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Emotional Intelligence as a Non-Traditional Predictor of College Student Retention and Graduation

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EMOTIONAL INTELLIGENCE AS A NON-TRADITIONAL PREDICTOR OF

COLLEGE STUDENT RETENTION AND GRADUATION

by

Larry Austin Sparkman

A Dissertation
Submitted to the Graduate Studies Office
of The University of Southern Mississippi
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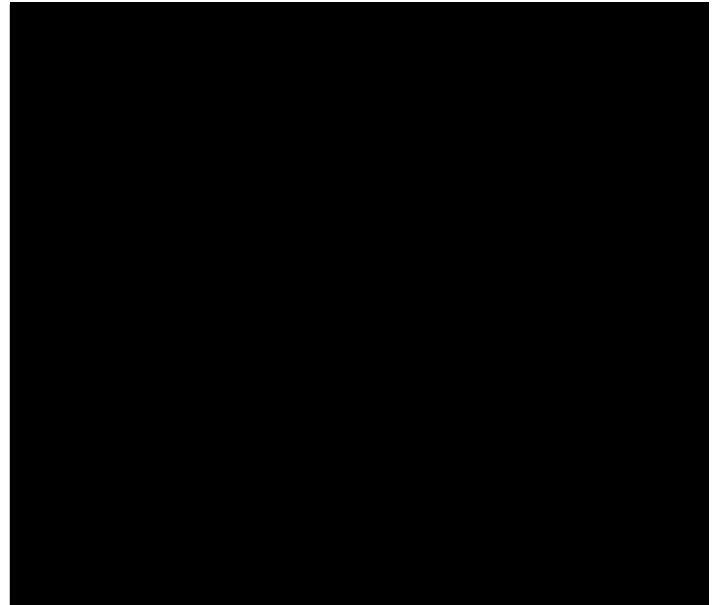Larry Austin Sparkman

Abstract of a Dissertation
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ABSTRACT

EMOTIONAL INTELLIGENCE AS A NON-TRADITIONAL PREDICTOR OF

COLLEGE STUDENT RETENTION AND GRADUATION

by Larry Austin Sparkman

May 2008

Universities are looking for new predictors of student retention and graduation.

Based on the findings of this study, emotional intelligence is a predictor of student

retention and performance over time. A survey of 783 traditional college students was

conducted using the Bar-On EQ-i:125 prior to initial enrollment for the fall semester

2002 at a particular university in the southeastern United States. At the conclusion of

spring semester 2007, data were collected which included enrollment status, graduation

status, and cumulative college grade point average. Relationships between the 15

subscales of emotional intelligence as defined by the Bar-On EQ-i:125 (self-regard,

emotional self-awareness, assertiveness, independence, self-actualization, empathy, social

responsibility, interpersonal relationship, reality testing, flexibility, problem solving,

stress tolerance, impulse control, optimism, and happiness) and enrollment status,

graduation status, and cumulative grade point average were examined. Emotional

intelligence scores were compared to national norms. Additionally, this study analyzed

the relationship of traditional predictors of student retention and graduation from college

such as gender, ethnicity, marital status, first generation college student status, on- or off-

campus housing, high school grade point average, and ACT score, with enrollment status,

graduation status, and cumulative college grade point average.

This research suggests that there is a statistically significant relationship predominately between Empathy, Social Responsibility, Flexibility, and Impulse Control, and enrollment status and graduation status. Social Responsibility was found to be the strongest positive predictor of graduation, followed by Impulse Control and Empathy. Flexibility proved to be a negative predictor of both enrollment and graduation. The emotional intelligence subscales that positively predicted the cumulative college grade point averages of students were Self-Actualization, Social Responsibility, and Happiness. Independence and Interpersonal Relationship were negatively related to cumulative college grade point average. Additionally, high school grade point average positively predicted enrollment, graduation, and cumulative college grade point average while ACT significantly predicted graduation and cumulative college grade point average. The findings of the study also suggest that the demographic most likely to graduate are White females, not dating, who live in on-campus housing their first semester, with one or both parents having a 4-year degree.

ACKNOWLEDGMENTS

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CHAPTER I

PURPOSE OF THE STUDY

Introduction

College student success and graduation are important to students seeking a degree and to the nation's communities (Day & Newburger, 2002; Rowley & Hurtado, 2003; Institute for Higher Education Policy, 1998), yet only just better than half of students who enroll in 4-year colleges and universities will receive a bachelor's degree within 6 years (Astin, 1985; "The Chronicle Almanac," 2005). The purpose of this study was to determine if a student's emotional intelligence is related to a student's ability to persist and obtain a bachelor's degree in 5 years or less.

The first chapter of this document presents background information, a brief definition of emotional intelligence, statement of the problem, research question and hypotheses, definition of terms, delimitations, limitations, assumptions, and justification. Chapter II provides a theoretical framework upon which to base the research, purpose of this study, institutional initiatives designed to affect student retention traditional pre-entry predictors of college student success, other factors that research has shown to be related to retention, a brief historical review of emotional intelligence, prominent emotional intelligence models, relationships between emotional intelligence and retention, and research on emotional intelligence and academic performance. Chapter III introduces this study's research question and hypotheses, provides information about the research design, offers a description of the participants and procedures, identifies the variables, describes the instrument, and gives a description of data collection processes and statistical evaluation methods.

Background

Persistence in obtaining a college degree is an important area of study for higher education. All over the nation, students seeking undergraduate degrees enroll in colleges and universities with the hope of graduating, yet only approximately 58% will graduate within 6 years of study (Astin, 1985; Beck & Davidson, 2001; Bettencourt, Charlton, Eubanks, Kernahan, & Fuller, 1999; "The Chronicle Almanac," 2005; Cyr, 2006; DeBerard, Spielmans, & Julka, 2004; Feldman, 2003; La Civita, 2003; Parker & Duffy, 2005). For a number of reasons, graduation from college is important both to the individual and society. According to Day and Newburger (2002), a person's financial earning potential directly relates to the amount of education he or she obtains. College graduates earn twice as much as persons with no education beyond their high school diplomas, and one third more than persons with some college but no degree. Past studies have shown that students who graduate from college also report gains in multiple areas such s factual knowledge, intellectual skills, and "a broad array of value, attitudinal, psychosocial, and moral dimensions" (Pascarella & Terenzini, 1991, p. 557).

Predictors of college persistence and academic success traditionally center on the student's high school grade point average and standardized test scores. To ensure better academic readiness for college level study, the educational community readily embraced standardized tests such as the American College Testing program (ACT) and Scholastic Aptitude Test (SAT) as appropriate means for establishing admissions eligibility (Guidelines on the Uses of College Board Test Scores and Related Data, 1988). Historically, the traditional predictors of student success in college, ACT/SAT and high school grade point average, have been shown to account for only a modest amount of

variance (25%) of a student's academic performance in college as reflected by their grade point averages (Pascarella & Chapman, 1983; Tinto, 1975). According to Astin (1993), among the current admissions data available, a student's high school grade point average and standardized test score were the two strongest predictors of his or her college grade point average out of the current admissions data available. These data have yielded modest prediction results on a consistent basis.

Due to these past findings, many scholars have called for more focus on nontraditional predictors of college performance. While high school grade point average and standardized test scores have been shown to be the best predictors of college success, recent research demonstrates that high school grade point average and ACT scores are unrelated to prediction of college graduation (Schuh, 1999). Success in college, as defined by student retention and academic performance, may be related to other variables or combinations of variables. This researcher explored potential effects of emotional intelligence on a student's ability to persist and graduate in a 4-year period. Other variables or combinations of variables may relate to college persistence and graduation.

Emotional Intelligence

When psychological researchers began studying intelligence in the early 1900s, cognitive aspects of intelligence were almost solely focused on by their studies, but a few researchers acknowledged that other noncognitive aspects help define intelligence. In fact, intelligence was defined by Wechsler (1958) as "the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment" (p. 7). Wechsler was not alone in his research and recognition of noncognitive contributors to intelligence. The work of these researchers was passed over

until 1983 when Gardner wrote on "multiple intelligence" (Cherniss, 2000; Gardner, 1983b).

Emotional intelligence indicators have been used expansively since the term was first coined by Salovey and Mayer in 1990 who defined emotional intelligence as "the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional meanings, and to reflectively regulate emotions in ways that promote emotional and intellectual growth" (Stein & Book, 2000, p. 14). Emotional Intelligence is the set of skills that a person needs to function effectively in the world and what might be referred to as "common sense." This makes EI (Emotional Intelligence) distinctly different from IQ, which is a measure of cognitive abilities relating to such mental capacities as learning and recall.

IQ alone has not been a strong predictor of performance at work nor in life. In fact, longitudinal studies found that IQ had little relation to life-related success, while the largest contributors to success were abilities "such as being able to handle frustration, control emotions, and get along with other people" (Cherniss, 2000, p. 5). Life success factors seem to be more influenced by emotional intelligence than cognitive abilities.

While emotional intelligence has been used widely in the business world and at times heatedly debated, its use in the higher education arena is relatively new. Many recent studies have been conducted on student performance, which is usually measured by grade point average and/or retention, in relation to scores on emotional intelligence indicators. More study is needed to determine the effects of education on emotional intelligence and the use of emotional intelligence in the practices of higher education.

The Relationship Between EI and Retention of College Students

Higher education is currently being sought by more students than at any time in history. As a result, higher education faces the task of dealing with a more diverse pool of students than previously experienced. Students bring a vast array of talents and dysfunctions into their institutions. In fact, over the past 10 years, mental health issues of college students have raised great concerns among health practitioners. Mental health issues among college students tend to be growing steadily (Kadison, 2004). As a result, higher education must find ways to deal with the mental health issues and the development of their students.

Statement of the Problem

To date, there is a dearth of research on the relationship between college student retention, academic performance, and degree attainment and emotional intelligence. While there are several studies that examine short-term (1-4 semesters) relationships of academic success and emotional intelligence, very little has been studied about long-term academic performance and retention.

This study investigated potential relationships between college student retention/performance and emotional intelligence. The major variables were identified as student enrollment graduation 5 years after initial enrollment, cumulative grade point average, composite ACT scores, high school grade point average, and emotional intelligence scores as defined by 15 components that include self-regard, emotional self-awareness, assertiveness, independence, self-actualization, empathy, social responsibility, interpersonal relationship, reality testing, flexibility, problem solving, stress tolerance,

impulse control, optimism, and happiness. The subjects were first year freshmen students prior to initial fall enrollment in 2002 as a 4-year, public institution.

Research Question and Hypotheses

This study examined the following research question:

1.   What is the emotional intelligence at a particular university in comparison to national norms?

For purposes of this research, emotional intelligence is operationalized as 15 components: self-regard, emotional self-awareness, assertiveness, independence, self-actualization, empathy, social responsibility, interpersonal relationship, reality testing, flexibility, problem solving, stress tolerance, impulse control, optimism, and happiness.

Predications regarding these research questions are described in the following hypotheses:

H1:   There is a significant difference between students who have graduated, who are enrolled but have not graduated, and who are not enrolled 5 years after their initial enrollment at a particular university and emotional intelligence scores.

H2:   There is a significant relationship between the cumulative grade point average of students who have graduated or are enrolled 5 years after their initial enrollment at a particular university and emotional intelligence scores.

Definition of Terms

The following terms were instrumental in the development of this research and are defined as follows:

Academic achievement - term used to refer to a measure of student achievement by cumulative grade point average.

ACT - American College Test

Assertiveness - Emotional Intelligence subscale defined as "the ability to express feelings, beliefs, and thoughts and defend one's rights in a nondestructive manner" (Bar-On, 2004b, p. 15).

Attrition - term that "refers to students who fail to reenroll at an institution in consecutive semesters" (Seidman & Tinto, 2005, p. 7).

Emotional Intelligence (EI) - Bar-On defined EI as "a cross-section of interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others and relate to them, and cope with daily demands' (Bar-On, 2006, p. 3).

Emotional self-awareness - Emotional Intelligence subscale defined as "the ability to recognize one's feelings" (Bar-On, 2004b, p. 15).

Empathy - Emotional Intelligence subscale defined as "the ability to be aware of, to understand, and to appreciate the feelings of others" (Bar-On, 2004b, p. 16).

First generation student status - term used to refer to a college student where neither parent has a 4-year college degree.

Flexibility - Emotional Intelligence subscale defined as "the ability to adjust one's emotions, thoughts, and behavior to changing situations and conditions" (Barr-On, 2004b, p. 17).

Grade point average - the average of points assigned to grades. A 4.0 grade point scale was used for the purposes of this study.

Graduation - term used to refer to the completion of degree requirements for a bachelor's degree.

Graduation status - term used to refer to a student's enrollment or graduation status. If a student has remained enrolled for 5 years at a particular university, he or she was considered an enrolled student. If a student has completed all of his or her degree work prior to or within 5 years of their initial enrollment at a particular university, the student was considered graduated. A student who was not enrolled in a particular university 5 years after his or her initial enrollment and had not graduated was considered dropped out.

Happiness - Emotional Intelligence subscale defined as "the ability to feel satisfied with one's life, to enjoy oneself and others, and to have fun" (Bar-On, 2004b, p. 18).

Impulsive control - Emotional Intelligence subscale defined as "the ability to resist or delay an impulse, drive, or temptation to act" (Bar-On, 2004b, p. 18).

Independence - Emotional Intelligence subscale defined as "the ability to be self-directed and self-controlled in one's thinking and actions and to be free of emotional dependency" (Bar-On, 2004b, p. 16).

Interpersonal relationship - Emotional Intelligence subscale defined as "the ability to establish and maintain mutually satisfying relationships that are characterized by intimacy an by giving and receiving affection" (Bar-On, 2004b, p. 16).

Nontraditional college student - term used to refer to students who are more than 25 years of age and/or attend school part time.

Optimism - Emotional Intelligence subscale defined as "the ability to look at the brighter side of life and to maintain a positive attitude, even in the face of adversity" (Bar-On, 2004b, p. 18).

Persistence - term used to "refer to the desire and action of a student to stay within the system of higher education from the beginning year through degree completion" (Seidman & Tinto, 2005, p. 7).

Problem solving - Emotional Intelligence subscale defined as "the ability to identify and define problems as well as to generate and implement potentially effective solutions" (Bar-On, 2004b, p. 17).

Reality testing - Emotional Intelligence subscale defined as "the ability to assess the correspondence between what is experienced and what objectively exists" (Bar-On, 2004b, p. 17).

Retention - term used to "refer to the ability of an institution to retain a student from admission to the university through graduation" (Seidman & Tinto, 2005, p. 7). For the purposes of this study, retention was used to describe a student who initially enrolled fall semester 2002 and was enrolled or graduated by spring semester 2007.

Self-actualization - Emotional Intelligence subscale defined as "the ability to respect and accept oneself as basically good" (Bar-On, 2004b, p. 15).

Social responsibility - Emotional Intelligence subscale defined as "the ability to demonstrate oneself as a cooperative, contributing, and constructive member of one's social group" (Bar-On, 2004b, p. 16).

Stress tolerance - Emotional Intelligence subscale defined as "the ability to withstand adverse events and stressful situations without "falling apart" by actively and positively coping with stress" (Bar-On, 2004b, p. 17).

Traditional college student - term used to refer to college students who are under 25 years of age and attending school full time.

Delimitations

1.   All participants were incoming first time students who participated in welcome week orientation activities for new freshmen students at a southeastern institution of higher learning in the United States in fall 2002.

2.   All participants were surveyed in a small group orientation meeting during welcome week activities for first time students.

3.   The survey was administered by upperclassman students who were not certified by Multi Health Systems for the Bar-On EQ-i.

Limitations

1.   The Bar-On EQ-i:125 was not administered by persons certified by Multi Health Systems.

2.   The Bar-On EQ-i:125 is a self-report measure of emotional intelligence.

3.   First time students attending welcome week activities are largely traditional college students and homogeneous in nature located at an institution of higher learning in the southeastern United States.

4.   Students who do not remain enrolled in or graduated from a particular university may be enrolled in or graduated from another university.

Assumptions

The researcher assumed that participants were given appropriate instructions and materials to take the test during the orientation welcome week by upperclassman students. The researcher also assumed that students actively participated in the testing and filled out the survey honestly.

Justification

It was the intention of this researcher to assure that the results of this research can be used to examine issues related to student retention and graduation in the higher education arena. It was also the intention of this researcher to assure that the results of this research will help institutions better understand the relationship between emotional intelligence and academic achievement and retention among college students. It was the intention of this researcher that the results of this study will be used to encourage and facilitate student graduation from college and into all of the benefits that have been shown to come from college degree attainment (Rowley & Hurtado, 2003; Day & Newburger, 2002; Cohn & Geske, 1992).

Summary

College student success is a concern for students, universities, and communities. College graduates have a positive effect on communities, families, and the economy. Emotional intelligence may be related to academic performance in college and graduation but little empirical research has been conducted on the long-term relationship of emotional intelligence and college success. Practices to encourage student success must be carefully crafted on scientific data collection. Solutions can then be sought in the student departure scenarios. This study sought to answer the research question whether emotional intelligence is related to student graduation and academic performance over a 5-year interval. Delimitations included a sample of students participating in a pre-semester orientation welcome week program. Limitations include a sample of largely traditional freshmen at a public university. Assumptions include honest survey responses from participants. Definitions are listed. Following this section, a theoretical foundation

is explained along with a review of literature and research on emotional intelligence, student persistence and retention, and emotional intelligence research within the higher education arena.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Chapter II provides a theoretical framework upon which to base the research and purpose of this study. Institutional initiatives designed to affect student retention are explored. Traditional pre-entry predictors of college student success are reviewed along with other factors that research has shown to be related to retention. A brief historical review of emotional intelligence is offered along with prominent emotional intelligence models. Relationships between emotional intelligence and retention are presented along with research on emotional intelligence and academic performance.

Theoretical Framework

Early theories on Emotional Intelligence can be traced to Darwin's theories showing the relevance of emotional expression in the work of adaptation and surviving. Darwin's theories are evident in the development of the Bar-On model that stresses the importance of expression and other emotional outcomes as "intelligent behavior in Darwinian terms of effective adaptation" (Bar-On, 2000, p. 3). This realm of thinking began to be developed in the early to mid-1900s. Wechsler suggested that non-IQ related abilities are more important than IQ in predicting a person's success in life.

The main question is whether nonintellective, that is affective and cognitive abilities, are admissible as factors of general intelligence. [My contention] has been that such factors are not only admissible but necessary. I have tried to show that in addition to intellective there are also definite nonintellective factors that determine intelligent behavior. If the foregoing observations are correct, it follows

that we cannot expect to measure total intelligence until our tests also include some measures of the nonintellective factors. (Wechsler, 1958, p. 103)

Other researchers who saw noncognitive components of intelligence as important include Robert Thorndike who wrote about "social intelligence" in the 1930s and Howard Gardner in the 1980s when he began to write about "multiple intelligence," proposing that intrapersonal and interpersonal abilities are as significant as IQ (Cherniss, 2000).

In the mid-1990s, emotional intelligence emerged as a popular business buzzword when Goleman published a work entitled "Emotional Intelligence." Interest in this new concept led to the idea that Emotional Intelligence affects academic success (Elias & Bruene-Butler, 1997; Pasi, 1997). Recently, research on emotional intelligence turned to examining effects on student success in college. For students to be successful in college, they must first be able to navigate the transition from high school, a controlled and limited environment, to college, which offers more options and decisions to be made by the student. Several studies indicate that multiple variables appear to influence students to drop out of college including making new relationships, adjusting existing relationships, learning to study, and dealing with independence (Parker, Summerfeldt, Hogan, & Majeski, 2004). Evidence indicating that a student may effectively deal with these adjustments appears to be connected to emotional and social Intelligences (Parker, Summerfeldt et al., 2004).

Students who make a successful transition from high school to college are more likely to be involved in campus activities and have contact with professors and other campus professionals (Berger & Milem, 1999). Both Astin (1984) and Tinto (1993) supported the suggestion that student involvement encourages positive educational

outcomes. "Quite simply, student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience" (Astin, 1984, p. 297).

Currently, very limited literature exists which studies the long-term effects of emotional intelligence on academic achievement. Emotional intelligence is known to increase with age (over time) and is possibly improved through intentional training programs (Mayer, 2002). These findings suggest that higher education can help promote student academic and life success through effective training which may increase emotional intelligence.

Higher education institutions have traditionally sought to develop in students a large scope of interpersonal and intrapersonal abilities (Tinto, 1993). With this in mind, while universities foster development of interpersonal and intrapersonal skills in students, emotional intelligence scores should improve as students progress through their degrees. Within the institution, students who are highly involved and specifically trained to develop these skills should have higher emotional intelligence scores than students who are only minimally involved during their college careers.

Institutions of higher learning consider retention and persistence important to their educational missions and funding structures. Students seeking undergraduate degrees enroll in colleges and universities with the hopes of graduating, yet only approximately 58% will graduate within 6 years of study (Astin, 1985; Beck & Davidson, 2001; Bettencourt, Charlton, Eubanks, Kernahan, & Fuller, 1999; "The Chronicle Almanac," 2005; Cyr, 2006; DeBerard, Spielmans, & Julka, 2004; Feldman, 2003; La Civita, 2003; Parker & Duffy, 2005). Data have shown that 25% of all first year students do not return

to the same institution a second year, and half of all students do not graduate in 6 years (Lotkowski, Robbins, & Noeth, 2004; Consortium for Student Retention Data Exchange [CSRDE], 2002). According to the Consortium for Student Retention Data Exchange, of the total number of student who leave college, more than half depart before the second year of enrollment (Levitz, Noel, & Richter, 1999). "Forty-one of every one hundred entrants will depart the higher educational system without earning a college degree. Most (three-quarters) of them will leave in the first two years of college, the greatest proportion occurring in the first year of college" (Tinto, 1987, p. 21). According to Adelman (2006), more than a quarter of students who enter 4-year colleges and universities do not return to the same school for their second year.

In round numbers, of the high school graduates in this cohort, 83% engaged in some form of postsecondary education by age 26 and 68% attended a 4-year college at some time. Of the group who attended 4-year colleges at some time (which includes a substantial proportion of students who began postsecondary study in community colleges), 66% earned a bachelor's degree (Adelman, 2006, p. 3).

A topic of significant interest among many administrators in higher education is the retention of college students (McGrath & Braumstein, 1997). As universities and colleges look for means of creating better financial situations, retention immediately becomes an area of interest (Seidman & Tinto, 2005). Retaining students who pay tuition dollars is a great way to help increase enrollment. Increasing retention also means that the school is fulfilling its mission of educating students who come there to pursue an education (Seidman & Tinto, 2005).

As institutions face the pressure of more restrictions on state funding and increased scrutiny of accountability and performance, institutions have to make tough choices on how to allocate resources to areas that will help in retaining students and fulfilling the institution's mission (Donald, 1997; Guskin, 1994a, 1994b). Simple math shows that the most cost effective means of increasing tuition dollars is to retain the students who have already been admitted and enrolled. This principle is good for the students, good for the institution, and good for the future.

> Dropouts cannot only hurt an institution's reputation, they can hurt finances. As budgets tighten, competition for students increases, resources shrink and regents, legislatures, taxpayers, and prospective students and their families take up the cry for institutional accountability, institutions that put students first will succeed, even excel, just as their students will. (Levitz et al., 1999, p. 31)

Some private schools and universities with small endowments depend almost solely on tuition revenue to drive their budgets. Without students paying tuition in the current financing paradigm, the institution would be forced to close its doors.

Retention has become not only an issue of finances for institutions but has also become an area of public relations. The *U.S. News & World Report* ranks universities and colleges annually on multiple factors, which include retention and graduation rates. The area of retention and graduation rates is important enough to the ranking committee that it accounts for 20% of an institution's overall score in the ranking system. These types of publications are bestsellers every year, and their rankings, however questionable they may be, certainly affect the perceived prestige of an institution by readers.

In most cases, retention is measured mainly from the first year of enrollment to the second year (Seidman & Tinto, 2005). The measurement happens at this juncture because students are most likely to drop out or "stop-out" between the first and second year than in any other time frame within the college career (Barefoot, 2004). As a result, retention from first to second year of college enrollment is on the forefront of almost every college administrator's mind. Many schools now have administrators whose titles are vice president of enrollment management or dean of enrollment management. These positions work with admissions, recruitment, and retention to make the transition into the institution as seamless as possible for incoming students so that fewer of the incoming students are "lost" in the transition into the institution (Barefoot, 2004).

With retention being such a pertinent issue for both students and the institution, reasons for attrition must be carefully evaluated. Student makes a decision at some point in their transition into the institution whether they will persist or not. According to Pascarella and Chapman (1983) and Thomas (2000), this decision is based upon characteristics that existed before the students enrolled, the ability to make commitments and commitment level to the institution, select background variables, and also the students' integration into both the social and academic cultures of the institution. As a result, students who are able to integrate into these cultures of the university are less likely to drop out.

In fact, Tinto (1975, 1993) believed that the level of integration is inversely related to the potential that a student will drop out. The more a student integrates, the less likely the student is to drop out of the institution. Tinto's model originally noted that integration of a student both academically and socially were indicators of his or her

ability to persist in college. To be successful in the pursuit of a degree, students need to achieve a level of commitment to their career, academic goals, and the institution, as well (Tinto, 1975). Tinto eventually expanded his model of integration to include stages such as separation, transition, adjustment, difficulty, incongruence, isolation, incorporation, finances, learning, and external obligations for commitments (Tinto, 1987).

Tinto's interactionist theory of student departure postulated that a student's characteristics upon entry to the institution and his or her level of commitment to graduate and to the institution are the contributing items of a student's decision about departure (Tinto, 1975, 1993). In later studies of Tinto's model, Braxton (2000) suggested that Tinto's idea on social integration was supported, but evidence of the importance of academic integration was not supported when seeking to understand student departure.

Thomas (2002) expanded on Tinto's theory with a definition of "social capital" (p. 5). Over about the last 15 years the concept of social capital has been closely linked to the promotion of learning. Social capital is perceived as the "glue," which helps to move individuals and communities from exclusion to participation. Social capital is therefore an unusual form of capital, as it accumulates with use, rather than diminishing (Thomas, 2002, p. 5). Thomas (2002) listed the benefits of social capital as follows, "shared understanding of norms and expectations, trust and self-confidence, information and guidance, resources and opportunities, and friendship and support" (p. 5).

In 1980, Bean developed the Model of Student Departure. Based on organizational theory about attrition of employees, Bean stated that students possess certain characteristics that impact their perceptions and interactions with the educational institution. The student interacts with the institution, perceiving objective measures, such

as grade point average or belonging to campus organizations, as well as subjective measures, such as the practical value of the education and the quality of the institution. These variables are, in turn, expected to influence the degree to which the student is satisfied with the institution. The level of satisfaction is expected to increase the level of institutional commitment. The lack of institutional commitment is seen as the leading indicator that a student will drop out of school (Bean, 1980, p. 160). Bean (1985) later revised his model, finding that a student's socialization is largely dependent upon the student, while interactions with other students are more important than informal contact with faculty. Bean and Eaton (2000) theorized that there is psychological process that prompts a decision in student departure.

Student entry characteristics, such as past behavior, beliefs, and normative beliefs, shape how students perceive the college or university environment. Interactions with the institutional environment then result in psychological processes that affect a student's motivation. The psychological processes include positive self-efficacy, declining stress, increasing efficacy, and internal locus of control. These psychological processes lead to academic and social integration, institutional fit and loyalty, intent to persist, and persistence (Seidman & Tinto, 2005, p. 64).

Astin (1984, 1985, 1990) introduced the developmental theory of student involvement, which looked to clearly designate issues that affect student retention in the college environment. In Astin's (1993) revisiting of the theory, he found that students were most impacted by three types of differing aspects of involvement: with faculty, with academics, and with peer groups which, according to his observations, is the most influential of the involvement areas. According to Astin (1977, 1985), the amount of

effort that a student exerts and invests both socially and academically in his or her university experience has a direct relationship with retention.

Bean (2001) has directed attention to the elaborate set of structures and practices that institutions are notorious for, often called "the bureaucracy," and their effect on first year retention and learning. Research has been minimal in this area, but future studies could focus on attendance policies, academic advising, first year seminars, effective teaching practices, and grading methods. Strong independent studies have been difficult to find that affect the local institution and its "practice" of education. Most institutions conduct their own research, which has lacked the national power to be published, whereas national data are often difficult to relate to each individual campus and its unique needs (Barefoot, 2004).

The bureaucracy of the college can affect a student's experience and their commitment to an institution. In fact, most students drop out or "stop out," not because of poor academic performance but for other places of study (Seidman & Tinto, 2005). Other factors that could affect students' retention are their sex, family educational history, socioeconomic status, and academic preparation from the high school level. The factors that impact a student's ability to persist are numerous (Barefoot, 2004). As discussed earlier, students enter the institution with pre-existing conditions and characteristics that affect retention. One of the important characteristics that lead to a student's retention or departure is commitment (Tinto, 1975, 1987).

Institutional Initiatives Designed to Affect Retention

Institutions have developed a vast array of initiatives designed to help stem the flow of dropouts from their ranks (Barefoot, 2000, 2002, 2004; Seidman & Tinto, 2005).

Most of these campus specific initiatives seek to integrate students academically and socially in accordance with Tinto's model of student retention (Seidman & Tinto, 2005). Each institution has a specific approach and population on which they choose to focus, whether this happens intentionally or by happenstance.

Popular positions in many student services areas are directors of retention. They may be named numerous different titles, such as Director of Freshman Year Experience, Dean of Enrollment Management, Director of Retention Programs, Director of New Student Programming, etc. These positions oversee the specific programs and issues that affect student retention, in particular, from the first year of enrollment to the second year. These professionals must learn to collaborate across the campus to bring together all of the resources of the institution and the various components of the student experience to provide effective means of building strong practices in promoting student retention (Barefoot, 2004).

Often these retention directors are housed in a department named the First Year Experience or First Year College. Most often these offices provide a semester-long orientation course entitled University 101 or First Year Seminar, which orients students to the resources of the institution while providing opportunities for students to meet with other, faculty, and staff. These courses have become quite popular with approximately 90% of all universities offering some form of first year seminar (Barefoot, 2002). These courses focus on student interaction with the intention of helping students feel like they matter in accordance with Schlossberg's Theory of Marginality vs. Mattering. This theory hypothesizes that students who feel like they matter are more likely to persist than

students who become frustrated and unconnected, which leads to a feeling of marginalization and then a decision to drop out (Schlossberg, 1989).

The most common of the retention programs would be "Welcome Week" activities that include programming for incoming first year students consisting of spirit building, community service programs, residential programming, and campus orientation (Barefoot, 2004). This programming is built off of Astin's theory that student retention is positively influenced by the forming of relationships and group affiliations (Astin, 1993). While these programs work for the traditionally aged on campus students in helping them connect and transition into the university setting, this programming has no measurable effect for nontraditional, working, commuting, or alternative delivery method students (Barefoot, 2004). Nontraditional students are a heterogeneous group with differing stresses and issues than traditional students which makes traditional methods of promoting student retention ineffective due to the limited social integration of nontraditional students (Bean & Metzner, 1985).

Another form of retention strategy used by many institutions are first year initiatives that are aimed at early intervention strategies and discovering early indicators of "at-risk" student characteristics. Students are often given a battery of tests and assessments as they enter the university that are designed to help administrators identify students who will have some form of transition issues, such as time management, interpersonal skill development, financial aid neds, or some specific struggle in a designated subject area. When these issues are identified, services are designed to help the student address the issue and hopefully have a more successful transition into the

college environment, which should lead to a higher retention rate for the institution (Barefoot, 2002).

Counseling Centers have begun to promote themselves as retention builders. Counseling is a broad topic that affects many parts of a student's experience. Past studies have shown that students involved in counseling have a higher rate of retention than those who are not involved (Bishop, 1990). The only problem with these studies is that they have not separated out academic counseling from psychological counseling so it is difficult to know if psychological counseling has as strong of an effect on student retention as academic counseling (Wilson, Mason, & Ewing, 1997). More recent research has suggested that students who receive psychological counseling have shown a significantly greater retention rate than the general student population (Turner & Berry, 2000). Counseling is obviously valuable on multiple levels and is a pertinent resource for students and institutions alike.

An area of more recent focus has been the old practice of academic advising, which is a potentially valuable resource in helping students persist in their educational endeavors. Academic advising has become one of the most negatively rated experiences by first year students. If academic advising were done with purpose and with the student's interest in mind, it could be one of the most significant morale boosters of a student's experience, which should lead to a greater commitment from the student and, therefore, a greater level of retention in his or her education (Adelman, 1999; Astin, 2005; Metzner, 1989; Wilder, 1981). Academic advisement should be central to a student's experience. There is no function of the institution that is more directly related to addressing the

student's goal of pursuing his or her career goals (Astin, 1996; Barefoot, 2004; Levitz & Noel, 1989; Seidman & Tinto, 2005).

Multiple reasons exist that demonstrate graduation from college is important both to the individual and society. According to Day and Newburger (2002), a person's financial earning potential directly relates to the amount of education that he or she obtains. College graduates earn twice as much as persons with high school diplomas only and one third more than persons with some college but no degree (Day & Newburger, 2002). Students who graduate college also report gains in multiple areas such as factual knowledge, intellectual skills, and "a broad array of value, attitudinal, psychosocial, and moral dimensions" (Pascarella & Terenzini, 1991, p. 557).

Pre-entry Predictors of Retention

Pre-entry predictors of college retention and academic success traditionally center on the student's high school grade point average and standardized test scores. To better ensure academic readiness for college level study, the educational community readily embraced standardized tests such as the American College Testing Program (ACT) as appropriate means for establishing admissions eligibility ("Guidelines on the Uses of College Board Test Scores and Related Data," 1988). The traditional predictors of student success in college, ACT/SAT and high school grade point average, have been shown to account for only a modest amount of variance (25%) of students' academic performance in college as reflected by their grade point average (Pascarella & Chapman, 1983; Tinto, 1975).

According to Astin (1993), a student's high school grade point average and standardized test score were the two strongest predictors of his or her college grade point

average out of the current admissions data available. These data have yielded modest

prediction results on a consistent basis. "Even among the students most likely to

succeed—those who begin their college careers as full-time freshmen in four-year

colleges and universities—only six out of ten of them on average get a B.A. within six

years" (Carey, 2004, p. 1). According to Tinto (1987),

> high school grades (and other areas of related measures of ability) account for but
>
> 12 percent of the variance in staying or leaving behaviors. Approximately 88% of
>
> the variance is left unaccounted for when only high school grades are employed to
>
> predict persistence. (Tinto, 1987, p. 51)

Other studies have shown the high school grade point average to be the strongest single

predictor of success, and when coupled with a standardized test score, it can account for

27% of variance in the fourth year of enrollment, which still leaves 73% of a student's

cumulative grade point average in college as unexplained (Geiser & Santelices, 2007).

As a result of these findings, scholars have called for more focus on nontraditional

predictors of college performance and retention (Beck & Davidson, 2001; Bettencourt

et al., 1999; Cyr, 2006; DeBerard et al., 2004; Feldman, 2003; La Civita, 2003; Parker &

Duffy, 2005; Parker, Duffy, Wood, Bond, & Hogan, 2005; Parker, Hogan, Eastabrook,

Oke, & Wood, 2006). While high school grade point average and standardized test scores

have been shown to be the best predictors of college success, recent research

demonstrates that high school grade point average and ACT scores are unrelated to

prediction of college graduation (Schuh, 1999).

According to Astin (2005), degree completion rates (over 6 years of enrollment) are not directly contributable to the superiority of the institution, but are, first and foremost, a reflection of the entering students and their pre-existing characteristics. The differences among institutions in the degree completion rates are primarily attributable to differences among their student bodies at the time of entry . . . more than two-thirds of the variation among institutions in their degree completion rates is attributable to differences in their entering student bodies. (Astin, 2005, p. 7)

With this noted, pre-existing enrollment data can give institutions possibilities of determining what their completion rates should be in light of the characteristics of their student body at the time of enrollment. Institutions with low retention rates in light of their entering student characteristics should examine students' "involvement, engagement, commitment, and integration" (Astin, 2005, p. 12).

Other Factors Affecting Retention

When psychological researchers began studying intelligence in the early 1900s, cognitive aspects of intelligence were almost solely focused on, but a few researchers acknowledged that other non-cognitive aspects help define intelligence (Thorndike & Stein, 1937; Wechsler, 1943). In fact, intelligence was defined by Wechsler as "the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment" (Wechsler, 1958, p. 7). Wechsler was not alone in his research and recognition of non-cognitive contributors to intelligence. The work of these researchers was passed over until 1983 when Gardner wrote on "multiple intelligence" (Cherniss, 2000; Gardner, 1983b). EI is a part of Gardner's approach to

what he called "personal intelligences," which were divided into interpersonal and intrapersonal intelligence (Salovey & Mayer, 1990).

The core capacity at work here is access to one's own feeling life—one's range of affects or emotions: the capacity instantly to effect discriminations among these 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. In its most primitive form, the intrapersonal intelligence amounts to little more than the capacity to distinguish a feeling of pleasure from one of pain and, on the basis of such discrimination, to become more involved in or to withdraw from a situation. At its most advanced level, intrapersonal knowledge allows one to detect and to symbolize complex and highly differentiated sets of feelings. One finds this form of intelligence developed in the novelist (like Proust) who can write introspectively about feelings, in the patient (or the therapist) who comes to attain a deep knowledge of his or her own feelings, in the wise elder who draws upon his or her own wealth of inner experiences in order to advise members of his or her community. (Gardner, 1983a, p. 239)

Emotional intelligence indicators have been used expansively since the term was first coined by Salovey and Mayer in 1990, who defined it as "the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional meanings, and to reflectively regulate emotions in ways that promote emotional and intellectual growth" (Stein & Book, 2000, p. 14). Salovey and Mayer later revised their definition of EI to be more thorough and more inclusive of feelings.

Emotional intelligence involves the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (Salovey, Brackett, & Mayer, 2004, p. 35).

Emotional Intelligence is the set of skills that a person needs to function effectively in the world and what might be referred to as "common sense" (Bar-On, 1997a, p. 1). This makes EI (Emotional Intelligence) distinctly different from IQ, which is a measure of cognitive abilities relating to such mental capacities as learning and recall (Goleman, 1995).

IQ alone has not been a strong predictor of performance at work nor in life (Goleman, 1995). In fact, longitudinal studies found that IQ had little relation to life-related success, while the largest contributors to success were abilities "such as being able to handle frustration, control emotions, and get along with other people" (Cherniss, 2000, p. 5; Cherniss & Goleman, 2001; Goleman, 1995, 1998; Stein & Book, 2000). Life success factors seem to be more influenced by emotional intelligence than cognitive abilities (Goleman, 1995, 1998; Liptak, 2005; Mayer & Salovey, 1997; Parker, Creque et al., 2004; Parker et al., 2006).

While emotional intelligence has been used widely in the business world and at times debated heatedly, the use of emotional intelligence in the higher education arena is relatively new (Salovey et al., 2004). Many recent studies have been conducted on student performance, which is usually measured by grade point average and/or retention, in relation to scores on emotional intelligence indicators (Bauer & Liang, 2003; DeBerard et

al., 2004; Furnham, Chamorro-Premuzic, & McDougall, 2002; Parker & Duffy, 2005; Parker et al., 2006; Parker, Summerfeldt et al., 2004; Petrides, Frederickson, & Furnham, 2004). More study is needed to determine the effects of education on emotional intelligence and the use of emotional intelligence in the practices of higher education (Parker & Duffy, 2005; Parker, Duffy et al., 2005; Parker et al., 2006; Parker, Saklofske, Wood, Eastabrook, Taylor, 2005; Parker, Summerfeldt et al., 2004; Perry, Hladkyj, Pekrun, & Pelletier, 2001; Petrides et al., 2004; Vela, 2003).

History of Emotional Intelligence

Early theories on emotional intelligence can be traced to Darwin's theories showing the relevance of emotional expression in the work of adaptation and surviving (Darwin, 1965). Darwin's theories are evident in the development of the Bar-On model that stresses the importance of expression and other emotional outcomes as "intelligent behavior in Darwinian terms of effective adaptation" (Bar-On, 2000, p. 3). This realm of thinking began to be developed in the early to mid-1900s. Wechsler suggested that non-IQ related abilities are more important than IQ in predicting a person's success in life.

The main question is whether non-intellective, that is affective and cognitive abilities, are admissible as factors of general intelligence. [My contention] has been that such factors are not only admissible but necessary. I have tried to show that in addition to intellective there are also definite non-intellective factors that determine intelligent behavior. If the foregoing observations are correct, it follows that we cannot expect to measure total intelligence until our tests also include some measures of the non-intellective factors. (Wechsler, 1943, p. 103)

Other researchers who saw non-cognitive components of intelligence as important include Robert Thorndike, who wrote about "social intelligence" in the 1930s, and Howard Gardner in the 1980s when he began to write about "multiple intelligences," proposing that intrapersonal and interpersonal abilities are as significant as IQ (Cherniss, 2000; Gardner, 1983b). Gardner's theory states that persons have capabilities in many areas including music, math, linguistics, and both interpersonal intelligence, focused on the understanding of others, and intrapersonal intelligence, concerned with the understanding of oneself and its use to interact with life's situations among several other areas of newly-defined intelligences. Through this theory Gardner was encouraging educators to find ways to work with students through multiple learning dimensions (Gardner, 1983a).

Salovey and Mayer (1990) actually coined the term "Emotional Intelligence" in an article that set forth their initial theory on the construct. This theory defined emotions as responses from a wide range of systems (i.e., psychological, physiological) that present themselves as a response to some event "that has a positively or negatively balanced meaning for the individual" (Salovey & Mayer, 1990, p. 186). Emotional Intelligence was defined as "the ability to monitor one's own and other's feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (Salovey & Mayer, 1990, p. 189). In a study by Mayer, DiPaolo, and Salovey (1990), findings suggested that emotional intelligence appears to be an ability that can be measured by conducting tasks. "Empathy involves well-defined skills rather than only attitudes and sentiments, suggests that individuals with interpersonal difficulties might suffer, not from attitude problems, but from skill deficits that can be assessed and

ameliorated" (Mayer et al., 1990, p. 779). These findings suggest that both emotion and cognition can be used to process information.

In the mid-1990s, emotional intelligence emerged as a popular business buzzword when Goleman published a work that became a bestseller named "Emotional Intelligence" (Goleman, 1995). Interest in this new concept led to the idea that emotional intelligence affects academic success (Elias & Bruene-Butler, 1997; Pasi, 1997). Recently, research on emotional intelligence turned to examining effects on student success in college. For students to be successful in college, they must first be able to navigate the transition from high school, a controlled and limited environment, to college, which offers more options and decisions to be made by the student (Astin, 1993; Barefoot, 2004; Tinto, 1993). Several studies indicated that multiple variables appear to influence students to drop out of college including making new relationships, adjusting existing relationships, learning to study, and dealing with independence (Parker, Summerfeldt et al., 2004). Evidence indicates that a student who may effectively deal with these transition adjustments has appropriate and effective emotional and social intelligences (Parker, Summerfeldt et al., 2004).

Students who make a successful transition from high school to college are more likely to be involved in campus activities and have contact with professors and other campus professionals (Berger & Milem, 1999). Boh Astin (1984) and Tinto (1993) supported the suggestion that student involvement encourages positive educational outcomes. "Quite simply, student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience" (Astin, 1984, p. 297).

Currently, very limited literature exists which studies the long-term effects of emotional intelligence on academic achievement. Emotional intelligence is known to increase with age (over time) and is possibly improved through intentional training programs (Mayer, 2002). These findings suggest that higher education can help promote student academic and life success through effective training which may increase emotional intelligence. Higher education institutions have traditionally sought to develop in students a large scope of interpersonal and intrapersonal abilities (Tinto, 1993).

Emotional Intelligence Models

Emotional intelligence has several models that attempt to explain the make-up of the construct with each theory defining the core traits of emotional intelligence (Bar-On, 2000; Emmerling & Goleman, 2003; Goleman, 1995; Mayer & Salovey, 1997). While many different definitions of EI have surfaced over recent years, Spielberger (2004) suggested that there are three major models of EI. First, the Bar-On model consists of emotional and social competencies and skills, which are measured by a self-report, which have an effect on behavior (Bar-On, 1996, 1997b, 2000). Secondly, the Goleman model of EI focuses on organizational leaders as his work largely is oriented to the business world (Goleman, 1995). This model is measured by multiple assessments from multiple persons regarding a wide range of competencies and skills (Boyatzis & Sala, 2004). Finally, the Salovey-Mayer model is rooted in the theories of intelligence and is an abilities-based, four branch model, which focuses on the "ability to perceive, understand, manage and use emotions to facilitate thinking" (Bar-On, 2006, p. 3).

Bar-On defined EI as "a cross-section of interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and

express ourselves, understand others and relate to them, and cope with daily demands"

(Bar-On, 2006, p. 3). The Bar-On model, also known as a mixed model of EI that focuses

on "well being," is made up of five components and 15 subscales of non-cognitive

intelligence that include: (a) intrapersonal components—self-regard, emotional self-

awareness, assertiveness, independence, and self-actualization; (b) interpersonal

components—including empathy, social responsibility, and interpersonal relationship

skills; (c) adaptability components—including reality testing, flexibility, and problem

solving; (d) stress management—including stress tolerance, and impulse control; and (e)

general mood components—including optimism and happiness (Bar-On, 1997b, 2000,

2006). Bar-On's model explores ability and non-ability traits to find relationships

between those traits and success in life (Bar-On, 1997b).

Goleman's model, referred to as a competency based or "mixed model" of EI

(Bar-On, 1996; Goleman, 1995; Schutte et al., 1998), joins emotions, skills, and abilities

as a larger competency which is considered part of the construct developed from the work

of Salovey and Mayer's (1990) original work with EI. Goleman defined EI as follows:

> What can we change that will help our children fare better in life? What
>
> factors are at play, for example, when people of high IQ flounder and those of
>
> modest IQ do surprisingly well? I would argue that the difference quite often lies
>
> in the abilities called here *emotional intelligence*, which include self-control, zeal
>
> and persistence, and the ability to motivate oneself. (Goleman, 1995, p. xii)

Goleman's model of EI (1995) embraces five domains: (a) knowing one's

emotions (recognizing and monitoring feelings) (b) managing emotions (dealing with

negative emotions with optimism and hope) (c) motivating oneself (includes impulse

control and persistence); (d) recognizing and understanding other's emotions (empathy and awareness); (e) managing relationships (managing reactions to the emotions of other persons). Goleman's model goes beyond the mental capacity for processing emotion to encapsulate motivation and other personality traits and abilities (Mayer, Caruso, & Salovey, 2000).

Salovey and Mayer (1990) developed an abilities based model of emotional intelligence made up of four branches of functioning which establishes an individual's ability to group and recognize emotions. According to Salovey and Mayer, intelligence involves the use of abstract reasoning in which the use of emotions serve as stimuli to augment cognitive performance. Salovey and Mayer (1990) stated that EI was "a form of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action" (p. 5).

The four branches of the Salovey and Mayer model are hierarchical in nature and achieving competency in a branch allows one more effective use of the following branches. The first branch is entitled the "perception of emotion," which consists of the ability to recognize one's own emotions and the emotions of others through voice inflection, facial expressions, art, etc. (Mayer, 2002, p. 19). The second branch is the "emotional facilitation of thought" (Mayer, 2002, p. 19). This branch takes both the emotional response and the cognitive response and seeks to unite them. The "emotional facilitation of thought" branch illustrates one's ability to use emotions to communicate and facilitate processes. The third branch is the understanding of emotion (Mayer, 2002). The understanding of emotion is "the ability to understand emotional information, how

emotions combine and progress through relationship transitions and to reason about such emotional meanings" (Mayer, 2002, p. 7). The fourth branch and highest level of emotional ability in this model is managing emotion, which is "the ability to be open to feelings, to modulate emotion in self and others in order to promote personal understanding and growth" (Mayer, 2002, p. 7).

> The latest definition of what Mayer and Salovey (1997) term "ability EI" is
>
> the ability to perceive accurately, appraise and express emotion, the ability to
>
> access and/or generate feelings when they facilitate thought; the ability to
>
> understand emotion and emotional knowledge; and the ability to regulate
>
> emotions to promote emotional and intellectual growth. (p. 10)

"Salovey and Mayer raised the possibility of individual differences in abilities to perceive and express emotion, an to understand and manage emotional related information, and that these can be learned" (Warwick & Nettelbeck, 2004, p. 1092).

The Relationship Between EI and Retention

According to *The Chronicle Almanac* (2006), higher education is currently being sought by more students than at any time in history. As a result, higher education faces the task of dealing with a more diverse pool of students than previously experienced (Kadison, 2004). Students bring a vast array of talents and dysfunctions into their institutions. In fact, over the past 10 years, mental health issues of college students have raised great concerns among health practitioners (Kadison, 2004). As a result, higher education must find ways to deal with the mental health issues and the development of their students.

Research has indicated that emotional intelligence may predict end-of-the-year grade point averages of first-year students (Schutte et al., 1998). Schutte et al. (1998) found that a mixed model of emotional intelligence self-report predicted year-end GPA, while the EI score was not related to SAT scores. These findings may support mixed models of EI in predicting academic success, as measured by end-of-the-year GPA, beyond that of traditional cognitive measures (Salovey et al., 2004). Encouraging emotional growth among college students is important, not only to their mental health, but to their success in life. By realizing both the value and necessity of providing students with opportunities for emotional development, institutions lighten the load of mental health services while producing graduates more prepared to function as professionals and contribute to society (Goleman, 1995; Skipper, 2005).

Examining the ability to teach emotional intelligence in the student development function of higher education is important to the success of students (Downing, 2005). Emotional intelligence has been shown to be connected to successful work relationships, positive life relationships, and performance in higher education as evidenced by grade point average (Goleman, 1995). If student development in higher education fosters growth in emotional intelligence, students are being prepared for a more successful life (Downing, 2005; Goleman, 1995).

Personal social adjustment into a university setting plays an important role in student retention (Bar-On & Parker, 2000; Gerdes & Mallinckrodt, 1994; Schutte & Malouff, 2002; Spady, 1970; Tinto, 1975). Gerdes and Mallinckrodt (1994) suggested that students who struggle academically would benefit from counseling, anxiety management, and building self-confidence. "Improving academic and social integration

may increase retention of students regardless of academic standing" (Gerdes &

Mallinckrodt, 1994, p. 287).

Due to popular interest in EI and current research, colleges have included

emotional intelligence training as part of first year seminars and learning strategies

courses in hopes that increase in EI will lead to better day-to-day functioning and student

retention (Downing, 2005; Upcraft & Gardner, 1989). "Freshmen express almost as much

anxiety about finding supportive friends as they do about flunking out" (Upcraft &

Gardner, 1989, p. 2). Freshmen must learn interpersonal relationship skills that will

facilitate their being involved and feeling accepted into the college social setting.

Students must deal with stress and become aware of their emotional and physical health

(Upcraft & Gardner, 1989).

Research on Emotional Intelligence and Academic Performance

Research in the emotional intelligence arena is less than 2 decades old and in its

beginning stages (Salovey et al., 2004). Goleman (1995) has claimed that EI predicts

success in life (school, work, family) just as well as IQ or even better. This claim has

neither been confirmed nor refuted. Research is beginning to explore this area and several

studies show that EI is related to student academic achievement, while others show no

relationship (Barchard, 2003). While the literature has had mixed results on EI and

student achievement, the construct is relatively new and in need of more study.

Schutte and Malouff (2002) studied the impact of teaching EI skills in a freshman

orientation class. Students in the experimental group were given a specially designed

class for EI training. Control group students were placed into classes that taught the

standard freshman orientation material. The study found that students enrolled in the EI

intensive seminar were retained for the academic year at a significantly higher rate, z-1.93, $p < .026$, and more able to comprehend emotions and control their emotions than that of the non-EI intensive course counterparts (Schutte & Malouff, 2002).

In a study conducted by Parker, Duffy, Wood, Bond, and Hogan (2005), findings from a survey involving 1,426 entering freshmen at four different universities suggested that EI was an important factor in predicting the academic success of students. Students with GPAs of 3.0 or better had significantly higher scores on the Emotional Quotient Inventory (EQ-i) than students who finished the year with a GPA of less than 2.0. Students took the Emotional Quotient Inventory (EQ-i) either immediately prior to the beginning of classes or within the first week of classes (Parker, Duffy et al., 2005). When first-year grade point average was treated as a continuous variable, the relationships were not significant (Parker, Duffy et al., 2005). According to Parker et al. (2005), these findings are consistent with a similar study conducted by Newsome, Day, and Cantano (2000) where both cognitive and personality factors were found to be significant predictors of student performance but none of the Emotional Quotient Inventory items were found to have a significant relationship when grade point average was treated as a continuous variable.

In a later study, student retention from the first year of enrollment to the second year of enrollment was studied using the Bar-On EQ-i as the survey. Students who returned for a second year of enrollment were found to have higher EI scores on more dimensions than students who did not return for the second year of enrollment (Parker & Duffy, 2005).

Similarly, high school grade point average has been found to be significantly related to scores on the Bar-On EQ-i. In a study examining 667 high school students in Huntsville, Alabama, students in the top 20% of their class, as measured by grade point average, were found to have higher emotional intelligence scores in interpersonal skills, stress management, and adaptability (Parker, Creque et al., 2004).

In another study of EI and its relations to academic performance and deviant behavior, EI was found to moderate the relationship between cognitive ability and student academic performance (Petrides et al., 2004). Students with higher EI scores were also less likely to be absent or removed from school. EI scores were found to be connected to academic subjects better predicting performance in English than the sciences (Petrides et al., 2004).

A study conducted to explore transitions to young adulthood, namely, the transition that occurs upon graduation from high school into the university setting, found that EI scores remained stable over a 32-month period (Parker, Saklofske et al., 2005). By the second test, EI scores were significantly higher, which may be attributed to successfully completing a major life transition from high school to college and/or increases due to EI's tendency to increase with age (Bar-On, 2004b; Mayer, 1999; Mayer, 2002; Parker, Saklofske et al., 2005).

Summary

Chapter II provided a theoretical framework upon which to base the research and purpose of this study. Institutional initiatives designed to affect student retention were explored. Traditional pre-entry predictors of college student success were reviewed along with other facts that research has shown to be related to retention. A brief historical

review of emotional intelligence was offered along with prominent emotional intelligence

models. Relationships between emotional intelligence and retention were presented along

with research on emotional intelligence and academic performance.

CHAPTER III

METHODOLOGY

Introduction

Chapter II introduces this study's research question and hypotheses, information about the research design, and description of the participants; in addition, the variables are identified. Data collection processes and statistical evaluation methods for data analysis are described in this chapter.

Research Question and Hypotheses

This study examined the following research question:

1.   What is the emotional intelligence at a particular university in comparison to national norms?

For purposes of this research, emotional intelligence is operationalized as 15 components: self-regard, emotional self-awareness, assertiveness, independence, self-actualization, empathy, social responsibility, interpersonal relationship, reality testing, flexibility, problem solving, stress tolerance, impulse control, optimism, and happiness.

Predictions regarding this research question are described in the following hypotheses:

H1:   There is a significant difference between students who have graduated, who are enrolled but have not graduated, and who are not enrolled 5 years after their initial enrollment at a particular university and emotional intelligence scores.

H2:   There is a significant relationship between the cumulative grade point average of students who have graduated or are enrolled 5 years after their initial enrollment at a particular university and emotional intelligence scores.

Research Design

The design of this research was informed by recent research on emotional

intelligence and academic performance (Barchard, 2003; Bauer & Liang, 2003; Cyr,

2006; Lewis, 2004; Parker et al., 2004; Parker, Hogan, Eastabrook, Oke, & Wood, 2006;

Potter, 2005; Vela, 2003). To measure student retention and achievement (cumulative

grade point average), data from the completion of the fifth year of enrollment were

collected from a southeastern United States institution of higher education student

information database as of May 2007. Variables included were high school grade point

average, composite ACT score, current enrollment status, cumulative grade point average,

gender, ethnicity, first generation college student status, and emotional intelligence scores

as measured by the Bar-On EQ-i:125. These findings used a correlational methodology

that analyzed information gathered from a southeastern United States institution of higher

education student information database and the administration of the Bar-On EQ-i:125.

Participants

The participants for this study were students who initially enrolled at a

southeastern institution of higher learning as freshmen for the fall semester of 2002 and

attended freshman orientation the weekend prior to the beginning of classes. These

students were traditional students (i.e., they were aged 17-24, not married, and without

dependents).

Instrumentation

The instrument used for this survey was the 125-item EQ-i (Bar-On, 2004a) which

is a self-report of emotionally and socially intelligence behavior. This instrument is the

most widely used measure of emotional-social intelligence to date. The Bar-On EQ-i:125

has a 5-point response scale ranging from *very seldom or not true of me* (1) to *very often true of me or true of me* (5). The Bar-On EQ-i:125 takes approximately 40 minutes to complete. Scores are given on the following five composite scales that comprise 15 subscale scores: Intrapersonal (comprising Self-Regard, Emotional Self-Awareness, Assertiveness, Independence, and Self-Actualization); Interpersonal (comprising Empathy, Social Responsibility, and Interpersonal Relationship); Stress Management (comprising Stress Tolerance and Impulse Control); Adaptability (comprising Reality-Testing, Flexibility, and Problem-Solving); and General Mood (comprising Optimism and Happiness). The survey also generates a total EQ score. Scores are computer-generated with raw scores being converted into standard scores based on a mean of 100 and a standard deviation of 15. This instrument has been rigorously tested for validity and reliability and has been normed for age and gender (Bar-On, 2004b).

The EQ-i has been found to be internally consistent and to have retest reliability. Cronbach alpha coefficients are all moderate to high for all EQ-i subscales (Bar-On, 2004b). This test has been found to possess adequate validity using studies that have tested content and face validity, factorial validity, construct validity, convergent validity, divergent validity, criterion group validity, discriminate validity, and predictive validity (Bar-On, 2004b). The EQ-i uses validity indicators which include positive impression scales, negative impression scales, inconsistency index, and omission rate. The positive impression scale accounts for any tendencies by the subject to skew scores in a positive manner. Conversely, the negative impression scale measures any negative impression a subject is trying to project. The EQ-i has corrective measures that adjust the scores of the positively or negatively scored tests to minimize the effects of these biased scores. The

inconsistency index measures the scores of similar items to evaluate whether a respondent

answered questions in a consistent manner. The omission scale totals the omitted

responses and will invalidate a score that is missing too many responses (Bar-On, 2000).

Procedures

Study participants were given the EQ-i:125 (Appendix A) during an afternoon

session of their small group orientation during the freshman welcome weekend activities

of a southeastern United States institution of higher education immediately prior to the

beginning of the fall semester in 2002 through its Office of the First Year Experience.

Students were given the option of not taking the self-report void of penalty to them or

their involvement with the orientation session. Institutional Review Board permission

was obtained prior to this survey's being administered (Appendix B). Information from

the database of the southeastern United States institution of higher education and the EQ-

i:125 were linked through the student's six digit identification number issued by the

southeastern United States institution of higher learning and provided by the student in

his or her EQ-i instrument. Variables collected by the EQ-i included emotional

intelligence scores, gender, ethnicity, marital status, on- or off-campus housing, and first

generation student status. The student database of the southeastern United States

institution of higher learning provided high school grade point average, composite ACT

score, cumulative grade point average, degree completion status, and enrollment status.

Data Analysis

Multiple linear regressions were used to evaluate possible relationships between

cumulative grade point average and emotional intelligence scores of students 5 years after

their initial enrollment or degree completion. Discriminate function analysis was used to

determine the possibility of relationships between graduation status, enrollment, and student departure and emotional intelligence scores 5 years after the sample's initial enrollment or degree completion. The 0.05 level of significance was used.

Summary

Chapter III introduced and described the procedures and variables of this study. The research question and hypotheses were stated. The research design was presented and participants were described. A review of the instrumentation and the definition of emotional intelligence subscales were stated. Study procedures for collecting data and statistical methods to be used for data analysis were listed.

CHAPTER IV

RESULTS

Overview

Chapter IV presents the descriptive statistics and analysis of student graduation, performance, and enrollment in relationship to emotional intelligence. This section scientifically establishes possible significant relationships between student performance and enrollment data and emotional intelligence.

Descriptive Statistics

The Bar-On EQ-i:125 was given prior to the initial enrollment of the 784 freshman subjects for the fall semester of 2002. Variables included in the data analysis consisted of the following: student identification number, date of birth, marital status (defined by single, dating/engaged, married, common-law, divorced, or widow), gender, ethnicity, degree attainment by either parent (to determine first generation status) on- or off-campus living accommodations, high school grade point average, highest composite ACT score, cumulative grade point average at the conclusion of the spring semester 2007 (if not previously graduated or cumulative grade point average upon graduation if graduation occurred earlier than spring semester 2007), emotional intelligence subscales that include Self-Regard, Emotional Self-Awareness, Assertiveness, Independence, Self-Actualization, Empathy, Social responsibility, Interpersonal Relationship, Reality Testing, Flexibility, Problem Solving, Stress Tolerance, Impulse Control, Optimism, and Happiness.

Of the sample, 32% were male and 68% were female. The race designations as reported by the subjects were 44.7% Black, .8% Asian, 52.9% White, .9% Hispanic, .1%

Native, and .6% other. All subjects reported themselves to be between 17-24 years old with marital status of single or dating/engaged. Subjects indicating that they planned to live in on-campus housing comprised 89.3% while 10.7% indicated that they would live in off-campus housing.

Table 1 illustrates some descriptive information about selected groups of students who took part of this survey. Females graduated (72.0%) at a statistically significantly higher rate than males (28.0%). Of the students who participated in the survey, only single and dating/engaged were represented. Students who were single at the time of their initial enrollment to the university fall semester 2002 were more likely to be enrolled and/or graduated 5 years after their initial enrollment than students who were dating/engaged. Five years after their initial enrollment at the university, Black students are more likely than Whites to be enrolled but not graduated, while White students are more likely to be graduated than Black students. Students with parents who have a college degree are more likely to be enrolled and more likely to have graduated 5 years after their initial enrollment than students with neither parent having a 4-year degree. Of the participants in this study, students who chose to live their initial semester in on-campus housing graduated within 5 years at a higher rate than students who lived in off-campus housing their first semester.

<div align="center">Statistical Analysis</div>

Table 2 lists means and standard deviation for norms for the local sample and a North American normative sample for the Bar-On EQ-i:125. The two top scores for the local sample were Interpersonal Relationship ($M = 44.90$, $SD = 6.06$) and Social Responsibility ($M = 40.83$, $SD = 5.57$). The lowest scores for the local sample were

Table 1

Descriptive Statistics of the Sample

	Not Enrolled		Enrolled		Graduated	
Gender*						
Male	110	32.9%	46	46.1%	93	28.0%
Female	224	67.1%	66	58.9%	239	72.0%
Marital Status*						
Single	213	63.2%	84	75.0%	237	71.0%
Dating/Engaged	124	36.8%	28	25.0%	97	29.0%
Ethnicity*						
Black	161	47.8%	64	57.1%	124	37.3%
Asian	4	1.2%	0	.0%	2	.6%
White	166	49.3%	46	41.1%	201	60.5%
Hispanic	3	.9%	1	.9%	3	.9%
Native	1	.3%	0	.0%	0	.0%
Other	2	.6%	1	.9%	2	.6%
Parents' Educational Status (neither have 4-year degree or one or both have degree)*						
No Degree	169	50.8%	50	44.6%	135	40.8%
Degree	164	49.2%	62	55.4%	196	59.2%
Housing (lived in off-campus or on-campus housing during first semester)*						
Off-campus	44	13.1%	15	13.4%	25	7.5%
On-Campus	292	86.9%	97	86.6%	309	92.5%

*$p < .05$

Independence (M = 25.45, SD = 4.47), Assertiveness (M = 26.22, SD = 4.47), and Flexibility (M = 27.81, SD = 4.72). The local sample was statistically significantly lower than the North American normative sample in the emotional intelligence scores of Social Responsibility, Reality Testing, Impulse Control, Empathy, Stress Tolerance, Optimism, Problem Solving, Flexibility, and Independence. The local sample was higher than the North American national sample on Interpersonal Relationship and Happiness.

Tests of Hypotheses

H1:   There is a significant difference between students who have graduated or who are enrolled but have not graduated, and students who are not enrolled, 5 years after their initial enrollment at a particular university and emotional intelligence scores.

For purposes of this research, emotional intelligence was operationalized as 15 components: self-regard, emotional self-awareness, assertiveness, independence, self-actualization, empathy, social responsibility, interpersonal relationship, reality testing, flexibility, problem solving, stress tolerance, impulse control, optimism, and happiness. Means are contained in Table 3.

A multivariate test revealed that differences between groups on emotional intelligence scores using the Pillai's Trace criteria were statistically significant (F(30, 1536) = 2.07, p = 0.001). The univariate F's that were statistically significant were Empathy (F(2, 781) = 3.26, p = .039), Social Responsibility (F(2, 781) = 9.57, p < .001). Flexibility (F(2, 781) = 3.30, p = .039), and Impulse Control (F(2, 781) = 3.15, p = .043). The other 11 EI factors were not significant.

A discriminate analysis was conducted to assess whether the 15 emotional intelligence subscale predictors could distinguish those who were not enrolled, enrolled,

Table 2

Sample Norms and National Norms

	Sample (N = 784)		National (N = 3,831)	
	Mean	Std.. Deviation	Mean	Std. Deviation
Interpersonal Relationship*	44.90	6.06	44.23	6.02
Social Responsibility*	40.83	5.57	43.27	4.93
Happiness*	38.12	5.10	37.48	5.13
Self-Actualization	37.47	5.19	37.72	5.07
Reality Testing*	36.77	5.97	39.53	5.58
Self-Regard	35.55	6.95	35.78	6.30
Impulse Control*	33.02	6.05	34.59	5.63
Empathy*	32.36	4.41	33.51	4.19
Stress Tolerance*	31.63	5.40	33.66	5.64
Optimism*	30.69	4.70	32.98	4.46
Emotional Self-Awareness	29.71	5.00	29.79	5.28
Problem Solving*	29.66	4.75	31.79	4.60
Flexibility*	27.81	4.72	28.94	4.86
Assertiveness	26.22	4.47	25.82	4.66
Independence*	25.45	4.47	27.37	4.48

*$p < .003$ (Bonferroni Corrected)

Table 3

Descriptive Statistics of the Emotional Intelligence Subscales by Status (N = 784)

	Status	Mean	Std. Deviation	*n*
Self-Regard	Not Enrolled	35.76	7.12	337
	Enrolled	35.59	7.14	112
	Graduated	35.32	6.72	335
	Total	35.55	6.95	784
Emotional Self-Awareness	Not Enrolled	29.87	5.37	337
	Enrolled	29.80	4.88	112
	Graduated	29.52	4.64	335
	Total	29.71	5.00	784
Assertiveness	Not Enrolled	26.57	4.61	337
	Enrolled	26.16	4.61	112
	Graduated	25.88	4.26	335
	Total	26.22	4.47	784
Independence	Not Enrolled	25.60	4.56	337
	Enrolled	25.46	5.03	112
	Graduated	25.30	4.18	335
	Total	25.45	4.47	784
Self-Actualization	Not Enrolled	37.22	5.53	337
	Enrolled	37.07	5.09	112
	Graduated	37.84	4.86	335
	Total	37.47	5.19	784
Empathy*	Not Enrolled	32.26	4.49	337
	Enrolled	31.53	4.31	112
	Graduated	32.73	4.32	335
	Total	32.36	4.41	784
Social Responsibility*	Not Enrolled	40.37	5.67	337
	Enrolled	39.43	5.53	112
	Graduated	41.76	5.35	335
	Total	40.38	5.57	784
Interpersonal Relationship	Not Enrolled	44.83	6.25	337
	Enrolled	44.16	6.05	112
	Graduated	45.22	5.87	335
	Total	44.90	6.06	784

Table 3 - continued

	Status	Mean	Std. Deviation	*n*
Reality Testing	Not Enrolled	36.64	6.31	337
	Enrolled	36.59	6.03	112
	Graduated	36.97	5.59	335
	Total	36.77	5.97	784
Flexibility*	Not Enrolled	28.31	4.77	337
	Enrolled	27.38	4.59	112
	Graduated	27.46	4.67	335
	Total	27.81	4.72	784
Problem Solving	Not Enrolled	29.44	4.98	337
	Enrolled	29.49	4.73	112
	Graduated	29.95	4.51	335
	Total	29.66	4.75	784
Stress Tolerance	Not Enrolled	31.82	5.56	337
	Enrolled	31.22	5.33	112
	Graduated	31.57	5.25	335
	Total	31.63	5.36	784
Impulse Control*	Not Enrolled	32.62	5.97	337
	Enrolled	32.36	6.12	112
	Graduated	33.63	6.06	335
	Total	33.02	6.05	784
Optimism	Not Enrolled	30.46	4.73	337
	Enrolled	30.31	4.94	112
	Graduated	31.05	4.58	335
	Total	30.69	4.70	784
Happiness	Not Enrolled	37.86	5.26	337
	Enrolled	37.61	5.28	112
	Graduated	38.55	4.85	335
	Total	38.12	5.10	784

*$p < .05$

or graduated from a particular university 5 years after their initial enrollment. Functions 1 through 2 were found to be statistically significant and the canonical correlations for this dimension is .26. Wilk's lambda is significant, λ = .26, $\chi2$ = 61.97, p = .001, which indicates that there is a significant difference between the emotional intelligence of the three groups (enrolled, not enrolled, or graduated). The difference appears to be predominately in Impulse Control, Happiness, Assertiveness, Optimism, Self-Actualization, Problem Solving, Empathy, Flexibility, Interpersonal Relationship, and Stress Tolerance. The strongest predictors are Social Responsibility (.598), Empathy (.529), Flexibility (.526), Interpersonal Relationship (.352), Stress Tolerance (.314), Impulse Control (.331), Happiness (.272), Assertion (-.259), Optimism (.245), and Self-Actualization (.236). Table 2 listed Social Responsibility (M = 40.83, SD = 5.57), Happiness (M = 38.12, SD = 5.10), Self-Actualization (M = 37.47, SD = 5.19) as the highest means in this group. Table 4 lists the predictors of enrollment status.

Using Tukey's post hoc procedure, it should be noted that in Table 3, Social Responsibility for the Not Enrolled (M = 40.37, SD = 5.67) is higher than the Enrolled (M = 39.43, SD = 5.53). Empathy is higher for the Not Enrolled (M = 32.26, SD = 4.49) than the Enrolled (M = 31.53, SD = 4.31). Flexibility for the Not Enrolled (M = 28.31, SD = 4.77) is higher than the Enrolled (M = 27.38, SD = 4.59) and the Graduated (M = 27.46, SD = 4.67). The classification results are shown in Table 5.

The overall classification of enrollment status by the emotional intelligence subscales was 46% which is better than chance criterion of 33%. Enrollment status as Graduated was predicted the best (54%) by emotional intelligence subscales.

Table 4

Table of Structure Coefficients for Discriminating Variables

	Function 1	Function 2
Impulse Control	.331*	.186
Happiness	.272*	.194
Assertiveness	-.259*	.221
Optimism	.245*	.137
Self-Actualization	.236*	.127
Problem Solving	.196*	.007
Emotional Self-Awareness	-.123*	.015
Independence	-.115*	.069
Self-Regard	-.110*	.052
Reality Testing	.108*	.045
Social Responsibility	.535	.598*
Empathy	.262	.529*
Flexibility	-.266	.526*
Interpersonal Relationship	.161	.352*
Stress Tolerance	-.046	.314*

*Largest absolute correlation between each variable and any discriminate function

Table 5

Discriminant Function Classification

	Predicted Group Membership					
	Not Enrolled		Enrolled		Graduated	
Original						
Not Enrolled	138	40.9%	105	31.2%	94	27.9%
Enrolled	30	26.8%	44	39.3%	38	33.9%
Graduated	76	22.7%	77	23.0%	182	54.3%

Note: 46.4% of original grouped cases correctly classified.

H2:   There is a significant relationship between the cumulative grade point

average of students who have graduated or who are enrolled 5 years after their initial

enrollment at a particular university and emotional intelligence scores.

For purposes of this research, emotional intelligence is operational as 15

components: self-regard, emotional self-awareness, assertiveness, independence, self-

actualization, empathy, social responsibility, interpersonal relationship, reality testing,

flexibility, problem solving, stress tolerance, impulse control, optimism, and happiness.

Means are contained in Table 2.

Results for H2: Multiple linear regressions were calculated to statistically assess

the prediction of cumulative grade point average of students who were enrolled spring

semester 2007 after their initial enrollment in the fall semester of 2002 or the cumulative

grade point average of students who had graduated within 5 years of their initial

enrollment fall semester 2002. Regression results show that the linear combination of

independence, self-actualization, social responsibility, interpersonal relationships, and

happiness statistically significantly predicted the cumulative grade point average of

students who were enrolled 5 years after initial enrollment ($F(15, 431) = 4.317, p < .001$,

$R^2 = .13$, Adjusted $R^2 = .10$). Table 6 presents a summary of the significant regression

coefficients. Based on B coefficients, the strongest predictor is social responsibility. The

weakest predictors are self-actualization and happiness. The predictors having a positive

impact on the dependent variable are self-actualization, social responsibility, and

happiness. The predictors having a negative impact on the dependent variable are

independence and interpersonal relationships.

Table 6

Regression Coefficients for Model Variables

Predictors	B	Seβ	Beta	p
Independence	-.021	.008	-.156	.006
Self-Actualization	.022	.008	.180	.006
Social Responsibility	.033	.008	.303	.000
Interpersonal Relationship	-.022	.008	-.213	.008
Happiness	.019	.009	.154	.050

Ancillary Findings

First, a multiple regression analysis was conducted to test the relationship between HSGPA and ACT score and the cumulative GPA 5 years after a student's initial enrollment or cumulative GPA upon graduation if graduation occurred prior to the fifth year. The means of HSGPA and ACT are given in Table 7.

The regression results suggest that HSGPA and ACT statistically significantly predict the cumulative GPA 5 years after initial enrollment in the fall 2002 or cumulative GPA upon graduation if graduation occurred prior to the fifth year ($F(2, 431) = 170.04$, $p < .001$, $R^2 = .441$, Adjusted $R^2 = .438$). A one-way analysis of variance (ANOVA) was conducted to evaluate for a significant relationship between enrollment status and HSGPA and ACT score. An alpha level of .05 was used for all statistical tests (Table 8) (Rosenthal, 1991).

A one-way analysis of variance (ANOVA) was calculated on HSGPA, ACT, and enrollment status for spring 2007. The analysis of HSGPA and enrollment status was significant, $F(2, 777) = 74.17$, $p < .001$. HSGPA had a significantly statistically positive relationship with graduation by spring 2007. Participants who had higher HSGPAs were more likely to have graduated ($M = 3.36$, $SD = .50$) and remain enrolled ($M = 2.97$, $SD = .51$) than participants with a lower HSGPA ($M = 2.88$, $SD = .53$). The analysis of ACT score and enrollment status was also significant, $F(2, 764) = 27.48$, $p < .001$. ACT score had a significantly statistically positive relationship with graduation by spring 2007. Participants who had higher ACT scores were more likely to have graduated ($M = 22.33$, $SD = 3.94$) than participants with lower ACT scores ($M = 20.32$, $SD = 3.68$). A summary of descriptive statistics is presented in Table 9.

Table 7

Descriptive Statistics of the Traditional Student Performance Indicators (N = 434)

	Mean	Std. Deviation
Cumulative GPA	2.96	.60
HSGPA	3.27	.52
Max Composite ACT Score	21.79	4.02

Table 8

Regression Coefficients for Model Variables

Predictors	B	Seβ	Beta	*p*
HSGPA	.559	.048	.484	.000
ACT	.041	.006	.277	.000

Table 9

Descriptive Statistics by Status

		N	Mean	Std. Deviation	Std. Error
HSGPA HS	Not Enrolled	335	2.88	.53	.03
	Enrolled	112	2.97	.51	.05
	Graduated	333	3.36	.50	.03
	Total	780	3.10	.56	.02
ACT Score	Not Enrolled	331	20.32	3.68	.20
	Enrolled	110	20.11	3.70	.35
	Graduated	326	22.33	3.98	.22
	Total	767	21.14	3.94	.14

CHAPTER V

DISCUSSION

Overview

Chapter V provides a summary of this study. Conclusions and discussion are

provided based on the analysis of the research question and hypotheses. A comparison of

select published studies and the results of this research is conducted. Recommendations

for policy and practice are made based on the results of this study. In conclusion, future

research suggestions are discussed.

Summary

This research sought to identify relationships between emotional intelligence

scores and student retention, graduation, and performance (as indicated by cumulative

grade point average). Students at an institution of higher learning in the southeastern

United States were surveyed prior to their initial enrollment at a particular university

during the fall semester of 2002. Five years after their initial enrollment (spring semester

2007) in the fall semester of 2002, information was gathered on which students were not

enrolled, enrolled, or graduated and their cumulative grade point average.

This research examined the concept of emotional intelligence which is

operationalized by the Bar-On EQ-i:125 as 15 component subscales: self-regard,

emotional self-awareness, assertiveness, independence, self-actualization, empathy, social

responsibility, interpersonal relationship, reality testing, flexibility, problem solving,

stress tolerance, impulse control, optimism, and happiness. For the purpose of this study,

additional variables were collected that included gender, race/ethnicity, parent

educational status defined by neither parent having a 4-year degree, or one or both having

a 4-year degree, housing indicated by the student as on-campus or off-campus for the fall

semester of 2002, and marital status which for this sample included not dating or

dating/engaged.

<div align="center">Conclusions and Discussion</div>

The findings of this research suggest that the demographic subgroup most likely to

graduate from a particular university are White females who are not dating, live on

campus their first semester, and have one or both parents holding a 4-year degree. This

finding was expected as this demographic is widely anticipated to be most likely to

graduate (Seidman & Tinto, 2005; Barefoot, 2004). It would appear that the limited

resources available to first generation college students may result in longer periods of

enrollment before graduating. These limited resources may be in the form of parental

financial support, causing students to have to work to support their educational

endeavors. When parents and family without college degrees form the primary support

structure of students in college, there is a lack of experience surrounding the student that

may lead to insufficient levels of emotional support or a lack of understanding of the

commitment necessary for a student to persist in college. These students may deem it

necessary to drop out or take lighter academic loads as they seek to find the resources

they need to be successful. This lack of support and experience may be a deterrent to

timely graduation (Kuh, Kinzie, Schuh, Whitt, & Associates, 2005).

The local sample was lower than the national norm for emotional intelligence on

every subscale other than Happiness and Interpersonal Relationship. Bar-On (2004b, p.

18) defined Happiness as "the ability to feel satisfied with one's life, to enjoy oneself and

others, and to have fun" (p. 18). Interpersonal Relationship is defined as "the ability to

establish and maintain mutually satisfying relationships that are characterized by intimacy and by giving and receiving affection" (Bar-On, 2004b, p. 16). Due to the location of the sample at a university in the southeastern United States, these two subscales may have been higher than the norm because of cultural differences. Happiness and Interpersonal Relationship appear to be strongly valued and expressed in southern culture, and these scores may reflect this southern characteristic or ability. It should be noted that the sample participants surveyed were new students about to enter college for the first time. This writer would submit that these may be strong characteristics of such a population. Students who choose to attend college in a traditional university setting may be stronger in Interpersonal Relationship than the general population due to the institutional characteristics that attracted them. These students were largely choosing to live in on-campus housing which may also reflect the high Interpersonal Relationship score. Students with strong abilities on the Interpersonal Relationship subscale would naturally be attracted to living conditions that would require intimate relationships to be formed and maintained.

The instrument was given at a pre-enrollment orientation, welcome week event, that would be a natural attraction to students who were happy about their college choice and enjoyed the relationships that the groups they were assigned to offered. This finding is congruent with the work of Barefoot (2004) and Bean (1985). When a student is satisfied and happy with his or her choice and experience of the institution, the student will integrate and perform in his or her academic endeavors (Bean, 1980). Astin (1993) found that students were impacted by three types of involvement: with faculty, with academics, and peer groups. Astin stated that peer group interaction was the most

impactful on student retention and satisfaction. Students who participated in this survey had chosen to be engaged in their orientation groups and academic pursuits, which appears to be reflected in this measure of Happiness. These students had integrated into their orientation groups and were attending the group sessions indicating that these students felt like their involvement and presence mattered. Students who believe they matter are more likely to persist and participate than students who feel marginalized (Schlossberg, 1989). This writer believes that this served as a type of self-selection for those who took the survey, eliminating students who felt unconnected and unsatisfied with their experience, which could also lead to higher scores in Happiness for those who took the survey.

The age of the local sample would affect the lower scores on the 13 other emotional intelligence subscales. The normative sample has 89% of the subjects older than 20 years of age with over 56% of the normative sample having more than a high school education. Research has shown that Emotional Intelligence scores increase with age and education attainment (Bar-On, 2004b; Mayer, 1999; Mayer, 2002; Parker, Saklofske et al., 2005). As a result of the local sample's status as traditional college students, these students were predominately 17-19 years of age with no more than a high school education. Their emotional intelligence scores should be lower than the normative sample due to age and educational status.

The three status groups (not enrolled, enrolled, and graduated) are significantly different predominately on the variables of Empathy, Social Responsibility, Flexibility, and Impulse Control. Empathy is defined as "the ability to be aware of, to understand, and to appreciate the feelings of others" (Bar-On, 2004b, p. 16). Students who had graduated

scored higher in Empathy than students who were enrolled and not enrolled. Empathetic people are able to read others' emotions and needs and are sensitive to what another person may be requesting or explaining. Graduating from a traditional college setting requires a person to be able to work with other students, faculty, and staff (Tinto, 1975; Astin, 1993; Seidman & Tinto, 2005). Empathy would be a key resource in effectively working with others.

Social Responsibility is defined as "the ability to demonstrate oneself as a cooperative, contributing, and constructive member of one's social group" (Bar-On, 2004b, p. 16). Social Responsibility is the strongest emotional intelligence subscale predictor of graduation. This would coincide with students being good followers of rules and working together for the betterment of all involved in the process or group. Data have shown that graduates from college are less likely to be arrested, more likely to vote, and have healthier relationships than those who do not graduate from college (Higher Education Research Institute, 1998; Day & Newburger, 2002). While Social Responsibility is related to graduation with 5 years of initial enrollment, it may also be related to the actions of successful graduates later in life. This finding prompts a question regarding whether college degrees help make good citizens or whether good citizens help make college graduates.

Flexibility was negatively related to graduated status. Flexibility is defined as "the ability to adjust one's emotions, thoughts, and behavior to changing situations and conditions" (Bar-On, 2004b, p. 17). It is quite possible that students with high flexibility scores found it both advantageous and acceptable to transfer to another institution to finish their degree or to change their career of choice. An interesting finding is that

Flexibility was highest for those not enrolled. These scores may reflect the transient

nature of this era of students (Seidman & Tinto, 2005; Adelman, 2006).

The students who were no longer enrolled at this particular university may have

enrolled at other institutions and may have even graduated from other universities by the

spring semester of 2007. Students with high flexibility scores may have been comfortable

in changing universities. These students with high flexibility may have even found it

desirable to change educational settings in search of a better institutional "fit" (Astin,

2005). These students may have also deemed it acceptable to "stop out" in order to fulfill

family obligations or to take advantage of an internship that would potentially advance

them later in their careers. The students who were enrolled and not graduated had the

lowest Flexibility subscale of the three groups. This would indicate a possible inability to

adapt to the social, academic, and bureaucratic changes of the college environment in a

timely manner, thus delaying graduation. It should also be noted that during the potential

enrollment period between fall semester 2002 and spring semester 2007 there were

catastrophic events that could have affected the findings of this study especially in the

area of Flexibility. Students high in Flexibility may have found it advantageous to transfer

during a time of uncertainty to other universities that offered aid and/or a new beginning

to these students. This may have caused Flexibility to appear as a negative predictor of

enrollment or graduation when under normal circumstances it could potentially be a

positive predictor.

Impulse Control is defined as "the ability to resist or delay an impulse, drive, or

temptation to act" (Bar-On, 2004b, p. 18). Impulse Control is the second highest predictor

of graduation. A student who can control his or her anger and hostility and practice self-

control would be more likely to navigate the university experience and persist to graduation. An interesting observation regarding these four emotional intelligence scores is that the enrolled students had the lowest subscale scores in all four emotional intelligence components.

Cumulative grade point average could be predicted for the students who graduated or remained enrolled based on their emotional intelligence subscales of Independence, Self-Actualization, Social Responsibility, Interpersonal Relationship, and Happiness. The predictors having a positive impact on the cumulative GPA were Self-Actualization, defined as "the ability to realize one's potential capacities" (Bar-On, 2004b, p. 16), Social Responsibility (see above), and Happiness, which was defined as "the ability to feel satisfied with one's life, to enjoy oneself and others, and to have fun" (Bar-On, 2004b, p. 18). Students who are realizing their potential are able to contribute to their social group and feel a sense of responsibility to the greater community, and are satisfied with themselves and should be able to make major life transitions more effectively and, therefore, make higher grades than students who do not have scores as high in these emotional intelligence components (Goleman, 1995).

The predictors having a negative impact on the cumulative GPA were Independence, defined as "the ability to be self-directed and self-controlled in one's thinking and actions and to be free of emotional dependency" (Bar-On, 2004b, p. 16), and Interpersonal Relationship. Both of these subscales are relationship oriented. Independence may be related to lower cumulative grade point average because of the communal characteristics of traditional university education practices. These students may be so independent that they reject much of the institutional bureaucracy and

necessary group dependence or interaction that often leads to higher academic performance (Bean, 2001; Barefoot, 2004; Seidman & Tinto, 2005). Higher scores on Interpersonal Relationship leading to lower cumulative grade point averages may point to the students' enjoyment of relationships to the detriment of academic performance.

The literature has had mixed findings about the predictive value of high school grade point average and ACT scores in relationship to college graduation and academic performance in college. In this study, HSGPA and ACT statistically significantly predicted the cumulative GPA, enrollment status, and graduation. The analysis of HSGPA and enrollment status had a significantly statistically positive relationship with graduation by spring 2007. Participants who had a higher HSGPA were more likely to have graduated and remain enrolled than participants with a lower HSGPA.

The analysis of ACT found a significantly statistically positive relationship with graduation by the spring semester of 2007. Participants who had higher ACT scores were more likely to have graduated than participants with lower ACT scores. This prediction value of HSGPA and ACT is congruent with literature cited in this study as ACT and HSGPA were stated to have modest significance for predicting performance or graduation over 6 years (Tinto, 1975; Pascarella & Chapman, 1983; Astin, 1993, 2005; Geiser & Santelices, 2007). These findings are not congruent with the findings of Schuh (1999).

Limitations

One limitation to this study was that not all of the incoming students took the Bar-On EQ-i:125. Only students who attended the Welcome Week Orientation prior to their initial enrollment and attended the session designated for the survey to be taken were able to participate. Students present for the session in which the survey was offered were

showing aspects of responsibility and ability to work with groups which could have led to a type of self-selection. Students who registered late for the semester or who chose not to attend the orientation session designated for the survey were not given the option of participating.

A second limitation of this study would be the length of time allotted for degree completion (5 years) and the location of the university that was studied. Students may take longer than 5 years to complete a degree. Students may also attend more than one university in their quest for a degree. This study did not follow students past 5 years or between institutions. Students who were not enrolled may have been enrolled in or graduated from another institution. Collection of data past this time frame or between institutions may have an effect on the results. Collection of data from multiple institutions in multiple geographic areas may have also had an effect on these results.

It should be noted that the students who took this survey did so 5 years prior to enrollment or graduation as of spring semester 2007. Students encountered many life transitions that were not accounted for over that 5 year period that would affect their retention, performance, and graduation. Persisting in one's education and graduation is not totally dependent upon emotional intelligence scores or HSGPA/ACT, but upon a multiplicity of other factors.

Recommendations for Policy or Practice

Student retention and graduation is becoming an important aspect of enrollment management and is of special interest to institutions as they seek to help students become successful at their institutions. Emotional Intelligence is a potential predictor of student success. Emotional intelligence scores should be used to help address areas of emotional

intelligence that will give students the resources that they need to become successful

students and citizens. If emotional intelligence scores can be used to predict a student's

graduation from a particular university and their academic performance level, then

students may find such information very valuable as they prepare themselves for college.

Research has shown that emotional intelligence scores can improve through

training. In fact, the actual EQ-i:125 comes with suggestions of how to improve scores

over time through specific training and practices (Bar-On, 2004b). Future students could

be encouraged by high school guidance counselors, college admissions personnel, and

college preparatory programs to investigate and develop their emotional intelligence.

Prospective college students could be administered an emotional intelligence survey, like

the Bar-On EQ-i, that offers suggested means of developing one's emotional intelligence

and then use the results of the survey to find the areas in which they need to grow in order

to become more successful students and healthier persons. Results of these tests could be

used by the educational professionals working with prospective students to help direct

curriculum development and student advising during the K-12 experience to better direct

students towards intentional experiences for emotional intelligence development. This

information could also be used by students and professionals to understand their

emotional intelligence strengths which would lead to better utilization of personal

strengths and resources for sustained success in all areas of life.

Universities wishing to increase student retention and graduation should use these

scores to develop curriculum and extracurricular activities to encourage student growth in

emotional intelligence, this practice will specifically help students and institutions alike

reach their educational goals. A recent study has show that emotional intelligence can be

taught in university classes and that emotional intelligence training affects student performance and retention in the first 2 years of enrollment (Schutte & Malouff, 2002).

In this study, Empathy, Social Responsibility, Flexibility, and Impulse Control were predictors of student enrollment and graduation. Growth in these areas could be encouraged by offering seminars, in-class training, service opportunities, individual counseling, and interactions with others inside and outside the classroom. Universities should provide training to address these significant indicators after careful study of their incoming students' scores. Freshman classes, including first year seminars, residence hall programming, and mentorship could be used to facilitate this training.

The two leading predictors, Social Responsibility and Empathy, can be specifically addressed through both course offerings and extracurricular functions. Civic engagement can provide multiple opportunities to engage students in a learning process that will promote growth in Social Responsibility, Empathy, and other components of emotional intelligence. The courses designed to provide civic engagement opportunities for students could be first year seminars or major specific courses. These courses would teach course content using active learning pedagogy, providing students with structured, group service projects that require clear methods of reflection. Service opportunities may also be implemented through student affairs offices and through intentional student activities opportunities.

While flexibility was a negative predictor of enrollment and graduation, students who have high scores in flexibility may be in need of intentional intervention in the form of direct contact and interaction with well-informed faculty and staff. Students with high flexibility scores may be too willing to consider other options of work or transferring

schools before knowing all of the options available to them within the institution in which they are currently enrolled. While it is not known if the students who were no longer enrolled transferred to a different university, started working full time, or participated in some other endeavor, students with high levels of flexibility should be able to successfully navigate the paths of higher education when adequately informed of their options and potentials within a particular university. These students need to be well-oriented to the resources and options within their initial university of choice so that they do not make a decision to transfer, potentially delaying graduation and increasing debt, unless their decision has been carefully weighed and benefits the student.

When investigating cumulative grade point average, the emotional intelligence predictors of Self-Actualization, Social Responsibility, and Happiness were positive predictors. Universities should encourage growth in these areas through intentional training and opportunities. Social Responsibility can be increased through group work and team development; feedback to allow students to assess the benefits and consequences of actions on others; increased social interactions; involvement with community service, service learning, and other community functions. EI characteristics of Self-Actualization can be trained and developed through objective goal setting; career counseling and planning; skill training; and encourage pursuit of hobbies and exploration of fulfilling interests. Growth in Happiness should be encouraged by celebrating achievements; teaching appropriate time management skills that include scheduling time to relax and rest; promote active and healthy lifestyles; and helping students identify items that they find interesting and enjoyable and encourage participation in those items (Bar-On, 2004b).

Independence and Interpersonal Relationship were slightly negative predictors of cumulative grade point average. The negative prediction of cumulative grade point average by Independence may have been caused by the importance that a liberal education places on group dynamics and assignments. Persons strong in Independence may not have been willing to conform to the group requirements in these areas or the bureaucratic policies of higher education may have affected their performance. The negative prediction of Independence and Interpersonal Relationship may be some anomaly present during the process used to gather these data or in the time frame during which the study was conducted.

Academic advisement would be a potential avenue to realize the impact of emotional intelligence on students' educational success. Universities could give the opportunity to every student to go through interpretation of their Bar-On EQ-i results where specific strategies for development may be offered. This practice would not only provide the student with opportunities of realizing growth in emotional intelligence, but would also give academic advisors an opportunity to engage students beyond class scheduling and degree audits.

The use of emotional intelligence scores in academic advisement would help bring clarity to career choices and provide advisors with insight into a student's strengths and needs for further development. A periodic retest of students would allow them to see where growth had taken place and where growth may continue to be needed. With this type of information available to both the student and the advisor, choice about degree plans, electives to be taken, study abroad opportunities, and civic engagement can be planned intentionally to impact student development and success.

Development of a student's emotional intelligence is not just in the interest of higher education. Astin (2005) suggested that graduation is not directly attributable to the level or superiority of the higher education institution, but is a reflection of pre-existing characteristics. The emotional intelligence scores used in this research were collected prior to enrollment in the university and were influenced by K-12 educational efforts. For students to be successful in the educational endeavors in K-12 and higher education, emotional intelligence needs to be addressed throughout their educational careers.

Encouraging emotional growth among students and others at all levels of education is important to success in life. By seizing the opportunities that educational institutions have to help students develop emotionally, not only will more graduates be produced, but engaged citizens will be prepared to contribute to the greater society (Goleman, 1995; Skipper, 2005). Life-long learning should encompass more than keeping up with new technology, programs, and discoveries, but also promote self-discovery and growth.

Emotional intelligence education has the potential to serve faculty and staff as well as students. Faculty and staff development could offer opportunities for these professionals to learn more about their own emotional intelligence scores and provide suggestions for growth, thus potentially creating a more emotionally intelligent institution. Utilizing emotional intelligence scores would allow administrators to better plan for faculty and staff resources, training, and development. Emotional intelligence as an institutional initiative would help promote the adoption of emotional intelligence as a part of the educational fabric of the institution. Faculty, staff, administrators, and students would have a better understanding of the concept of emotional intelligence and their own

emotional strengths, weaknesses, and strategies for continued development. Having a campus culture in which the concepts and potential value of emotional intelligence are valued would potentially provide students with constant opportunities for their continued education and development both inside and outside of the classroom. An educational institution immersed in the concept of emotional intelligence could lead to more student success and to a healthier institution that is better able to communicate, collaborate, and engage all constituents involved (students, faculty, staff, and society). Emotional intelligence should be used to provide a common language for leadership development, engagement of students, campus collaborations, and development.

Recommendations for Future Research

Future research recommendations could cover a vast spectrum of questions and possibilities. One of the limitations of this study was that it was conducted within a single institution and did not follow students to other universities or colleges when they failed to re-enroll. It would be interesting to identify all graduates from a cohort class who had graduated by the sixth year of enrollment regardless of which college or university they had graduated from and to study which emotional intelligence scores would be the best predictor of graduation across institutions.

Another interesting study would be to test students prior to their initial enrollment and again each year after their initial enrollment to assess changes in their emotional intelligence and the effects of the college experience on emotional intelligence scores. This would allow educators opportunities to evaluate curriculum and practices to better encourage student success through intentional and planned emotional intelligence training while students are enrolled in their institution.

A recurring theme in this study was the positive and statistically significant relationship of Social Responsibility with graduation and student performance as measured by cumulative grade point average. This researcher would suggest further study of Social Responsibility and how student performance and graduation may differ according to their Social Responsibility scores. It has been suggested that students who obtain a college degree are more socially responsible than those who do not have a college degree (Rowley & Hurtado, 2003). Research to investigate the effects of higher education on the Social Responsibility of students will be important for colleges and universities as they seek to build a stronger society.

This researcher would be interested in the effects of service-learning on emotional intelligence scores. Does a student's emotional intelligence impact his or her response to service? Are emotional intelligence scores of students who engage in service different from students who do not? Does a student's involvement in service raise the student's emotional intelligence subscales like Self-Actualization and Social Responsibility which may lead to increase in graduation rates and cumulative grade point averages?

Other research possibilities may include looking at emotional intelligence scores and their relationship to specific majors. Is there a relationship between emotional intelligence scores and performance in certain areas of study? Is there a relationship between emotional intelligence scores and students who pursue graduate degrees? Remedial courses and the effect of emotional intelligence training on student performance in remedial courses would offer educators potential tools for increasing student success.

There is a wealth of research opportunity and questions to study in this emerging field of emotional intelligence and student success. As educators seek to better

understand what matters in student retention and performance, they should look beyond just the traditional predictors. To help students grow and become successful graduates, educators would be well advised to continue to find means of identifying opportunities for student education and development of emotional intelligence. While educators cannot effectively increase the IQ of students, emotional intelligence can be taught and intentionally increased over time (Goleman, 1995; Mayer, 2002). Student development and growth is vital to fulfilling the mission of educational institutions. According to Goleman (1995), emotional intelligence is vital to the success of society. Emotional intelligence certainly warrants the attention of today's educational institutions for research, development, and practice.

APPENDIX A

BAR-ON EMOTIONAL QUOTIENT INVENTORY: 125

APPENDIX B

INSTITUTIONAL REVIEW BOARD APPROVAL

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Institutional Review Board

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Hattiesburg, MS 39406-0001
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HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
  Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 27102204
PROJECT TITLE: Emotional Intelligence as a Non-Traditional Predictor
of College Student Retention and Graduation
PROPOSED PROJECT DATES: 11/15/07 to 04/01/08
PROJECT TYPE: Dissertation or Thesis
PRINCIPAL INVESTIGATORS: Larry Sparkman
COLLEGE/DIVISION: College of Education & Psychology
DEPARTMENT: Educational Leadership & Research
FUNDING AGENCY: N/A
HSPRC COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 01/10/08 to 01/09/09

Lawrence A. Hosman   _1/15/08_
Lawrence A. Hosman, Ph.D.   Date
HSPRC Chair

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