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Emotional Intelligence and Graduate Student Satisfaction at Online Institutions of Higher Education

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Abstract

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M.B.A., University of Phoenix 2007

B.A., Arizona State University, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Psychology

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Abstract

The effect of emotional intelligence (EI) among students in education settings could prove essential to determining the needs of student satisfaction leading to retention and graduation. However, lack of research has yet to determine whether EI is an important factor of student satisfaction. The purpose of this quantitative survey study was to determine whether a relationship exists between EI in graduate students and satisfaction with their overall academic experience at their online institution of higher education. Participants included graduate students enrolled in a masters' or doctoral program at an online institution of higher education. They were surveyed to measure their level of EI by Mayer-Salovey-Caruso Emotional Intelligence Test v. 2 and satisfaction of overall academic experience measured by the Priorities Survey for Online Learners. Research questions were focused on satisfaction of graduate students and elements of EI including overall EI and the 4 branches of the EI model. Statistical regression analyses revealed no significant relationships between EI, branches of EI, and overall satisfaction. Nevertheless, the results have implications for positive social change. No significant relationship demonstrated between EI and satisfaction may help accentuate other factors such as motivation and expectations that affect student satisfaction. These results can contribute to social change by supporting focus and improvement of the quality of factors that do affect overall satisfaction of students.

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Dedication

This dissertation is dedicated to my parents for their ability to instill the true values and confidence during my youth and adulthood and their unwavering support in any path I choose to take. They helped me realize that anything is possible if I put my mind to it and there is no limit to my success.

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Chapter 1: Introduction to the Study

Introduction

One of the most common definitions of emotional intelligence focuses on an individual's ability to perceive, understand, and act based on the emotional cues provided by self and others (Mayer & Salovey, 1997). The use of emotional intelligence (EI) in a higher education setting has the potential to provide positive interaction on a personal and/or social level for students including reduction of potential emotional or behavioral problems and increase of scores on curriculum (Vandervoort, 2006). This allows for improvement in the learning process, in career choices, and in overall success of students (Vandervoort, 2006). Due to the influence EI may have on such factors, this study will determine if EI is also directly related to student satisfaction adding to the number of influential factors contributing to student retention and graduation.

The remainder of the chapter will provide background on EI, the problem statement, and the purpose of the study. Research questions will be provided followed by more in-depth information including theoretical basis, nature of study, definition of terms, assumptions, limitations/delimitations, and the significance of the study.

Background

Much of research on EI in higher education focuses on how EI relates to academic performance, student retention, and degree completion. Studies on other intervening and/or moderating variables—such as gender, age, and ethnicity—have also been done, but with a minor focus (Giroir, 2009; Kingston, 2008; Lu, 2008). Research on EI and

student satisfaction often refers to life or overall satisfaction, not satisfaction with an educational institution (Abassi, Malik, Chaudhry, & Imdadullah, 2011). Salami (2011), for example, found that EI (along with other factors, such as self-efficacy and life satisfaction) was significantly correlated with intrinsic motivation, self-discipline, and respect for faculty. Murphy (2006) found no significant correlation between EI and life satisfaction among community college students. Research rarely focuses on students but EI and satisfaction has demonstrated that higher EI was associated with increased job satisfaction in addition to higher level of job involvement and organizational commitment among faculty (Mustafa & Amjad, 2011).

Student satisfaction with the institution has been researched including satisfaction with various facilities, teaching techniques and methods, and administration and staff; but, again, that research has not included EI (Abassi, Malik, Chaudhry, & Imdadullah, 2011; Gibson, 2010).

Research also indicates an increasing trend toward demand and interest in distance learning education. For instance, during the fall 2010 term, over 6.1 million students were taking at least one online course which is a 10% increase (5.6 million students) from 2009 (Allen & Seaman, 2011). Despite the steady increase of online learning each year, EI research of higher education students still predominantly focuses on what may be considered traditional universities or face-to-face instruction (Olatoye, Akintunde, & Yakasai, 2010).

With research focused on traditional universities, there is also the likelihood that the EI measured is focused on undergraduate populations (Deniz, Tras, & Aydogan, 2009; Faralli, 2009; Kingston, 2008; Lu, 2008). Furthermore, much of this research focuses on first and second year students and the effect of EI on the transition from grade school to higher education (Christie, 2009; Johnson, Gans, Kerr, & LaValle, 2010; Kingston, 2008; Salami, 2011). With lack of research on the EI of graduate students, particularly at online universities, results from the current study may provide results rarely investigated with this specific population.

Problem Statement

Research conducted on the EI of higher education students found that students with higher EI are often more inclined to stay enrolled in their programs, become more social with peers, and achieve a higher level of satisfactory academic standing (Han, 2009; Holt, 2007; Qualter, Whiteley, Morley, & Dudiak, 2009). Much of this research, however, focused on students under the age of 25 who may not have had the opportunity to fully develop EI skills (Bradshaw, 2008; Huang, 2007). Although some studies included participants beyond the age of 25, these participants were often still enrolled in the first years of their undergraduate degree (Holt, 2007; Jacques, 2009; McBride, 2010). The current research provides in-depth information on the EI of undergraduate students, but similar detailed research on graduate students is lacking.

Measuring satisfaction among higher education students focused on overall or life satisfaction and included their education. Satisfaction with educational experiences has

only been investigated on the level of faculty and staff (de Lourdes Machado-Taylor & Gouveia, 2011; Hashim & Mahmood, 2011; Hussain, Syed, & Rahman, 2010; Jager & Gbadamosi, 2010; Little & Arthur, 2010). These results provide no understanding on how satisfaction of overall learning experience relates to EI. The problem is with an increase of online graduate students, knowledge to determine whether their level of EI has an effect on satisfaction, which may help with the quality of online experience, is lacking.

Purpose of the Study

The purpose of this quantitative survey study was to determine whether a relationship exists between EI in graduate students and satisfaction with their overall academic experience at an online institution of higher education.

Research Questions and Hypotheses

This study was based on five research questions, each with a null and alternate hypothesis:

Research Question 1: Does a relationship exist between overall emotional intelligence among graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT V2.0) and Priorities Survey for Online Learners (PSOL), respectively?

$H1_0$: There is no statistically significant relationship between overall emotional intelligence score, as measured by MSCEIT V2.0 in graduate students, and satisfaction

with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

$H1_1$: There is a significant, positive relationship between overall emotional intelligence, as measured by MSCEIT V2.0, in graduate students, and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

Research Question 2: Does a relationship exist between the first branch of emotional intelligence, perceived emotions, among graduate students and satisfaction with their overall, academic, and institutional online learning experience, as measured by MSCEIT V2.0 and PSOL, respectively?

$H2_0$: There is no statistically significant relationship between the first branch of emotional intelligence, perceived emotions, as measured by MSCEIT V2.0, in graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

$H2_1$: There is a significant, positive relationship between the first branch of emotional intelligence, perceived emotions, as measured by MSCEIT V2.0, in graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by PSOL (Noel-Levitz, 2012).

Research Question 3: Does a relationship exist between the second branch of emotional intelligence, using emotions, among graduate students and satisfaction with

their overall, academic, and institutional online learning experience as measured by MSCEIT V2.0 and PSOL, respectively?

$H3_0$: There is no statistically significant relationship between the second branch of emotional intelligence, using emotions, as measured by MSCEIT V2.0, in graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

$H3_1$: There is a significant, positive relationship between the second branch of emotional intelligence, using emotions, as measured by MSCEIT V2.0, in graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

Research Question 4: Does a relationship exist between the third branch of emotional intelligence, understanding emotion, among graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by MSCEIT V2.0 and PSOL, respectively?

$H4_0$: There is no statistically significant relationship between the third branch of emotional intelligence, understanding emotion, as measured by MSCEIT V2.0, in graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

$H4_1$: There is a significant, positive relationship between the third branch of emotional intelligence, understanding emotion, as measured by MSCEIT V2.0, in

graduate students and satisfaction with their overall, academic, and institutional online

learning experience as measured by the PSOL (Noel-Levitz, 2012).

Research Question 5: Does a relationship exist between the fourth branch of

emotional intelligence, regulation of emotion, among graduate students and satisfaction

with their overall, academic and institutional online learning experience as measured by

MSCEIT V2.0 and PSOL, respectively?

$H5_0$: There is no statistically significant relationship between the fourth branch of

emotional intelligence, regulation of emotion, as measured by MSCEIT V2.0, in graduate

students and satisfaction with their overall, academic, and institutional online learning

experience as measured by the PSOL (Noel-Levitz, 2012).

$H5_1$: There is a significant, positive relationship between the fourth branch of

emotional intelligence, regulation of emotion, as measured by MSCEIT V2.0, in graduate

students and satisfaction with their overall, academic, and institutional online learning

experience as measured by the PSOL (Noel-Levitz, 2012).

Theoretical Basis

Emotional intelligence has its primary foundation in Gardner's theory of multiple

intelligences. The premise is that there is not one specific form of intelligence, usually

gauged by an individual's capacity to gain specific knowledge, but rather that intelligence

is composed of various intellectual competencies (Gardner, 1983). This "small set of

human intellectual potentials" is attainable by any individual, given the correct

environment and nurturance specific to his or her particular potential intelligences

(Gardner, 1983, p. 278). These intellectual competencies include the linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, and personal (Gardner, 1983).

The intelligence most closely related to EI is comprised of the personal intelligences, which encompass "the capacity instantly to effect discriminations among the feelings and, eventually, to label them, to enmesh them in symbolic codes, to draw upon them as a means of understanding and guiding one's behavior" (Gardner, 1983, p.239). Embodied within personal intelligences are intrapersonal and interpersonal intelligence. In its basic form, *intra*personal intelligence focuses on the ability to distinguish the difference between feelings of pleasure and pain. On a deeper level, an individual will use *intra*personal intelligence to gain the ability to distinguish between more complex sets of feelings (Gardner, 1983). These are, primarily, distinctions that an individual makes about him or herself. Although interpersonal intelligence also involves the distinction between complex feelings, it is considered to be more external as it focuses on the ability to notice and understand the emotions of others.

*Inter*personal intelligence encompasses the ability to recognize and distinguish feelings in other individuals. In its most primitive form, a child uses this ability to understand the moods of those around him or her. In a more progressive form, an individual can determine the emotions and moods of others, both those that are obvious and those that are hidden from public view (Gardner, 1983). These two intelligences are present in all contexts involving social behavior. Emotional intelligence, then, is the connection between interpersonal and intrapersonal intelligence in that these intelligences

involve a focus on and an awareness of one's own self-image. This "sense of self" noted by Gardner (1983), captures a balance one has between internalized feelings caused by external pressures (p. 242). The recognition of this balance in oneself can help an individual recognize these qualities in others.

Nature of the Study

A cross-sectional research design was used for this study to respond to the posed research questions. The data collected from this given approach allowed for potential inference to the specific sample population of online graduate students (Creswell, 2009). Variables measured for potential relationships were the independent variable, EI, (including total EI and four branches of EI), measured by MSCEIT V2.0 and the dependent variable, satisfaction, measured by PSOL.

Data was collected from online graduate students via three separate surveys. The first survey collected demographic data from SurveyGizmo, the second survey collected satisfaction data from the PSOL and the third assessment collected EI data from MSCET V2.0. Data was then analyzed using Pearson product moment correlation coefficient and multiple regressions.

Definitions

Emotional intelligence. Emotional intelligence is defined 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 so as to promote emotional and

intellectual growth" (Mayer & Salovey, 1997, p. 31). The Mayer-Salovey-Caruso

Emotional Intelligence Test (MSCEIT) is used to assess emotional intelligence.

Satisfaction. Satisfaction is operationalized in this study to include specific areas

of university satisfaction including academic services, enrollment services, institutional

perceptions, instructional services, and student services. Satisfaction is measured by the

Priorities Survey for Online Learners or PSOL (Noel-Levitz, 2012).

Traditional university. An institution offering multiple-level certificate and degree

programs where primary instruction is focused on campus or face-to-face learning and

content is delivered in oral or written form (Allen & Seaman, 2011; MacKeogh & Fox,

2009).

Online higher education institution. An institution offering multiple-level

certificate and degree programs where most or all instruction is delivered in an online

format (Allen & Seaman, 2011).

Retention. Student's commitment to completion of a program based on academic,

social, and external factors including individual performance, institutional engagement,

and social support (Jensen, 2011).

Graduation. The successful completion of a degree based on a formal course of

study at a college or university ("Graduation rates definitions," n.d).

Assumptions

A couple assumptions were made in the research for this study. (a) One

assumption is that emotional intelligence is a measurable type of intelligence validated

with significant research. In addition, it is assumed that the scales provided by Mayer, Salovey, and Caruso (1997) and Goleman (1995), accurately measure the intended aspects of emotional intelligence. (b) It is also assumed that all answers provided by students are honest views of their own feelings towards the university in terms of their satisfaction and their honest and accurate answers to questions on their level of emotional intelligence.

Scope and Delimitations

This study was delimited to graduate students at online higher education institutions and did not include any students attending traditional universities or undergraduate students either in an online or traditional format. As a result any conclusions from the study can only be generalizable to online graduate student populations. The generalizability of the results from the participants on EI and satisfaction are also limited to the measurement tools, MSCEIT V2.0 and PSOL. Therefore, research with use of other measurement tools on EI and satisfaction should be noted for potential differences with any type of comparison.

Limitations

One common limitation often mentioned with EI was the questionable validity and reliability. These questions are raised due to the fairly recent conception of EI compared to other intelligences; as EI is still in its infancy, variance in theories may be common until a more consistent theory develops (Emmerling & Goleman, 2003). Many studies measuring validity and reliability of EI, however, have found correlations ranging

from r = .80. to -.94 for test-retest reliability and have found the instruments to

demonstrate validity in comparison to analytical intelligence and other personality

constructs (Brackett & Mayer, 2003; Mayer, Caruso, Salovey, & Sitarenios, 2003;

Salovey, Mayer, Caruso, & Lopes, 2003). Further research by Kafetsios et al. (2009)

indicated that the experiential and strategic areas of MSCEIT are correlated with five of

the EQ-I branches. Despite ample evidence indicating the validity and reliability of the

(MSCEIT V2.0) test, the results derived from its use may still be questioned by critics of

EI (Daus & Ashkanasy, 2005; Joseph & Newman, 2010).

Another limitation was the use of a self-report (PSOL) to measure satisfaction,

which relied on the truthfulness of participants' answers. Since questions were asked of

students' satisfaction with their current institution, they may have been reluctant to

provide truthful answers in fear of answers being received by their institutions. Students

were informed, however, that answers provided were anonymous and not sent to their

attending institutions. An additional limitation was that the study was conducted on a

population and environment yet to be researched thoroughly. Since there is little previous

research on this area, results may not be widely generalizable, as there is no foundation

for comparison. Any findings would have to be interpreted and generalized with caution.

Significance of the Study

EI may have some overall effect on a student's well-being, including their

interaction with others, in their personal and educational social networks, and the ability

to perform successfully in an educational format (Vandervoort, 2006). EI among higher

education students has been positively correlated with overall or life satisfaction (Murphy, 2006; Salami, 2011). However in focusing on overall satisfaction, it may be difficult to determine if EI has an effect on satisfaction with their institution due to lack of research in this area. There is little research, if any, on the emotional intelligence of students and if that has an effect on their satisfaction specific to their academic institution.

The results of this study can, therefore, not only help build a foundation for this existing population but relationship yet to be explored in-depth. Because the demand for this mode of learning is increasing considerably, it is important to determine what students consider important contributors to their satisfaction and if EI is one of those contributing factors affects satisfaction. Most institutions researching student satisfaction focus on the effects of cognitive factors and not on other potentially influential factors such as emotional intelligence (Holt, 2007). It is difficult to determine what students need in order to be satisfied with their academic career because other factors have not been measured. Due to the increase of online learning, other factors such as EI should be further researched to determine if they can have an effect on student satisfaction.   This study can add to a foundation of knowledge on how to keep and increase the quality of the student experience by understanding what they expect and what makes them academically successful.

Data on student success and satisfaction in an online environment could further add to current research on the retention and graduation of higher education students.

Increased scrutiny of graduation rates from the Student Right-to-Know Act, Higher Education Opportunity Act, and most recently the American Graduation Initiative has increased pressure on higher education institutions to improve retention and graduation (College graduation rates, 2010). Universities have yet to determine, however, what factors will provide such results. Current factors include academic, personal, and social support, monitored activity of the university, academic fit, and social integration; but not one element nor set of elements appears to be the solution (Jones-White, Radcliffe, Huesman, & Kellogg, 2010; Tinto, 2004). It is anticipated that the results of this study would provide some insight as to whether EI is one of those elements that adds to satisfaction to potentially increase retention and graduation rates. By increasing this knowledge, institutions can enhance their policies directed towards retention and graduation efforts.

Implications for positive social change include clarifying what specific factors (EI in this study) may contribute to satisfaction and other areas of a students' overall online academic experience. Acknowledging contributing components can provide awareness for the students themselves, faculty, and administration of institutions. This knowledge can be useful in increasing quality of instruction which will, in turn, lead to the development and promotion of quality throughout online institutions. Grace (2004) found that nursing students, in particular, may need emotional intelligence and empathy within their field of study. Determining student EI and presence within the curriculum may be an effective way of making sure nursing students have the EI and empathy they may need

for a career. EI may also be helpful in enhancing recruiting techniques more suited to students fitting the institutions' culture and retaining these students to degree completion (Grace, 2004; Holt, 2007). Such results, including alignment in institutional culture and application of EI to careers, can increase the confidence of students, quality of online education, and the overall positive experience for students. Effectiveness of factors relating to the increase of satisfaction can also provide a huge impact on the steady focus on graduation and retention which will most likely be a measurement of institutional effectiveness for many years to come (Scholder & Maguire, 2009).

Summary

This chapter introduced the rationale for the overall study as reflected through purpose and statement of the problem. As indicated, research was limited on factors affecting satisfaction; particularly in regard to online graduate students. The purpose of this quantitative study was to determine whether a relationship exists between EI in graduate students and satisfaction with their overall academic experience at online institutions of higher education. Gardner's theory of multiple intelligences guided the study, which focused on the personal intelligences, including the more recent theory of EI by Mayer, Salovey, and Caruso (1997).

Chapter 2 will present a literature review of research on EI of higher education students, foundational theories of EI, and student satisfaction. Chapter 3 will focus on the measurement tools used by participants, the type of methodology used, the setting and sample, and how the data were collected and analyzed. Chapter 4 will present the results

of the study including the descriptive statistics of the measurement tools and the answer

to the research questions. In conclusion, chapter 5 will include the discussion and

interpretation of data, limitations, recommendations, and implications of the results.

Chapter 2: Literature Review

Introduction

The purpose of this quantitative survey study was to determine whether a relationship exists between EI in graduate students and satisfaction with their overall academic experience at an online higher education institution. The purpose of this chapter was to provide information on research conducted related to the study. This includes discussion of various models of EI, satisfaction, and the use of both variables in higher education settings. Much research on EI and students in higher education has indicated that EI can play a role in students' success, for example, academic achievement and retention (Buvoltz, Powell, Solan, & Longbathom, 2008; Olatoye, Akintunde, & Yakasai, 2010; Shipley, 2010). Other research focuses on the relationship between EI and social interaction/relationships, age, gender, and ethnicity (Han, 2009; McBride, 2010; Shipley, 2010).

While there is research on student satisfaction specific to their academic institutions, it tends to focus on the EI of administrators and their satisfaction with roles at those academic institutions (Abassi, Malik, Chaudhry, & Imdadullah, 2011; Downey, 2008; Ko, 2011; Mustafa & Amjad, 2011; Zupancic, 2011). There is little research on EI and student satisfaction with their academic institutions. The only found research was conducted on undergraduate students at a traditional institution enrolled in a nursing program (Grace, 2004). Background information in the context of a literature review is provided in the remainder of this chapter to understand the importance of the variables,

EI and student satisfaction, and how the results of this study can provide an environment for a positive student experience.

Research on the background and development of the theoretical foundation of EI will be provided. This includes Multiple Intelligence Theory, and specific models of EI including Mayer and Salovey (1997), Bar-On (1997), and Goleman (1995). Past research on EI in students, student satisfaction, and both EI and satisfaction in higher education is also discussed.

Literature Research Strategy

In searching the literature, the following keywords were used: *emotional intelligence*, *student satisfaction*, *satisfaction, graduate students, online education, higher education, retention, graduation, and MSCEIT*. The following online databases were used: Academic Search Complete, ERIC, LexisNexis Academic, Proquest, SocINDEX, PsycARTICLES, and PsycINFO.

Background and Development of Emotional Intelligence

Multiple Intelligence Theory

The development of EI stemmed from Gardner's theory of multiple intelligences which was one of the first theories to expand intelligences into other areas beyond cognitive aspects. Gardner's definition of intelligence provided room for expansion of the accepted cognitive definition of intelligence. The theory consisted of seven intelligences (Gardner, 1983):

1. Linguistic intelligence, defined as the ability to use language in four different aspects including being able to use language to influence others to take action, ability to remember information, being able to provide explanation, and the use of language to explain itself.

2. Musical intelligence, the ability to understand basic musical structures such as pitch, rhythm, tone, and the use of repetition and transformation with communication through music.

3. Logical-mathematical intelligence, the ability to handle objects and develop mental images including interpretation of these symbols, recognizing problems and patterns, and providing solutions.

4. Spatial intelligence, "the ability to perceive a form or an object" within a spatial realm (Gardner, p. 174).

5. Bodily-kinesthetic intelligence, "the ability to use one's body in highly differentiated and skilled ways, for expressive as well as goal-directed purposes" (Gardner, p. 206).

6. The personal intelligences, comprised of two different intelligences, intrapersonal and interpersonal; *intra*personal intelligence involved being able to determine and acknowledge one's own feelings while *inter*personal intelligence provides the ability to acknowledge others' feelings and provided the motivation for others to act on those feelings.

These intelligences were intellectual capabilities that Gardner believed everyone has from the beginning of life and develops to their full potential or capacity dependent on one's interaction with stimulating factors of each category of intelligence such as music, language, and culture. The knowledge gained from each category of intelligence was dependent on repetition, elaboration, and interaction with tools associated with these intelligences (Gardner, 1983). Although Gardner has discussed the similarity between interpersonal and intrapersonal intelligences, differences also existed.

For instance, Chan (2008) found minor differences between the two intelligences, as Hong Kong teachers scored higher in intrapersonal intelligence than interpersonal intelligence. Experienced teachers also had higher scores in regard to intrapersonal intelligence than prospective teachers. Teacher self-efficacy, however, correlated significantly with both interpersonal and intrapersonal intelligence. It should be noted, however, that some of the results may be due to cultural differences among Western cultures as well. The personal intelligences, interpersonal and intrapersonal, focus on self and one's awareness of feelings of self and others; this is a foundational aspect of the Mayer and Salovey model of emotional intelligence.

Mayer and Salovey Model

Perhaps considered the most common and more measurable models of emotional intelligence is the ability model of EI. This ability model is considered more of a cognitive intelligence model and, because it is deemed an ability like other intelligences, it has more constructs that are measurable than the mixed model of EI (Van Rooy,

Viswesvaran, & Pluta, 2005). Even though EI has been operationalized, questions still arise on its validity when compared to more traditional intelligence from some critics (Caruso, Mayer, & Salovey, 2002).

Developed from the subset of Gardner's personal intelligences, the Mayer and Salovey's (1990) version of the ability model of EI has been seen as having more of a foundation in the ability of cognitive processing to perform such functions of understanding emotion, unlike mixed models which focuses partially on personality traits (Malekar & Mohanty, 2008). Emotional intelligence is defined as:

> [t]he ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth. (Mayer & Salovey, 1990, p. 31)

This approach to emotional intelligence has demonstrated emotional intelligence as distinct from personality as its similarities to and subtle distinctions from, traditional IQ (Rosete & Ciarrochi, 2005). The approach also helps to situate EI within the realm of other intelligences, as it demonstrates the interaction between the emotions and cognitive processing. This helps to operationalize the constructs of EI as many researchers consider it easier to assess constructs in the ability model (Farrelly & Austin, 2007; Mayer, Salovey, & Caruso, 2002).

The ability model of EI (Mayer & Salovey, 1990) is also known as the four branch model of EI. The four branches or dimensions, are perceiving emotion, facilitating

thought, understanding emotions, and managing emotions (Salovey & Grewal, 2005; Salovey, Mayer, Caruso, & Lopes, 2003). Perceiving emotion describes the "ability to perceive and identify emotions in oneself and others" (p. 252). This perception of emotion was not limited to that evoked by people but also by inanimate objects such as music, stories, and art; it also includes being able to recognize the emotions of others through faces, voices, and pictures as well (Grewal & Salovey, 2005). This branch has been found to demonstrate a positive relationship with bonding of peers (Han, 2009).

Facilitating thought involves the utilization of recognized emotions in areas such as problem solving, reasoning, and creativity (Salovey et al., 2003). An individual using this dimension of EI uses his or her experience of emotions to facilitate thinking and cognitive activities. This branch alone has shown improvement from training of EI, followed by team-based learning (Clarke, 2010). The third branch of EI, understanding emotion, describes the ability to understand the intensity and complexity in emotions, how they may be sequenced, such as being sad to angry, and what feelings they portray of that individual (Fatt & Howe, 2003). This dimension was found to have a statistically, significant correlation with nursing students' overall performance score compared to any other branch scores which had no significant relationship to performance. Although this was stated to be due to this nursing population not having enough clinical experience, this particular branch may indicate a focus for a particular group of students (Beauvais, Brady, O'Shea, & Griffin, 2011).

Finally, the fourth branch, managing emotion, is defined as an individual's ability to help regulate his or her own emotions (Salovey et al., 2003). Several studies have been conducted on various disciplines in regard to this branch. For instance, research has indicated that social science students have a higher level of self-management than science and business students (Kafetsios, Maaridaki-Kassotaki, Zammuner, Zampetakis, & Vouzas, 2009). A similar study on accounting and marketing students indicated that although both sets of students had similar scores in understanding emotions, accounting students scored higher on managing emotions scores (Bay & McKeage, 2006).

Goleman's Theory of Emotional Intelligence

The mixed model of EI proposed by Goleman (1995) focused on a combination of cognitive aspects, personality, traits, skills, and competencies as components of emotional intelligence. Because of this overlap with emotion and personality in defining intelligence, criticisms of the mixed model focus on whether EI can truly be measured without a more careful distinction between EI and personality factors (Van Rooy, Viswesvaran, & Pluta, 2005). Despite these criticisms, however, emotional intelligence has been popularized by Goleman's work.

Goleman's theoretical concept of EI has focused primarily on work performance and organizational leadership; however, these same concepts have also been applied to education implying that incorporating emotional intelligence within the classrooms will help all roles within various relationships of those students. Quarles and Cole (2011) suggest that teachers should, therefore, be aware of their own emotional intelligence to

help the emotional growth of their students. Cliffe (2011) found that teachers in lead

positions, who were more aware of their own and others emotions and made use of their

emotions, were able to reach their leadership positions and face challenges associated

with leadership.

Like Mayer and Salovey (1990), Goleman (1995) included some of the same

factors in his definition of emotional intelligence, including the ability to be aware of

one's own emotions and the emotions of others and being able to manage those emotions;

however, he also included personality factors. Goleman included three main factors,

among others, in his theory of emotional intelligence. The first factor was *emotional self-*

awareness where an individual is able to recognize and be aware of his or her own

feelings, see the links between thoughts, feelings, and reactions. The second factor was

managing emotions, which involves an individual understanding what is behind a feeling

or emotion and learning ways to handle those specific emotions. Another factor, closely

related to managing emotions, is *productively harnessing emotions,* which involves

demonstrating more self-control and being less impulsive with one's emotions. Goleman

believed a significant factor in being able to harness one's emotions was by being able to

read emotions and assume the perspectives of others (empathy). In empathizing with

someone, an individual would be more effective in handling relationships through this

kind of understanding and thus be able to solve conflicts or other issues (Goleman, 1995).

Bar-On Model

Like Goleman, Bar-On also focused on a combination of both emotional and social aspects of emotional intelligence and is considered a mixed model of EI as well. According to Bar-On (2007), the integration of both emotional and social competencies provides individuals the ability to understand themselves and others. Bar-On's model incorporates five distinct competencies. The first competency is *self-awareness* and *self-expression* which included being aware of self and others' emotions in addition to using the understanding of those emotions to also express oneself and others. The second competency is *social awareness* and *interpersonal relationship* which incorporated understanding how others feel, identifying with one's social group, and relating well to others as a requirement to establishing relationships (Bar-On, 2005).

These first two competencies are related to the emotional aspect of the model; the three remaining competencies provide a more social component. The third competency is *emotional management* and *regulation*, which involves constructively and effectively managing and controlling emotions. The fourth competency, *change management*, requires that an individual validate and adjust one's feelings to new situations and solve problems. The final competency, *self-motivation*, describes one's general mood and is focused on positive aspects such as optimism and happiness (Bar-On, 2007). Competency in each of the five areas, results in the ability to adjust to changes on social, personal, and environmental levels.

The emotional quotient inventory (EQ-I; Bar-On, 2007) is a measurement tool for EI created by Bar-On. This self-report measures emotional and social intelligence behaviors using 15 subscales which include self-regard, emotional self-awareness, assertiveness, independence, self-actualization, empathy, social responsibility, interpersonal relationship, stress tolerance, impulse control, reality-testing, flexibility, problem-solving, optimism, and happiness.

There have been criticisms to using the EQ-I as a measurement tool due to its reliance on self-report and the blending of personality traits with emotional intelligence. This in spite of generally high internal consistencies of the instrument (Cronbach's alpha = -.76) and reliability coefficients for the subscales, that have ranged from .69 to .86 (Brackett & Mayer, 2003; Bar-On, 1997). Due to such criticisms, some research has indicated the ability for participants to intentionally alter scores from the answers they provide on the EQ-I than the MSCEIT (Day & Carroll; Grubb III & McDaniel, 2007; Whitman, Van Rooy, Viswesvaran, & Alonso, 2008). Day and Carroll, in particular, attribute this difference to MSCEIT being focused more on the ability model while the EQ-I has a mixed ability approach involving emotional intelligence and personality factors.

Emotional Intelligence in Students

The emotional intelligence of students both in the K-12 and higher education levels has been thoroughly researched. Research on higher education students has focused predominantly on academics and retention. There are some conflicting results

among many of the studies. In reference to age, most research has focused on those within higher education who are undergraduate students often within the age range of 18-22 (Bradshaw, 2008; Giroir, 2009; Lu, 2008; Qualter, P., Whiteley, Morley, & Dudiak, 2009).

As more non-traditional students become part of student populations, research on older students is important, and there is little research focused on age groups other than 18-22 years. More research in this area is emerging. Al Qamash and Altal (2011) found in a sample of 160 graduate students in Jordan that as age increased, the score of emotional intelligence increased as well except for the branch of emotional intelligence of identifying one's emotions. Those 25-30 years of age had the highest scores which conflicts with other results indicating that as age increases, emotional intelligence increases as well. Another study involved 82 students with an average age of 29.7 years in an online program. Results indicated that EI was also significantly correlated with age. However, age had no correlation with the managing emotions branch of MSCEIT which had the strongest relationship with GPA (Berenson, Boyles, & Weaver, 2008). In contrast, Johnson (2008) found in a sample of 111 students with an average age of 34 years (84% of whom were graduate students) no correlation between age and emotional intelligence.

Much research including graduate students often includes undergraduate students as well but with more emphasis on the undergraduate population. For instance, Huang (2007) found that although there was a significant correlation between EI and leadership

skills, each group except those students over the age of 25 demonstrated this relationship between EI and leadership skills. However, it should be noted that the sample was very small.

There have also been mixed results related to the relationship between EI and grade point average (GPA). Landau and Merivoich (2011) conducted a study on 137 undergraduate students and found no correlation between the two variables. A study conducted by Hall and West (2011) also found among undergraduate students no correlation between GPA, American College Testing (ACT) scores, and emotional intelligence measures. Olatoye, Akintunde, and Yakasai (2010), however, found a negative relationship between emotional intelligence and academic achievement measured by GPA. Jaegar and Eagan (2007) found in their research of 864 first year university students, that EI factors including interpersonal skills, adaptability, and the ability to manage stress measured by the EQ-I were all positively and significantly related to their first year of GPAs. MacCann, Fogarty, Zeidner, and Roberts (2011) found similar results in a sample of 159 community college students. Holt (2007) found among community college students that the managing emotions branch of EI, specifically, was positively correlated with GPA.

There is also a significant amount of research on EI of students in relation to retention within their designated programs and universities. Several studies conducted by Qualter, Whitely, Morley, and Dudiak (2009) demonstrated a significant positive relationship between students' total EI score as well as the four EI branch scores retention

in courses. In a separate study, 640 students who received EI training were able to increase their EI scores, and as a result were "more likely to persist with their studies" than those students not receiving EI training with lower EI (Qualter et al., p. 226) . Researchers found that students reporting high EI before training were more likely to persist with studies regardless of whether EI training was offered.

In another study students who were able to successfully pass their first year of college had significantly higher levels of EI than those students that withdrew before the start of their second year. More specifically, these students had higher levels of interpersonal, intrapersonal, adaptability, and stress management abilities than those that withdrew (Parker, Hogan, Eastabrook, Oke, & Wood, 2006). However, other researchers have found no correlation between and retention and EI (Buvoltz, Powell, Solan, & Longbathom, 2008; Veitch & Justice, 2011).

Student Satisfaction

Research conducted on student satisfaction often focuses on academic staff and teaching, classes, and other services such as advising support and other facilities (Gibson, 2010). Previous research has focused on more traditional universities, but more recent research has begun to focus on online institutions as well. Carmel and Gold (2007) found that on-site and hybrid learning courses have similar satisfaction rates. There are no differences as well between the two groups on GPA.

Student satisfaction research has been conducted in international universities. Arena, Arnaboldi, and Azzone (2010) found that the highest student satisfaction scores

among Italian higher education students were in relation to accuracy and consistency of the information provided by student support offices. Lowest scores were associated with waiting times and opening hours. Undergraduate students appeared to be more satisfied than graduate students. Overall, the variables influenced most when measuring student satisfaction included personnel courtesy, competence, and availability of student support services (Arena, Arnaboldi, & Azzone, 2010). Jalali, Islam, and Ariffin (2011) conducted a study with predominantly graduate students (81%) and found moderate levels of student satisfaction. Areas of lower satisfaction included financial services and availability of staff. Lower scores were also associated with larger universities (those with more than 15,000 students). A similar study also found satisfaction among students attending Pakistani universities in regard to some facilities and services; however most dissatisfaction was present in teaching techniques, methods, administration, staff, and computer/library/lab facilities (Abbasi, Malik, Chaudhry, & Imdadullah, 2011).

Hameed and Amjad (2011) found a positive correlation between faculty and students' college experience. Higher student satisfaction was associated with faculty members who were more cooperative, experienced, and understanding of students. Hameed and Amjad also found a strong, positive relationship between satisfaction and advising staff (including accessibility, willingness to help and understanding, and college experience). College experience, which included cognitive development, career programs, and business skills, had the most significant effect on satisfaction (Hameed & Amjad).

Student satisfaction research conducted within the U.S. mostly agrees with results found among research in international institutions. Lo (2010) found various aspects of satisfaction (course policies, instructors, and one's own commitment to learning) to be highly intercorrelated in a sample of students completing hybrid programs. Jones (2008) found that in addition to in-class instruction and support, students' satisfaction and motivation was increased by outside classroom support as well. Steele (2007) found flexibility of scheduling, knowledge of the instructor, and instructor support to contribute most to overall satisfaction. However, knowledgeable instructors and instructor support were the only services that actually obtained a high rating from the students' university.

Students attending online schools share similar concerns with satisfaction. Palmer (2009) found that about 45% of students under the age of 25 were at least generally satisfied with online delivery of their courses. Factors contributing to this satisfaction were having clear expectations and being able to find the information effectively in regard to the studied subjects. Students not satisfied attributed their lack of satisfaction to not being able to fully understand feedback and not being given additional support to help them improve their learning and studying.

Similar results were found in a study of 279 students learning through web-enhanced environments. There was a positive, statistically significant relationship between satisfaction with class and satisfaction with a number of variables including satisfaction with school, commitment, satisfaction with instructor, and ease of use and flexibility of the web-enhanced format (Hermans, Haytko, & Mott-Stenerson, 2009).

Consistent with other studies, no significant relationship between GPA and satisfaction was found. Joo, Lim, and Kim (2011) found that the presence of teaching and cognition, and perceived usefulness to students had a positive relationship with satisfaction and learner persistence. Ruiz (2007) compared both traditional and online students and found that in almost every category (general experiences with flexibility of program and consistency of information, classes, faculty) online students were more satisfied overall than traditional students.

Emotional Intelligence and Satisfaction in Higher Education

Although limited, research does exist on the combination of emotional intelligence and satisfaction of students within higher education. Holt (2007) found that the majority of undergraduate students enrolled in a summer program at a California community college were satisfied with their educational experience (48% somewhat satisfied, 29% very satisfied). The sample mean of these same students were below the standardized mean for EI based on MSCEIT with the lowest branch on Understanding Emotions. The Social Management Task within the MSCEIT score demonstrated a positive relationship with satisfaction (Holt, 2007).

Grace (2004) found that areas of emotional intelligence had an effect on certain satisfaction factors for undergraduate students enrolled in a nursing program. Out of the total population of students, 71% were either extremely satisfied or satisfied with the university. More specifically, those who had high satisfaction with professional development had lower scores on the use of emotion. However, those who had high

scores on the use of emotion had higher levels of satisfaction in internal personal growth. The perception of emotions was also a statistically significant predictor on the levels of satisfaction with artistic and human development.

Further research focuses on EI within higher education but on overall life satisfaction. Murphy (2006) found a small correlation between total EI and all EI factors and satisfaction with life among community college students. However, all correlations were non-significant. Palomera and Brackett (2006) also found non-significant results between perceived EI of Spanish undergraduate students and life satisfaction. In contrast, another study on students at an Indian university suggests found there was a significant, positive relationship between EI and life satisfaction suggesting empathy with others and improvement of social relations can help with the satisfaction of life (Ghorbanshiroudi, Khalatbari, Salehi, Bahri, & Keikhayfarzaneh, 2011).

Summary

This chapter began with a discussion of the development of EI and the foundation of this study. Gardner's (1983) multiple intelligences theory focused on additional intelligences beyond the standard intelligence including the personal intelligences, interpersonal and intrapersonal. From the development of Gardner's theory, subsequent theories and models of EI developed including Goleman, Bar-On, and Mayer and Salovey's model served as the foundations for this study (Bar-On, 2007; Goleman, 1995; Mayer & Salovey, 1990).

Research demonstrated that, there have been some findings indicating EI has a positive relationship with GPA; however the significance of that relationship between EI and GPA varied by study (Jaegar & Eagan, 2007; MacCann, Fogarty, Zeidner, & Roberts, 2011). Other research indicates that EI may demonstrate a positive correlation with the retention of students within their enrolled programs (Qualter, Whitely, Morley, & Dudiak, 2009). Research has also indicated that stress management may be an effective cause for the variables of GPA and retention (Parker, Hogan, Eastabrook, Oke, & Wood, 2006).

Research on student satisfaction is consistent in terms of the areas students find important and satisfaction with their online or traditional education institutions (Gold, 2007). Much of this research also focuses on several areas including faculty (teaching practices) and other services such as academic or financial departments (Abassi, Malik, Chaudhry, & Imdadullah, 2011; Arena, Arnaboldi, & Azzone, 2010; Palmer, 2009). Research also indicates, however, that with this known knowledge these areas still appear to be areas of lack of satisfaction for higher education students. Although information between EI and satisfaction of students was very limited research did demonstrate that, overall, there was a positive correlation between EI and satisfaction (Grace, 2004; Holt, 2007).

Chapter 3 will provide details on the research design and approach, the setting and sample, and the collection of data including chosen instruments.

Chapter 3: Research Method

Introduction

The purpose of this quantitative survey study was to determine whether a relationship exists between the independent variable, EI, in graduate students and the dependent variable, satisfaction, with their overall academic experience at an online higher education institution. The purpose of this chapter was to explain the research design and the approach to collecting data. This includes the description of the sample population and the measurement tools to be used. The current research on EI has been important to educational settings, in general, as it has demonstrated the influence of EI on students' learning and overall satisfaction with their institutions at various levels including high school and post-secondary education (Deniz, Tras, & Aydogan, 2009; Han, 2009; Kingston, 2008; Lo, 2010; Qualter, Whitely, Morley, & Dudiak, 2009). However, research on graduate students at online higher education institutions is lacking. No studies were found that focused on the relationship between EI of graduate students and their satisfaction with an online higher education institution.

The purpose of this chapter was to explain (a) the approach and design used for this research, (b) the setting and sample population, (c) description of assessment tools used for data collection, (f) how the data were collected and analyzed in relation to research questions, and (g) the ethical procedures including protection of participants.

Research Approach and Design

Design Approach

The objective of quantitative research is to determine if a relationship exists between the independent and dependent variables (Creswell, 2009). In this study, the independent variable was EI and the dependent variable was student satisfaction. The present study was descriptive as these studies, also called correlational or observational, do not make any manipulations to the environment and simply provide associations between relationships ("Descriptive Studies", n.d.).

Participants in the study were graduate students at an online institution of higher education, enrolled in a variety of master's and doctoral programs. Initial recruitment took place on university's participant pool. A message was posted summarizing the study. Students signed up for the study were directed to a link which took them to SurveyGizmo, an online survey tool. There they were briefed again on the study and presented with an informed consent form. Students were then asked several questions, including their status as graduate students.

Students who completed all information received a message providing a numeric eight-digit code which was used both on the MSCEIT and PSOL as a way to link both assessments to each student. Upon completion of MSCEIT, notification was sent to the researcher by MHS, a company providing psychological assessments and services and determined the participant scores. Once all PSOL submissions were completed scores

were processed and received from Noel-Levitz, a company providing satisfaction assessments to institutions.

Additional recruitment for potential participants occurred on social networks including Facebook and LinkedIn (Dissertation Writing Help—Writing Your PhD Dissertation, Higher Education Teaching and Learning, Walden Organizational Psychology, TA_DA! Thesis and Dissertation Completed, Thesis and Dissertation, Training and Development, and ASTD National). Multiple messages were posted on these sites; they provided a brief summary of the study and a link to the initial assessment.

Permission was pursued from organizations to obtain access to their specific student populations. These organizations included Society for Industrial & Organizational Psychology, Inc. (SIOP) and American Society for Training and Development (ASTD). Approval was provided by both organizations allowing the researcher to post a summary of the study to various blogs and social networks within both organizations.

Appropriateness of Design

A cross-sectional survey design was used to determine the relationship between EI and satisfaction of graduate students. As research was limited on these variables, a design that allowed for a descriptive approach for correlation of the variables was necessary. Cross-sectional designs allow inferences to be made from the responses of the sample population from data collected at a given point in time in addition to minimizing time necessary for data collection (Creswell, 2009). The results of cross-sectional

designs, therefore, allow for potential associations between the interests of the study but not causality (Levin, 2006). The answers to the research questions were only for potential association between the variables and not causality as current research is limited on these particular variables.

Setting and Sample

The initial setting for the study was a regionally accredited online university with five distinct colleges and over 38,000 total students (33,000 graduate students) from all 50 U.S. states and 120 countries. The university offers undergraduate, masters, and doctoral degrees. The majority of participants used for this study were currently enrolled graduate students in master's and doctoral programs. Requirements to become graduate students of this university generally include having a bachelor's degree for master's students and bachelor's and/or master's degrees for PhD students. Dependent on the specific degree, work experience may be a necessary requirement as well such as three years teaching experience and teaching licenses for certain education programs. Students were enrolled in a number of programs including education, business, human services, and counseling/psychology.

A 95% level for the confidence interval was used (Dalall, 2007). A small or medium effect size was considered appropriate for psychological research and was to be used in this study (Cohen, 1988). G Power was used to calculate sample size (Faul, Erdfelder, Buchner, & Lang, 2009). Based on a medium effect size (.15) at an alpha level

of 0.5 and for 95% power, the resulting sample size requirement for a test involving

linear multiple regression was 89 participants.

<div style="text-align:center">**Instrumentation and Materials**</div>

Emotional Intelligence

  The Mayer-Salovey-Caruso emotional intelligence test, v.2 (MSCEIT). The

MSCEIT was used to measure the EI of managers (Day & Carroll, 2007; Karim & Weisz,

2010; Mayer, Salovey, & Caruso, 2000). This test, which was originally developed in

2002, measured four branches or dimensions of EI: perceiving emotion, facilitating

thought, understanding emotion, and managing emotion (Mayer, Salovey, Caruso, &

Sitarenios, 2003). Branch 1 (perceiving emotion) uses the faces task which involves an

individual being able to identify the emotions of stimuli by use of viewing faces and

pictures to detect emotions. It also includes the pictures task which is similar to the faces

task but uses cartoon faces as a way for participants to respond rather than words as the

faces task uses. Branch 2 (facilitating thought) uses the sensations task where the test

taker generates an emotion and responds to that emotion. The facilitation task, also part

of Branch 2, asks participants to fit a certain mood with a specific cognitive task or

behavior.

  The blends task in Branch 3 (understanding emotions) measures an individual's

ability to combine different emotions to develop other emotions. The changes task in

Branch 3 involves an individual choosing an emotion based on the intensification of other

feelings. For instance, the intensified feelings of joy and happiness could be referred to as

elation.   Finally, Branch 4 (managing emotions) contains two tasks - an emotion

management task where a test taker determines the emotion of an individual in a story

and the emotional relationships task where the participants use the actions of one

individual to determine the most effective ways to manage another's feelings (Mayer et

al., 2003). Table 1 contains a summary of the four branches as well as each pair of tasks

designated with each branch.

Table 1

Branch and Tasks Association of MSCEIT, v. 2

Branches	Tasks
Branch 1 (Perceiving Emotions)	*Faces task:* identifying emotions in stimuli with words.
	Pictures task: identifying emotions in stimuli with pictures
Branch 2 (Facilitating Thought)	*Sensations task:* generate and respond to emotion
	Facilitation task: match mood with cognitive behavior.
Branch 3 (Understanding Emotions)	*Blends task:* combine different emotions to develop another emotion.
	Changes task: determine an emotion based on the intensification of other feelings.
Branch 4 (Managing Emotions)	*Emotion management task:* determine emotion of others based on stories.
	Emotional relationships task: use of actions of another to determine effective ways to manager others' feelings.

The test is suitable for respondents 17 years or older, takes 30-45 minutes to complete, and can be administered on paper or online. The test includes 141 items distributed among the four branches and the two areas or tasks contained within each branch (Caruso, 2005). The answers to the 141 items produce scores for each branch consisting of the scores from the two specific tasks within each branch. These are combined to provide a total EI score. These scores are then compared to scores based on two different scoring methods.

The MSCEIT test is objectively scored in two different methods that include general consensus and expert scoring (Caruso, 2005). The test administrator can either choose to have scores compared against either the consensus or expert scoring. General consensus scoring is based on the agreement of the responses of the normative data of 5,000 individuals during the initial development of the MSCEIT test. Expert scoring uses the judgment of 21 members of the International Society for Research on Emotions (ISRE) who are considered experts within their field. Once the administrator determines whether the consensus or expert scoring will be used, the test takers' scores will then be compared to the chosen scoring method for correct answers. In a study conducted by Mayer, et al. (2003), participants had higher overall scores when compared to the expert consensus, particularly in branches 1 and 3, indicating that the experts are more knowledgeable within these areas and have a more accurate distinction of emotions than the general group.

Further findings by Mayer et al. (2003) suggest that the expert consensus had greater reliability when it came to similar, correct test answers than the consensus group. It should be noted, however, in other studies that the correlation between both scoring methods were high (r = .98, r > .90), resulting in little difference between either scoring method (Brackett, Mayer, & Warner, 2003; Lopes, Salovey, & Straus, 2003). Thus, the expert scoring was used for this study.

The actual score of the test taker produced includes the responses to a set of questions associated with each task and with each branch. The task scores are combined to yield a score for each of the four branches and branch scores can then be combined to provide a total MSCEIT score. The range of scores—which is the same whether an expert or consensus scoring is used—fall into the following categories. EI scores less than 70 are associated with a level of EI of *Improve*. Scores greater than or equal to 70 but less than 90 are assigned a level of *Consider Developing*. Scores greater than or equal to 90 but less than 110 are assigned a level of *Competent*. Scores greater than or equal to 110 but less than 130 are assigned a level of *Skilled*, and those with scores greater than or equal to 130 are assigned a level of *Expert* (Multi-Health Systems, Inc., 2010).

Test-retest reliability in the validation sample was excellent (r = .86; Brackett & Mayer, 2001). Split half reliability in another study was acceptable (r = .93 for general consensus and r = .91 for expert consensus, n = 1985; Mayer, et al., 2003). Brackett and Mayer (2003) also measured various types of validity of MSCEIT, v. 2. Confirmatory

factor analysis has also been used to demonstrate construct validity of the 4 factor

structure of the MSCEIT (Livingstone & Day, 2005).

Written permission was obtained to use MSCEIT by Mental Health Systems

(MHS) to the researcher completing an application for approval. This information was

sent from MHS.

Satisfaction of Students

Priorities survey for online learners. The instrument used to measure student

satisfaction was the PSOL. This survey, specifically designed for online, higher education

students, measures how satisfied students are with aspects of the university and the

importance of these criteria including academic, enrollment, student, and instructional

services (Noel-Levitz, Inc., 2012). Table 2 provides a definition associated with the

specifics of each of the criteria (Noel-Levitz, Inc., 2010). Each of the 26 items are

provided with two Likert scales asking students to determine the importance of the item

and how satisfied the student is with the institution meeting this expectation. The Likert

scale ranges from 1 (*Not important/satisfied*) to 7 (*Very important/satisfied*).

Initial research indicates that the PSOL is reliable with an internal consistency of

0.77 (Noel-Levitz, 2010). This tool was selected to measure student satisfaction as it

specifically measures the satisfaction of online students and has been used as a

measurement tool for the same purpose at numerous higher education institutions.

Table 2

Associated Areas of the PSOL

Area	Description
Institutional Perceptions	Measures how students perceive the institution
Academic Services	Includes students' assessment of advising, course offerings, technical assistance, online library resources, and tutoring services
Instructional Services	Measures student's academic experience, instructional materials, faculty/student interactions, evaluation procedures, and quality of instruction
Enrollment services	Measures the services in regard to enrollment of students into their program, financial aid, registration, and payment
Student services	Measures the quality of student programs and services including responses to student requests, career services, and the bookstore

Demographic information was also included and collected from PSOL. Due to the inability to make any adjustments to the demographic questions, all questions were posed to participants.

Written permission was obtained to use the PSOL by Noel-Levitz and completion of an application for approval. This information was sent from Noel-Levitz, upon the necessary timeframe of ten weeks for completion of surveys.

Demographic information was included within the participants' initial access to SurveyGizmo. All of the demographic questions asked, were also included in the PSOL assessment but were more directly related to participants. More specifically, questions in regard to graduate level and college status. Demographic items are provided in Appendix C and are also similar to other studies including the same variables (Grace, 2004; Holt, 2007).

Data Collection and Analysis

The MSCEIT was used to measure the independent variable, emotional intelligence. All participants took the online version of the test which takes approximately 30-45 minutes to complete. The online version of MSCEIT was purchased through Multi-Health Systems (MHS), a company that provides psychological and other types of tests. With the purchase of the MSCEIT through MHS, all raw scores, including subscale scores and total scores of EI, were computed and then emailed on an Excel spreadsheet.

The Priorities Survey for Online Learners (PSOL) was used to measure the dependent variable of satisfaction. All participants took the online version of the test which took approximately 10-15 minutes to complete. Generated codes for each participant were provided by Noel-Levitz, Inc., a consulting company providing services to higher education institutions. All raw scores were also computed and emailed on an Excel spreadsheet.

The independent variable, EI, was operationalized using scores from MSCEIT producing total EI scores and scores for each of the four branches of EI. These scores were provided by Multi-Health Systems. The dependent variable, satisfaction, was operationalized using scores from the PSOL producing scores for each individual item, each individual scale, and a summary of students' overall, online experience. Similar to research conducted by Holt (2007), Pearson product-moment correlations were calculated to compare total EI and branch scores to satisfaction scores. After this calculation was conducted, ANOVAs and Spearman ρ analyses were conducted to determine the existence of any relationships between EI and satisfaction scores with demographic values.

All mentioned calculations were conducted using SPSS software. In order for SPSS to calculate the aforementioned calculations two data sets were needed for each variable. The first data set represented independent variable scores and the second data set represented the dependent variable. With the present study, the first data set included the scores of emotional intelligence (either total EI or specific branches depending on the hypothesis) and the second data set included satisfaction scores. More specific information in regard to the steps taken in SPSS is provided in the next section pertaining to each hypothesis tested.

In addition to the analyses described for the five hypotheses below, associations between scores of MSCEIT and PSOL and demographic variables were tested and presented as part of the descriptive analysis of the sample.

Hypothesis Testing

The purpose of this study is to determine whether a relationship exists between emotional intelligence (including overall EI and the four branches of EI) and satisfaction of graduate students at online institutions of higher education. The focus of this study is addressed by the following research questions and hypotheses.

Research Question 1

Does a relationship exist between overall emotional intelligence among graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT, V2.0) and Priorities Survey for Online Learners (PSOL), respectively?

$H1_0$: There is no statistically significant relationship between overall emotional intelligence score, as measured by MSCEIT V2.0 in graduate students, and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

$H1_1$: There is a significant, positive relationship between overall emotional intelligence, as measured by MSCEIT V2.0, in graduate students, and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

Research Question 2

Does a relationship exist between the first branch of emotional intelligence, perceived emotions, among graduate students and satisfaction with their overall,

academic, and institutional online learning experience, as measured by MSCEIT V2.0 and PSOL, respectively?

$H2_0$: There is no statistically significant relationship between the first branch of emotional intelligence, perceived emotions, as measured by MSCEIT V2.0, in graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

$H2_1$: There is a significant, positive relationship between the first branch of emotional intelligence, perceived emotions, as measured by MSCEIT V2.0, in graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by PSOL (Noel-Levitz, 2012).

Research Question 3

Does a relationship exist between the second branch of emotional intelligence, using emotions, among graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by MSCEIT V2.0 and PSOL, respectively?

$H3_0$: There is no statistically significant relationship between the second branch of emotional intelligence, using emotions, as measured by MSCEIT V2.0, in graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

$H3_1$: There is a significant, positive relationship between the second branch of emotional intelligence, using emotions, as measured by MSCEIT V2.0, in graduate

students and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

Research Question 4

Does a relationship exist between the third branch of emotional intelligence, understanding emotion, among graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by MSCEIT V2.0 and PSOL, respectively?

$H4_0$: There is no statistically significant relationship between the third branch of emotional intelligence, understanding emotion, as measured by MSCEIT V2.0, in graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

$H4_1$: There is a significant, positive relationship between the third branch of emotional intelligence, understanding emotion, as measured by MSCEIT V2.0, in graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

Research Question 5

Does a relationship exist between the fourth branch of emotional intelligence, regulation of emotion, among graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by MSCEIT V2.0 and PSOL, respectively?

H5$_0$: There is no statistically significant relationship between the fourth branch of emotional intelligence, regulation of emotion, as measured by MSCEIT V2.0, in graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

H5$_1$: There is a significant, positive relationship between the fourth branch of emotional intelligence, regulation of emotion, as measured by MSCEIT V2.0, in graduate students and satisfaction with their overall, academic, and institutional online learning experience as measured by the PSOL (Noel-Levitz, 2012).

Protection of Human Participants

The following information was included in the consent form:

- A statement of what the study involved including its purpose, the length of the participant's cooperation, and description of procedures.

- Description of any foreseeable risks and/or benefits in participating in the study possible alternative procedures, if needed, and mention of participation of the study being completely voluntary. Information in regard to measures taken to protect the confidentiality of participants and contact information for any questions in regard to the study were also mentioned.

All information provided in the consent form was presented in a language understandable to potential participants in that information regarding the measurement tools and specific terms was simplified for easier understanding. As indicated on the electronic version of the consent form, students were informed that by clicking on the

'next' button within the first page provided by SurveyGizmo, students gave their consent to proceed with the study.

Steps were taken to protect the confidentiality and privacy of all individuals by coding data to prevent the identification of participants, providing minimal access of data to individuals, and properly securing data. There were a couple codes associated with each participant including shared codes for both measurement tools (MSCEIT and PSOL) and a designated code for the initial assessment. Upon collection, all data was monitored via a password-protected database listing the completed measurement tools for each participant. None of the participants had access to the overall database or master list associated with these codes. Data was then stored on a flash drive and locked in a combination safe with only I having access to the combination. The data will be kept in this safe for five years. After the five year period, data will be deleted and the flash drive destroyed and discarded.

Summary

Chapter 3 discussed the use of a cross-sectional, quantitative research design to determine if a relationship exists between EI (independent variable) and satisfaction (dependent variable). The rationale for the design was provided to determine whether an association between variables exists rather than causality due to the nature of the study. Details and reasoning for the population of graduate students at an online higher education institution were provided including the confidence interval and confidence level. Specific approach to data collection was included describing the details of the

measurement tools used, the data analysis process, and a restatement of all hypotheses.

Finally, ethical considerations including approaches to protect all participants choosing to

take part in the study were provided.

The results from the analyses are provided in Chapter 4.

Chapter 4: Results

Introduction

The purpose of this study was to determine whether a relationship exists between EI in graduate students and satisfaction with their overall academic experience at an online institution of higher education. The variables of EI and satisfaction were examined to add to current research on whether EI is one of the potential contributing factors to satisfaction. Knowledge of this relationship could provide administrators in higher education institutions the information needed to improve quality of education and thus lead to an increase of retention and graduation of students. Answers to this potential relationship included tests measuring overall EI and overall satisfaction as well as specific branches and tasks of EI and types of satisfaction.

In this chapter, the procedures for data collection were described, followed by presentation of demographic data that describes the sample. Next, the results of the statistical analyses associated with each of the study hypotheses were presented.

Data Collection

Data were obtained from graduate students currently enrolled in masters and doctoral programs at online higher education institutions. Recruitment was conducted through social network sites, including Facebook and several LinkedIn groups. Information about the study was posted on a university-hosted website that seeks research participants. All posts included a link to SurveyGizmo, where participants completed the first assessment and were told how to complete the remaining assessments.

Participants were instructed to complete three assessments: a demographic questionnaire, the PSOL, and the MSCEIT. A total of 149 participants completed the first assessment, 103 completed the second assessment, and 86 completed the third assessment. Thus the completion rate was 54%. Eighty participants completed all three assessments and thus formed the analysis sample. The initial data collection period was 5 weeks but was extended to 10 weeks for recruitment of additional participants.

Demographic Data

Of the 80 participants with complete data, 75% were female. Ages ranged from 26 to 66 (median = 44 years; $M = 44.71$ years; $SD = 9.69$ years). The ethnic distribution was 48.8% White, 26.3% Black, 12.5% Hispanic, and 11.3% Other; 1.3% chose not to respond.

Participants were asked to designate their college. According to the results, 6.3% were enrolled in Education, 15% were enrolled in Health Sciences, 23.8% were enrolled in Management and Technology, and 52.5% were enrolled in Social and Behavioral Sciences. About 50% were enrolled in Master's programs, 37.5% were enrolled in a PhD program, and 12.5% were enrolled in a professional doctorate program. Table 3 provides basic demographic information for the sample.

Table 3

Demographic Information

Characteristic	Gender		
	Male (*n* = 20)	Female (*n* 60)	Total (*n* = 80)
Age			
26-36	3 (15%)	12 (20.4%)	15 (19.1%)
37-46	6 (30%)	24 (40.8%)	30 (38.1%)
47-56	10 (50%)	15 (25.5%)	25 (31.6%)
57-66	1 (5%)	8 (13.6%)	9 (11.5%)
Ethnicity			
Caucasian/White	11 (55%)	28 (46.7%)	39 (48.5%)
African American/ Black	4 (20%)	17 (28.3%)	21 (26.3%)
Hispanic	4 (20%)	6 (10%)	10 (12.5%)
Other	1 (5%)	8 (13.3%)	9 (11.3%)
College			
Education	-------	5 (8.3%)	5 (6.3%)
Health Sciences	2 (10%)	10 (16.7%)	12 (15%)
Management and Technology	12 (60%)	7 (11.7%)	19 (23.8%)
Social and Behavioral Sciences	6 (30%)	36 (60%)	42 (52.5%)
Prefer not to answer	-------	2 (3.3%)	2 (2.5%)
Employment			
Full time	17 (85%)	36 (61%)	53 (66.3%)
Part time	1 (5%)	6 (10.2%)	7 (8.8%)
Not employed	2 (10%)	17 (28.8)	19 (23.8%)
Current residence			
Own	11 (55%)	34 (56.7%)	45 (56.3%)
Rent	6 (30%)	19 (31.7%)	25 (31.3%)
Relative's home	3 (15%)	3 (5%)	6 (7.5%)
Other Residence	-------	4 (6.7%)	4 (5%)

(table continues)

Characteristic	Gender		
	Male (*n* = 20)	Female (*n* 60)	Total (*n* = 80)
Marital Status			
Single	5 (25%)	16 (26.7%)	21 (26.3%)
Single with children	-------	14 (23.3%)	14 (17.5%)
Married	5 (25%)	8 (13.3%)	13 (16.3%)
Married with children	10 (50%)	18 (30%)	28 (35%)
Prefer not to respond	-------	4 (6.7%)	4 (5%)
Current Plans			
Complete online program	18 (90%)	60 (100%)	78 (98.7%)
Transfer credit	--------	-------	--------
Complete this course	1 (5%)	-------	1 (1.3%)
Current online enrollment			
1-3 courses	2 (10%)	5 (8.3%)	7 (8.8%)
4-6 courses	5 (25%)	26 (43.3%)	31 (38.8%)
7-9 courses	3 (15%)	11 (18.3%)	14 (17.5%)
10-12 courses	4 (20%)	8 (13.3%)	12 (15%)
13-15 courses	1 (5%)	2 (3.3%)	3 (3.8%)
More than 15 courses	3 (15%)	6 (10%)	9 (11.3%)
Previous online enrollment			
No classes	2 (10%)	3 (5%)	5 (6.3%)
1-3 classes	5 (25%)	26 (43.4%)	31 (38.8%)
4-6 classes	2 (10%)	6 (10%)	8 (10%)
7-9 classes	1 (5%)	4 (6.7%)	5 (6.3%)
10-12 classes	1 (5%)	6 (10%)	7 (8.8%)
13-15 classes	1 (5%)	2 (3.3%)	3 (3.8%)
More than 15 classes	8 (40%)	12 (20%)	20 (25%)

Note. N= 80

Descriptive Statistics for Priorities Survey for Online Learners (PSOL)

The Priorities Survey for Online Learners (PSOL) was used to measure the satisfaction and importance of certain aspects of the university including academic, enrollment, student, and instructional services. For the purposes of this study, focus was on the satisfaction scores only.

Overall experience.

Three questions were related to overall experience with participants' particular program. Results indicated that experience met expectations ($M = 5.11$; $SD = 1.50$) on a scale of 1 (*much worse than I expected)* to 7 (*much better than I expected*). Overall satisfaction ($M = 5.86$; $SD = 1.43$) on a Likert scale of 1 (*much worse than I expected*) to 7 (*much better than I expected*). Whether participants would enroll in their program again was also relatively high ($M = 5.75$; $SD = 1.81$) on a Likert scale of 1 (*definitely not)* to 7 (*definitely yes*).

Satisfaction with institutional perceptions.

Two questions posed to participants measured how satisfied students were with their perceptions of their institution. Scores ranged on a Likert scale of 1 (*not satisfied*) to 7 (*very satisfied*). Students were overall satisfied with reputation ($M = 5.84$; $SD = 1.32$) and tuition paid being an investment ($M = 5.57$; $SD = 1.53$).

Satisfaction with academic services.

Seven questions related to satisfaction with academic services. Participants were generally satisfied with program advisor accessibility (*M* = 5.58; *SD* = 1.67), advisor assistance towards student goals (*M* = 4.56; *SD* = 2.08), clarity of program requirements (*M* = 5.97; *SD* = 1.09), sufficiency of course offerings (*M* = 5.65; *SD* = 1.28), technical assistance availability (*M* = 5.98; *SD* = 1.54), online library resources (*M* = 6.39; *SD* = 1.25), and tutoring services (*M* = 3.52; *SD* = 2.77). Scores also ranged on a Likert scale of 1 (*not satisfied*) to 7 (*very satisfied*).

Satisfaction with instructional services.

Eight questions assessed satisfaction with instructional services. These included appropriate instructional materials (*M* = 5.92; *SD* = 1.14), timely feedback by faculty (*M* = 5.90; *SD* = 1.16), student-to-student collaborations (*M* = 5.56; *SD* = 1.31), student assignment clarity (*M* = 5.91; *SD* = 1.19), frequency of student/faculty interactions (*M* = 5.56; *SD* = 1.31), clarity of assessment and evaluation procedures (*M* = 5.81; *SD* = 1.31), instructional quality (*M* = 5.89; *SD* = 1.17), and faculty responsiveness (*M* = 5.78; *SD* = 1.37). Scores ranged on a Likert scale of 1 (*not satisfied*) to 7 (*very satisfied*).

Satisfaction with enrollment services.

Four items assessed satisfaction with enrollment services. Students reported satisfaction with financial aid availability (*M* = 4.94; *SD* = 2.35), timely information on financial aid (*M* = 5.0; *SD* = 2.24), convenience of online registration (*M* = 6.08, *SD* =

1.50), and billing and payment procedures ($M = 5.82$; $SD = 1.75$). Scores ranged on a Likert scale of 1 (*not satisfied*) to 7 (*very satisfied*).

Satisfaction with student services.

Five questions assessed satisfaction with student services. Scores were assessed using a 7 point Likert scale and ranged from 1 (*not satisfied*) to 7 (*very satisfied*). Students reported on institutional response to requested information ($M = 6.04$, $SD = 1.19$), timeliness of responses to student complaints ($M = 4.85$; $SD = 2.08$), career services satisfaction ($M = 4.85$; $SD = 2.08$), satisfaction with adequate contacts for questions about programs and services ($M = 5.68$; $SD = 1.54$), and timeliness of bookstore services for students ($M = 4.80$; $SD = 2.52$).

Table 4 presents the top five areas of satisfaction for students.

Table 4

Mean and Standard Deviations for Top Five Satisfaction Items from the PSOL (N= 80)

Variables	M	SD
Adequate online library resources provided	6.39	1.25
Registration for online services is convenient	6.08	1.50
Institution's response to information	6.04	1.19
Program advisor accessible via phone or email	6.03	1.38
Appropriate technical assistance is available	5.98	1.54

Descriptive Statistics for the MSCEIT

The MSCEIT was used to measure emotional intelligence. The 141-item assessment was used to assess the four branches of emotional intelligence including

perceiving emotions, facilitating thought, understanding emotion, and managing emotion (Mayer, Salovey, & Caruso, 2002).

Results from MSCEIT included 15 scores. The overall EIQ (emotional intelligence quotient) or EIQ score can be divided into two area scores (Experiential Emotional Intelligence (EEIQ) and Strategic Emotional Intelligence (SEIQ). There are also scores associated with each of the four branches of EI and each branch is segmented into two tasks for each branch. The first branch, perceiving emotions (PEIQ) has two tasks (faces and pictures). The second branch, facilitating thought (FEIQ), has two tasks that include facilitation and sensations. The third branch, understanding emotion (UEIQ), includes changes and blends tasks. Managing emotions (MEIQ) includes two tasks of emotional management and emotional relations.

Descriptive Statistics of MSCEIT

The average score on MSCEIT is 100 with a standard deviation of 15 (similar to the intelligence quotient (IQ) score). The mean score of participants for overall EI was 91.77 (SD = 16.29). The two area scores of Experiential (M = 92.12, SD = 19.46) and Strategic (M = 95.12, SD = 14.24) were slightly higher, although fell within the same range (90-99) which are considered low average scores by MSCEIT. All branch scores also ranged from 90-99 which were considered low average (please see table 5). All task scores with the exception of the pictures task score were also considered low average. The pictures task score (M = 100.3, SD = 23.62), however, was the only score considered a high average score as it fell within the range of 100 – 109.

There are two supplemental scores that can be computed from the MSCEIT. The Positive-Negative Bias is used to assess the tendency participants have to either respond to stimuli with positive or negative emotions; the mean score was 106.80 ($SD = 14.90$). The Scatter Score indicates the fluctuation between scores within the eight different tasks. This mean score was close to the previous score at 106.00 ($SD = 16.67$). Mayer, Salovey, and Caruso (2002) indicate scores greater than 115 are considered a high standard score whereas a score below 85 is considered a low score for both Positive-Negative Bias score and the Scatter Score. Therefore, both scores would be considered an average standard score.

Table 5

Descriptive Statistics of MSCEIT

EI Scores	Minimum	Maximum	Mean	Std. Deviation
Perceived Emotions				
Branch Score	31.63	145.97	92.86	19.21
Faces task	44.90	129.82	90.27	20.75
Pictures task	27.65	157.65	100.31	23.62
Using Emotions				
Branch Score	39.55	135.14	95.65	18.65
Facilitation Task	56.68	133.55	98.59	16.12
Sensations Task	51.41	132.44	94.17	16.66

(*table continues*)

Understanding Emotions

Branch Score	56.27	139.78	96.97	15.13
Changes Task	71.65	141.19	97.67	14.76
Blends Task	50.78	134.88	98.01	16.90

Managing Emotions

Branch Score	59.23	135.72	95.38	14.76
Emotions Mgmt Task	68.10	132.79	98.18	14.95
Social Mgmt Task	42.26	133.74	95.03	14.92

Area Scores

Experiential	33.50	128.63	92.12	19.46
Strategic	53.71	132.09	95.12	14.24

Overall (Total) EI	53.47	122.22	91.77	16.29

Supplemental Scores

Positive-Negative Bias	62.32	150.49	106.80	14.92
Scatter Score	66.60	143.68	106.02	16.67

Note. N= 80; 69 or less = consider development; 70-89 = consider improvement; 90—99 = low average score; 100-109: high average score; 110-119: competent; 120-129: strength; 130 or more: significant strength

Instrument Reliability

Instrument reliability for all scales was investigated with Cronbach's alpha. On the MSCEIT, reliability coefficients ranged from .24 for perceived emotions to .70 for managing emotions with an overall reliability of .73. Reliability coefficients for student satisfaction ranged from .50 for student services to .84 for instructional services with an overall reliability of .88. See Table 6.

Table 6

Reliability Coefficients

Scale	*N* of Items	Cronbach's Alpha
Emotional Intelligence		
Perceived Emotions	2	.24
Using Emotions	2	.59
Understanding Emotions	2	.40
Managing Emotions	2	.70
Emotional Intelligence (All Items)	8	.73
Student Satisfaction		
Institutional Perceptions	2	.81
Academic Services	7	.69
Instructional Services	8	.84
Enrollment Services	4	.59
Student Services	5	.50
Overall Satisfaction	26	.88

Results

Research Questions

Research Question 1: Does a relationship exist between overall emotional intelligence of graduate students and satisfaction of their overall, academic, and instructional online learning experience as measured by Mayer-Salovey-Caruso

Emotional Intelligence Test (MSCEIT V2.0) and Priorities Survey for Online Learners (PSOL), respectively?

Pearson product correlation was used to determine whether a relationship existed between overall emotional intelligence of graduate students and their overall satisfaction with their institutions. The analysis indicated there was no significant relationship between the overall emotional intelligence score and overall satisfaction score. When looking at all satisfaction scores there was only a statistically significant relationship between overall EI and participants' level of satisfaction with tutoring services ($r = -.36$, $N = 79$, $p < .01$) and advisor career goals ($r = -.22$, $N = 79$, $p < .05$) as indicated below in Table 7.

Table 7

Pearson Correlation of Overall Emotional Intelligence with Satisfaction Scores

Satisfaction Scores	Total EI
Institution Reputation	.07
Advisor Accessibility	-.09
Instructional Materials Appropriate	-.11
Timely Faculty Feedback	.01
Advisor Career Goals	-.22*
Investment of Tuition Paid	-.04

(*table continues*)

Satisfaction Scores	Total EI
Program Requirements Clear	-.03
Student Collaboration	-.04
Financial Aid Available	.10
Institution Responds Quickly	.08
Assignments Clearly Assigned	-.09
Sufficient Course Offerings	-.02
Student Instructor Interaction	-.06
Timely Financial Aid Information	.07
Timely Responses to Student Complaints	-.07
Technical Assistance Available	-.16
Clear Assessment Procedures	-.05
Registration process convenient	.01
Career Services Available	-.22
Online Instruction Quality	-.03
Library Resources	-.02
Contact for Questions on Programs	.01
Billing/payment procedures convenient	-.03

(table continues)

Satisfaction Scores	Total EI
Tutoring Services	-.36**
Faculty Responsiveness	.09
Timely Bookstore Service	.18
Overall Satisfaction	.10

*Correlation is significant at .05 level (2-tailed). **Correlation is significant at .01 level (2-tailed).

Research Question 2: Does a relationship exist between the first branch of emotional intelligence, perceived emotions, among graduate students and satisfaction with their overall, academic, and instructional online learning experience as measured by MSCEIT V2.0 and PSOL, respectively?

Pearson product correlation was used to determine whether a relationship existed between the first branch of emotional intelligence, perceived emotions, of graduate students and their overall satisfaction with their institutions. Table 7 indicates that there was no significant relationship between overall EI and overall satisfaction. However, when both EI and satisfaction were looked on the granular level, significant relationships did exist.

The satisfaction scores for tutoring services demonstrated significant, negative correlations with all aspects of perceived emotions including the faces task, which asks participants to read facial expressions, ($r = -.28$, $N = 79$, $p < .01$), the pictures task, which

asks participants to determine emotions through music and art, (r = -.30, $N = 79$, $p < .01$),

and the overall branch score (r = -.39, $N = 79$, $p < .001$). The satisfaction with the

availability of career services also had multiple significant, negative relationships with

the pictures task (r = -.27, $N = 79$, $p < .01$) and overall branch score (r = -.26, $N = 79$, $p <$

.01). Another significant, negative relationship was the relationship between advisor

career goals and the pictures task of perceived emotions (r = -.22, $N = 79$, $p < .01$).

Finally, the only positive relationship identified was between the faces task of perceived

emotions and timely bookstore service (r = .23, $N = 80$, $p < .01$).

Research Question 3: Does a relationship exist between the second branch of

emotional intelligence, using emotions, of graduate students and satisfaction with their

overall, academic, and instructional online learning experience as measured by MSCEIT

V2.0 and PSOL, respectively?

As with previous hypotheses, this relationship was also not significant with the

using emotions branch score and the overall satisfaction of participants. Two significant,

negative relationships did emerge, however, when analyzing data on specific satisfaction

scores. The sensations task of using emotions, which compares participants' response of

emotions to sensations (lights and colors), showed a significant, negative relationship

with advisor accessibility (r = -.28, $N = 79$, $p < .01$) and with advisor career goals as well

(r = -.26, $N = 79$, $p < .01$).

Research Question 4: Does a relationship exist between the third branch of

emotional intelligence, understanding emotion, of graduate students and satisfaction with

their overall, academic, and instructional online learning experience as measured by

MSCEIT V2.0 and PSOL, respectively?

There was no significant relationship between understanding emotion and overall

satisfaction of participants. There was only one significant relationship found which was

a negative correlation between the changes task of understanding emotion, which

measures how emotions transition from one to another, and the satisfaction of technical

assistance being available ($r = -.27$, $N = 80$, $p < .01$).

Research Question 5: Does a relationship exist between the fourth branch of

emotional intelligence, regulation of emotion (managing emotions), in graduate students

and satisfaction with their overall, academic, and instructional online learning experience

as measured by MSCEIT V2.0 and PSOL, respectively?

As with previous hypotheses, there was no significant relationship between the

managing emotions branch score and overall satisfaction of participants with their

institutions. However, there were a few significant relationships on a granular level.

There was a negative, significant relationship between student collaboration interaction

and the social management task of managing emotions, which measures the ability to

incorporate emotions in decision making involving other people, ($r = -.27$, $N = 77$, $p <$

.01). Social management also had a significant yet positive relationship with timely

bookstore service. The emotions management task, which measures one's own emotions

of decision making, had a positive, significant relationship with student instructor

interaction ($r = .22$, $N = 79$, $p < .01$). The managing emotions branch score only had one

significant, negative relationship with the availability of career services ($r = -.27$, $N = 79$,

$p < .01$). Both branch scores, emotions management, ($r = -.24$, $N = 79$, $p < .01$) and social

management ($r = -.27$, $N = 79$, $p < .01$) also had a significant, negative relationship with

career services availability.

Further Exploratory Analyses

Correlations were computed to investigate the relationships between demographic

variables, emotional intelligence, and student satisfaction. There was a significant,

negative relationship between overall satisfaction and age, ($r = -.26$, $N = 78$, $p = .02$). As

age increased, there was a corresponding decrease in student satisfaction as presented in

Table 8.

Table 8

Correlation Matrix

Variable	1	2	3	4	5	6	7
Total EI (1)	—	.10	.01	.05	.03	.05	.17
Overall satisfaction (2)		—	$-.26^a$	-.04	-.01	.11	.05
Age (3)			—	-.09	-.00	$-.26^a$	.05
Gender (4)				—	.00	$.28^a$	-.07
Graduate level (5)					—	.05	-.04
College type (6)						—	-.14
Ethnicity (7)							—

Note. $N = 80$; Gender: 0 = Male, 1 = Female; Graduate Level: 0 = Masters, 1 = Doctorate; College Type: 0 = Education, Health services, Management & technology, 1 = Social and behavioral science; Ethnicity: 0 = Non-white, 1 = White.
[a]Correlation is significant at the 0.05 level (2-tailed).

None of the other demographic variables were significantly related to overall satisfaction or emotional intelligence. Since age was significantly related to overall satisfaction, multiple regression was utilized to determine whether emotional intelligence was a moderating variable between age and student satisfaction. In Step one of the model, emotional intelligence and age were entered. In Step two of the model, the interaction term was entered. The interaction term is the cross-product of age x emotional intelligence. To address collinearity issues, the variables (age and emotional intelligence) were standardized by converting them to z-scores. The interaction term was then computed by multiplying the two values. A moderating effect is observed when there a significant F-change when the interaction term is added. In this analysis interaction was not statistically significant, $F(1, 76) = .006$, $p = .937$. Therefore, emotional intelligence did not moderate the relationship between age and satisfaction. Regression coefficients are presented in Table 9.

Summary

There were no significant correlations between total emotional intelligence and the corresponding branch scores and overall satisfaction. Thus, the null hypothesis was retained in all cases.

Further exploratory analyses of demographic variables also demonstrated no significant relationships with either emotional intelligence or overall satisfaction except for age. Age had a significant, negative relationship with overall satisfaction.

The results provided in this chapter will further be analyzed and interpreted in addition to recommendations for further studies in Chapter 5.

Table 9

Regression Coefficients

Predictor variable	ΔR^2	Adj. R^2	ΔF	B	SE B	β	t	P
Step 1	.08	.05	3.25*					
Total EI				.01	.01	.10	.91	.36
Age				-.04	.02	-.26	-2.39	.02*
Step 2	.00	.04	.01					
Total EI				.01	.01	.10	.90	.37
Age				-.04	.02	-.26	-2.37	.02*
Total EI x age				-.01	.16	-.01	-.08	.94
Total R^2	.08	.04						

*$p < .05$.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative survey study was to determine whether a relationship exists between EI in graduate students and satisfaction with their overall academic experience at an online higher education institution. The purpose of this chapter was to discuss the findings of the data collection and analysis and, based on this information, provide conclusions and recommendations. This chapter included interpretations of the findings, limitations, recommendations, and implications of the study.

Online higher education is increasingly being seen as an alternative to traditional brick-and-mortar universities (Crawford-Ferre & Wiest, 2012). However, there is some debate about many aspects of online education, including whether online students can learn as well as their traditional counterparts when considering affecting factors such as instructional strategies and collaboration, social communication, and instructor/mentor support (Chou, 2012). According to research, EI may have an effect on some of these factors; however, there has been little to no research on students' emotional intelligence and its potential effect on the satisfaction with their overall, academic experience at institutions of higher education (Qualter et al., 2009; Shipley, 2010; Vandervoort, 2006).

The purpose of this study was to determine whether there was a relationship between EI in graduate students and satisfaction with their overall academic experience at

institutions of online higher education. The results could help administrators in improving satisfaction, retention, and the eventual graduation of online students. Data were collected from various countries and online institutions. Demographic factors and EI scores were measured with MSCEIT and satisfaction with their institution was measured with the PSOL.

A quantitative analysis indicated no significant relationships between total emotional intelligence, emotional intelligence branch scores, and overall satisfaction with graduate students' online institution. The results, however, did indicate several significant relationships when investigating more specific satisfaction scores with EI branch and task scores.

Interpretation of the Findings

Emotional Intelligence

Results from the MSCEIT were in the low average range. They were consistent with other research where participants also had average scores (low or high) despite type of educational environment, traditional or online (Bay & McKeage, 2006; Brannick, Wahi, Arce, Johnson, Nazian, & Goldin, 2009; Cyr, 2006; Lewis, 2004). This study may demonstrate not only consistency of EI with different educational formats, but comparability to the average standardized IQ score of 100 (Neiser, 1997). Consistency in these findings may also indicate distinct relationships with the EI of higher education students as well as with other variables, such as satisfaction.

Student Satisfaction

Results from the PSOL for overall satisfaction were about a 5.86 on a Likert scale of 1 (*not satisfied*) to 7 (*very satisfied*). Noel-Levitz, Inc. (2012) states average satisfaction scores range from about 4-5 on the same Likert scale indicating that participants in this study were slightly above average in their satisfaction with their institutions. These results were similar to other research indicating students had moderate to high levels of satisfaction with their institutions (Grace, 2004; Jalali, Islam, & Ariffin, 2011).

The highest areas of satisfaction involved academic services including online library resources, clear program requirements, and technical assistance. This is consistent with Arena, Arnaboldi, and Azzone (2010) who found highest satisfaction scores with consistency and accuracy of information provided by student services. Results from this study, however, differ slightly from other studies in regard to quality and support of instructors.

Studies have found significant correlations with satisfaction and knowledge, presence, and support from the instructor both in traditional and online settings (Hermans, Haytko, & Mott-Stenerson, 2009; Joo, Lim, & Kim 2011). Although satisfaction with instructional services were ranked relatively high in this study, ranging from 5.56-5.92 (Likert scale of 1 = *not satisfied* to 7 = *very satisfied*), the highest satisfaction scores focused on accessibility and consistent use of the learning platforms provided by online institutions. These results were consistent with Palmer (2009) and

Holt (2007) indicating highest scores were related to aspects of online factors such as ability to learn and navigate online, with lowest satisfaction on faculty interaction or class quality. This distinction between traditional and online education environments may help guide focus for additional research on satisfaction dependent on learning format.

Interpretation of Hypotheses

Results of this study did not find any significant relationship between emotional intelligence and overall satisfaction with graduate students' online higher education institutions. There is little research specifically on the relationship of emotional intelligence and satisfaction of students' institutions. Grace (2004) found, however, when focusing on nursing students that there was no significant relationships between emotional intelligence and satisfaction in regard to GPA and no significance of emotional intelligence in varying nursing programs. Studies focused on emotional intelligence and life satisfaction also found no significant relationship when investigating higher education students (Cogan, 2011; Murphy, 2006; Palomera and Brackett, 2006).

Emotional intelligence demonstrated some significant correlations with specific areas of life satisfaction or emotional intelligence in other studies; however, studies provided contradicting information. Cogan (2011) found a positive significant relationship with interpersonal scales of EI and life satisfaction whereas Ghorbanshiroudi, et al. (2011) found a significant, negative relationship with EI and life satisfaction. Contradicting results from these studies may further question the relationship between EI and satisfaction specific to institutions of higher education.

Significant relationships did exist on a distinct level between specific branches and tasks of EI and specific satisfaction scores. Satisfaction with academic services including availability of technical assistance, tutoring services, and advisors' ability to help participants to career goals all had significant, negative relationships with varying emotional intelligence scores (total EI, branch scores, and task scores). Only one significant, positive relationship existed specifically between the emotions management task of the managing emotions branch and satisfaction with the availability of career services.

When observing satisfaction with student services, satisfaction with timely bookstore services had significant, positive relationships with emotional intelligence while availability of career services all had significant, negative relationships with EI branch or task scores.

Clemes, Gan, and Kao (2007) has also demonstrated significant relationships with similar services including academic, administrative staff, and career opportunities and satisfaction indicating as the quality of the mentioned services increases, satisfaction increases.

As almost all significant relationships between emotional intelligence and satisfaction factors were negative (quite the opposite of current research) it may suggest that the ability to being more emotionally intelligent makes someone more aware of the quality of services, hence decreasing the satisfaction in these specific areas.

The only instructional services satisfaction factor that had a significant relationship was the negative relationship between the social management task of managing emotions and satisfaction with student-to-student collaboration interactions. This relationship indicates as one's ability increases to determine the emotion of individuals, their satisfaction with student-to-student collaboration decreases. This may suggest that as participants begin to acknowledge the emotions of their classmates, they may choose to decrease collaboration with certain individuals based on that interaction; however, there is room for interpretation of these emotions as interaction is online. This may explain why this study contradicts a study where emotional regulation abilities of EI were significantly, positively related with social interaction (Lopes, Salovey, Côté, & Beers, 2005). It should be noted, though, that participants of this study were undergraduate students attending a traditional university where social interaction is more prevalent. Han (2009) suggested that the social bonding of online students may be associated with the quality of the class and program and not necessarily the student interaction. In addition, focus for online students may not necessarily be on making friends but earning a degree as many students are often work full time, have children, and a variety of other responsibilities.

Further exploratory analysis indicated only one significant relationship which found a negative relationship between age and overall satisfaction; as age increased, overall student satisfaction decreased. Significant, negative relationships between age and overall satisfaction were also found in other studies (Aldemir & Gülcan, 2004; Kim, Lee,

& Skellenger, 2012). As emotional intelligence did not demonstrate any significant relationship between age and satisfaction, it cannot be determined from this study whether older students who are emotionally intelligent are more or less satisfied than older students who are less emotionally intelligent. However, as participants in this study were relatively older than the traditional college students ($M = 44.71$ years) and have more real-world experience, expectations may be slightly higher.

Some traditional universities have had different results. For instance, a study conducted by Hess (1997) found older students (35-44 years) were more satisfied with the campus environment than younger students. Kelso (2008) also found that non-traditional students (over 25 years) had a higher level of satisfaction with academic services than traditional students (under 25 years). The potential differences of satisfaction between older traditional and online education students may indicate certain preferences when it comes to long distance and face-to-face interactions as younger students may have had more experience with online learning environments, thus having lower expectations in regard to satisfaction.

Limitations of the Study

One limitation mentioned previously was the questionable validity and reliability of EI measurement tools. As described, the use of MSCEIT focuses on the ability model and may carry more validity as the focus is on emotional intelligence alone instead of other personality factors found in other measurement tools. The reliability found by Mayer, Salovey, and Caruso (2002) range from .76 to .91 which is considered relatively

high acceptable levels of reliability. In this study, however, reliability was considerably low ranging from .24 to .73 for all branches and overall EI.

Comparison of reliability for satisfaction scores showed more improvement. Reliability conducted by the assessment company, Noel Levitz, (2012) found range of reliability from .70 to .90 considered acceptable to highly acceptable reliability. The reliability for this study ranged from .50 to .88. This reliability is still relatively low in some areas but slightly higher than the MSCEIT reliability. For both reliabilities calculated for this study, the significantly low range puts into question whether the results and, thus, correlations found have much meaning. It should be noted, however, that overall or total EI was at a level of .73 and overall satisfaction score was at a .88 level. As a .70 is considered an acceptable reliability standard, this would place the main variables of the study as acceptable (Nunnally, 1978). For other variables, however, the increase in the number of participants could potentially increase this reliability.

An increase in participants would have also been effective for the power size. An a priori was initially calculated for a power of 95% and 0.5 alpha level and a sample size of 89 participants. After the length of the study was doubled from five to ten weeks, a power less than 95% but at least 80% was considered. An a priori power analysis revealed that for a medium effect size ($f^2 = .15$) three predictors and two steps, a sample size of 80 resulted in a power of level of 86.96%. However, as no relationships hypothesized were considered significant it may be assumed that the power size conducted from the a priori analysis was not obtained.

Another limitation was the genuineness of the participants' responses in regards to the PSOL, which measured satisfaction. Within any study it may be difficult to determine the truthfulness of the answers. However, within this study there was focus on anonymity of results which hopefully made participants feel more comfortable in providing their results. The lack of mention or inquiry of what institution the participants attended may help with easing any potential discomfort of the generated answers. However, does not allow for information specific to any institution.

Although there was a diverse population in regard to some demographic factors such as location and age range, there was a limitation based on this specific online, graduate population. This does not allow for a generalization of all student populations and formats of learning. An extension of the study to other populations such as undergraduate students, programs, or specific institutions may help in more clearly directing the specifics on student satisfaction and whether EI does indeed play a crucial factor in enhancing online higher education. As the population of students attending online higher education institutions expands, a larger population would also be more reflective of this growing population.

Recommendations

Based on the findings of this study the lack of research focused specifically on emotional intelligence and student satisfaction, a much larger population to either accept or reject the hypotheses would be necessary to draw a solid conclusion. Having a larger

sample size may provide the necessary reliability and power needed to determine whether there is some merit to the findings obtained in this study.

Expanding the sample size would provide a more generalized population but it is also recommended to conduct more specific populations. This study focused on several different programs at multiple online institutions. Being able to focus specifically on one type of degree focus or institution may provide some more designated results such as Grace (2004) whose research focused on the emotional intelligence of nursing students at a specific institution. Explicit research will allow for a more thorough and in-depth analysis for comparison among future studies.

As controversy over the validity of emotional intelligence still exists, using multiple EI instruments may be helpful. Other studies have conducted using similar methods such as comparing MSCEIT and EQ-I showing some moderate relation (Mattingly, 2010). Comparing the validity of those assessments may strengthen EI results in addition to other variables such as satisfaction. This use of multiple instruments may also determine if any EI strengths or weaknesses can be obtained by different instrumental methods.

Results from this study focused more on the satisfaction of institutional services than instructional services, similar to some available research (Hameed & Amjad, 2011). However, much research has focused on the satisfaction of interaction and quality with instructors and students instead (Joo, Lim, & Kim; 2011; Steele, 2007). Much of this research has been due to the traditional environment where more frequent

instructor/student interaction occurs versus online environment where the mode of communication is separated by distance and other methods of communication. Exploring traditional and online learning environments in regard to satisfaction may display a more concrete relationship between satisfaction and emotional intelligence.

Implications

Research within higher education has focused on potential factors affecting students' success with their academic careers. Both online and traditional formats have investigated factors such as emotional intelligence and satisfaction to determine its overall effects for students. However, much of this research has been conducted separately and with other variables not related to EI and satisfaction specifically.

The intent of this study was to connect EI to satisfaction to determine if a relationship existed between the two variables. Research on EI and life satisfaction hinted to a potential positive relationship (Ghorbanshiroudi et al., 2011). However, the majority of research indicates no significant relationships between the two variables. This research is similar to the results from this study in that no relationship between online graduate students' emotional intelligence and satisfaction with their institution was found. Although results were limited due to the sample size of the study, the results may heed something worthwhile to add to current research.

The results of this study may be cause to consider that there may be little to no connection between EI and satisfaction in general when it comes to higher education

students. This implication may have a significant impact on determining factors affecting student satisfaction of their attending institutions.

This study adds to the research suggesting that, in most cases, students are satisfied or highly satisfied with their institutions regardless of learning environment (Callaway, S.K., 2012; Mahmood, Mahmood, & Malik, 2012). The distinction, however, lies in the specific areas that affect student satisfaction. Significant relationships for student satisfaction both at traditional and online environments focus on faculty effectiveness (Hameed & Amjad, 2011; Hermans et al., 2009; Lo, 2010). There is slight emphasis with online environments on other services such as academic and student support services, and other features related to navigating online (Holt, 2007; Palmer, 2009). The distance between students and online universities may indicate a higher need for satisfaction in areas related to ease and convenience for students to be successful.

Similar scores on EI of students both at online and on-campus institutions may add to that confirmation that the student populations may not vary too much in regard to the level of EI. The similarity between the two environments can possibly allow for the transference of current and tested practices in traditional settings to online environments. However, the true extent of the effect of EI still needs to be explored further to confirm some consistency and development of more solid theories.

The findings of this study and previous research demonstrate both similarities and differences when referring to EI and satisfaction as separate entities. Although not significant, the results of this study still provide implications for social change and

perhaps a bridge to connect these two interests. The potential for EI not being directly related to student's overall academic experience and/or satisfaction of that institution can help narrow down focus to areas where student satisfaction is affected. As research within this area is quite limited and the demand and development of online learning increases, this research will help add to this growing population. In addition, this study broadens other potential areas of research to consider including the dynamics of faculty, the differing teaching strategies from traditional universities, and its impact on online students. By doing so, institutions will have the knowledge to understand how to improve the quality of the educational services provided to their student population hence increasing retention and eventual graduation of these students by proven ability, development, and application of such researched techniques and factors.

Conclusion

Research on emotional intelligence within higher education has focused primarily on academic staff and faculty but has begun to steadily increase with focus on student populations. As such, research on satisfaction and potential impact on student success has also been a common theme in research of institutions of higher education. However, little research still exists on EI of graduate students, in particular, and whether that impacts the satisfaction of these students at online higher education institutions.

The relationship between emotional intelligence of graduate students and satisfaction with their institutions of online higher education was explored in this study. With the limited sample size used, results indicated that there was no significant

relationship with emotional intelligence and overall satisfaction with online higher education institutions. Significant relationships with specific branches or tasks of EI and specific satisfaction factors were obtained, however, indicating there may be some further areas to study, particular within academic services for online institutions.

Exploratory analyses did show a significant, negative relationship between age and satisfaction indicating as age increased, satisfaction decreased. Due to the often older age of online students, this is certainly something to be considered for future studies.

Although a significant relationship was not found with EI and overall satisfaction additional research, conducted in this area with larger populations, will help confirm or deny these results and add to this foundation of literature yet to fully be developed. The importance of these factors can make a significant impact to the growing industry of online higher education and effective graduation efforts of its students.

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Appendix A: Permission from MHS for use of MSCEIT

Attention: Christa Thompson

Re: Copyright Clearance Letter

Thank you for your interest in Multi-Health Systems Inc. ("MHS") and request for the MSCEIT (test). This letter provides Christa Thompson Witson (The "Party") with permission to reproduce one copy of the MSCEIT (test) at no cost.

The Party will not be permitted to make additional reproductions of the MSCEIT (test) without first obtaining express written permission from MHS, which may be subject to additional costs. The Party agrees to return and/or destroy the MSCEIT (test) within thirty (30) days of receipt.

The Party shall not, directly or indirectly, disclose, divulge, reveal, report, publish, transfer or otherwise communicate, or use for its or his own benefit or the benefit of any other person, partnership, firm, corporation or other entity, or misuse in any way, any of the MSCEIT (test) components.

Please sign and return a copy of this letter acknowledging your understanding of our relations. If you have any questions or concerns regarding the foregoing, please feel free to contact me.

We accept the arrangements outline above.

Sincerely,
MULTI-HEALTH SYSTEMS INC.

Appendix B: Permission from Noel-Levitz for use of PSOL

Christa – thank you for your quick follow up with this email. Here is the information regarding the special pricing we can offer you for an administration of the Priorities Survey for Online Learners for your graduate research:

You can place your order via an email to me or on our Website: www.noellevitz.com/orderPSOL and just make a note in the comments section regarding the special pricing and we will adjust the fees when your order is received. Once we receive your order, we will provide you access to your online account within a couple of days and you will then be able to customize the survey. We will do all billing based on the actual number of invited students and the actual number of completed surveys.

By purchasing the instrument from us, you have permission to use the data for your research. You do not need to complete any special paperwork.

I have attached the reliability and validity information we have on file for the PSOL for your reference.

Let me know how else we can be helpful.

Visit www.noellevitz.com/SSI for more information about the
Satisfaction-Priorities Surveys from Noel-Levitz

Appendix C: Demographic Questions

1. Graduate level

    a. Master's degree

    b. Educational Specialist

    c. PhD

    d. Professional Doctorate (e.g., D.B.A., D.N.P., Ed.D)

    e. Prefer not to answer

2. College

    a. Education

    b. Health Sciences

    c. Management and Technology

    d. Social and Behavioral Sciences

    e. Prefer not to answer

Appendix D: Informed Consent Form

You are invited to take part in a research study of the relationship between emotional intelligence and satisfaction of graduate students at their online higher education institution. You were chosen for the study because you are a graduate student at an online, higher education institution. The section of this survey is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Christa Thompson, who is a doctoral student at Walden University and is overseen by the following faculty members: Dr. Stacy Orr-Sprague and Dr. Gary Burkholder.

Background Information:
The purpose of this study is to determine whether there is a relationship between the level of emotional intelligence of online graduate students and their satisfaction with their higher education institution. Emotional intelligence includes being aware, able to recognize, and understand the emotions of oneself and others. Satisfaction includes specific areas such as academics, enrollment, instructional, and student services.

Procedures:
If you agree to be in this study, you will be asked to:
- Complete a demographic survey
    - The demographic survey completed on an online survey tool (SurveyGizmo) will ask two questions including graduate level work. Participation will take 1-2 minutes, on average, to complete.
- Complete one emotional intelligence online test
    - Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT v.2), asking various sets of questions related to measures of emotional intelligence including: face recognition, application of moods to identify tasks and behaviors, ability to combine emotions to create other emotions, and identifying emotions in a scenario. Participation will take 30-45 minutes, on average, to complete the test.
- Complete an online student satisfaction questionnaire
    - Priorities Survey for Online Learners (PSOL), asking how important and satisfied the student is with the institution meeting the expectations of specific statements. This will take 10-15 minutes, on average to complete the test.

Voluntary Nature of the Study:
Your participation in this study is voluntary. This means that everyone will respect your decision of whether or not you want to be in the study. If you decide to join the study

now, you can still change your mind during the study. If you feel stressed during the study you may stop at any time. If you feel uncomfortable with the researcher's association with any organization or university and feel it may be a conflict of interest, feel free to stop the study at any time. You may also skip any questions that you feel are too personal.

Risks and Benefits of Being in the Study:
There are no physical risks currently present with the study as all participation is conducted in an online format that all participants are used to furthering their education in an online environment. The benefits of participating in this study can result in potentially contributing to the research of online higher education institutions and, therefore, adding to the quality of these institutions.

Compensation:
There will be no compensation for participation in this study; however, scores from the MSCEIT assessment will be available upon request. Please be informed that only scores will be provided and for further explanation of what your results mean, you will need to contact Multi-Health Systems (MHS) at www.mhsassessments.com. Further inquiry and cost may be associated with these results completely separate from the researcher and with direct involvement of MHS.

Confidentiality:
Any information you provide will be kept confidential. The researcher will not use your information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in any reports of the study. In addition, the information collected will be coded to provide even more confidentiality to participants. Because of the potential conflict of interest of the researcher's association and employment at the same site as participants, additional steps will be taken to ensure confidentiality and minimize interference including coding any data received and safely securing this data in a locked safe.

Contacts and Questions:
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via 480-330-9973 or christa.thompson2@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 1210. Walden University's approval number for this study **07-18-12-00122526** and it expires on **July 17, 2013.**

As a participant, you may print a copy of this consent form for your records.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. In order to protect my privacy, my signature will not be collected and my completion of the survey indicates that I have provided consent to participate.

Curriculum Vitae

Education:

Ph.D., Psychology, Walden University, 2013
Concentrations: Organizational Psychology
Dissertation: Emotional Intelligence and Graduate Student Satisfaction at Online Institutions of Higher Education

MBA, University of Phoenix, 2007
Concentrations: Marketing

B.A, Communications, Arizona State University, 2003

Experience:

Adjunct Faculty, 2009 - 2013
University of Phoenix
Course: Critical Thinking

Research Skills:

Knowledge of SPSS statistical program

Awards and Honors:

Freshman Achievement Award, 1999

Skills and Qualifications:

Microsoft Office, PowerPoint, Excel
Adobe Captivate, Flash
Lectora