effectively managing one’s motives and regulating one’s behavior. Social awareness incorporates the ability to understand others’ words, feelings and actions. Relationship management is the ability to get results from others and reach personal goals (Goleman, 1995).

The instrument is designed for use only as a development tool, not for hiring or compensation decisions (Wolff, 2006). The ESCI instrument is a proprietary tool available
through the Hay Group; considerations such as time and cost associated with administering the test are not published on the site (The Hay Group, 2013).

**Emotional Intelligence and Age**

Intuitively, one might assume that emotional intelligence increases with age. From the literature, EI is improved upon as one learns to be more aware of self – through evaluation and regulation of moods and behaviors - thus, also able to handle distressing emotions and situations. According to Mayer et al. (2000), matured and experienced individuals have the aptitude to sense other’s feelings about their work environments and therefore exhibit higher levels of EI. Cooper (1997) noted that individuals with high EI are proactive; begin with the end in mind; think win/win; and seek first to understand then to be understood. Spencer and Spencer (1993) regarded skills in recognizing others’ emotions along with the ability to use one’s emotions to motivate others toward a common goal. A significant positive linear relationship between EI and age was found by Ciarrochi and Ciarrochi (2001) as the age of the respondents increased EI also increased in tandem.

While evidence that people can improve on emotional intelligence competencies comes from a wide range of sources, one of the most recognized examples of the relationship between age and experience occurs from longitudinal studies conducted at the Weatherhead School of Management at Case Western Reserve University (Boyaatzi, Cowan & Kolb, 2005). Students in this study participated in a required course on competence building, which allowed students to assess their emotional intelligence competencies. Objective assessment of students at the beginning of the program, upon graduation and again years later on-the-job allows a unique opportunity to help address the issue of whether emotional intelligence competencies can be
developed. The results of this research have shown that emotional intelligence competencies can be significantly improved and moreover these improvements are sustainable over time.

In a comparative study of several hundred adults and adolescents, Salovey and Mayer (1990) found that adults score higher on EI. Over 3000 men, women and children of varying ages ranging from teens to 50s revealed a strong, steady significant increase in EI with advancing age. Further, a peak was observed in the 40s age bracket. It was confirmed that EI developed with age and job experience as a person progressed from childhood to adulthood.

**Emotional Intelligence and Gender**

Interpersonal skills incorporate a set of abilities or talents that an individual brings to the table, whether at school, work, home or social settings. These abilities or talents could include team skills, communication skills, leadership skills, customer service skills, and problem solving skills (James & James, 2004). In reviewing literature, about the socialization process, one might question whether one gender has an emotional intelligent advantage over the other? Research demonstrates contradictory results (Brackett & Salovey, 2006).

Petrides and Furnman suggested that gender differences exist. Additionally, these researchers view gender as a process in which situations and activities are characterized as masculine or feminine. This socialization process begins at birth (2000). Families, schools, peers and media, as part of the socialization process, encourage girls to be cooperative, expressive and attuned to their interpersonal world. Boys, however, are led to be openly competitive and independent (Petrides & Furnman, 2006). From childhood, literature suggests that women are more likely to value nurturing and interconnectivity more than men (Gunkel, Lusk, Wolff, & Li, 2007). From a workplace perspective, Reiff, Hatzes, Bramel, and Gibbon indicate that work is gendered as women are less likely than men to ask for what they want.
In life, whether in a professional or personal realm, one must negotiate opportunities to access the “right” experiences, resources and positions. However, women are less likely to negotiate (Reiff et al., 2007). Previous studies have found that women are slightly superior to men in perceiving emotions, demonstrating greater abilities in social and emotional intelligence, greater doubt about feelings and decisions, and less emphasis on the intellect (Ciarrochi, Chan, & Caputi, 2002; Mayer & Geher, 1996; Wong & Law, 2002).

From previous studies it appears that gender differences associated with EI are inconclusive. While some findings report women are more emotionally intelligent than men, these findings are based on specific competencies. Women tend to have stronger aptitudes for areas incorporating empathy and social skills, while men’s scores demonstrate a proficiency in self-regulation (Gunkel et al., 2007; Petrides & Furnman, 2006). Other studies have found no significant differences between genders. Goleman (1995) contended that no gender differences exist, conceding that men and women while diverse in profiles of strengths and weaknesses will overall have levels of EI that are equivalent. However, studies by Mayer et al. (1998) as well as Mandell and Peherwani (2003) have found that women are more likely to score higher on emotional intelligence scales than men, in both professional and personal environment.

**Emotional Intelligence and Teamwork**

Emotions are ever present in the educational environment. One area in which emotional intelligence may be taught is within courses that require collaborative or team based activities and assignments. Students enrolled in courses incorporating collaborative learning endeavors, whether within the traditional or online environment, expand their opportunities to practice and experience working toward a common goal, as well as achieving satisfaction in contributing to the group performance and artifacts (Webb, 1995). Evidence shows that teamwork encourages
habitual use of higher level reasoning strategies, higher achievement, and more precise assessments than individual endeavors (Clarke, 2010; Johnson & Johnson, 2004). In addition to providing opportunities for students to gain new knowledge and abilities, teamwork cultivates EI skillsets, which are necessary for working effectively with others. Additionally, these shared encounters result in increased student maturity levels through cognitive processes, ethical or moral decision making activities, and in considering the perspective of others throughout the entire event.

When professors provide team-based activities, they often offer students an emotional vocabulary, identify and model respectable behavior, mirror the behaviors, and encourage higher levels of critical thinking and reflection. These activities are essential in the development of EI. As the literature suggests, these skills are not learned in isolation. Zull (2002) observed that social structures allow the exchange and development of emotions and that in the process, neural connections and EI are strengthened with reciprocity in how these skills are learned: Interaction between team members may facilitate and reinforce EI (Moriarty & Buckley, 2003). In the same way, EI skills development may facilitate team-building efforts (Welch, 2003). Other research suggests that teams with high levels of EI are more successful, specifically with higher problem-solving abilities, better performance, and grades (Druskat & Wolff, 2001; Yost & Tucker, 2000). Team leaders with EI skillsets also facilitate better responses from their colleagues (Antonakis et al., 2009; Ashkanasy & Tse, 2000; George, 2000).

**Situational Judgment Tests (SJT)**

Situational judgment tests are devised to gauge one’s judgment in various situations (Christian, Edwards, & Bradley, 2010; McDaniel & Nguyen, 2001; O’Connell, Hartman, McDaniel, Grub, & Lawrence, 2007). They are a step removed from direct observation and offer
insights associated with procedural knowledge in specific domains (e.g., interpersonal skills). Within the SJTs, participants are asked to indicate from a list of responses how they would react to written or video-based scenarios (Christian, Edwards, & Bradley, 2010; McDaniel, Hartman, Whetzel, & Grubb, 2007). SJTs are an appealing method of measurement because they can be employed to access a variety of constructs such as job performance, leadership, cognitive ability, personality tendencies, integrity, interpersonal skills, and teamwork skills (Christean et al., 2010; McDaniel & Nyguen, 2001).

A study by Lievens and Sackett (2012) focused on the assessment of interpersonal skills via SJTs. Key results found that procedural knowledge about interpersonal behavior as measured with an SJT was valid for from college admission to internship (seven years later) and job performance (nine years later) in medical students. Furthermore, students' procedural knowledge as related to interpersonal behavior exhibited incremental validity over cognitive factors for predicting academic and post-academic success. The study revealed not only the potential role of interpersonal skills assessment via SJTs in higher education admissions but also to its relevance in the employment world. Another key contribution of the study was the theoretical support for a conceptual link between possessing procedural knowledge about interpersonal behavior, translating that knowledge into actual interpersonal behavior in constrained settings such as internships, and showing that interpersonal behavior later on the job (Lievens & Sackett, 2012).

The Situational Test of Emotional Management (STEM) was developed, according to the Situational Judgment Tests (SJTs) paradigm by MacCann and Roberts (2008), as a new evaluation tool for EI. These researchers have presented validity evidence for this test through positive correlations with intelligence tests, divergent validity with respect to personality and for
the Multi-factor Emotional Intelligence Scale (MEIS). The 20-item STEM ($\alpha = .83$) is found in Appendix A. Unlike the other tests surrounding the concept of EI, these test items and scoring protocol are publicly available and offered freely online to allow researchers to administer these short forms for additional research purposes.

Emotional Learning (EL) is a process for developing the fundamental competencies for effectiveness throughout life which imparts knowledge and allows opportunities for application of the interpersonal skills needed to handle oneself, relationships, and work, ethically and effectively (Collaborative for Academic, Social & Emotional Learning [CASEL], 2011). These skills include recognizing and managing emotions, developing caring and concern for others, establishing positive relationships, making responsible decisions, and handling challenging situations constructively and ethically. They are the skills that allow individuals to establish relationships, resolve conflicts, contain emotions and make ethical and safe choices (CASEL, 2011).

Intelligence describes aggregate abilities, competencies and skills as a collection of knowledge used to cope with life effectively. Yet, EI asks the question of what is more important, the situation, or the person? Those who master the competencies associated with EI, regardless of training and experience, maintain the most successful careers. Yet, EI is also considered a lifetime journey of self-discovery (Bar-On, 2004).

Within the fields of business and psychology, interpersonal skills are often entwined within EI. Howard Gardner (1983) is credited with the concept of emotional intelligence. The concept of multiple intelligences actually refers to EI in the form of intrapersonal and interpersonal intelligence (Rozell, Pettijohn, & Parker 2004). Gardner (1993) stated that “in an advanced form, interpersonal knowledge permits a skilled adult to read the intentions and
Successive researchers within the field of psychology have also supported that interpersonal skills or interpersonal intelligence is an essential part of emotional intelligence. Bar-On (2004) included the interpersonal emotional quotient in their understanding of emotional intelligence, which includes empathy, social responsibility, and interpersonal relationships. Weisinger’s (1998) model of emotional intelligence included two interpersonal variables: “emotional mentoring” and “relating well.” Scholarly activities within the field of management also link emotional intelligence to interpersonal skills (Brown & Moshavi 2005; Groves, McEnrue, & Shen 2008; Quebbeman & Rozell 2002). Thus, interpersonal skills as a key element in emotional intelligence are highly regarded by management scholars (Butler & Chinowsky 2006; Riggio 1986). Afolabi, Ogunmwonyi, and Okediji (2009) conducted a study with undergraduates and found emotional intelligence to have a significant influence on interpersonal relationships: t(109) = 1.83; P < .05). In 2004, Afolabi also found a positive relationship between emotional intelligence and interpersonal relationships among work teams as well as a positive relationship between emotional intelligence and interpersonal relationships. These studies also found support in the works of Salovey and Mayer (1990), who in their own research found that emotionally intelligent individuals will also have good interpersonal skills.

Online Learning

The educational environment has changed significantly over the past decade or so largely due to the advent of educational technology incorporating the Internet and online learning programs (Allen & Seaman, 2011). Technology has changed the very nature of teaching, learning and school environments from preschool to graduate school. As technologies have
improved, become less expensive, more available and easier to use, post-secondary learners have drifted toward asynchronous learning as it offers both convenience and flexibility. With such a tremendous use of online resources for communicating in not only social settings, but educational settings as well, could interpersonal skills gaps be more likely to occur with online students rather than those participating in the traditional college experience? At the moment no measures exist which assess these skills in online environments (Loader, 2007). Yet, the online environment continues to grow at a ten percent rate each year that exceeds the one percent growth rate of the total higher education population. In the fall of 2010, approximately 560,000 learners joined the higher education online environment for a total of 6.1 million students. These results demonstrate that approximately one-third of all college students are now at least partially participating in the online learning environment (Allen & Seaman, 2011). Yet, there is little research on how or if asynchronous learning affects undergraduate students’ interpersonal skills (Doo, 2006). Turkle (2011) described today’s connective technologies as a means to promote always being elsewhere emotionally and socially.

What are the views on online education when compared to the traditional format? Going the Distance: Online Education in the United States is the ninth annual report on the state of online learning in the United States post-secondary institutions and was based on data collected from over 2,500 colleges and universities and showed:

An increase in the number of academic leaders who believe online learning is ‘at least as good as’ – those who rate online as either the same or superior to face-to-face instruction. This proportion now represents just over two-thirds of all survey respondents, up from fifty-seven percent in the first year of the study in 2003. (Allen & Seaman, 2011, p. 5)

In regard to student-to-student interactions and overall communication, the traditional format was viewed as superior by academic leaders. The perceived value and legitimacy of online education varied by faculty and between colleges and universities. However, institutions which
offer only online courses, and those that offer both online courses and full online programs report that only seven percent of the faculty do not fully accept online education (Allen & Seaman, 2011). Furthermore, professors perceive interpersonal skills to be inferior in the asynchronous environment when compared with the traditional face-to-face atmosphere (Allen & Seaman, 2011).

The literature supports the conclusion that interpersonal skills proficiency is important to potential employers. Technology has changed the work world as automated machinery has the capability of completing routine tasks. Additionally, online communal networks are transforming social relationships. Since many employees are reported to be deficient in “soft skills,” research is needed to determine which elements of interpersonal skills to research.

In 2002, Sloan C reported that 9.6% of U.S. students were enrolled in online courses. By 2011, nine years later, this number has grown substantially to 31.3%. The literature reports that one-half million new students entered into the online education environment in 2011 alone (Allen & Seaman, 2011).

Professors perceive interpersonal skills to be inferior in the asynchronous environment when compared with the traditional face-to-face atmosphere (Allen & Seaman, 2011). Yet, there is little research on how or if asynchronous learning affects undergraduate students’ interpersonal skills (Doo, 2006).

Colleges and universities must adapt to the changing needs of both the students and workplace. “To best prepare students for the jobs that will be available in the future, educators need to anticipate emerging trends and reconsider the kind of skill development they are promoting” (League for Innovation in the Community College, 1995, ¶ 7). Yet, the marketplace
is defined by global competition, rampant change, fast flows of information and communication, increasing complexity and ubiquitous globalization (The Conference Board et al., 2006).

Knowing that colleges must better prepare tomorrow’s workforce with the skills previously identified as essential for success in the 21st century marketplace, one must address if asynchronous education limits students’ opportunities to practice and implement interpersonal skills. Does asynchronous education fail to offer students a place to enhance and practice interpersonal interactions and thereby fail to prepare them for today’s marketplace?

Academic leaders at institutions with online offerings currently hold a more favorable opinion of the learning outcomes of online education. Furthermore, over two-thirds of post-secondary faculty rates the online educational environment to be either the same or superior to the traditional face-to-face setting. While many of the academic leaders perceive online education to be at least as good as face-to-face instruction, one dimension falls short of this attitude. Interpersonal skills are estimated to be inferior in the online atmosphere when compared with the face-to-face environment (Allen & Seaman, 2011).

Interpersonal skills research rarely occurs despite its significance to the individual’s life as it is difficult to distinguish interpersonal skills from other cognitive, psychomotor, or affective components like personalities (Doo, 2006). Additionally, some individuals may presume that interpersonal skills will not increase through educational opportunities. Personality and interpersonal or social skills are related, yet, personality is not easily changed while interpersonal skills can be developed and improved upon through training (Ferris, Whitt, & Hochwartar, 2001; Geher, 2004). Improving interpersonal skills helps individuals enrich relationships, cope better at work and in social situations, and especially when dealing with difficult or challenging individuals. As the trend of online education expands, some faculty question whether an online
education provides students with the proper development of interpersonal relationships and social skills (Allen & Seaman, 2011).

**Merging Marketplace Needs, Interpersonal Skills, and Online Learning**

According to a Harvard survey (2011), the successful college graduate must possess a ratio of 80% emotional-social intelligence (ESI) to 20% book smarts. Career-minded individuals will need to display foresight in navigating a rapidly shifting economic landscape. They will need to reassess the skills they need and quickly put together the right resources to develop and update skill sets (Glenn, 2003; Harvard, 2011; James & James, 2004; League for Innovation in the Community College, 1995; Mitchell, Skinner, & White, 2010; Perreault, 2004; Sharma, 2009; Wilhelm, 2004).

The career-minded graduate is one who can adapt, manage stress, incorporate teamwork and help others. Yet, a 2010 University of Michigan study utilizing fourteen thousand college students over the past thirty years, from 1979 through 2009, shows that over the past nine years, young people have demonstrated a dramatic decline in interest in other people (University of Michigan, 2010). Additionally, the report suggests that college students do not understand the value of viewing a situation from another person’s perspective. Sarah Konrath, a researcher at the University of Michigan Institute for Social Research, reported that “Many see the current group of college students, sometimes called ‘Generation Me’ as one of the most self-centered, narcissistic, competitive, confident and individualistic in recent history” (University of Michigan, 2010, ¶. 7).

In 1991, the U.S. Department of Labor’s Secretary of Labor appointed The Secretary's Commission on Achieving Necessary Skills (SCANS) to determine the skills that young people needed to succeed in the work world. The Commission's fundamental purpose was to encourage
a high-performance nation characterized by high-skill, high-wage employment with a primary objective of helping educators understand how curriculum and instruction must change to enable students to develop the skills needed to succeed in the workplace. Interpersonal skills were listed as one of five workplace competencies necessary for accomplishing this objective (U.S. Department of Labor, 1991). The commission identified interpersonal skills as the ability to work well with others by a) participating as a team member who contributes to group effort; b) teaching others new skills; c) serving others by working to meet their expectations; d) exercising leadership through communicating ideas, justifying positions, persuading and/or convincing others, and challenging procedures and policies in a responsible manner; e) negotiating for agreements related to exchange of resources and resolving divergent interest; and f) working well with diversity (U.S. Department of Labor, 1991).

Colleges and universities are known for teaching content through specific, teachable abilities that can be defined and measured. In contrast, emotional intelligence (EI) skills incorporate the qualities of personal attributes that enhance an individual's interactions, job performance and career prospects (Sharma, 2009). Today’s marketplace requires both elements to successfully work in teams, multitask and think critically and creatively (Harvard, 2011; James & James, 2004).

Summary

It appears that today’s employers do not have confidence in the abilities of 21st Century college graduates. One shortcoming, found by both college professors and employers, falls under the realm of interpersonal skills. As the trend of online education expands, professors have questioned whether an online education provides students with the proper development of interpersonal relationships and social skills (Allen & Seaman, 2011).
Interpersonal skills research, while highly significant to individual lives, rarely occurs due to the challenging task of distinguishing interpersonal skills from other cognitive, psychomotor, or affective components such as personality (Doo, 2006). Additionally, presumptuous individuals may believe that interpersonal skills will not increase through educational opportunities. Personality and interpersonal or social skills are related, yet, personality is not easily changed while interpersonal skills can be developed and improved upon through training (Ferris, Whitt, & Hochwart, 2001; Geher, 2004).

It is believed that improving interpersonal skills will help individuals enrich relationships, cope better at work, and in social situations and especially when dealing with difficult or challenging individuals. It appears that research should be conducted to determine, first, whether or not asynchronous education limits students’ opportunities to practice and improve upon interpersonal skills or fails to offer students a place enhance and practice interpersonal interactions when compared to student enrolled in traditional environments.
CHAPTER III:
METHODOLOGY

Introduction

The purpose of this study was to compare the interpersonal abilities of online students to traditional students by evaluating their EI through the Situational Test of Emotional Management (STEM). The study also sought to determine if there is a relationship between the age, gender and number of online courses completed and EI abilities of online students.

Research Design

This quantitative study was descriptive in nature, as it provided information about the behavior of the participants. Additionally, it was a cross-sectional study at the individual student level as information was collected from individual students at one point in time. This study demonstrated relationships and the educational environment as it existed at the time of the study by utilizing a situational judgment test for current abilities associated with emotional intelligence and a survey styled questionnaire for the collection of demographic data.

Participant Population

Utilizing a convenience sample, the study occurred at one regional university in the southeast that provides educational opportunities for students within four colleges: arts and sciences, business, education and human environmental sciences, and nursing and allied health. The campus is located in the southeastern United States in a four-city metropolitan area with approximately 140,000 people. During the Fall 2013 term, the university enrolled 6,931 students, 5,993 of whom were pursuing an undergraduate degree. The students at this university
represented 43 countries in addition to the United States. Approximately 57% of the students were female with a male population of 43%. Seventy-seven percent of the student body were residents of the state in which the college is located, 18% of the student body were non-residents while 5% of the population consisted of international students.

From reports published on the study site, the average age of new freshmen is 18.3, while the average age of all freshmen is 19.1. The average undergraduate age is 22.6. This result implies the overall student population within the undergraduate community falls into the traditional age bracket of 19-24 years of age.

Campus-wide, 30% of the undergraduate student population at the time of the study was enrolled in at least one course online, with an additional 7% of the undergraduate student population completing all courses online during the Fall 2013 term. The campus wide numbers closely match national percentages as reported by the Sloan Consortium Reports created by Allen and Seaman (2011) in online learning.

**Sampling**

Upon reviewing statistical data associated with the student population of the institution in question, the researcher elected to conduct the study within only one college of the regional university. The rationale associated with this decision is discussed within this section of the paper.

The largest percentage of online course offerings and student enrollments associated with completing at least one course online at the university were found specifically within the College of Business (CoB). Within the CoB, there are four departments: a) the Department of Accounting and Business Law accounts for 20.9% of the business student population (n = 179); b) the Department of Computer Science and Information Systems accounts for 13.7% of the student
body within the college (n = 117); c) the Department of Economics and Finance contains 12.8% of business students; and d) the Department of Management and Marketing hosts the largest student population within the college at 22.5% (n = 336). These four departments are further subdivided into eight majors. The Department of Accounting and Business Law offers a major in accounting. Computer Science and Information Systems offers two degree programs. Option I is Enterprise Information Systems. End-User Computing Systems is Option II. The degree programs of Economics, Professional Finance, and Banking and Financial Services are housed within the Department of Economics and Finance. Additionally all administrative responsibilities for undecided business majors are housed within this department. Undecided students account for 13.3% (n = 114) of the total population within the business school. Professional Management and Professional Marketing degree programs are available in the Department of Management and Marketing.

During the Fall 2013 term, there were approximately 856 undergraduate students enrolled within the CoB, which represents approximately 15% of the undergraduate student body. Approximately 50% of all online offerings at this university were in the undergraduate CoB program. When adding graduate courses into the mix, approximately 80% of the online offerings campus-wide were housed in the CoB. Forty-nine percent of the undergraduate business students were taking at least one course online during the study. Another 7% of the undergraduate business students were completing all courses online during the same period. Due to the small number of faculty within the CoB (n = 39), it was unlikely to have different professors teach the online and FtF classes, meaning that a course offered in both formats will be taught by only one professor, possibly eliminating the concern or limitation of instructional differences among the traditional and online formats. Additionally, the CoB has implemented a
standardized online course structure to assist in the navigation and orientation process for online students. This standardization was likely to reduce student confusion and frustration associated with online courses allowing both faculty and students to focus on the process of teaching and learning the specified subject matter. All undergraduates within the college were asked to participate in the study.

**Instrumentation**

Situational judgment tests (SJT) are devised to gauge one’s judgment in various situations (Christian, Edwards, & Bradley, 2010; McDaniel & Nguyen, 2001; O’Connel, Hartman, McDaniel, Grub & Lawrence, 2007). SJTs are an appealing method of measurement because they can be employed to access a variety of constructs such as job performance, leadership, cognitive ability, personality tendencies, integrity, interpersonal skills, and teamwork skills (Christian et al., 2010; McDaniel & Nyguyen, 2001).

The Situational Test of Emotional Management (STEM) was used to measure the level of ability EI as an indicator of interpersonal skills. It was developed according to the Situational Judgment Tests (SJT) paradigm by MacCann and Roberts (2008). Validity evidence for this test is available through positive correlations with intelligence tests, divergent validity with respect to personality and for the Multi-factor Emotional Intelligence Scale (MEIS). The 20-item STEM (α = .83) is found in Appendix A. Test items and scoring protocol are publicly available and offered freely online to allow researchers to administer these short forms for additional research purposes. Additional demographic questions have been added to the original survey and can be found in Appendix B.
Data Collection

Upon receiving IRB approval, the primary investigator (PI) requested and received an e-mail address list for all undergraduate majors and minors within the College of Business at the university to be studied. The compiled address list contained 765 undergraduate business majors and 91 undergraduate business minors for a total sample of 856. On September 9, 2013, the e-mail advertisement/informed consent letter, found in Appendix C, which contained a link to the Qualtrics survey, was sent to the students. Additionally, a cover letter, found in Appendix D, and the e-mail advertisement/informed consent letter was sent to all 39 undergraduate faculty within the College of Business. Faculty were asked to both announce the study in their face to face classes and send an e-mail to online students with e-mail advertisement/informed consent statement to their students whether in the online or traditional environment. All undergraduate students within the College of Business received an e-mail request as well as two follow-up requests, found in Appendix E, to participate in the study. Consent was obtained, when the student elected to complete the survey as the e-mail contained the consent letter which included a link to the Qualtrics survey.

The survey was open for a period of three weeks. On Monday of week one, the initial request to participate was be e-mailed. On Monday of weeks two and three the follow-up request to participate was e-mailed to all 856 undergraduates. The repeat messages were sent to all students as the PI did not know which students from the sample population had completed the survey as it was anonymous. Students completed a one-time survey containing 30 questions in total. Within the first 20 questions students were presented with a few brief details about an emotional situation, and asked to choose from four responses what they believed was the most effective course of action to manage both the emotions the person was feeling and the problems
they faced in that situation. Although more than one course of action might be acceptable, students were asked to choose what they thought was the most effective response for that person in the specified situation. The remaining ten questions related to age, gender, classification, major, department, number of courses completed online, communication and teamwork.

Upon completion of collecting data, information was coded and entered into SPSS software for analysis. The STEM test provided a best answer approach as determined by subject matter experts for each question. Descriptive statistics were used to identify missing data, identify result ranges, and expound upon frequencies, proportions and percentages associated with gender, age and online course experience of the respondents. Cronbach's alpha was used to determine internal consistency and reliability. To ensure maximum reliability and establish further relationships among the data, item-to-total correlations were identified. The standard error of measurement gauged potential error within the study's results. An independent t-test determined if any significant differences exist between online and traditional students on the basis of age or gender. A one-way analysis of variance (ANOVA) investigated whether the total of previous online courses completed had a significant relationship to the EI of students as a gauge of interpersonal skills. Upon seeking Institutional Review Board (IRB) approval at institutions associated with the current study, data were collected during the Fall 2013 term from the COB within the same regional university utilizing an online survey instrument known as Qualtrics.

**Data Analysis**

Upon collecting data, survey data were coded and entered into SPSS software for analysis. The STEM test, available online, provided a best answer approach as determined by subject matter experts for each question. Descriptive statistics were used to identify missing
data, identify result ranges, and expound upon frequencies, proportions and percentages associated with gender, age and online course experience of the respondents. Cronbach’s alpha determined internal consistency and reliability. To ensure maximum reliability and establish further relationships among the data, item-to-total correlations were identified. The standard error of measurement gauged potential error within the study’s results. An independent t-test determined if any significant differences exist between online and traditional students on the basis of age or gender. A one-way analysis of variance (ANOVA) was conducted to investigate whether the total of previous online courses completed has a significant relationship to the EI of students as a gauge of interpersonal skills.
CHAPTER IV:
RESULTS AND ANALYSIS

Introduction

The purpose of this study was to compare the interpersonal abilities of online students to traditional students by evaluating their EI through the Situational Test of Emotional Management (STEM). The study sought to determine if there was a relationship between the number of online courses completed and EI abilities of students. Additionally, the study examined demographic data such as age, gender and classification for any relationships associated with EI abilities of students. Finally, the study evaluated whether a relationship exists between teamwork components of courses and students’ EI abilities. As previously stated the study was descriptive in nature, as it provided information about the behavior of the participants. Additionally, it was a cross-sectional study at the individual student level as information will be collected from individual students at one point in time. This study demonstrated relationships and the educational environment as it currently exists by utilizing a situational judgment test for current abilities associated with emotional intelligence and a survey styled questionnaire for the collection of demographic data. This chapter provides the quantitative analyses of data collected in the study. Survey data were coded and entered into version 21 of the SPSS software for analysis. This chapter provides the various findings within this study. Unless otherwise specified, an alpha level of .05 was employed for all statistical tests. Descriptive statistics were used to identify missing data, identify result ranges, and expound upon frequencies, proportions and percentages associated with gender, age and online course experience of the respondents.
Descriptive Statistics

The sample for this study included 856 students comprised of 765 undergraduate business majors and 91 undergraduate business minors. Additionally, with the assistance of the undergraduate professors, some undecided and elective business students also participated in the study. During the Fall 2013 term, there were 646 non-business majors or minors enrolled in undergraduate business classes. While these individuals were not specifically targeted for the study, faculty notified students of the study and encouraged 89 students to participate for a response rate of 13% of non-major students. A total of 393 survey responses from business majors, business minors and non-business students were received. Upon subtracting the non-major respondents (n = 89) from the total received it was determined that 304 of the 865 targeted participants were reached for a 35% response rate. Utilizing SPSS and the descriptive statistics feature, 46 surveys were eliminated from the study. Thirty-nine of these surveys were discarded due to incomplete information while seven surveys were rejected as students listed a graduate classification which did not meet the specified perimeters of the study, resulting in an adjusted targeted response rate of 30%.

From the 347 completed responses, 43.5% were male (n = 151) while the remaining 56.5% (n = 196) were female participants. Regarding age, 82.1% (n = 285) of the participants fell in the traditional college age range of 19-24, while 17.9% (n = 62) indicated an age range of the non-traditional student, which is 25 or older. Additionally, respondents were categorized into four undergraduate grade classifications: a) freshmen, b) sophomores, c) juniors, and d) seniors. Table 1 illustrates these results.

Self-reported survey data also showed that approximately 14% (n = 49) of the respondents characterize themselves as online students while 86% (n = 298) regard themselves
as traditional students. The 14% of self-identified online students is double the actual online student percentage of 7% as reported by the university.

Table 1

*Survey Respondents by Classification*

<table>
<thead>
<tr>
<th>Classification</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>12</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td>Sophomore</td>
<td>53</td>
<td>15.3</td>
<td>18.7</td>
</tr>
<tr>
<td>Junior</td>
<td>153</td>
<td>44.1</td>
<td>62.8</td>
</tr>
<tr>
<td>Senior</td>
<td>129</td>
<td>37.2</td>
<td>100</td>
</tr>
</tbody>
</table>

An additional survey question addressed the communications preference of the students. Results suggest that only 16.7% (n=58) of students prefer online communications to the traditional classroom communications experience, while 83.3% (n = 289) of the students prefer the traditional classroom communication environment to the online experience.

As part of the demographic data collected, students were asked to identify the total number of courses which they had completed online. Students were offered three response ranges: a) none, b) one to four, and c) five or more. Over half of the students surveyed self-reported that they completed between one and four online courses. Table 2 illustrates the survey responses.

Since teamwork is an instrumental element of interpersonal communications undertakings, students were asked if they had participated in online and/or traditional courses that offered teamwork activities and assignments. Fifty-seven percent (n=196) of the students had completed online courses which required team based activities, while 43% (n = 151) had not
been required to complete teamwork in the online environment. Within the traditional classroom, 91.9% (n = 319) of students participated in a team-based assignment or activity with only 8.1% (n = 28) of the participants indicating no team-based work in the traditional classroom environment.

Table 2

*Number of Courses Completed Online*

<table>
<thead>
<tr>
<th>Number of Courses</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>50</td>
<td>14.4</td>
<td>14.4</td>
</tr>
<tr>
<td>1-4</td>
<td>198</td>
<td>57.1</td>
<td>71.5</td>
</tr>
<tr>
<td>5 or More</td>
<td>99</td>
<td>28.5</td>
<td>100</td>
</tr>
</tbody>
</table>

As previously stated the CoB is divided into four departments: a) the Department of Accounting and Business Law, b) the Department of Computer Science and Information Systems, c) the Department of Economics and Finance, and d) the Department of Management and Marketing. Table 3 illuminates the respondents by department within the CoB.

Table 3

*Respondents by Department*

<table>
<thead>
<tr>
<th>Department</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting &amp; Business Law</td>
<td>63</td>
<td>18.2</td>
<td>18.2</td>
</tr>
<tr>
<td>Computer Science &amp; Information Systems</td>
<td>46</td>
<td>13.3</td>
<td>31.4</td>
</tr>
<tr>
<td>Economics &amp; Finance</td>
<td>30</td>
<td>8.6</td>
<td>40.1</td>
</tr>
<tr>
<td>Management &amp; Marketing</td>
<td>119</td>
<td>34.3</td>
<td>74.4</td>
</tr>
<tr>
<td>Other</td>
<td>89</td>
<td>25.6</td>
<td>100</td>
</tr>
</tbody>
</table>
These four departments are further subdivided into eight majors. Table 4 illuminates the respondents by major within the CoB.

Table 4

Respondents by Major

<table>
<thead>
<tr>
<th>Major</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>63</td>
<td>18.2</td>
<td>18.2</td>
</tr>
<tr>
<td>Enterprise Information Systems</td>
<td>10</td>
<td>2.9</td>
<td>21.1</td>
</tr>
<tr>
<td>End-User Computing Systems</td>
<td>16</td>
<td>4.6</td>
<td>25.7</td>
</tr>
<tr>
<td>Economics</td>
<td>9</td>
<td>2.6</td>
<td>28.3</td>
</tr>
<tr>
<td>Professional Finance</td>
<td>12</td>
<td>3.5</td>
<td>31.8</td>
</tr>
<tr>
<td>Banking and Financial Services</td>
<td>9</td>
<td>2.6</td>
<td>34.4</td>
</tr>
<tr>
<td>Management</td>
<td>56</td>
<td>16.1</td>
<td>50.5</td>
</tr>
<tr>
<td>Marketing</td>
<td>41</td>
<td>11.8</td>
<td>62.3</td>
</tr>
<tr>
<td>Undecided</td>
<td>42</td>
<td>12.1</td>
<td>74.4</td>
</tr>
<tr>
<td>Other</td>
<td>89</td>
<td>25.6</td>
<td>100</td>
</tr>
</tbody>
</table>

Quantitative Results

Reliability and Validity

Cronbach’s Alpha was used to determine internal consistency and reliability for survey questions 1 through 20. To ensure maximum reliability and establish further relationships among the data, item-to-total correlations were also identified. Alpha coefficients range in value from 0 to 1 and may be used to describe the reliability of factors extracted from dichotomous and/or multi-point formatted questionnaires or scales. Higher scores indicate more reliable results. The
original 20-item STEM instrument reported $\alpha = .83$. Nunnaly (1978) has indicated .7 to be an acceptable reliability coefficient but lower thresholds are sometimes used in the literature.

Upon calculating the initial test of reliability, Cronbach’s Alpha was .686. To ensure a score above .7, questions 9 ($\alpha = .693$); 1 ($\alpha = .699$); and 11 ($\alpha = .704$) would need to be eliminated.

Since the original 20-item STEM test reported a strong Cronbach’s Alpha ($\alpha = .83$), the PI did not eliminate the three questions to maintain the integrity of the initial survey. Validity evidence for this test is available from the STEM test creators through positive correlations with intelligence tests, divergent validity with respect to personality and for the Multi-factor Emotional Intelligence Scale (MEIS).

**Research Question 1**

Is there a significant difference in the emotional intelligence of online and traditional students? Emotional Intelligence results relevant to the type of student were used in conducting a $t$-test to determine if significance exists in the emotional intelligence between online and traditional students. The results were calculated using five basic assumptions: a) data were metric; b) samples were independent; c) random selection; d) Levine’s test .011 > .01, verifying homogeneity of variance; and e) Kolmogorov-Smirnov .092 > .01, .000 < .01, which did not depart significantly from the normal on the basis of the central limit theorem. “When a sample size is greater than 30, the approximation of the sampling distribution to a normal distribution is usually quite close even if the population is not normally distributed” (Hinkle, Wiersma & Jurs, 2003, p. 164). Grounded in this information, the data did not depart significantly from normal. The means and standard deviations by type of student (online or traditional) are summarized in the group statistics found in Table 5.
Table 5

*Group Statistics for EI Scores by Type of Student*

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>$N$</th>
<th>$M$</th>
<th>$SD$</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Students</td>
<td>49</td>
<td>12.22</td>
<td>4.124</td>
<td>.589</td>
</tr>
<tr>
<td>Traditional Students</td>
<td>298</td>
<td>12.13</td>
<td>3.221</td>
<td>.187</td>
</tr>
</tbody>
</table>

The $t$-test found no significant differences, $t(345) = 6.530, p = .862$. Because the p-value is greater than .05, there is no significant difference between the online and traditional students and their emotional intelligence scores. The $t$-test equality of means summary table for emotional intelligence scores by type of student is found in Table 6.

Table 6

*t-test for Equality of Means based on EI Scores by Type of Student*

<table>
<thead>
<tr>
<th></th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>95% Confidence Lower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variances assumed</td>
<td>.862</td>
<td>.090</td>
<td>.518</td>
<td>-.929</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.884</td>
<td>.090</td>
<td>.618</td>
<td>-1.147</td>
</tr>
</tbody>
</table>

Research Question 2

Is there a significant difference in the emotional intelligence scores of students based on the number of online courses completed? A one way ANOVA was used to determine whether there are differences in the EI scores of students based on the number of online courses completed: a) zero, b) 1 - 4, or c) five or more. Results indicated $F(2, 344) = 5.465, p = .005.$
The standard deviations and means associated with the number of online courses completed are located in Table 7.

Table 7

*Group Statistics for the Number of Online Courses Completed*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>50</td>
<td>10.74</td>
<td>3.069</td>
<td>.434</td>
</tr>
<tr>
<td>1-4</td>
<td>198</td>
<td>12.30</td>
<td>3.450</td>
<td>.245</td>
</tr>
<tr>
<td>5 or More</td>
<td>99</td>
<td>12.56</td>
<td>3.147</td>
<td>.316</td>
</tr>
<tr>
<td>Total</td>
<td>347</td>
<td>12.15</td>
<td>3.356</td>
<td>.180</td>
</tr>
</tbody>
</table>

The analysis revealed a significant $F$ ratio of 5.465 ($p = .005$), which indicated there was significance among the groups. To highlight these differences, a follow up Tukey Post Hoc test indicated that the group taking no online courses had a significantly different EI score when compared to students taking 1 - 4 online courses ($p = .009$). Students within the traditional environment, who have not completed any online courses, scored significantly lower ($M = 10.74$, $SD = 3.069$) on the situational judgment test than students taking 1 - 4 online courses ($M = 12.30$, $SD = 3.450$). Another significant difference was found among the students completing zero online courses and those completing five or more online courses ($p = .005$). The STEM outcome conveyed that traditional students, who have not completed any online courses, scored significantly lower ($M = 10.74$, $SD = 3.069$) than students completing five or more courses online ($M = 12.15$, $SD = 3.356$). ANOVA results associated with the number of online courses completed are contained in Table 8.
Table 8

ANOVA Table by Number of Online Classes Completed

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>120.021</td>
<td>2</td>
<td>60.010</td>
<td>5.465</td>
<td>.005</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3777.484</td>
<td>344</td>
<td>10.981</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3897.504</td>
<td>346</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Research Question 3

Is there a significant difference in the emotional intelligence of students on the basis of age? The results were calculated using five basic assumptions: a) data were metric; b) samples were independent; c) random selection; d) Levine’s test .940 > .01, verifying homogeneity of variance; and e) Kolmogorov-Smirnov .000 < .01, .23>.01, which did not depart significantly from the normal on the basis of the central limit theorem. “When a sample size is greater than 30, the approximation of the sampling distribution to a normal distribution is usually quite close even if the population is not normally distributed” (Hinkle, Wiersma, & Jurs, 2003, p. 164). Based on this information, the data did not depart significantly from normal. Table 9 describes the means and standard deviations by age of student.

Table 9

Group Statistics by Age of Student

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-24</td>
<td>285</td>
<td>12.22</td>
<td>3.314</td>
<td>.196</td>
</tr>
<tr>
<td>25 or older</td>
<td>62</td>
<td>11.79</td>
<td>3.549</td>
<td>.451</td>
</tr>
</tbody>
</table>
A *t*-test found no significant differences in the emotional intelligence scores of students on the basis of age, $t(345) = .006$, $p = .357$. Because the p-value is greater than .05, there is no significant difference between the online and traditional students and their emotional intelligence scores. The means and standard deviations by age of student are summarized in the group statistics found in Table 9. The *t*-test equality of means summary table for emotional intelligence scores by age of student is found in Table 10.

Table 10

* *t*-test for Equality of Means based on EI Scores by Student Age *

<table>
<thead>
<tr>
<th></th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>95% Confidence Lower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variances</td>
<td>.357</td>
<td>.434</td>
<td>.470</td>
<td>-.491</td>
</tr>
<tr>
<td>assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances</td>
<td>.380</td>
<td>.434</td>
<td>.492</td>
<td>-.543</td>
</tr>
<tr>
<td>not assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Research Question 4**

Is there a significant difference in the emotional intelligence of students on the basis of gender? The results were calculated using five basic assumptions: a) data were metric; b) samples were independent; c) random selection; d) Levine’s test $.103 > .01$, verifying homogeneity of variance; and e) Kolmogorov-Smirnov $.000 < .01$, $.000 < .01$, which did not depart significantly from the normal on the basis of the central limit theorem. “When a sample size is greater than 30, the approximation of the sampling distribution to a normal distribution is usually quite close even if the population is not normally distributed” (Hinkle, Wiersma, & Jurs, 2003, p. 164). Based on this information, the data did not depart significantly from normal. The
means and standard deviations by student gender are summarized in the group statistics found in Table 11.

Table 11

*Group Statistics by Student Gender*

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>151</td>
<td>11.38</td>
<td>3.532</td>
<td>.287</td>
</tr>
<tr>
<td>Female</td>
<td>196</td>
<td>12.73</td>
<td>3.097</td>
<td>.221</td>
</tr>
</tbody>
</table>

A *t*-test found significant differences in the emotional intelligence scores of students on the basis of gender, $t(345) = 2.673$, $p < .01$. Because the p-value is less than .01, there is a significant difference between the online and traditional students and their emotional intelligence scores. Females completing the study, scored significantly higher ($M = 12.73, SD = 3.097$) than their male counterparts ($M = 11.38, SD = 3.532$). The *t*-test equality of means summary table for emotional intelligence scores by student gender is found in Table 12.

Table 12

*t*-test for Equality of Means based on EI Scores by Student Gender

<table>
<thead>
<tr>
<th></th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>95% Confidence Lower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variances assumed</td>
<td>.000</td>
<td>-1.351</td>
<td>.357</td>
<td>-2.052</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.000</td>
<td>-1.351</td>
<td>.363</td>
<td>-2.064</td>
</tr>
</tbody>
</table>
Research Question 5

Is there a significant difference between EI abilities of students on the basis of classifications? For the purpose of this study, classifications refer to undergraduate freshmen, sophomores, juniors and seniors. The results were calculated using five basic assumptions: a) data were metric; b) samples were independent; c) random selection; d) Levine’s test $0.798 > 0.01$, verifying homogeneity of variance; and e) Shapiro-Wilk $0.288 > 0.01$, $0.090 > 0.01$, $0.003 < 0.01$, and $0.000 < 0.01$, which did not depart significantly from the normal on the basis of the central limit theorem. “When a sample size is greater than 30, the approximation of the sampling distribution to a normal distribution is usually quite close even if the population is not normally distributed” (Hinkle, Wiersma, & Jurs, 2003, p. 164). Based on this information the data did not depart significantly from normal. The means and standard deviations by student classification are summarized in the group statistics found in Table 13.

Table 13
Group Statistics by Student Classification

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>12</td>
<td>12.17</td>
<td>3.099</td>
<td>.895</td>
</tr>
<tr>
<td>Sophomore</td>
<td>53</td>
<td>12.34</td>
<td>3.674</td>
<td>.505</td>
</tr>
<tr>
<td>Junior</td>
<td>153</td>
<td>12.12</td>
<td>3.372</td>
<td>.273</td>
</tr>
<tr>
<td>Senior</td>
<td>129</td>
<td>12.10</td>
<td>3.259</td>
<td>.287</td>
</tr>
</tbody>
</table>

A one way ANOVA was used to determine that there is no significant difference in the EI abilities of students on the basis of classification, $F (3, 343) = 0.70, p = 0.976$. The ANOVA table for emotional intelligence scores of students by classification is found in Table 14.
Research Question 6

Is there a significant difference in the EI abilities of students who participated in course teamwork activities and students who did not participate in teamwork activities? The results were calculated using five basic assumptions: a) data were metric; b) samples were independent; c) random selection; d) Levine’s test .009 > .01, verifying homogeneity of variance; and e) Shiapiro–Wilk .000 < .01, .902 > .01, .424 > .01, .050 > .01, which did not depart significantly from the normal on the basis of the central limit theorem.

Table 14

ANOVA Table for the EI Scores of Students by Classification

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2.379</td>
<td>3</td>
<td>.793</td>
<td>.070</td>
<td>.976</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3895.126</td>
<td>343</td>
<td>11.356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3897.504</td>
<td>346</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“When a sample size is greater than 30, the approximation of the sampling distribution to a normal distribution is usually quite close even if the population is not normally distributed” (Hinkle, Wiersma, & Jurs, 2003, p. 164). Based on this information, the data did not depart significantly from normal. The means and standard deviations by department are summarized in the group statistics found in Table 15.
Table 15

*Groups Statistics based on Teamwork*

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both Online &amp; Traditional</td>
<td>188</td>
<td>12.24</td>
<td>3.380</td>
<td>.247</td>
</tr>
<tr>
<td>Online Only</td>
<td>7</td>
<td>9.86</td>
<td>6.012</td>
<td>2.272</td>
</tr>
<tr>
<td>Neither Online or Traditional</td>
<td>21</td>
<td>10.90</td>
<td>4.134</td>
<td>.902</td>
</tr>
<tr>
<td>Traditional Only</td>
<td>131</td>
<td>12.34</td>
<td>2.945</td>
<td>.257</td>
</tr>
<tr>
<td>Total</td>
<td>347</td>
<td>12.15</td>
<td>3.356</td>
<td>.180</td>
</tr>
</tbody>
</table>

A one-way ANOVA was used to determine that no significant differences exist between the EI abilities of students on the basis of teamwork opportunities within the online and traditional environment, $F(3, 343) = 2.255, p = .082$. The ANOVA table for emotional intelligence scores by department is found in Table 16. While the study did not demonstrate a statistically significant difference of EI scores on the basis of teamwork at $\alpha = .05$, the findings were significant at $\alpha = .1$. The means suggest that students incorporating teamwork in the traditional only format scored highest on the stem test followed closely by students experiencing collaborative learning activities in both the traditional and online environment. One odd finding was that students who had not experienced team-based activities scored higher than students in the online only environment.
Research Question 7

Is there a significant difference in the abilities of students among the four departments within the College of Business? The results were calculated using five basic assumptions: a) data were metric; b) samples were independent; c) random selection; d) Levine’s test .256 > .01, verifying homogeneity of variance; and e) Shapiro-Wilk .151 > .01, .319 > .01, .593 > .01, .01 = .01, .000 < .01, which did not depart significantly from the normal on the basis of the central limit theorem. “When a sample size is greater than 30, the approximation of the sampling distribution to a normal distribution is usually quite close even if the population is not normally distributed” (Hinkle, Wiersma, & Jurs, 2003, p. 164). Based on this information, the data did not depart significantly from normal. The means and standard deviations by department are summarized in the group statistics found in Table 17.
A one-way ANOVA was used to determine that no significant differences exist between the abilities of students among the four departments within the College of Business: a) Accounting and Business Law, b) Computer Science and Information Systems, c) Economics and Finance, and 4) Management & Marketing. The results were $F(4, 346) = 1.264, p = .284$. The ANOVA table for emotional intelligence scores by department is found in Table 18.
Table 18

ANOVA Table for the EI Scores of Students by Department

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>56.791</td>
<td>4</td>
<td>14.198</td>
<td>1.264</td>
<td>.284</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3840.714</td>
<td>342</td>
<td>11.230</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3897.504</td>
<td>346</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER V:
DISCUSSION

Introduction

The purpose of this study was to compare the interpersonal abilities of online students to traditional students by evaluating their EI through the Situational Test of Emotional Management (STEM). The study sought to determine if there was a relationship between the number of online courses completed and EI abilities of students. Additionally, the study examined demographic data such as age, gender and classification for any relationships associated with EI abilities of students. Finally, the study evaluated whether a relationship exists between teamwork components of courses and students’ EI abilities.

Discussion of Findings

Descriptive Statistics

From the 347 completed responses, 43.5% were male (n = 151) while the remaining 56.5% (n = 196) were female participates. These results correspond directly to the university’s population that reported that approximately 57% of the students were female with a male population of 43%. Regarding age, 82.1% (n = 285) of the participants fell in the traditional college age range of 19-24, while 17.9% (n = 62) indicated an age range of the non-traditional student who is 25 or older. This finding also reflected the total student population as the average enrollee’s age is 22.6.

Self-reported survey data also showed that approximately 14% (n = 49) of the respondents characterize themselves as online students while 86% (n = 298) regard themselves
as traditional students. Forty-nine percent of the undergraduate business students were taking at least one course online during the study. Another 7% of the undergraduate business students were completing all courses online during the same period. The 14% of self-identified online students is double the actual online student percentage of 7% as reported by the university as well as the CoB. Over half of the students surveyed self-reported that they completed between one and four online courses. Campus-wide, 30% of the undergraduate student population was enrolled in at least one course online, with an additional 7% of the undergraduate student population completing all courses online during the Fall 2013 term. However, information available from the institution results suggest the campus wide numbers closely match national percentages as reported by the Sloan Consortium Reports created by Allen and Seaman (2011) in online learning.

**Research Question 1**

This study implied no significant difference exists in the emotional intelligence of online and traditional students. This finding might be based on the small number of faculty within the college studied (n = 39). Within this regional institution, it was unlikely to have different professors teach the online and FtF classes. Since courses offered in both the online and traditional formats were taught by only one professor, the concern or limitation of instructional differences among professors within one subject was eliminated.

Another consideration associated with this result, is the adoption of a standardized technology enhanced course structure through the university’s Learning Management System (LMS) to assist in the navigation and orientation process for both traditional and online students. This standardization was likely to reduce student confusion and format differences associated with online courses as both the traditional and online students are presented with the same
content, assignments, assessments and course infrastructure. This process allows both faculty and students to focus on the process of teaching and learning the specified subject matter.

The result of this research question, coincide with the implications found in other scholarly works. As previously reported, over two-thirds of post-secondary faculty rates the online educational environment to be either the same or superior to the traditional face-to-face setting. Many of the academic leaders perceive online education to be at least as good as face-to-face instruction (Allen & Seaman, 2011).

**Research Question 2**

Is there a significant difference in the emotional intelligence of students based on the number of online courses completed? Yes. The analysis revealed significant differences in the EI scores among three groups: a) students completing zero courses online; b) students completing 1-4 courses online; and c) students completing five or more courses online. The group taking no online classes had a significantly lower EI score when compared to students taking 1-4 classes. Additionally, a significantly lower EI score was found among the students completing zero classes when compared to those completing five or more online courses.

While evidence that people can improve on emotional intelligence competencies comes from a wide range of sources, one of the most recognized examples of the relationship between age and experience as interpersonal skills can be developed and improved upon through time and training (Boyaatzi, Cowan, & Kolb, 2005; Ferris, Whitt, & Hochwarter, 2001; Geher, 2004; Loader, 2007). Improving interpersonal skills helps individuals enrich relationships, cope better at work and in social situations, and especially when dealing with difficult or challenging individuals.
One justification for the significant difference in EI scores among students completing no online courses when compared to those taking 1 - 4 or 5 or more online courses might be that online education provides students with additional opportunities not present in the traditional environment. Online courses may offer more chances for the proper development of interpersonal relationships and social skills utilizing developments of the Internet and Web 2.0 technologies to enhance their understanding of citizenship and engagement (Loader, 2007).

Additional considerations for the significantly higher EI scores on the basis of completing online classes might be that students within the traditional classroom may not be offered frequent opportunities to participate in direct involvement with others. Professors within the traditional environment often serve as the “Sage on Stage.” These instructors often rely heavily on a teacher centered, lecture-based format, thereby potentially eliminating the opportunity to practice interpersonal skills among students.

Another explanation might be related to student engagement opportunities. Students within the online environment often interact with one another and the professor through asynchronous discussion boards in which interpersonal skills are stimulated by dialog, regarding others' opinions and preferences. Contrary to the information found in scholarly works, one might consider the use of computers in solitude allows students have the opportunity to provide thought-based, provocative responses which might serve to not only enhance interpersonal skills practice, but also boost the development and maintenance of social relationships as students are offered time for revisions and opportunities to consider other’s feelings before responding to the topic at hand (Turkle, 2011). In other words, students have time and opportunity for revision before communicating, sharing and using information to solve complex problems; and adapting and innovating in response to new demands and constantly changing circumstances with the
feelings of others in mind; unlike the experiences found in a traditional course which require students to move through the critical thinking process, and develop responses immediately.

**Research Question 3**

The results of this investigation show that no significant difference exists in the emotional intelligence of students on the basis of age. Intuitively, one might assume that emotional intelligence increases with age. From the literature, EI is improved upon as one learns to be more aware of self – through evaluation and regulation of moods and behaviors - thus, also able to handle distressing emotions and situations. According to Mayer et al. (2000), matured and experienced individuals have the aptitude to sense other’s feelings about their work environments and therefore exhibit higher levels of EI. Cooper (1997) noted that individuals with high EI are proactive; begin with the end in mind; think win/win; and seek first to understand then to be understood. However, no significant differences in the emotional intelligence scores of students on the basis of age were found in this particular study.

The participant population for this study was centered on undergraduate students. From reports published by the study site, the average age of new freshmen was 18.3. Upon combining the age of all new freshmen with the age of returning freshmen, the average age of the freshmen class increased by 6 months to 19.1 years. The average undergraduates’ age was 22.6. This result implied the overall student population within the undergraduate community, at the study site, fell into the traditional age bracket of 19-24 years of age, which could infer why no significant difference was found in EI scores on the basis of age.

Future studies might incorporate a further breakdown of the age demographic from traditional and non-traditional age ranges to specific ages instead of ranges. Incorporating this specific change might change the significance factor associated with age in the study, as subtle
changes could have occurred at varying intervals within the age ranges associated with a 
student’s freshman, sophomore, junior and senior years.

**Research Question 4**

This study has found that generally there is a significant difference in the emotional 
intelligence of students on the basis of gender. Females notably outscored males on the STEM 
survey. This finding is not surprising based on scholarly literature. Petrides and Furnman 
(2000) suggested that gender differences exist. One explanation for this finding is tied to 
socialization. Families, schools, peers and media, as part of the socialization process, encourage 
girls to be cooperative, expressive and attuned to their interpersonal world. Boys, however, are 
lead to be openly competitive and independent (Petrides & Furnman, 2006).

According to North Carolina State University’s Student Health Center (2012), “People 
learn interpersonal skills by interacting with family members, going to school, and socializing 
with their peers. Healthy interpersonal skills reduce stress, resolve conflict, improve 
communication, enhance intimacy, increase understanding, and promote joy” (¶ 1). It is through 
this socialization process that women might learn to value nurturing and interconnectivity 
(Gunkel, Lusk, Wolff, & Li, 2007). Previous studies have also found that women are slightly 
superior to men in perceiving emotions, demonstrating greater abilities in social and emotional 
intelligence, greater doubt about feelings and decisions, and less emphasis on the intellect 
(Ciarrochi, Chan, & Caputi, 2002; Mayer & Geher, 1996: Wong & Law, 2002). Women tend to 
have stronger aptitudes for areas incorporating empathy and social skills, while men’s scores 
demonstrate a proficiency in self-regulation (Gunkel et-al, 2007; Petrides & Furnman, 2006). 
Studies by Mayer et al. (1998) as well as Mandell and Peherwani (2003) have found that women
are more likely to score higher on emotional intelligence scales than men, in both professional and personal environment.

**Research Question 5**

Is there a significant difference between the emotional intelligence of students based on student classifications? No. For the purpose of this study, classifications refer to undergraduate freshmen, sophomores, juniors and seniors. To move from one classification to another, students must successfully complete a specified set of course hours. Freshmen students are those who have completed between zero and 31 hours of coursework. Students completing 32 - 63 hours of coursework are identified as sophomores. Students who have finalized between 64 and 95 hours are juniors, while seniors have successfully fulfilled 96 or more hours of college credit. No significant difference between EI abilities of students based on student classifications was found within this study, as scores were consistent among the various groups of students.

One potential explanation for this finding is that freshmen and sophomore students are typically underrepresented populations with the COB due to admissions requirements of the business school. Students pursuing a degree in business must apply for admission to the college major program after completing 45 semester hours of required courses. Students who are not admitted into the COB are not allowed to enroll in the majority of business courses offered. This small sample size of freshmen (n = 12) and sophomores (n = 53) could easily explain the result.

Another potential consideration is that classification associated with EI abilities might only be valuable on a broader scope by looking for comparative analysis of undergraduate and graduate students. However, a composite of age and experience might account for potential differences better than classification alone.
Research Question 6

No significant differences were found in the EI abilities of students who participate in course teamwork activities and those who do not. A potential explanation for this finding is that the sample size was too small (n = 347). From the data collected, there were seven students who had participated in teamwork within the online only environment and twenty-one students had never experienced any form of group work. While 131 students had participated in team exercises in the traditional environment only, there were 188 students who had the benefit of team activities in both formats. An individual’s ability to be a team player, to collaborate with individuals from different cultures and backgrounds, to interact with diverse personalities, and to work on projects with strict deadlines is required in the marketplace. EI has been found to gauge the skills necessary to safeguard interpersonal relationships as they are related to social adaptation within the environment (Bar-On, 2005). Furthermore, EI predicts positive relations with others and is negatively associated with interpersonal problems (Ghiabi & Ali Besharat, 2011).

Emotions are ever present in the educational environment. One area in which emotional intelligence may be taught is within courses that require collaborative or team based activities and assignments. Students enrolled in courses incorporating collaborative learning endeavors, whether within the traditional or online environment, expand their opportunities to practice and experience working toward a common goal, as well as achieving satisfaction in contributing to the group performance and artifacts (Webb, 1995). Evidence shows that teamwork encourages habitual use of higher level reasoning strategies, higher achievement, and more precise assessments than individual endeavors (Clarke, 2010; Johnson & Johnson, 2004). In addition to providing opportunities for students to gain new knowledge and abilities, teamwork cultivates EI
skill sets, which are necessary for working effectively with others. Additionally, these shared encounters result in increased student maturity levels through cognitive processes, ethical or moral decision making activities, and in considering the perspective of others throughout the entire event.

When professors provide team-based activities, they often offer students an emotional vocabulary, identify and model respectable behavior, mirror the behaviors, and encourage higher levels of critical thinking and reflection. These activities are essential in the development of EI. As the literature suggests, these skills are not learned in isolation. Zull (2002) observed that social structures allow the exchange and development of emotions and that in the process, neural connections and EI are strengthened with reciprocity in how these skills are learned: Interaction between team members may facilitate and reinforce EI (Moriarty & Buckley, 2003). In the same way, EI skills development may facilitate team-building efforts (Welch, 2003). Other research suggests that teams with high levels of EI are more successful, specifically with higher problem-solving abilities, better performance, and grades (Druskat & Wolff, 2001; Yost & Tucker, 2000). Team leaders with EI skill sets also facilitate better responses from their colleagues (Antonakis et al., 2009; Ashkanasy & Tse, 2000; George, 2000).

While the study did not demonstrate a statistically significant difference of EI scores on the basis of teamwork, the mean scores indicate that students incorporating teamwork in the traditional only format scored highest on the stem test followed closely by students experiencing collaborative learning activities in the blended environments. Students who had not experienced team-based activities in either environment produced higher mean scores than students participating in team-based activities within the online only environment. While there is no empirical evidence from this study to support any findings, this discovery does lend itself to
future studies to determine what constitutes teamwork within the online environment from the educators’ perspective. In addition, one might question whether or not pedagogically sound collaborative activities are actually occurring within the online environment. Students enrolled in courses utilizing collaborative learning endeavors, whether within the traditional or online environment, expand their opportunities to practice and experience working toward a common goal, as well as achieving satisfaction in contributing to the group performance and artifacts (Webb, 1995). In addition to providing opportunities for students to gain new knowledge and abilities, teamwork cultivates EI skillsets, which are necessary for working effectively with others.

**Research Question 7**

The evidence from this study, suggests that no significant difference exists in the EI abilities of students among the four departments of within CoB. This finding could be tied to the organizational infrastructure and degree requirements found at the study site. As previously mentioned, the Cob is divided into four departments: a) the Department of Accounting and Business Law; b) the Department of Computer Science and Information Systems; c) the Department of Economics and Finance and d) the Department of Management and Marketing. These four departments are further subdivided into eight majors.

Students enrolled in the CoB, must complete 21 hours of Pre-Bachelor of Business Administration (BBA) Foundation hours, and 21 hours of BBA core courses regardless of their major. To receive a degree within one of the eight fields of study, students are required to complete varying ranges (24 – 30) of departmental hours. As such, it is likely that students could obtain the necessary EI skills from the general foundations and core course components, thereby eliminating a difference of skill sets on the basis of department or major.
Conclusions

The purpose of this study was to compare the interpersonal abilities of online students to traditional students by evaluating their EI through the Situational Test of Emotional Management (STEM). The study sought to determine if there was a relationship between the number of online courses completed and EI abilities of students. Additionally, the study examined demographic data such as age, gender and classification for any relationships associated with EI abilities of students. Finally, the study evaluated whether a relationship exists between teamwork components of courses and students’ EI abilities.

As previously stated the study was descriptive in nature, as it provided information about the behavior of the participants. Additionally, it was a cross-sectional study at the individual student level as information will be collected from individual students at one point in time. This study demonstrated relationships and the educational environment as it currently exists by utilizing a situational judgment test for current abilities associated with emotional intelligence and a survey styled questionnaire for the collection of demographic data.

Interpersonal skills research, while highly significant to individual lives, rarely occurs due to the challenging task of distinguishing interpersonal skills from other cognitive, psychomotor, or affective components such as personality (Doo, 2006). Additionally, presumptuous individuals may believe that interpersonal skills will not increase through educational opportunities. Personality and interpersonal or social skills are related, yet, personality is not easily changed while interpersonal skills can be developed and improved upon through training (Ferris, Whitt, & Hochwarter, 2001; Geher, 2004).

It is believed that improving interpersonal skills will help individuals enrich relationships, cope better at work, and in social situations and especially when dealing with difficult or
challenging individuals. This study was conducted to determine, whether or not asynchronous education limits students’ opportunities to practice and improve upon interpersonal skills or fails to offer students a place enhance and practice interpersonal interactions when compared to student enrolled in traditional environments.

Implications of this study suggest that no significant difference exists in EI scores of students constructed on the type, age, or classification of students. Additionally, the results did not find a relationship of EI scores on the bases of collaborative learning activities, department or major.

While the study found no significant difference existed in the EI scores of students in the online and traditional environment, one of the most interesting findings to emerge from the data was the significant difference of EI scores surrounding the number of online courses completed. Students who completed at least one online course scored significantly higher on the STEM survey than their counterparts who had not completed any online courses. This finding implies that students might benefit from the time, training, experience, and practice of interpersonal skills in an online environment.

**Implications of the Study**

This study is only a first step in providing insights into the differences among the EI levels of students within the online and traditional environment. The ultimate goal through research endeavors should be to seek the most advantageous teaching and learning opportunities from both environments to provide new insights for pedagogical practices that improve student preparedness with regard to EI and interpersonal skill sets upon graduation, thereby meeting the needs of the marketplace.
The career minded individual is one who can adapt, manage stress, incorporate teamwork and help others; these skill sets are often referred to as EI. Colleges and universities are known for teaching content through specific, teachable abilities that can be defined and measured. In contrast, EI skills incorporate the qualities of personal attributes that enhance an individual's interactions, job performance and career prospects (Sharma, 2009). Today’s marketplace requires both elements to successfully work in teams, multitask and think critically and creatively (Harvard, 2011; James & James, 2004).

Professors must seek out methods of incorporating the assignments and activities that promote practice of these skill sets, in both online and traditional environments. While additional research is necessary to fully understand how to incorporate interpersonal skills practice at the undergraduate level, this portion of the paper will discuss implications of the study and potential areas for improvements.

Data analysis revealed significant differences in the EI scores among three groups: a) students completing zero courses online; b) students completing 1 - 4 courses online; and c) students completing five or more courses online. The group taking no online classes had a significantly lower EI score when compared to students taking 1 - 4 classes. Additionally, a significantly lower EI score was found among the students completing zero classes when compared to those completing five or more online courses. To improve upon students EI and interpersonal skills professors might consider encouraging traditional students to take some online courses as part of the college experience, while employers might encourage subordinates to seek out online professional development opportunities as online courses may offer opportunities to enhance interpersonal relationships and social skills utilizing developments of the Internet and Web 2.0 technologies which are present in the marketplace. Online courses
likely provide authentic practice in developing communications and interpersonal skill sets utilizing these marketplace tools. Students and employees alike might benefit from trying different methods of learning to gain authentic practice and improve upon interpersonal skills.

Whether in the traditional or online environment professors might also consider offering frequent opportunities to participate in direct involvement with others rather than rely on a teacher centered lecture-based format. Classroom discussions and group work provide engagement opportunities for additional interpersonal skills practice among students. These collaborative assignments offer interpersonal skills practice for authentic marketplace activities such as: a) comprehending what others say, b) voicing your thoughts effectively, c) giving and receiving constructive criticism for others, d) being influential to others, e) initiating proper conflict resolution, f) working with others, and g) changing pace when unproductiveness occurs (James & James, 2004). However, for professors this requires that the assessments and activities offered are pedagogically sound collaborative experiences.

Students within the online environment often interact with one another and the professor through asynchronous discussion boards in which interpersonal skills are stimulated by dialog, regarding others' opinions and preferences. The use of computers in solitude allows students the opportunity to provide thought-based, provocative responses which might serve to not only enhance interpersonal skills practice, but also boost the development and maintenance of social relationships as students are offered time for revisions and opportunities to consider other’s feelings before responding to the topic at hand. In other words, students have time and opportunity for revision before communicating, sharing and using information to solve complex problems; and adapting and innovating in response to new demands and constantly changing circumstances with the feelings of others in mind unlike the experiences found in a traditional
course which require students to move through the critical thinking process and develop responses immediately. Professors within the traditional classroom might consider the addition of online asynchronous discussion boards to stimulate this type of thought-based communications practice. Additionally, online professors might consider utilizing technology based tools that allow for synchronous discussions to ensure online students have the opportunity to practice immediate response interpersonal skills practice as both scenarios (synchronous and asynchronous communications) are likely to arise in the marketplace.

Students enrolled in courses utilizing collaborative learning endeavors, whether within the traditional or online environment, expand their opportunities to practice and experience working toward a common goal, as well as achieving satisfaction in contributing to the group performance and artifacts (Webb, 1995). Evidence shows that teamwork encourages habitual use of higher level reasoning strategies, higher achievement, and more precise assessments than individual endeavors (Clarke, 2010; Johnson & Johnson, 2004). In addition to providing opportunities for students to gain new knowledge and abilities, teamwork cultivates EI skill sets, which are necessary for working effectively with others. Additionally, these shared encounters result in increased student maturity levels through cognitive processes, ethical or moral decision making activities, and in considering the perspective of others throughout the entire event.

While this study did not demonstrate a significant difference in EI scores on the basis of age, professors and employers alike may benefit from the knowledge that emotional intelligence is not genetic-based. Additionally, it does not end upon early childhood development. Emotional intelligence seems to be fundamentally learned, and can continue to grow throughout life as people learn from past experiences. Therefore, one’s competence may be continuously improved upon. Studies that have tracked people's level of emotional intelligence through the years show
that people improve as they grow more adept at handling their own emotions and impulses, at motivating themselves, and at honing their empathy and social competence. The old fashioned term for this change in emotional intelligence: maturity (Boyaatzi, Cowan & Kolb, 2005; Ciarrochi & Ciarrochi, 2001; Ferris, Whitt, & Hochwartner, 2001; Geher, 2004; Mayer et al., 2000; Salovey & Mayer, 1990).

The study also found that generally there is a significant difference in the emotional intelligence of students on the basis of gender. Females notably outscored males on the STEM survey. However, professors and employers should remember that women are not "smarter" than men when it comes to emotional intelligence, nor are men superior to women. Each gender has a personal profile of strengths and weaknesses in these capacities. Some individuals are highly empathic but lack some abilities to handle emotional distress; others may be quite aware of the subtlest shift in individual moods, yet be inept socially. It is true that men and women as groups tend to have a shared, gender-specific profile of strong and weak points. Women, on average, are more aware of emotions, show more empathy, and are more adept interpersonally. Men, on the other hand, are more self-confident and optimistic, adapt more easily, and handle stress better (Gunkel et-al., 2007; Petrides & Furnman, 2006). The good news is that individuals who understand their own areas of weaknesses may work to improve upon their skill sets as previously stated, emotional intelligence is not genetic-based and can be improved upon.

Emotions play an important role in the coordination of social interactions and relationships (Keltner & Haidt, 2001) and serve important communicative functions (Elfenbein, Foo, White, Tan, & Aik, 2007) by providing information about thoughts and intentions and the probable behavior of interaction partners. To benefit from this information, emotions have to be processed as optimally as possible (Mayer & Salovey, 1997). Professors and employers alike can
assist subordinates in identifying areas of emotional and interpersonal weaknesses and offer opportunities for improvement in these areas to better prepare for the workplace.

**Recommendations for Further Study**

Future studies might re-assess EI abilities in subsequent stages of an academic program, as students who complete the university experience are likely to have different levels of emotional intelligence at the end of their program when compared to levels at the start of their program. One consideration would be to gather STEM survey results of entering freshmen and then periodically test EI throughout their course of their study. Most post-secondary institutions have, as a primary goal, the desire to foster a variety of interpersonal and intrapersonal skills in their students, one might expect emotional and social competencies to change over the course of a student's post-secondary experiences.

Additional research might also want to investigate a broader range of indicators incorporating items like GPA, work experience, and extracurricular activities. Other indicators might include variables like the number of online and traditional courses dropped or not completed, and whether a student persists or withdraws from an institution (either to transfer to another institution or to dropout entirely).

While the study did not demonstrate a statistically significant difference in EI scores on the basis of teamwork, the means suggest that students incorporating teamwork in the traditional only format scored highest on the stem test followed closely by students experiencing collaborative learning activities in both the traditional and online environment. Students who had not experienced team-based activities within the traditional environment scored higher on average than students who completed team-based assignments in the online only environment. Future studies might determine what constitutes teamwork within the online and traditional
environment from the educators’ perspective. Are there differences in the professors’ perspectives based on the actual environment? Do the professors’ assessments within an online environment match educators’ perspective of collaborative activities? Do the professors’ assessments within a traditional environment match the educators’ perspective of collaborative activities? Students enrolled in courses utilizing collaborative learning endeavors, whether within the traditional or online environment, expand their opportunities to practice and experience working toward a common goal, as well as achieving satisfaction in contributing to the group performance and artifacts (Webb, 1995). Evidence shows that teamwork encourages habitual use of higher level reasoning strategies, higher achievement, and more precise assessments than individual endeavors (Clarke, 2010; Johnson & Johnson, 2004). In addition to providing opportunities for students to gain new knowledge and abilities, teamwork cultivates EI skill sets, which are necessary for working effectively with others. Additionally, these shared encounters result in increased student maturity levels through cognitive processes, ethical or moral decision making activities, and in considering the perspective of others throughout the entire event.

Now that a relationship has been found surrounding the number of online courses completed and EI scores, further research to explore the relationship specifics between the demographic variables and the EI scores of students is warranted. Interpersonal skills research rarely occurs; as such, this study was unique in that it examined whether or not there is a relationship between online education and interpersonal skills of students. Pedagogical practices associated with interpersonal skills and education could be improved upon to help individuals cultivate relationships; cope better at work and in social situations based on the results of this study by combining learning opportunities to include the interpersonal skills teaching practices in
both environments. Additionally, this study will add to scholarly literature as it was the first in what is hopefully a new line of studies.
REFERENCES


University of Michigan. (2010, May). *Research study: Empathy: College students don’t have as much as the used to.* Retrieved from http://ns.umich.edu/new/releases/7724


APPENDIX A

SITUATIONAL TEST OF EMOTION MANAGEMENT (STEM) SHORT FORM

Instructions

In this test, you will be presented with a few brief details about an emotional situation, and asked to choose from four responses the most effective course of action to manage both the emotions the person is feeling and the problems they face in that situation. Although more than one course of action might be acceptable, you are asked to choose what you think the most effective response for that person in that situation would be. Remember, you are not necessarily choosing what you would do, or the nicest thing to do, but choosing the most effective response for that situation.

1. Pete has specific skills that his workmates do not and he feels that his workload is higher because of it. What action would be the most effective for Pete?
   (a) Speak to his boss about this.
   (b) Start looking for a new job.
   (c) Be very proud of his unique skills.
   (d) Speak to his workmates about this.

2. Wai-Hin and Connie have shared an office for years but Wai-Hin gets a new job and Connie loses contact with her. What action would be the most effective for Connie?
   (a) Just accept that she is gone and the friendship is over.
   (b) Ring Wai-Hin and ask her out for lunch or coffee to catch up.
   (c) Contact Wai-Hin and arrange to catch up but also make friends with her replacement.
   (d) Spend time getting to know the other people in the office, and strike up new friendships.

3. Surbhi starts a new job where he doesn’t know anyone and finds that no one is particularly friendly. What action would be the most effective for Surbhi?
   (a) Have fun with his friends outside of work hours.
   (b) Concentrate on doing his work well at the new job.
   (c) Make an effort to talk to people and be friendly himself.
   (d) Leave the job and find one with a better environment.

4. Andre moves away from the city his friends and family are in. He finds his friends make less effort to keep in contact than he thought they would. What action would be the most effective for Andre?
   (a) Try to adjust to life in the new city by joining clubs and activities there.
   (b) He should make the effort to contact them, but also try to meet people in his new city.
   (c) Let go of his old friends, who have shown themselves to be unreliable.
   (d) Tell his friends he is disappointed in them for not contacting him.
5. Clayton has been overseas for a long time and returns to visit his family. So much has changed that Clayton feels left out. What action would be the most effective for Clayton?
   (a) Nothing – it will sort itself out soon enough.
   (b) Tell his family he feels left out.
   (c) Spend time listening and getting involved again.
   (d) Reflect that relationships can change with time.

6. Daniel has been accepted for a prestigious position in a different country from his family, who he is close to. He and his wife decide it is worth relocating. What action would be the most effective for Daniel?
   (a) Realize he shouldn’t have applied for the job if he didn’t want to leave.
   (b) Set up a system for staying in touch, like weekly phone calls or emails.
   (c) Think about the great opportunities this change offers.
   (d) Don’t take the position.

7. Mei Ling answers the phone and hears that close relatives are in hospital critically ill. What action would be the most effective for Mei Ling?
   (a) Let herself cry and express emotion for as long as she feels like.
   (b) Speak to other family to calm herself and find out what is happening, then visit the hospital.
   (c) There is nothing she can do.
   (d) Visit the hospital and ask staff about their condition.

8. Upon entering full-time study, Vincent cannot afford the time or money he used to spend on water-polo training which he was quite good at. Although he enjoys full-time study, he misses training. What action would be the most effective for Vincent?
   (a) Concentrate on studying hard, to pass his course.
   (b) See if there is a local league or a less expensive and less time-consuming sport.
   (c) Think deeply about whether sport or study is more important to him.
   (d) Find out about sporting scholarships or bursaries.

9. Greg has just gone back to university after a lapse of several years. He is surrounded by younger students’ who seem very confident about their ability and he is unsure whether he can compete with them. What action would be the most effective for Greg?
   (a) Focus on his life outside the university.
   (b) Study hard and attend all lectures.
   (c) Talk to others in his situation.
   (d) Realize he is better than the younger students as he has more life experience.

10. Shona has not spoken to her nephew for months, whereas when he was younger they were very close. She rings him but he can only talk for five minutes. What action would be the most effective for Shona?
(a) Realize that he is growing up and might not want to spend so much time with his family anymore.
(b) Make plans to drop by and visit him in person and have a good chat.
(c) Understand that relationships change, but keep calling him from time to time.
(d) Be upset about it, but realize there is nothing she can do.

11. Joel has always dealt with one particular client but on a very complex job his boss gives the task to a co-worker instead. Joel wonders whether his boss thinks he can’t handle the important jobs. What action would be the most effective for Joel?
(a) Believe he is performing well and will be given the next complex job.
(b) Do good work so that he will be given the complex tasks in the future.
(c) Ask his boss why the co-worker was given the job.
(d) Not worry about this unless it happens again.

12. Hasina is overseas when she finds out that her father has passed away from an illness he has had for years. What action would be the most effective for Hasina?
(a) Contact her close relatives for information and support.
(b) Try not to think about it, going on with her daily life as best she can.
(c) Feel terrible that she left the country at such a time.
(d) Think deeply about the more profound meaning of this loss.

13. Mina and her sister-in-law normally get along quite well, and the sister-in-law regularly baby-sits for her for a small fee. Lately she has also been cleaning away cobwebs, commenting on the mess, which Mina finds insulting. What action would be the most effective for Mina?
(a) Tell her sister-in-law these comments upset her.
(b) Get a new babysitter.
(c) Be grateful her house is being cleaned for free.
(d) Tell her only to baby-sit, not to clean.

14. Juno is fairly sure his company is going down and his job is under threat. It is a large company and nothing official has been said. What action would be the most effective for Juno?
(a) Find out what is happening and discuss his concerns with his family.
(b) Try to keep the company afloat by working harder.
(c) Start applying for other jobs.
(d) Think of these events as an opportunity for a new start.

15. Mallory moves from a small company to a very large one, where there is little personal contact, which she misses. What action would be the most effective for Mallory?
(a) Talk to her workmates, try to create social contacts and make friends.
(b) Start looking for a new job so she can leave that environment.
(c) Just give it time, and things will be okay.
(d) Concentrate on her outside-work friends and colleagues from previous jobs.
16. Blair and Flynn usually go to a cafe after the working week and chat about what’s going on in the company. After Blair’s job is moved to a different section in the company, he stops coming to the cafe. Flynn misses these Friday talks. What action would be the most effective for Flynn?
   (a) Go to the cafe or socialize with other workers.
   (b) Don’t worry about it, ignore the changes and let Blair be.
   (c) Not talk to Blair again.
   (d) Invite Blair again, maybe rescheduling for another time.

17. Michelle’s friend Dara is moving overseas to live with her partner. They have been good friends for many years and Dara is unlikely to come back. What action would be the most effective for Michelle?
   (a) Forget about Dara.
   (b) Spend time with other friends, keeping herself busy.
   (c) Think that Dara and her partner will return soon.
   (d) Make sure she keeps in contact through email, phone or letter writing.

18. Hannah’s access to essential resources has been delayed and her work is way behind schedule. Her progress report makes no mention of the lack of resources. What action would be the most effective for Hannah?
   (a) Explain the lack of resources to her boss or to management.
   (b) Learn that she should plan ahead for next time.
   (c) Document the lack of resources in her progress report.
   (d) Don’t worry about it.

19. Jacob is having a large family gathering to celebrate him moving into his new home. He wants the day to go smoothly and is a little nervous about it. What action would be the most effective for Jacob?
   (a) Talk to friends or relatives to ease his worries.
   (b) Try to calm down, perhaps go for a short walk or meditate.
   (c) Prepare ahead of time so he has everything he needs available.
   (d) Accept that things aren’t going to be perfect but the family will understand.

20. Julie hasn’t seen Ka for ages and looks forward to their weekend trip away. However, Ka has changed a lot and Julie finds that she is no longer an interesting companion. What action would be the most effective for Julie?
   (a) Cancel the trip and go home.
   (b) Realize that it is time to give up the friendship and move on.
   (c) Understand that people change, so move on, but remember the good times.
   (d) Concentrate on her other, more rewarding friendships.
APPENDIX B

DEMOGRAPHIC DATA

Instructions: Please check only one response for each of the following questions.

1. Gender: Male _____ Female _____

2. Age: 18 or under_____ 19-24_____ 25-30 _____ 31 or older _____

3. Classification:
   Freshman___ Sophomore ___ Junior____ Senior____ Graduate ______

4. Major:
   Accounting ____ Computer Science & Information Systems____ Economics or Finance
   ____ Management or Marketing _____

5. I consider myself to primarily be…
   an online student _____ Face-to-Face student _____.

6. I consider myself to be more comfortable interacting with my peers in the
   Online environment _____Face-to-face environment _____.

7. Number of courses completed online:
   0 _____ 1-5 _____ 6 or more ______

8. I have taken courses online which require teamwork  Y or N
9. I have taken traditional courses which require teamwork  Y or N
APPENDIX C

E-MAIL ADVERTISEMENT/ INFORMED CONSENT STATEMENT (Survey)

Situational Test of Emotional Management

Dear Potential Participant:

You are invited to participate in a research study conducted by Natasha Lindsey, from The University of Alabama, Department of Educational Leadership, Policy and Technology Studies. The purpose of this study is to compare the interpersonal abilities of online students to traditional students by evaluating their Emotional Intelligence (EI) through the Situational Test of Emotional Management (STEM). The study seeks to determine if there is a relationship between the number of online courses completed and EI abilities of online students. Additionally, the study will examine demographic data such as age, gender and classification for any relationships associated with EI abilities of students, as well as evaluate whether a relationship exists between teamwork components of courses and students’ EI abilities.

You were selected as a possible participant in this study because you are currently enrolled in courses within the College of Business at UNA. However, you must be at least 19 years old to participate.

If you decide to participate, you will be asked to complete a survey which should take approximately 30 -45 minutes of your time. The purpose of this survey is to evaluate your EI. For this study online courses are defined as classes offered entirely over the internet. Face to face meetings between the students and the instructor are NOT mandatory in this online setting. The traditional classroom is one that requires students to meet face to face with the instructor on the college campus. You will be asked to complete the survey online by selecting the bubble which represents your response following each statement. The survey contains 20 opinion-based questions such as, “By their own actions, a person reaches a goal they wanted to reach. The person is most likely to feel?” The survey also contains 10 demographic questions related to your age, gender, classification, and number of online courses taken. The survey will be administered to you and collected from you electronically.

There are no known risks or discomforts associated with your participation in this study. By understanding your EI, Natasha Lindsey, the University’s Instructional Designer can assist the College of Business at UNA to improve the online learning environment and students’ preparedness for the marketplace upon graduation. However, I cannot guarantee that you personally will receive any benefits from this research.

Subject identities will be kept anonymous as the data will be collected using an anonymous survey tool online. No personal information will be connected to you in anyway or released for the purpose of this study.
Your participation is voluntary. Your decision whether or not to participate will not affect your relationship with the College of Business at UNA. If you decide to participate, you are free to withdraw your consent and discontinue survey participation at any time without penalty.

If you have any questions, please feel free to contact Natasha Lindsey at 413 Oakhill Avenue, Sheffield, AL 35660 or by phone at 256-765-4943. Dr. Margaret Rice, Associate Professor, Computers and Applied Technology within the Department of Educational Leadership, Policy and Technology Studies at the University of Alabama is serving as my advisor for this study. You may contact Dr. Rice at the University of Alabama, 315F Graves Hall – Box Tuscaloosa, AL 35487-0302, by phone at (205) 348-1165 or by e-mail at mrice@bamaed.ua.edu.

If you have any questions, concerns, or complaints about your rights as a research participant you may contact Ms. Tanta Myles, The University of Alabama Research Compliance Officer, at (205) 348-8461, or toll free 877-820-3066. You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website at http://osp.ua.edu/site/PRCO_Welcome.html or e-mail participationoutreach@bama.ua.edu. After you participate, you are encouraged to complete the survey for research participants that is online at the outreach website or you may ask the investigator for a copy of it and mail it to the UA Office of Research Compliance, Box 870127, 358 Rose Administration Building, Tuscaloosa, AL 35487-0127.

Completing and returning the survey constitutes your consent to participate and certifies that you are 19 years of age or older. Please keep this letter for your records.

If you are willing to participate in this study, please click on the Anonymous Survey Link: http://bamaesprmc.us2.qualtrics.com/SE/?SID=SV_em1qcDjkOcH2FZb

Natasha Lindsey 09/09/2013
Researcher’s signature Date
Hello I am Natasha Lindsey and I am the Instructional Designer with the Department of Educational Technology Services. I am also pursuing my PhD in “Instructional Leadership.” In my current research, I am undertaking a survey to compare the interpersonal abilities of online students to traditional students by evaluating their EI through the Situational Test of Emotional Management (STEM). The study seeks to determine if there is a relationship between the number of online courses completed and EI abilities of students. Additionally, the study will examine demographic data such as age, gender and classification for any relationships associated with EI abilities of students. Finally, the study will evaluate whether a relationship exists between teamwork components of courses and students’ EI abilities.

Interpersonal skills research rarely occurs; as such, this study is unique in that it will examine whether or not there is a relationship between online education and interpersonal skills of students. If a relationship exists, pedagogical practices associated with interpersonal skills and online education could be improved upon to help individuals cultivate relationships, cope better at work, and in social situations. This research endeavor has the potential to add to scholarly literature as it will be the first in a new line of studies.

The sample for this survey will include all of your traditional and online undergraduate students. To ensure your students do not miss the opportunity to participate, I am asking that assist me by promoting the study to your students through either a short-email message and/ or classroom announcement. Invitations for students to participate in this study will be sent out each Monday for a period of three weeks from 09/09/2013 through 09/30/2013. Please note: this study includes undergraduates in both the traditional and online environments.

Your help in promoting this survey is greatly appreciated. If you are interested in receiving a copy of the survey results, please let me know.

Many thanks,

Natasha Lindsey
Instructional Designer/Instructor
Educational Technology Services
(256) 765-4943
APPENDIX E

INFORMED CONSENT STATEMENT (Survey)

Situational Test of Emotional Management

Dear Potential Participant:

You were invited to participate in a research study conducted by Natasha Lindsey, from The University of Alabama, Department of Educational Leadership, Policy and Technology Studies last week. If you have not yet filled out the survey, please consider this a reminder notice of your eligibility to participate. If you have already completed the survey, your participation is greatly appreciated and you may disregard this notice. The purpose of this study is to compare the interpersonal abilities of online students to traditional students by evaluating their Emotional Intelligence (EI) through the Situational Test of Emotional Management (STEM). The study seeks to determine if there is a relationship between the number of online courses completed and EI abilities of online students. Additionally, the study will examine demographic data such as age, gender and classification for any relationships associated with EI abilities of students, as well as evaluate whether a relationship exists between teamwork components of courses and students’ EI abilities.

You were selected as a possible participant in this study because you are currently enrolled in courses within the College of Business at UNA. However, you must be at least 19 years old to participate.

If you decide to participate, you will be asked to complete a survey which should take approximately 30 - 45 minutes of your time. The purpose of this survey is to evaluate your EI. For this study online courses are defined as classes offered entirely over the internet. Face to face meetings between the students and the instructor are NOT mandatory in this online setting. The traditional classroom is one that requires students to meet face to face with the instructor on the college campus. You will be asked to complete the survey online by selecting the bubble which represents your response following each statement. The survey contains 20 opinion-based questions such as, “By their own actions, a person reaches a goal they wanted to reach. The person is most likely to feel?” The survey also contains 10 demographic questions related to your age, gender, classification, and number of online courses taken. The survey will be administered to you and collected from you electronically.

There are no known risks or discomforts associated with your participation in this study. By understanding your EI, Natasha Lindsey, the University’s Instructional Designer can assist the College of Business at UNA to improve the online learning environment and students’ preparedness for the marketplace upon graduation. However, I cannot guarantee that you personally will receive any benefits from this research.
Subject identities will be kept anonymous as the data will be collected using an anonymous survey tool online. No personal information will be connected to you in anyway or released for the purpose of this study.

Your participation is voluntary. Your decision whether or not to participate will not affect your relationship with the College of Business at UNA. If you decide to participate, you are free to withdraw your consent and discontinue participation at any time without penalty.

If you have any questions, please feel free to contact Natasha Lindsey at 413 Oakhill Avenue, Sheffield, AL 35660 or by phone at 256-765-4943. Dr. Margaret Rice, Associate Professor, Computers and Applied Technology within the Department of Educational Leadership, Policy and Technology Studies at the University of Alabama is serving as my advisor for this study. You may contact Dr. Rice at the University of Alabama, 315F Graves Hall – Box Tuscaloosa, AL 35487-0302, by phone at (205) 348-1165 or by e-mail at mrice@bamaed.ua.edu.

Dr. Margaret Rice, Associate Professor, Computers and Applied Technology within the Department of Educational Leadership, Policy and Technology Studies at the University of Alabama is serving as my advisor for this study.

If you have any questions, concerns, or complaints about your rights as a research participant you may contact Ms. Tanta Myles, The University of Alabama Research Compliance Officer, at (205) 348-8461, or toll free 877-820-3066. You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website at http://osp.ua.edu/site/PRCO_Welcome.html or email participantoutreach@bama.ua.edu. After you participate, you are encouraged to complete the survey for research participants that is online at our outreach website or you may ask the investigator for a copy of it and mail it to the UA Office for Research Compliance, Box 870127, 358 Rose Administration Building, Tuscaloosa, AL 35487-0127.

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Natasha Lindsey
Researcher’s signature
09/16/2013
Date
APPENDIX F

IRB APPROVAL

August 16, 2013

Natasha Lindsey
Department of ELPTS
College of Education
The University of Alabama
Box 870302

Re: IRB # EX-13-CM-083: “Online Education, Emotional Intelligence and Interpersonal Skills for the 21st Century Workforce”

Dear Ms. Lindsey,

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given exempt approval according to 45 CFR part 46.101(b)(2) as outlined below:

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:

i. information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and

ii. any disclosure of the human subjects’ responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects’ financial standing, employability, or reputation.

This approval expires on August 15, 2014. If the study continues beyond that date, you must complete the eProtocol Renewal Form. If you modify the application, please complete the Revision Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Final Report Form.

Please use the IRB-approved consent language when recruiting participants.

Should you need to submit any further correspondence regarding this application, please include the assigned IRB application number.

Good luck with your research.

Sincerely,

CARPENTI, I. MYLES, MSM, CLM
Director and Research Compliance Officer
Office for Research Compliance
The University of Alabama
INFORMED CONSENT STATEMENT (Survey)
Situational Test of Emotional Management

Dear Potential Participant:

You are invited to participate in a research study conducted by Natasha Lindsey, from The University of Alabama, Department of Educational Leadership, Policy and Technology Studies. The purpose of this study is to compare the interpersonal abilities of online students to traditional students by evaluating their Emotional Intelligence (EI) through the Situational Test of Emotional Management (STEM). The study seeks to determine if there is a relationship between the number of online courses completed and EI abilities of online students. Additionally, the study will examine demographic data such as age, gender and classification for any relationships associated with EI abilities of students, as well as evaluate whether a relationship exists between teamwork components of courses and students’ EI abilities.

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Subject identities will be kept anonymous as the data will be collected using an anonymous survey tool online. No personal information will be connected to you in anyway or released for the purpose of this study.

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