THE FIRST-GENERATION STUDENT IN A TWO-YEAR OPEN ACCESS COLLEGE: IMPROVING EMOTIONAL INTELLIGENCE AND RETENTION USING THE FREEZE-FRAME® TECHNIQUE

by

Karen M. Lankisch

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Karen M. Lankisch

has been approved

June 2007

APPROVED:

MARY DERESHIWSKY, Ph.D., Faculty Mentor and Chair

ELAINE GUERRAZZI, Ph.D., Committee Member

PAM HANFELT, Ph.D., Committee Member

RONALD LESLIE, Ph.D., Committee Member

ACCEPTED AND SIGNED:

_____

MARY DERESHIWSKY, Ph.D.

_____

Harry McLenighan, Ed.D.
Dean, School of Education

Abstract

This study was conducted to examine the factors that both support and inhibit retention among first-generation college students. In recent years, state boards of regents have begun to hold universities accountable for students successfully completing of their academic goals. In order for universities to help students to achieve their academic goals, institutions of higher education must search for new strategies to improve student retention. An examination of retention and its relationship to emotional intelligence has been reviewed. A recurring theme in this review was that emotional intelligence assessment may provide new strategies to help student retention. Participants' emotional intelligence levels were measured by the Mayer, Salovey, Caruso Emotional Intelligence Test V2.0. The FreezeFrame® emotion-management tool was used to provide participants with training to regulate or bring their emotions more under their conscious control. It was anticipated this training would be reflected in a higher retention rate.

Dedication

To the offhand, a doctoral dissertation may appear to be a solitary endeavor. However, to complete a project of this scope requires a network of support. I am indebted to many people. I am most especially grateful to my husband, Paul, children, Michelle, Brian, Rebecca and Molly, and my mother, Irene to whom I owe everything. I would not have even started this journey without their encouragement. Even more importantly, I would not have completed this without all of their continuous support, love and encouragement.

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CHAPTER 1. INTRODUCTION

Introduction to the Problem

College has become a rite of passage from adolescence to adulthood. At the turn of the twentieth century, most college students were white adolescent males. These students tended to be sons of doctors, lawyers, ministers, and business owners. If women attended postsecondary school, it was for a specific profession such as an office work, teaching, or nursing.

Today's college student population is much more diversified than the predominant upper-middle-class, adolescent white male of the past. Over the past three decades first-generation college students have become a significant force on today's college campuses. By the 1980s, the term "first-generation" in reference to college students can be found frequently in the literature. According to Nunez (1998), first-generation students are those individuals whose parents' highest level of education is a high-school diploma or less. In light of this definition, this researcher identified an open-access branch campus of a major urban research I university in which 60% of the student population is first-generation. From this point forward, this institution will be referred to as the open-access college.

First-generation students tend to be more prone to experience difficulties achieving college success which is

primarily reflected in low retention. Nationally many institutions of higher education are grappling with the issue of increasing retention. This open-access branch campus' experience with retention fits into this pattern. This national problem is very much present at many open-access branch campuses.

In recent years, state boards of regents have begun to hold universities accountable for students' successful completion of their academic goals. In order for universities to help students to achieve their academic goals, institutions of higher education must identify innovative means to improve student retention. There are three types of retention that exist in higher education. The first is graduating on time; the second is graduating at the college of initial enrollment, and the third is graduating in the program in which the student initially enrolled. In the two-year college, there are a wide variety of student goals. A student goal might be to obtain an associate's degree, complete a certificate, or pass a specific course.

The identified open-access college is a two-year branch campus. There are approximately 3,000 students who attend this institution. A significant characteristic of the student population is that 60% are first-generation learners (Ohio Board of Regents, 2004). Students select open-access branch campuses for a variety of reasons: to increase job skills, to obtain an

associate's degree, to transfer, or to complete a certificate. All of these factors may influence the retention rate at open-access branch campuses.

The major urban research I university referenced above is comprised of 13 colleges. The identified open-access college is one of these 13 colleges. Information from the office of Institutional Research at the major urban university indicates that the identified open-access branch campus ranks 12th in retention among its 13 colleges. The retention rate among students who entered in 2002 stood at 66% when measured in 2003 for those full-time students who were matriculated, non-returning enrollees. The retention rate has fluctuated over the past seven years from a high of 69.3% to a low of 57.6%. The statewide retention rate at university branch campuses ranges from 54% to 85% (Ohio Board of Regents, 2004). The retention rate for obtaining a degree in three years at the open-access branch campus is 20%. The statewide range for graduation from university branch campuses is 12% to 29% (Ohio Board of Regents, 2004).

One can clearly see that retention, especially at the open-access branch campus of this university, is a problem. However, what is unclear is how to solve this problem. A review of the literature suggests that a productive way to improve retention

may relate to understanding the role of emotional intelligence. The term "emotional intelligence" first appeared in the literature during the 1960s. Three decades later, it became part of a serious body of research conducted by Mayer and Salovey.

In 1990, Salovey and Mayer used the term emotional intelligence to "directly contrast with the term cognitive 'intelligence'". The term emotional intelligence has become known as the emotional quotient (EQ) and refers to a person's level of emotional intelligence (Simmons & Simmons, 1997, p. 2). Salovey and Sluyter (1997) state that "emotional intelligence is 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 so as to promote both better emotion and thought" (p. 22).

With this definition in mind, this investigation realized that emotional intelligence assessment may be an important new addition to this open-access branch campus' efforts to increase student retention. Currently, the open-access branch campus assesses its students' English and math abilities for placement. One could argue that emotional intelligence could be assessed concurrently in order to determine if a student needs help in strengthening their emotional intelligence skills. The four emotional intelligence skills that will be the focus of this

research are the ability to perceive emotion, to use emotion to facilitate thought, to understand emotion, and to manage emotion.

A number of studies have attempted to correlate emotional intelligence and the performance of students whose academic success was marginal (Wells, Torrie & Prindle, 2000; Barchard, 2003; Tapia & Marsh, 2003). Parker, Summerfeldt, Hogan, and Majeski (2003) discovered that academic success was strongly associated with several dimensions of emotional intelligence such as intrapersonal ($r=.33$, $p<.05$), adaptability ($r=.51$, $p<.05$), and stress management abilities ($r=.40$, $p<.05$), assessed at the start of the academic year. These variables were found to be strong predictors in identifying both academically successful and unsuccessful first-year students. Presumably students who experience academic success would be more likely to return and complete their degree which ultimately would increase retention rate. This investigation made an effort to strengthen the emotional-intelligence skills of the first-generation learner. An effort was taken to strengthen emotional-intelligence skills by introducing the Freeze-Frame® emotional-management-tool. If indeed there was an increase in emotion-intelligence skills, it is expected that there would be a positive effect on retention.

Childre (1998), stresses that the Freeze-Frame® technique uses "the power and intelligence of the heart to shift perception, momentarily bringing the biological systems, including the brain, into balance and harmony" (p. xi). The Institute of HeartMath (2002) research shows the unharmonious emotions routinely result in cortical inhibition which includes: "less clear thinking, less efficient decision making, and less effective communicating" (p. 19). Consequently, the Freeze-Frame® technique was used in the present study to enable students to learn to generate positive emotions. Positive emotions have been shown to result in cortical facilitation which includes: improved higher-order thinking, more effective problem solving, greater self-reflection, and better decision making. A specific aim of this investigation was to lend additional empirical support to the general claim that critical thinking, decision making and effective problem solving may be essential aspects of emotional intelligence and also of academic success and of retention.

Background of the Study

As an associate professor and advisor to many first-generation students at this open-access branch campus, this researcher has had many experiences working with and observing these individuals. In the classroom, the researcher has observed

outbursts, frustration, stress and anger from first-generation student trying to deal with a variety of situations at the College. Overtime, these negative emotions often lead to decreased student performance and ultimate drop out.

A pilot project at the main campus of the major urban university was completed in 2003. The pilot project consisted of placing students in a well-defined Learning Community. The focus of this pilot was to determine if student learning communities and emotional intelligence relate to student retention and success. The key finding of this pilot project indicated that undergraduate students' post-test scores were higher on 14 out of 20 competencies and higher on 2 out of the 4 clusters ("EI Project Building Emotional Intelligence," 2003). The study suggests that emotional intelligence is a skill set that can be improved. The pilot project also included guest presentations, feedback and related activities. Therefore, the study indicates that the emotion -training may increase the emotional intelligence assessment score on the post-test. However, the pilot project findings as of this writing have not been extended to show improvement in academic success as measured by grade point average or improved retention. One aim of the present study is to examine the relationship between emotion-management and retention.

The results from the pilot project suggest and other references from the literature (EI Project, 2004; Wells, Torrie & Prindle, 2000; Barchard, 2003; Tapia & Marsh, 2003) suggest that emotional intelligence is a set of skills that can be improved. Therefore, the present study will attempt to build on the earlier work by narrowing the scope to include only first-generation learners in a two-year college at the identified open-access branch campus. First-generation students comprise approximately 60% of the enrollment at the open-access branch campus. An emotional-management tool was used to help participants learn how to better manage their emotions.

A mixed design was used for the study at the open-access branch campus. One aspect of the study was quantitative in which participants were randomly assigned to either a training group or a comparison group. The qualitative aspects of the study used phenomenological based interview questions to uncover emerging themes about how participants are experiencing college life. Data was collected through the pre-test and post-test emotional-intelligence assessment using the Mayer, Salovey, Caruso Emotional Intelligence Test subsequent references to this test will be referred to as MSCEIT V2.0. Additional data was gathered through open-ended student interviews and documents.

According to Patton (1990) the purpose of applied research is to "gather information for informed action, enhanced decision making, and use of knowledge to solve human and societal problems" (p. 12). The qualitative part of the mixed design research model employed the phenomenological method

Gall, Gall and Borg (2003) indicate phenomenology is the "study of the world as it appears to individuals when they place themselves in a state of consciousness that reflects an effort to be free of everyday biases and beliefs" (p. 481). In addition phenomenology shares the goal of other qualitative designs which is to understand how individuals construct and influence social reality. One method of phenomenology is for the researcher to be intimately connected with the phenomena being studied and come to know oneself within the experience of the phenomena.

This researcher is connected to the phenomena through teaching and advising. Phenomenological and quantitative research are complementary. Gall, Gall and Borg (2003) state that the phenomenological method "sets the stage for more empirical investigations by lessening the risk of a premature selection of methods and categories. Such preliminary exploration does not supplant but complements the traditional methods of research available" (p. 481).

An assumption is made that a mixed design will provide for a stronger study. The mixed method design allows the researcher to pull out the best of each method. Without a combination of approaches we are often left with no clear way of deciding between competing conclusions. Furthermore, Gorard (2001) stresses that numeric evidence forms the basis of good qualitative studies, and can used to test its findings.

Statement of the Problem

From an institutional perspective the problem giving rise to this study is that the open-access branch campus ranks 12th among the 13 colleges that comprise the major urban university. The barrier is the open-access branch campus is not meeting Goal 1 of the Vision, Mission, Goals, and Strategies and Measures of the State Board of Regents. Goal 1 focuses on increasing the seamless access to affordable, quality higher education for all citizens of the state. One of the strategies to achieve Goal 1 is to improve first-year retention and to promote institutional accountability for student success.

Another problem identified in this study has to do with the sparse attention institutions of higher education give to the role of emotional intelligence in college success. Researchers (Salovey & Mayer, 1990; Goleman, 1995; Simmons & Simmons, 1997, Salovey & Sluyter, 1997; Bodine & Crawford, 1999) have found

that although a student's emotional intelligence may not be directly linked to college success, students with higher emotional intelligence may have more self-efficacy. For example, students with higher levels of emotional intelligence may have the self-perception and belief that they have the ability to effectively manage the problems and challenges they encounter. Other researchers (Mayer, Caruso & Salovey, 1999; Goleman, 1998) have developed emotional intelligence models that may prove useful for examining students' emotional intelligence in the college environment. Therefore, this study addressed the role that emotional intelligence and emotional intelligence models play in college success, specifically as it relates to retention.

Purpose of the Study

This qualitative-quantitative mixed-design study has a two-fold purpose. One of its functions is to capture the emerging phenomenological experiences of first-generation college students as they adjust to the emotional demands of the college environment. More specifically, the quantitative aspects of this study are to determine if the implementation of emotional intelligence testing and Freeze-Frame® seminars provide viable strategies to boost retention of first-generation students at the open-access branch campus.

Rationale

Emotional intelligence often goes unmeasured in higher education. Most students, when transitioning to college, must take a placement test to measure English, math or language skills. Colleges that focus only on academic intelligence may be missing factors that may relate to students' retention. Goleman (1995) describes the problem as one where academic intelligence offers very little preparation for the unexpected changes that a person must face when beginning college. Being academically intelligent is no guarantee for success and happiness in life. The literature lends support to the notion that infusing an academic skill set with an emotional-intelligence skill set might offer students a basis for generating broader and more efficient strategies for problem solving in the midst of life's uncertainties. Our culture—as well as most institutions of higher learning seems to focus on the academic intelligence of students while ignoring the emotional intelligence. Goleman (1995) states:

> Emotional life is a domain that, as surely as math or reading, can be handled with greater or lesser skill, and requires its unique set of competencies. And how adept a person is at those is crucial to understanding

> why one person thrives in life while another, of equal intellect dead-ends (p. 36).

At the open-access branch campus, the first-generation student population is approximately 60% of the overall enrollment. With such a large first-generation student population, an assessment of the emotional intelligence of these students before they begin their college careers would be helpful. This assessment may help students understand and bring their emotions under conscious control. The management of emotions may then lead to better decision making and a more positive state of well being and focus. A more positive focus may result in students' enhanced ability to adapt better to stressful internal and external events and engage others more effectively. Two potential outcomes related to assessing emotional intelligence may well be developing strategies to increase it and measuring the influence that enhanced emotional intelligence may have on retention.

Research Questions

This study is designed to answer three questions. These questions are as follows:

How does low, moderate, or high emotional intelligence relate to spring quarter to autumn quarter retention?

In what direction will the Freeze-Frame® emotion-management tool influence the emotional intelligence scores?

In what direction will Freeze-Frame® emotion-management tool influence spring quarter to autumn quarter retention?

Significance of the Study

As it has been stated previously, the State in which the identified open-access campus resides has launched an initiative to hold its universities accountable for successful completion of students' academic goals. Consequently, the open-access branch campus is motivated to increase retention. Since the open-access branch campus has approximately 60% first-generation learners, a focus on how to increase retention in this particular group was important. The significance of this study is to determine if high emotional-intelligence assessment scores are associated with an increase in retention. Consequently, all participants were given an emotional-intelligence assessment test. First-generation students are facing many issues such as conflicting obligations, cultural clash, history of failure, and lack of support. A biofeedback instrument was used to help the first-generation student to manage the sources of frustration and stress experienced in college. The tool that was used is called Freeze-Frame®. During the second week of spring quarter, retention and emotional intelligence was assessed. The more

participants internalize the Freeze-Frame® technique, it is anticipated that there will be an increase in emotional intelligence scores and an improvement in retention.

The significance of this study may be viewed on several levels. At the student level, if it is found that emotional intelligence skill development has a positive effect on retention, then student success in college should increase which may strengthen their economic futures and quality of life. If the research outcomes are favorable, then the institution would have a viable strategy to address Objective F of the open-access branch campus 2004 Vision which is as follows: to improve the level of student retention at the open-access campus. Objective F is a direct response to the State Board of Regents goal to promote institutional accountability for student success. Finally, positive results from this study may lend support to the State's vision of being a leader among states in the twenty-first century knowledge economy.

Definition of Terms

The following terms are defined operationally in the context of this study:

Academic Goal: For this study, academic goals will be operationally defined as meaning different things to different people. An academic goal of a student may be to complete a

course, a certificate or a degree. The key is that in order to achieve an academic goal a student must be present.

Emotional Intelligence: According to Mayer and Salovey (1997) emotional intelligence "is the ability to (a) perceive emotion, (b) integrate emotion to facilitate thought, (c) understand emotions, and (d) regulate emotions to promote personal growth" (p. 5).

First-Generation: "Students whose parents' highest level of education is a high-school diploma or less" (Nunez & Carroll, First-Generation Students: Undergraduates Whose Parents Never Enrolled in Postsecondary Education, 1998, p. 7).

Freeze-Frame®: A key "tool that consists of consciously disengaging one's mental and emotional reactions to either external or internal events and then shifting the center of attention from the mind and emotions to the physical area around the heart while focusing on feelings of care or appreciation for someone or something in one's life" (The HeartMath Solution, 1999, p. 267).

Open Access: An open-access college is one that accepts any person with a high-school diploma or a general equivalency degree (GED) the identified open-access branch campus policy is providing access to higher education to anyone with a high school diploma or equivalency.

Retention: Students who successfully completed the spring quarter 2006 at the identified open-access branch campus and registered and attended autumn quarter 2006 at the open-access branch campus.

Assumptions and Limitations

Two assumptions were made in this study. Assumption one was that the students had the prerequisite abilities to function in the college environment. The second assumption was that the students' response to the emotional intelligence questions was an accurate assessment.

The focus of the study was concerned with the experiences of the first-generation students. Therefore, the first-generation freshman student population was polled to ascertain their interest in participating in the study. In this investigation, a mixed quantitative and qualitative design was used. A small sample size was used for one major reason. The qualitative component of the study generated a large amount of phenomenological data and a small sample size made this a more manageable process. However, the use of a small sample size placed a delimitation on the study. Essentially, the findings were confined to first-generation college students.

The students participated in the pre-test during the first week of spring quarter and the post-test during the last week of spring quarter.

Nature of the Study

Mayer, Salovey, and Caruso (1997) suggest that emotional-intelligence is based the idea that academic intelligence offers very little preparation for the unexpected changes that a person must face when beginning college. Being academically intelligent is no guarantee for success and happiness in life. It is hypothesized that infusing an emotional intelligence skill set into an academic skill set might offer students a basis for generating broader and more effective strategies for problem solving in the midst of life's uncertainties. The specific hypothesis is that the higher the emotional intelligence score, the greater the retention rate. In order to test this hypothesis, the researcher used a mixed-design format. A quantitative study was used in assessing the emotional intelligence of a selected group of first-generation students. The MSCEIT V2.0 was used to measure emotional intelligence. Following the ability tests, qualitative methodology was used to collect data from the participants through open-ended student interviews. The qualitative methodology allowed the researcher to determine if there is a pattern that emerges from the input

given by the participants. In addition the Freeze-Frame® technique was used to determine if emotional-management training was related to higher retention and higher emotional intelligence.

The data was collected by the investigator of this study. The qualitative process included but was not limited to in-depth interviews. The quantitative data consisted of pre- and post-emotional intelligence assessment scores. The data was used to determine if the emotional intelligence score had a positive relationship in the retention of the first-generation learner at the two-year college.

The quantitative method was used to measure whether high emotional intelligence score resulted in higher retention and conversely whether low emotional intelligence score resulted in lower retention. A t-test was the statistical tool used to analyze the quantitative data. In-depth interviews were used to evaluate how the research participants experienced the phenomenon of being first-generation college students and how they interpreted their experiences.

Organization of the Remainder of the Study

The remainder of this study is organized into the following four chapters. Chapter 2 is the literature review for this study. Chapter 3 describes the methodology used in this study.

Chapter 4 discusses and interprets the data collected in this study. Chapter 5 discusses any recommendations and conclusions drawn from the data analysis.

CHAPTER 2. LITERATURE REVIEW

Introduction

The review of literature for this study will focus on the evolution of the two-year college, the first-generation learner, the issues of retention, the evolution of emotional intelligence and Freeze-Frame®.

The development of the two-year college paved the way for more diverse segments of population to experience higher education. In the early days of two-year colleges in the United States, admission was offered by highly selective institutions. Only those individuals from the "right families", the affluent, or those with the most advantages in life had the opportunity to attend college. During this period, higher education focused on the professions. In addition to the criteria just mentioned, gender was a barrier for many who aspired to a college degree; not many educational opportunities were made available for women. As the two-year college movement continued to evolve, however, the idea emerged that anyone who had the desire to attend college should have that opportunity. The identified open-access branch campus is a two-year college that has opened the doors to higher education for many people who would otherwise have been excluded. The shift to an open-access policy has led to an unprecedented growth in the first-generation

student population at two-year schools like the open-access branch campus featured in the present study.

Increasing numbers of first-generation students continue to populate the college campuses in the United States. Richardson and Skinner (1992) suggest that most first-generation students are likely to enroll in a two-year college. Usually the two-year college is located near the student's home, is affordable, and has an open-access mission. Because many first-generation students are non-traditional aged students, attending a two-year college that is smaller and typically more personal is inviting. In addition many first-generation students do not understand the norms, values, and expectations of the college environment that second and third generation learners take for granted. For instance, first-generation students may not know how to apply for financial aid, how to contact a professor, or where to find resources needed for academic success. The first-generation student's lack of knowledge often leads to high levels of stress, anger, and other negative emotions that inhibit performance which ultimately may result in his or her dropping out of college.

The Board of Regents in which the open-access branch campus resides has begun to hold colleges accountable for student retention. Colleges have begun to address the issue of retention

by examining ways to help students meet their academic goals. A number of retention models have been described in the literature (King, 1993, Harvey-Smith, 2003). This researcher will discuss three of these models later in the literature review. The models contain important insights on situations and experiences that students face when entering college. By implementing critical aspects of these models, colleges may be in a better position to meet the academic needs of students.

A thorough analysis of the literature shows that one factor that is often overlooked in student retention is the area of emotional intelligence. Students may enter college academically deficient but colleges have in place measures to improve the lacking skills. Currently, the open-access branch campus does not assess emotional intelligence skill set. The student may be deficient in his/her ability to use emotional intelligence skills, and the College is not even aware of it. Furthermore, research conducted by the Institute of HeartMath supports the idea that students can learn to self-regulate their emotions. This position is important to the present study in that if students can learn and then apply tools to neutralize and lessen the debilitating effect of stress, frustration, and other negative emotions. Research results from the Institute of HeartMath has shown that students' higher order thinking,

decision-making, problem-solving, self-reflection, and performance may be facilitated. These skills are either similar to or the same as the emotional intelligence skill sets. The Institute of HeartMath's research provides direct support to the growing evidence that emotional intelligence is a skill set that can improve with practice.

Another important aspect of the Institute of HeartMath's research that is germane to the present study indicates that the heart has its own nervous system that works independently from the brain (Institute of HEARTMATH, 2001, p. 8). Studies conducted by the Institute of HeartMath suggest that intervening at the emotional level is a way to change mental patterns and processes. Changing mental patterns and processes may in turn help to improve one's emotional intelligence skills. The emotional-management tool, Freeze-Frame® developed by the Institute of HeartMath is a technique used to allow people to disengage from negative mental and emotional reactions and shift attention to positive emotions. The Freeze-Frame® tool provides a strategy that may be beneficial to students as they cultivate and strengthen their emotional skill sets. In the literature section, a more in-depth discussion of the Freeze-Frame® emotion-management tool will be provided. In the next section a

brief historical overview of the two-year college will be presented.

History of the Two-Year College

The large number of first-generation college students found in today's two-year colleges can be traced back to a historical conference held in St. Louis in 1920. History has shown that the proceedings of the St. Louis Conference marked the turning point in the two-year college movement. This conference occurred in large part due to an interest in the two-year college movement expressed by the US Commissioner of Education, Philander Claxton (Pedersen, 1995). The conference was organized by the US Commissioner, Claxton. In attendance at the conference were 34 junior-college leaders. This was the first national conference dedicated to the junior-college movement.

The conveners of the St. Louis conference created the American Association of Junior Colleges. The association ensured that the junior college would be under the control of this group of leaders. This organization would provide a framework for the institution's periodic revitalization and a place where members could advocate the core values of broad access, low cost, and a community-based curriculum (Pedersen, 1995). These core values are the driving force behind the open-access branch campus

identified fro the study. The current mission statement of the open-access branch campus was adopted in September, 2003. The mission still reflects the core values of the historic St. Louis Conference. The open-access branch campus' mission statement as paraphrased is: the open-access branch campus embraces life-long learning in a dynamic and supportive open-access educational community that fosters intellectual, cultural, and social development.

During the 1920's many of the junior colleges were closing their doors. The sponsoring communities found it difficult to maintain the original enthusiasm and funding that were present when the junior colleges were founded. Some of the private junior colleges were denomination based. These denomination-based junior colleges had to make some tough choices-raise tuition or deny access to poorer students who could not afford the tuition (Pedersen, 1995).

In addition, college entrance, even among two-year institutions, during this time period was very selective. Only students who earned a high school diploma, and completed at least 15 Carnegie units in a traditional program of foreign languages, arts and sciences, were considered for admittance to college. Only one in 15 of all 18-year-olds during the early

1920's earned a high school diploma and had enough Carnegie units. Therefore admission standards had an enormous impact on access to higher education. According to Pedersen (1995), higher education was an opportunity available only to the academically gifted and well to do.

David MacKenzie presented the critical idea of universal access at the St. Louis Conference which later shaped the core values of two-year colleges emerging in the late sixties and early seventies. MacKenzie challenged society to use its schools of higher education to enlarge the general knowledge of the whole population. He viewed it as unfair for society to provide a few with a higher education that leads to the professions, while denying all others the general benefits of increased knowledge (Pedersen, 1995).

Founded in the early 1970's the open-access branch campus is a member college of a major urban research I university. In 1968, a group of county businessmen had a vision and that vision has become what is known today as the open-access branch campus. During the late 60s, and until just recently, the County was considered the western edge of the Appalachia region. The goal of this group of businessmen was to change the economic and political conditions of the county through higher education.

Since 1940, population growth in the County has been quite rapid but erratic. During 1940-1950 there was only a 15% increase in population. However by 1960, the population increased by 52%. The growth between 1950 and 1960 was a result of normal growth trends and improved accessibility, rather than the result of any exceptional phenomena. The 1960's experienced a rate of development that slowed because of restrictive controls (County Population and Economic Trends, 1967).

Age trends in the population were changing in the County. The median age in 1940 was 31.0, 1950 was 30.0 and in 1960 was 24.6. In 1960's the median age in the Tri-State region was 29.0. The lower median age in the County was the result of the migration and fertility of young adults who comprise the most mobile and prolific segment of the population (County Population and Economic Trends, 1967).

Residents of the County have traditionally lagged in educational attainment compared to the Tri-State regional and national indicators. The data listed in Table 1 shows the trend in the gap in educational attainment in the early 1960's.

Table 1

Educational Accomplishment Trends in the County

	Males over the age of 25 who have completed			
	High School		College	
Area	1940	1960	1940	1960
County	18.1%	34.2%	3.5%	6.7%
Tri-State Region	22.9%	37.2%	6.2%	10.5%
United States	22.6%	39.5%	5.5%	9.7%

In addition to the gap in education, the income levels of families in the County also reflected the low family income which contributed to the low educational attainment of residents in the County. Family income for the County residents in 1949 was $2,657. The family income rose to $6,174 in 1959 compared to the Tri-State median of $3,291 in 1949 and $6,329 in 1959 (County Population and Economic Trends, 1967). By the 1960s, the conditions were ripe for a two-year college in the County. An institution of higher education would give the residents an opportunity to attend college and raise their income levels significantly, something that in the past had not happened.

In 1960, the labor force of the County was mostly male (62.0%) and blue collar. Farmers made up 5.1% while white collar jobs accounted for 27.9% (County Population and Economic Trends, 1967). By 1967, the County experienced tremendous growth in its population, yet the area still had limited employment opportunities. For example, in 1965 only 12,984 people were

employed within the county at a time when the population was 96,697. The employment ratio in the County was .14% compared to the Tri-State region of .36% (County Population and Economic Trends, 1967). While the growth was rapid, there was little planning or zoning. By 1965, the growth slowed. Land costs were depressed and unemployment increased and there was an attitude of pessimism.

On December 15, 1967, the Governor of the State promised the citizens of the County that the State would provide the money for a new college in the County. The College would provide more than 5,000 new jobs. This institution of higher education, according to the Governor, would be the key to establishing a new image for the County.

In addition to creating a center for learning, the establishment of the College marked the beginning of a cooperative effort between the major urban university and the County's residents to create a vibrant, trained workforce for the local businesses and industries.

First-Generation

Decreasing the educational divide and increasing access to postsecondary education for underrepresented students is an issue of social justice (Carter & Robinson, 2002). Forty-seven percent of all new college students are first-generation. Only

29% of first-generation students enroll immediately after high school graduation compared to 73% of second-generation students (Duggan, 2001). The typical first-generation college student is older. Women first-generation undergraduate students outnumber males (London, 1992). The social minority that contributes the most first-generation college students today is Latino. The typical grandparent of all first-generation students did not finish high school. The first-generation learner's parents may not have finished high school and were employed in blue collar or lower-level white-collar jobs.

Most first-generation students emphasized that the completion of a postsecondary degree would likely improve their economic and occupational futures. Frequently, many first-generation college students associate the desire for a college degree with the ability to earn more money, security, and self-empowerment. A recent first-generation graduate said, "I want better employment, more money, a better standard of living, and more independence" (Richardson & Skinner, 1992, p. 30).

The literature (Richardson & Skinner, 1992; Striplin, 1999; McConnell, 2000; Choy, 2001; Duggan, 2001) indicates that first-generation students are more likely to enroll in a community college than in a baccalaureate institution. Research indicates many different reasons why students enroll in a community

college. One is that the first-generation student is probably going to be working and going to school at the same time. Many go to school and work full-time. Others work part-time and go to school part-time. This is because first-generation students have an increased chance of having a dependent. As one African American first-generation graduate said of his college experience, "I am a full-time student, I am employed full-time, and I was a full-time daddy and husband" (Richardson & Skinner, 1992, p. 35). Another reason for choosing a community college is because many first-generation students live at home while attending school. There is reluctance on the part of the first-generation students to leave home and the culture in which they are comfortable. Other reasons may be that they may not be academically prepared and may be unfamiliar with the college process.

Many of these factors that are present in first-generation students' lives may lead to stress. This stress, in turn, may lead to poor decision-making and a lack of critical thinking. The factors described above may be reflected in the student's emotional intelligence assessment. If students are experiencing stress and negativity in their life, then there may be a need to help them improve their emotional intelligence skills.

Many first-generation students tend to have less involvement with their high school peers and teachers than do students whose parents attended college. Consequently, these students may have a lack of knowledge in the college enrollment process. For example, many first-generation students do not know that they are required to take a college entrance test like the ACT or SAT (Choy, 2001). The first-generation learners' parents cannot provide much assistance because they did not attend college and are not sure of what to do either. Also the issue of financial aid and how to apply for it can be an enigma for the first-generation student.

High-school curriculum does have an effect on the success of the first-generation college student. Eighty-one percent of first-generation students who took a rigorous high-school curriculum remained in college three years after high-school graduation (Choy, 2001). Eighty-two percent of the first-generation students who take a rigorous secondary curriculum take either the ACT or SAT. For those who take the ACT or SAT, 71% apply to a four year institution (CollegePrep-101, 2002)). Of the 71% that apply to four-year institutions, 30% apply to private and 35% apply to public (Duggan, 2001).

Once the first-generation student arrives on the campus of the postsecondary institution, other social and psychological

issues come into play. For instance, most first-generation college students feel that they are not psychologically prepared for college. They frequently describe the first exposure to the campus as a shock that took them years to overcome (Richardson, Skinner, 1992, p. 33).

In addition the first-generation student tends to have weaker reading, math, and critical thinking skills. Poor performance in these areas often leads to feelings of frustration, fear of failure, uncertainty, and low self-esteem. Ultimately, first-generation students may exhibit patterns of avoidance behavior and essentially retreat from college.

By attending college first-generation students may separate from their pasts. This often means leaving the culture in which they were raised. First-generation students are often unaware of the personal and social dislocation attending college may have with their birth culture. The college culture may be, to some extent, in conflict with the culture of their family and neighborhood. Choosing between the conflicting cultures can be difficult. Tensions frequently require students to renegotiate relationships with friends, family, and relatives, not always done easily or without animosity (London, 1992). Often the low level of emotional intelligence that first-generation students display inhibits them from making critical, necessary

adjustments to the college environment. This failure may hinder the student's ability to adapt to new situations. The consequences for the lack of adaptability may, in the overall picture, result in lower retention.

Negotiating cultural obstacles involves a loss of a familiar past. Often times the student is receiving conflicting messages, one to achieve in the unfamiliar world and the other to stay at home, living in their past culture. This past may include their family as well as personal feelings, both of which are disturbed by periods of confusion, isolation and even distress. These feelings may be brought about by how students adapt to college life, such as the way they dress, their use of vocabulary and their choice in music. College is often viewed as an institution that espouses middle class values. Many first-generation college students are from low-income working-class families. The movement from one social class to another can have unsettling emotional effects that are as great as those produced by stress in familial relationships and personal feelings. London (1992) drawing upon the ideas of Max Weber, describes some of the parameters in status-group membership that must undergo change:

> Language (including vocabulary and accent), social conventions and rituals of all kinds, patterns of

> economic consumptions, understandings regarding outsiders, relations with outsiders, and matters of taste in clothing, food, grooming and hairdo ……extended the list for students to include tastes in music, sports, cars, and recreation. These items, in other words, are part of the substance or content of a status group's culture (p. 7).

Many first-generation college students find they are in conflicts based on cultural membership when they choose a path in life that deviates significantly from that of their parents (Striplin, 1999). The first-generation student often needs to learn new and more effective ways to respond to family, friends, professors, and other members of the college community. Learning these adaptive strategies would be easier if the student experienced an increase in emotional intelligence.

First-generation students have a more difficult time adapting to the social and academic systems of college than do second-generation learners. First-generation students typically have lower levels of social integration with their college peers. First-generation students were less likely to be involved in campus organizations, had fewer friends on campus and were more likely to say their best friends were off campus (McConnell, 1992). According to a study conducted by Attinasi

(1989), social integration was an important factor in the persistence of first-generation students. Terenzini & others (1994) found that first-generation students delayed involvement in the social systems of college until they were assured that they could perform adequately academically. First-generation college students may find a more constructive approach as being one in which they develop a positive relationship between social integration, academic performance, and retention. All of the above factors provide cogent reasons for assessing the first-generation learner's emotional intelligence and providing emotional intelligence management training when indicated.

First-generation students tend to have a lower rate of retention. This was found to be true in both community colleges and four-year institutions (McConnell, 2000). The National Center for Education Statistics (2002) shows that almost half of the students who enter higher education will leave before completing an associate's degree. Retention is a major problem facing institutions of higher learning. In the next section, three retention models that offer strategies for improving student retention will be reviewed.

Retention Models

The first retention model to be examined is the academic- and social-integration model devised by Tinto. Tinto's model was

developed in 1987 and is based on the work of Dutch anthropologist Van Gennep and French sociologist Durkheim. In 1960, Van Gennep focused his work on how individuals within a society transition from youth to adult membership. Van Gennep focused on three stages of transition. The first is the separation from past associations. The second is the transition as the person begins to interact in new ways with new groups. And the third is the incorporation or the feeling that the individual has become a member of an established group (King, 1993). Tinto used Van Gennep's theory and applied it to college students. Tinto theorized that students face very similar transitions when they enter college. Failure to move successfully through these transition phases may mean that students will not stay if they feel they do not belong.

Durkheim studied the idea that one form of suicide occurs when individuals are "unable to become integrated into and to establish membership within their society" (King, 1993, p. 24). Tinto used this theory to describe college students, who must integrate into society. Students must integrate into the social and academic system of the higher education environment. Like Van Gennep's theory, failure to establish membership into the society of the higher education institution may cause a student to withdraw, a less drastic form of "suicide" than that Durkheim

described. Therefore, one's ability to integrate into an academic setting may require a certain amount of emotional intelligence. If students are deficient in their emotional-intelligence skills, then they may be more likely to withdraw.

Tinto's model based on the work of Van Gennep and Durkheim focuses on the individual students and their varied backgrounds. For example the student's ethnicity, secondary-school achievements, family support and encouragement, and socioeconomic status are the varied backgrounds that students bring with them to college (Harvey-Smith, 2002). The institutions are not able to control for these variables. Students may attend college because they are told by parents that is what they have to do; as a consequence of this external "motivation," students may lack direction. Other students may have been planning to attend college for many years and are very clear about his or her direction. According to King (1993) Tinto's model suggests that when students entering college encounter situations within the "academic and social systems of the institution that involve interaction with faculty, staff and student," students may then adopt and become established in that society (p. 24). If the experiences are positive then the student has become integrated and the student's commitment is strengthened. If, on the other hand, the experiences of the

students are negative, then students will be more likely to withdraw. This idea may also be based on whether students have high or low emotional intelligence. If students are higher in emotional intelligence, he or she may be more likely to embrace college as a positive experience; whereas students with low emotional intelligence may look at the experience negatively which accounts for the lack of retention.

The second retention model is by Pascarella and Terenzini. King (1993) reviewed Pascarella and Terenzini's theory which was based on Tinto's. The theory measured academic and social integration through the development of five scales. The five scales are

> 1) students' peer-group interactions, 2) students' informal interaction with faculty, 3) students' perceptions of faculty concern based on student development and teaching, 4) students' academic and intellectual development, and 5) students' institutional and goal commitments (p. 25).

Pascarella and Terenzini's research is known as the student-faculty informal contact model. This model is important to this study because of social integration and engagement factors. If students are high in emotional intelligence they are likely to be integrated and engaged in their college experience.

Pascarella and Terenzini theorized that the process of how a student's characteristics fit or interplay with institutional characteristics affects retention. This model also supports the notion that additional exposure in college, both socially and academically impacts informal contact with faculty (Harvey-Smith, 2002).

The third model that is often used to develop retention strategies is the attrition model by J. P. Bean. Bean's theory suggests that student's intentions are shaped by prior experiences and attitudes and that these lead to retention or attrition. Under-prepared students may have more negative experiences, which may lead to fear of failure and increased anxiety. This description of under-prepared students support the idea that if students were aware and trained to use emotion-management tools they may be able to contend more effectively with negative experiences and attitudes. The central theme in Bean's attrition model is that there is an interrelationship between and among attitude, intention and behavior. Bean's attrition model developed four sets of variables. They are "background, organization, environment and attitude" (Harvey-Smith, 2002, p. 4). These variables affect the outcome of the student's intention to stay or leave college. Bean's model has

been noted for the modifications made to the theory to better explain the retention issues facing nontraditional learners.

All three retention models-academic and social integration, student-faculty informal contact and attrition-view retention as an outcome of a complex set of interactions. Two of the models, academic and social integration and attrition, suggest that pre-college characteristics affect how successful the student will be at transitioning to college. All three models conclude that the match between student and institution is critical for retention. The retention models also suggest that the students' ability to adapt to the academic setting is as important as the institution adapting to meet the needs of the students. Students may be able to adapt to the academic setting by focusing on ways to increase or maintain emotional intelligence.

Retention Factors

There are many factors that influence retention. Students enter college with a variety of backgrounds and experiences that affect their ability to persist. In addition to factors that affect student persistence, there are academic and institutional factors that may affect retention.

The first academic factor to be examined is academic under-preparedness. Because many two-year colleges, like the open-access branch campus, are open access, many students who would

not be admitted to a selective college are not prepared for the rigors of college life. Remedial classes in math and English are often the norm for many students. Student under-preparedness may be due to being out of school for sometime, not taking a college curriculum in high school, or not graduating from high school. Any of these reasons may be why students enter college with a need for some remediation. If students do not receive the remediation and take college level classes, then their time in college may be limited.

Another academic factor may be that students have unrealistic expectations of college. Students may think that college is a continuation of high school. Sliding by in high school or cramming for a test the night before worked in high school, which students may not able to do in college. The students may also be first-generation learners. Therefore, he or she may not know what to expect.

A third academic factor may be that students do not have educational or career goals. Directionless students may be of the type who is going to college because he or she has to go. Students may also be very talented but have no idea what type of career path he or she would like to pursue. According to King, (1993) "uncertainty about what to study is the most frequent

reason talented students give for dropping out of college" (p. 26).

Students may also have a difficult time transitioning to college for other reasons. They may be unable to adjust to the personal life changes of attending college. Many students may have difficulty identifying with a group or developing friendships in college. This is especially true in a two-year commuter campus like the open-access branch campus used in the present study.

All of the factors discussed above may be indicators of inhibited emotional intelligence. If students are experiencing some of these factors, then they would be prime candidates for emotional-intelligence training. Increasing emotional intelligence may help the first-generation students make better decisions and engage in better problem solving. In addition to the student factors that influence retention, the academic institution plays a role in retention as well.

An institutional factor may be the student-faculty interaction discussed in the Pascarella and Terenzini model (King, 1993). Students may not be able to connect with faculty members because the faculty may not be involved with students or student organizations. As stated by King (1993) Tinto suggests

that students' interactions with faculty outside the classroom are as important to them as the interaction in the classroom.

Campus climate is another institutional factor that may determine student retention. At many two-year campuses, students arrive for class and leave immediately afterwards with little time for student-faculty interaction. The campus is merely a place to take classes. These factors affecting retention lead to the conclusion that institutions must be more accessible to the students and that students need ways to improve their emotional intelligence so they can cope with their new social environment more effectively. If there is little connection between faculty and students, students do not have as much difficulty leaving college.

Emotional Intelligence

In the beginning of research into emotional intelligence, most research separated intelligence and emotions. Researchers did not discover a connection between the two concepts until the 1970s. At that time, researchers (Salovey & Meyer, 1990; Goleman, 1995; Simmons & Simmons, 1997; Salovey & Sluyter, 1997; Bodine & Crawford 1999) began to recognize that emotions and intelligence might indeed influence each other.

During the 1970s, research began on other factors besides IQ to determine success in life. According to Simmons and

Simmons (1997) "emotional intelligence—not IQ—is the single most important character trait for success in personal adjustment, in relationships, and in job performance" (p. xi). Simmons and Simmons (1997) describe how the measurement of 13 aspects of character that relate to success in life began. The elements included emotional energy, stress, optimism, self-esteem, commitment to work, attention to detail, desire for change, courage, self-direction, assertiveness, tolerance, consideration for others, and sociability. The measurement of these 13 aspects of character progressed into what is known today as emotional intelligence.

Simmons and Simmons (1997) describe emotional intelligence as the "emotional needs, drives, and true values of a person that guide all overt behavior" (p. 11). Simmons and Simmons use a situation to describe emotional intelligence as "a person's interests that tell you what a person likes to do. A person's mental and physical skills tell you what a person can do. However, a person's emotional intelligence determines what they do and will do" (p. 11).

In 1990, Salovey and Mayer used the term EI to "directly contrast with the term 'intelligence'" (p. 2). The term EI has become known as the emotional quotient (EQ) and refers to a person's level of emotional intelligence (Simmons & Simmons,

1997, p. 2). Salovey and Sluyter (1997) state that "emotional intelligence is 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 so as to promote both better emotion and thought" (p. 22).

According to Matthews, Zeidner, and Roberts (2002), Rueven Bar-On constructed the first commercially available operational index for the assessment of EI. Bar-On's assessment closely resembles the clusters of established personality traits by Goleman. Bar-On characterizes EI as "an array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures" (p. 15).

Brown, George-Curran, and Smith (2003) describe how research in emotional intelligence has developed over the past decade. Brown, et al. describes Salovey and Mayer's 1990 findings in which emotional intelligence is based on the theory of interpersonal and intrapersonal intelligence. Interpersonal intelligence is described as the ability to understand others. Intrapersonal intelligence is described as the capacity to understand oneself.

Emotional intelligence focuses on a person's ability to manage themselves and relationships with others (Brown, et al., 2003; Lynn, 2002; Barchard, 2003 and Matthews et al., 2002). Brown et al. (2003) affirms Salovey and Mayer's position that emotional intelligence is a sub-piece of social intelligence. EI entails the "capacity to efficiently handle psychological and social problems, to accurately express emotions, to correctly assess the emotions of others, to self-regulate one's own sentiments, and to use one's emotions to achieve one's goals" (p. 381).

Bodine and Crawford (1999) and Matthews, Zeidner and Roberts (2002) view emotional intelligence as an ability to understand one's own emotions as well as those of others. Matthews, et al. suggests that emotional intelligence refers to the "competence to identify and express emotions, understand emotions, assimilate emotions into thought, and regulate both positive and negative emotions in oneself and others" (p. xv).

According to Goleman (1995) there are five main domains of emotional intelligence. The first domain is the ability to recognize one's emotions. Another domain is to be able to manage and handle emotions appropriately. The third domain is self-motivation. Empathizing with others is the fourth domain. The last domain is the ability to handle relationships and the

emotions of others. Goleman (1995) theorizes that "emotional intelligence nurtured by experience will enable an individual to develop specific skills and abilities" (p. 43).

Bodine and Crawford (1999) state that emotional intelligence consists of building blocks where each level incorporates and builds upon the capabilities of all previous levels. The building blocks are as follows:

> the ability to accurately perceive, appraise, and express emotion; the ability to access or generate feelings on demand when they can facilitate understanding of self or another; the ability to understand emotions and the knowledge that derives from them; and, finally, the ability to regulate emotions in order to promote emotional and intellectual growth (p. 35).

All of these definitions view emotional intelligence as an important skill that plays a crucial role in developing the whole person. Most of the definitions view emotional intelligence as the ability to understand one's emotions, to understand the emotions of others, and to enhance thought. The literature supports the infusion of emotional intelligence skill sets into academic skills sets. The two combined provide a

broader view of life's choices and decisions and enhance a student's quality of life in the future.

Determining which emotions are considered the primary emotions is important in understanding what to assess when students transition to college. According to Goleman (1995) emotion is a "reference to a feeling and its distinctive thoughts, psychological and biological states, and range of propensities to act" (p. 289). Even with an understanding of emotions, researchers continue to have a difference of opinion regarding which emotions are more primary than others.

Goleman (1995) states that there are eight primary emotion families that make-up the core emotions people experience. These include "anger, sadness, fear, enjoyment, love, surprise, disgust and shame" (p. 43). There are many subcategories that have different degrees of intensity and energy. Each of these core emotions finds expression through a range of subcategories. For example, anger may be expressed as resentment, animosity, irritability, annoyance, outrage, or exasperation. The other seven families manifest themselves through similar ranges of emotions.

The core emotions have been used to develop various models of emotional intelligence. Emotional intelligence has major implications for learning and as a result represents an enormous

challenge to higher education and how it responds to these models of emotional intelligence.

Emotional Intelligence Models

Having high emotional intelligence means that a person has the ability to learn from their emotional experiences and to manage them. The two models of emotional intelligence- ability and mixed theory- will be reviewed. The ability theory was first developed by Salovey and Mayer (1990) and then revised by Mayer, Caruso and Salovey (1999). It divides emotional intelligence into four areas. The second model that will be explored is Goleman's (1998) mixed model, which is based on two categories, personal and social competence. These two categories comprise five domains, three in personal and two in social.

The ability model, developed by Mayer, Caruso and Salovey (1999) is divided into four areas. The first area focuses on emotional perceptions and expression. This area includes a person's ability to accurately assess their emotions and those of others. For example, Ciarrochi, Forgas, and Mayer (2001) state that a "person should be able to perceive emotions in faces, music, and designs" (p. 10).

The second area of the ability model entails the ability to use emotions to facilitate thought. This area includes the ability of a person to accurately associate emotions to other

sensations. Ciarrochi, et al. (2001) provides the example of a person who sees a color or feels a texture and would then be "able to accurately recognize an emotion associated with that experience" (p. 10). This area of ability also includes the very important idea that to "varying degrees people can use their emotions to enhance their thoughts" (p. 12).

The third area of the ability model is for a person to be able to understand emotions by "analyzing their components, to make transitions from one emotion to another, and to navigate among the complex feelings that a person may experience in a social situation" (Ciarrochi, et al., 2001, p. 12).

Finally Mayer, Caruso and Salovey's (1999) model describes the ability of a person to manage their emotions as well as the emotions of others (Ciarrochi, et al., 2001, p. 12). The fourth part of the ability model by Mayer, et al. (1999) overlaps, as will be shown, with the mixed model by Goleman. The ability model by Mayer, Caruso and Salovey will be the focus of this research study.

Emotional intelligence according to Goleman (1998) is grouped into two categories. The categories listed in Table 2.2 describe the domains, which are used to determine how a person manages their emotional intelligence and relationships with others.

Table 2

Emotional Intelligence Model

Goleman's Emotional Intelligence Model			
Categories	Domain	Domain	Domain
Personal Emotional Intelligence	Self-awareness	Self-regulation	Motivation
Social Emotional Intelligence	Empathy	Social Skills	

Any test of emotional intelligence should assess both categories and their component domains. Each domain will be explained in further detail.

The first domain, self-awareness, is the ability to know one's internal states, preferences, resources and intuitions. The self-awareness domain has three main parts: 1) emotional awareness, which is the ability to recognize one's emotions and their effects; 2) accurate self-assessment, which is the ability to recognize one's strengths and limits; and 3) self-confidence, which is a strong sense of one's self-worth and capabilities (Goleman, 1998).

The second domain, self-regulation, is the ability to manage one's internal states, impulses, and resources. There are five parts to the self-regulation domain. The first part is self-control, which is the ability to keep disruptive impulses and emotions in line. The second part, trustworthiness, involves maintaining standards of honesty and integrity.

Conscientiousness, is the third part of self-regulation, is the ability to take responsibility for personal performance. The fourth part is adaptability, which is the ability to be flexible in handling change. Lastly, innovation is the ability to be comfortable with new ideas, approaches and information (Goleman, 1998).

Motivation is the third domain of the personal category. Motivation consists of four parts that guide or facilitate reaching goals. The first part is achievement drive, the desire to strive to improve or meet a standard of excellence. Next, commitment is the ability to align with the goals of a group or organization. The third part of the motivation domain is initiative, which is the ability to act on opportunities. The final part is optimism, which is persistence in pursing goals despite obstacles and setbacks (Goleman, 1998).

The next two domains, empathy and social skills, are the heart of social competence. Empathy is the awareness of others' feelings, which consists of five parts. The first part is the capability to understand others, which includes the ability to sense others' feelings and perspectives and to take an active interest in their concerns. The second part is developing others which include the skill to sense others' development needs and to bolster their ability. The third part is service orientation,

the ability to anticipate, recognize, and meet others' needs. The fourth part of empathy is leveraging diversity which is the ability to cultivate opportunities through different kinds of people. The final part of empathy is political awareness. This includes reading a group's emotional currents and power relationships (Goleman, 1998).

The last domain in Goleman's (1998) framework is social skills. Social skills consist of being proficient in inducing desirable responses in others. Social skills consist of eight areas. The first is influence, which is wielding effective tactics for persuasion. The second is communication, which is the ability to listen openly and send convincing messages. The third skill is conflict management, which is the skill to negotiate and resolve disagreements. Leadership is the fourth skill, the ability to inspire and guide individuals and groups. Initiating and managing change is known as change catalyst, which is the fifth skill. The sixth skill is building a bond, the capacity to nurture instrumental relationships. Collaborating and cooperating is the seventh skill. This entails working with others toward shared goals. The last skill that is part of the social skill domain is team capabilities, which is the competency of creating group synergy in pursing collective goals.

The 25 skill sets included in the five domains of Goleman's mixed-method theory of emotional intelligence form relationships to determine the strengths and limitations of a person's emotional intelligence. These twenty-five skills sets relate to events that many students experience in their academic careers. These strengths and limitations may impact how a person is able to pursue and achieve academic and life goals.

Both models, ability and mixed, are ways of describing the emotional intelligence of a person. Both focus on how a person is able to handle his or her emotions in various situations. Both models explore how a person manages his or her own emotions and relates to others' emotions. The key difference between the two models is the assessment of motivation and the capacity to engage in relationships.

In the next section, the Freeze-Frame® emotional-management tool will be examined. The Freeze-Frame® technique provides a mechanism for practicing and developing the skill sets identified in ability and mixed models.

Freeze-Frame®

One of the first documented psychophysiological research studies began with Walter Cannon in 1923. Cannon showed that changes in emotions are accompanied by predictable changes in heart rate, blood pressure, respiration and digestion. The

Institute of HeartMath (2001) reports that Cannon discovered that people can be "aroused," referring to the mobilizing part of the nervous system that energizes us for fight or flight; but in more quiescent moments, the calming part of the nervous system cools people down (p. 4). Cannon assumed the autonomic nervous system and all the physiological activity operated in connection with the brain's response to a stimulus.

However, during, the 1960s and 1970s, John and Beatrice Lacey began to research the "conversations" between the heart and brain. The Laceys observed that the heart communicates with the brain in a variety of ways that significantly affect how people perceive and react to the world. The Laceys, then, expanded Cannon's research to include the heart. The research discovered that the heart seemed to have its own peculiar logic that frequently diverged from the direction of the automatic nervous system. The brain was no longer in total control. The heart appeared to send meaningful messages to the brain that it not only understood, but obeyed. In addition to the messages, the research by the Laceys found that the messages could affect a person's behavior. This research suggested that the heart and nervous system were not simply following the brain's directions as Cannon thought.

In 1991, Dr. J. Andrew Armour, introduced the idea of a functional "heart brain." The research by Armour suggested that the heart has a complex intrinsic nervous system that is sufficiently sophisticated to qualify as a "little brain" in its own right. The heart's brain is an intricate network of several types of neurons, neurotransmitters, proteins and support cells similar to those that are found in the brain. The elaborate circuitry found in the heart allows it "to act independently of the cranial brain-to learn, remember, and even feel and sense" (HeartMath Research Center, 2001, p. 4).

According to the HeartMath Research Center (2001)-and this conception is significant for the present study-"hormonal, chemical, rate, and pressure information is translated into neurological impulses by the heart's nervous system and sent from the heart to the brain" (p. 4). The signals that flow out of the brain to the heart, blood vessels, and other glands and organs may also "cascade upward into the higher centers of the brain and in turn influence perception, decision making and other cognitive processes" (p. 4).

In 1983 the heart was reclassified as an endocrine hormonal gland due to the isolation of the hormone produced and released by the heart called the atrial natriuretic factor. Recently it was discovered that the heart also secretes a hormone called

oxytocin referred to as the "bonding hormone" (HeartMath Research Center, 2001, p. 6). Evidence indicates that the hormone oxytocin is also involved in "cognition, tolerance, adaptation, complex sexual and maternal behaviors as well as in the learning of social cues and the establishment of enduring pair bonds" (p. 6).

The ancient Greeks believed that human thinking and feeling, or intellect and emotion, should be considered separate functions. The research conducted by the Institute of HeartMath in neuroscience confirms that emotion and cognition are best thought of as separate but interacting functions or systems, each with its unique intelligence. The key to the successful integration of the mind and emotions lies in increasing consistency in both systems and bringing them into phase with one another. Although the two-way communication between cognitive and emotional systems and the actual number of neural connections between them is fixed, the number of one-way paths running from the emotional centers to the cognitive centers is greater than the number going the other way. This lack of reciprocity in some ways explains and underscores the tremendous power emotions have on cognition. Once an emotion is experienced, it becomes a powerful motivator of future behaviors, "affecting moment-to-moment actions, attitudes and

long-term achievements" (HeartMath Research Center, 2001, p. 6). Because emotions exert such a powerful influence on cognitive activity, the Institute of HeartMath has discovered that intervening at the emotional level is often the most efficient way to initiate change in mental patterns and processes. The application of tools and techniques designed to increase coherence in the emotional system can bring the intellect into greater coherence.

The coherence between the mind and emotions varies with time. When the mind and emotions are out of synchronization, overall awareness is reduced. When the mind and emotions are in synchronization, awareness is expanded. The interactions between emotions and cognition affect people on a variety of levels, including "vision, listening abilities, reaction times, mental clarity, feeling states, and sensitivities-all influenced by the degree of mental and emotional coherence experienced" (HeartMath Research Center, 2001, p. 7).

The Institute of HeartMath suggests and supports the idea that individuals can gain more conscious control over the process of creating increased coherence within and between the mental and emotional systems. The Institute calls this "psychophysiological coherence" (HeartMath Research Center, 2001, p. 7). This internal state involves a balance, harmony and

synchronization within and between cognitive, emotional and physiological processes. This state is associated with high performance, reduced stress, increased emotional stability, and numerous health benefits. The Institute suggests that the research and experience show that the emotional system can be developed and brought into coherence. This achievement requires tools to develop and its connection with the brain and emotional system.

Freeze-Frame® is just such an emotion-management tool. It allows people to disengage from enervating mental and emotional reactions while on task by shifting their attention from the mind to the area around the heart and self-generating a sincere positive feeling state such as appreciation, love or care. This process prevents or even reverses the body's normal destructive stress response, changes the normal destructive stress response, and changes the bodily feedback sent to the brain, thus arresting physiological and psychological wear and tear. The use of Freeze-Frame® can shift perceptions. Individuals find they can think more clearly and often transform an inefficient, emotionally draining response into a proactive, creative one (Institute of HeartMath, 2001)

The Freeze-Frame® technique teaches people how to take charge of one's emotions and to refocus emotions so that they

work in a positive way. This technique consists of five steps. The first step is to recognize that one is experiencing stress and to take a timeout and put those feelings on hold.

The second step to Freeze-Frame® is to shift the focus to the area around the heart. Once the focus has shifted to the area around the heart, a person should focus on their breathing. A person using the Freeze-Frame® technique should take "four to five seconds on the in-breath and four to five seconds on the out-breath" (Institute of HeartMath, 2002, p.27). The third step is to activate a positive feeling. The feeling should be something that a person can really feel, not just think about.

The fourth step in the Freeze-Frame® emotional-management tool is to ask what would be a better way to handle this situation. Another component of the ask step is to determine what action may reduce the stress that a person is experiencing. The last step is to notice changes that have occurred in the way they think or feel. The key to the last step is to try to remember the new thoughts and feelings for as long as possible.

According to the Institute of HeartMath (2002) when people use steps two and three, there is a calming and balancing effect on the entire nervous system. Their research also indicates that there is an improvement in how the nervous system, heart, and brain work together. This technique can shift the pattern of

signals the heart sends to the brain, reducing the stress to help the nervous system, heart and brain work together. The outcome is that a person may be "less stressed and can think better, perform better, and have more fun" (p. 28).

The Institute of HeartMath suggests that Freeze-Frame® is appropriate to do while taking a test, giving a speech or presentation, or listening to someone who is trying to tell you something. In addition, the Institute suggests that when "experiencing the emotions and feelings of social pressure, embarrassment, frustration, anger, afraid, fear, anxiety, using Freeze-Frame® can be important" (Institute of HeartMath, 2002, p. 29).

An important position taken by the present study is that using the Freeze-Frame® emotional-management tool may play a key role in improving the emotional intelligence of the first-generation student. As discussed in the literature review, first-generation students often experience negative emotions and feelings. Understanding how to deal with those feelings, thoughts and emotions may increase emotional intelligence. Increasing emotional intelligence may facilitate the retention of the first-generation learner. The Institute of HeartMath (2002) states that "anytime a person manages their emotions, everyone involved in the situation benefits" (p. 28).

Understanding the relationship between first-generation learners, emotional intelligence, and retention will be the focus of this research project.

CHAPTER 3. METHODOLOGY

Introduction

This chapter provides a review of the design used in the study. In addition, the population, the sample, data collection techniques, and data-analysis procedures are discussed. In the subsequent paragraphs, particular attention will be given to examining the role emotional intelligence plays in student retention.

The careful review of the literature indicates that emotional intelligence is often not measured on the two-year college campus. The notion that emotional intelligence is a skill set that can be learned and improved upon was a primary focus of this study. An assumption was made that emotional intelligence may increase retention. Most of the studies reviewed have used qualitative research methods. The present investigation attempted to add a new dimension to this body of research by using a mixed design. This design was used to integrate the strengths of quantitative and qualitative methods in such a way that during the interpretation phase research findings from the two methods may be merged to strengthen the claims of the study. Using these two methods allowed for diversity in the analysis of data, which the researcher reasoned would strengthen the findings.

An important aspect of this research was that it attempted to examine the influence emotional intelligence training would have on the retention of first-generation learners at the open-access branch campus. It was expected that those students who are exposed to the Freeze-Frame® emotion-management tool would show more improvement in their emotion-intelligence scores than the students exposed to only the traditional methods. Furthermore, it was expected that participants with higher emotional intelligence scores would be the ones more likely to remain in college.

The first step in the development of this research study was to select an emotional-intelligence assessment instrument. The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT V2.0) (developed by John Mayer, Peter Salovey, and David Caruso) is designed to assess emotional intelligence, and measuring a person's capacity for reasoning with emotional information.

There were several reasons for using this instrument. One reason was that the MSCEIT V2.0 is an ability-based assessment instrument. This assessment instrument measures how well participants perform tasks and solves emotional problems. Participants' response styles are measured against a criterion of correctness rather than against a subjective assessment of their perceived emotional skills. An example of subjective

assessment may be, “I am skillful at reading other people’s emotions (True or False)”. Another reason for using the MSCEIT V2.0 was that it attempts to create an objective measure of one’s emotional skill set. The MSCEIT V2.0 also makes it difficult to give merely socially desirable responses.

In addition, the MSCEIT V2.0 is an instrument that attempts to measure whether the participants know how to manage emotions. Using the MSCEIT V2.0 in this research study was a good fit with the Freeze-Frame® emotional-management tool. The Freeze-Frame® emotion-management tool provided a strategy to practice ways to manage one’s emotions more effectively and the MSCEIT V2.0 presents a way to measure change in one’s ability to manage emotions.

Design of the Study

As was stated previously, this study was designed to examine the influence emotional intelligence training would have on the retention of first-generation learners at the open-access branch campus. The literature also suggests that emotional intelligence is composed of skill sets that can be learned. Consequently, the Freeze-Frame® emotion-management tool was used to provide participants with a means to gain more conscious control of their emotions.

The concurrent triangulation mixed design was used in this study.

The concurrent triangulation design is depicted in Figure 1 below. The quantitative and qualitative data was collected simultaneously. There was an integrated analysis of the results.



Figure 1. Concurrent Triangulation

According to Creswell (2003), "concurrent triangulation occurs when a researcher uses two different methods in an attempt to confirm, cross-validate, or corroborate findings within a single study" (p. 217).

The researcher realized that the concurrent triangulation mixed design offers a mode of inquiry that systematically integrates both qualitative and quantitative data collection and analysis within a single study. Tashakkori and Teddlie (2003) support the use of this methodological design for researchers who want to simultaneously accomplish two goals: "(a) demonstrate that a particular variable will have a predicted

relationship with another variable and (b) answer exploratory questions about how that relationship actually happens" (p. 15). The researcher explored the complex relationship between emotional intelligence and retention of first-generation learners at the open-access branch campus.

The quantitative feature of the mixed-design research method used equivalent groups by randomly assigning participants to the training and traditional groups. The qualitative aspects of the research used the phenomenological approach. Phenomenology is concerned with emerging comments, feelings, attitudes and experiences from the perspective of the individual participants. The MSCEIT V2.0 was the instrument used to measure emotional intelligence.

The study used 52 participants. The 52 participants were selected from approximately 300 first-generation, first-quarter, freshman students who had entered the open-access branch campus in the spring quarter 2006. Twenty-five participants were in the training group and 27 participants were in the traditional group. Each participant signed an informed consent form and through the use of a virtual computerized coin flip each participant was assigned to either the training group which was assigned heads, or the traditional group which was assigned to tails. The random assignment process worked much the same as a

lottery, so that each participant had an equal of ending up in the training or traditional group.

The training group was given a pre-test on the MSCEIT V2.0 during the first week of the spring 2006 quarter. This group had access to the traditional support resources available at the open-access branch campus, such as, the Learning Center, the Community Resource Center and Disability Services. Also available to this group was the opportunity to practice emotional-management skill development using Freeze-Frame®. During the tenth week of the spring 2006 quarter the students were given the post-test MSCEIT V2.0 assessment instrument.

Participants in the traditional group were also pre-tested on the MSCEIT V2.0 assessment instrument during the first week of spring quarter. This group had access to the traditional methods described above but not Freeze-Frame® training. At the end of the quarter, the traditional group was given a post-test on the MSCEIT V2.0 assessment instrument. A t-test was used to analyze the data.

The researcher sought to determine if there is a positive or negative relationship between emotional intelligence and retention. The other aspect of the concurrent triangulation mixed design used the qualitative approach known as the phenomenological research method. Creswell (1998) defines the

phenomenological research method as "one that describes the meaning for several individuals of the lived experiences of a particular concept or phenomenon" (p. 51). Furthermore, Creswell (2003) encourages researchers who use phenomenological methods to search for the "essential, invariant structure or central underlying meaning of the subject's experience and to emphasize the intentionality of consciousness where experiences contain both the outward appearance and inward consciousness based on memory, image and meaning" (p. 52). This phenomenological approach was used for the open-ended interviews. The researcher constructed the interview questions based on the theory of phenomenology. The researcher suspended all judgments and looked for patterns or themes within the interview responses. The interviews were concurrent with the emotional intelligence assessments. These interview questions were used to capture the phenomenological experiences of the participants.

The participants were asked to respond to a set of open-ended interview questions pertaining to issues, situations and circumstances that might pose a threat to their successful completion of their academic goals. Conducting the interviews provided an opportunity for the researcher to gain more in-depth insight into how students experience, interpret and live their lives as first-generation college students. The interview

technique also provided the researcher with a means to harvest the participants' experiences and perceptions about how emotional-management training and other perhaps unexpected factors were beneficial to, or a hindrance to, remaining in college.

At the end of spring quarter 2006, the researcher contacted the Assistant Dean of Student Services. The Assistant Dean provided the coded data on the participants. The researcher was able to determine retention rates.

The population and sample of the study, the data collection techniques, and data analysis utilized in the study are examined in further detail in the sections below.

Population and Sample

The participants were randomly assigned to two groups. There were more than 50 willing participants. Because the researcher wanted to include all willing participants, the sample size increased to 53 first-generation students. These students were first-time freshman for the spring 2006 quarter with no previous college experience. There were a mixture of sixteen males and thirty-seven female students. Fifty-three participants was a manageable number for gathering the large volume of qualitative data. This qualitative data provided an individual level of analysis which provided depth to the

research findings. The quantitative aspect of the study provided a group level of analysis and provided breadth to the research findings. Combining these two research methods strengthened a discussion of the findings from the study.

The age range of the 53 students was between 18 and 50 years old. This age range reflects the age distribution in this population. The students will represent various ethnic backgrounds.

The open-access branch campus' Associate Dean of Academic Affairs and the Assistant Dean of Student Services granted permission for the study to take place at the open-access branch campus. Prior to the study, informed consent letters were distributed to a pool of eligible students. Participants who took part in the study were informed that their identity and responses would be held in confidence when the findings were reported. In addition, the participants were assured that the findings are to be used to discover new procedures for addressing the needs of first-generation students and not to make judgments about their abilities or performance. At the end of the study, participants were debriefed on the purpose of the study.

Instrumentation

Emotional Intelligence Assessment Test. The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT V2.0) was selected over other emotional-intelligence tests because it provided an ability-measure test and did not rely on self-reporting. The other reason is that the MSCEIT V2.0 is based on the four-branch model (see Chapter 2) of emotional-intelligence by Mayer and Salovey. The purpose of the MSCEIT V2.0 is to measure emotional intelligence based on the four ability areas. The test can be delivered in a written format or web-based format. This particular study used the web-based administration of the assessment.

The MSCEIT V2.0 focuses on four emotional intelligence ability areas which include: perceiving, facilitating, understanding, and managing emotions. The MSCEIT V2.0 is a 141-item ability measure based on the four ability areas. According to Mayer, Salovey, Caruso and Sitarenios (2003) the four branches are measured with two tasks. The perceiving-emotions branch is measured with faces and pictures tasks. The ability to facilitate thought area is measured with sensation and facilitation tasks. Understanding emotions is measured by blends and changes tasks. The fourth area of the MSCEIT V2.0, managing

emotions, is measured with emotion-management and emotional relationship tasks.

The MSCEIT V2.0 provides several scores. The assessment provides a "total score, two area-Experiential and Strategic-four branch scores (corresponding to the four-branch model), and eight task scores" (Mayer, Salovey, Caruso & Sitarenios, 2003, p. 100). There are two ways the MSCEIT V2.0 was calculated. The first method was the consensus or general method. The consensus method takes the participant's answer to a given item and scores it against the proportion of the sample that endorsed the same MSCEIT V2.0 answer (p.100). The other method is called "expert scoring." The expert scoring method takes the respondent's answers and measures them against the criterion formed by proportional responding of an expert group (p. 100). The researcher for this study will use the consensus method. The consensus method is recommended by the authors of the MSCEIT V2.0. Mayer, Salovey and Caruso (2002) state, "this method utilizes the entire normative sample of 5000 to score item response" (p. 33).

The MSCEIT V2.0 has two sets of reliabilities which depend on whether the assessment uses the general or expert scoring criterion. According to Mayer, et al. (2003) this is because reliability analyses are based on participants' scored responses

at the item level, and scores at the item level vary depending on whether responses are compared against the general or expert criterion. The MSCEIT V2.0 full-test split-half reliability is "0.93" for general and "0.91" for expert consensus scoring (Mayer, et al, 2003, p. 101). The reliability for the two areas, experiential and strategic, is "0.90" and "0.90" for general and "0.88" and "0.86" for expert (p. 101). The reliability range for the four branch scores are "0.76" to "0.91" for both general and expert (p. 101). The reliability scores for the individual tasks range from a low of "0.55" to a high of "0.88" (p. 101). The recommendation of Mayer, Salovey, Caruso and Sitarenios is to interpret the assessment at the total scale, the two areas and branch levels.

The MSCEIT V2.0 is a valid measure of emotional intelligence based on face, content, structural, predictive, and constructs validity. Validity evaluates whether an instrument actually measures what it is intended to measure. Since the MSCEIT V2.0 is a new test, the data that is cited is from unpublished studies. According to Mayer, Salovey, and Caruso (2002), there is "considerable consistency across the MEIS, MSCEIT V2.0 RV and the MSCEIT V2.0 at the full level emotional intelligence level" (p. 36).

Face validity is focused on whether a test appears to measure what it is supposed to measure. Mayer, Salovey and Caruso (2002) concluded that "In general, the MSCEIT V2.0 has good face validity" (p. 37).

Content validity determines whether a test's items are rationally drawn from the domains that the test is supposed to cover. The MSCEIT V2.0, as well as previous version of the emotional-intelligence test, was based on the four-branch model of emotional intelligence by Mayer and Salovey. Mayer, Salovey and Caruso (2002) state that "MSCEIT V2.0 has good coverage of the four-branch model and therefore possesses content validity" (p. 37).

Structural validity refers to how many things a test measures. According to Mayer, Salovey, and Caruso (2002) the scoring of the MSCEIT V2.0 at a full-scale level, the two-area level, and the four-branch level implies that "mathematical models of the test performance are consistent" (p. 37, 38). The mathematical interpretations of the test should support scoring. Confirmatory factor analyses are "consistent and supportive of the methods of scoring" used (p. 37, 38). This factor analysis, then, supports the structural validity of the MSCEIT V2.0.

The predictive validity of the MSCEIT V2.0 is relatively "independent of a variety of self-report scales of positive

affect and well-being, including some scales labeled as measures of emotional intelligence" (Mayer, Salovey, Caruso, 2002, p. 39). The MSCEIT V2.0 is different from previous version of the emotional-intelligence tests created by Mayer, Salovey and Caruso. Mayer, Salovey and Caruso (2002) state that the "MSCEIT V2.0 can be used to predict significant workplace, school, family and other social behaviors" (p. 39). This is why the researcher selected the MSCEIT V2.0 for this project.

Interview. All participants were interviewed face-to-face interviews during the spring 2006 term. The interviews were tape-recorded. The questions were open-ended. These interviews were given prior to and after the study concludes.

As stated earlier, the study used the phenomenological research method design. The phenomenological interview, according to Thompson, C., Locander, W., and Pollio, H. (1989) " . . . is perhaps the most powerful means for attaining an in-depth understanding of another person's experiences" (p. 137). The in-depth interview obtained a first-person account of a specified experience. The researcher began the interview with an opening question. The opening question to the participants of this study was, "I understand you are the first member of your family to attend college. What's that like for you? And "What has your experience been like?" Previous investigators have used

this method, for instance deMarrais and Tisdale (2002), describe the goal of the phenomenological interview: "to keep the conversation focused on concrete descriptions of the particular experience rather than on abstract discussions about the experience" (p. 118). Each participant described in detail the experiences, feelings and actions. Each interview unfolded into a story that was transcribed and coded. By using the phenomenological interview method, the researcher was positioned to obtain insightful data about the challenges of adapting to college life. After the opening question the researcher had no set questions regarding the topic, follow-up questions emerged from the free flow of dialogue between the researcher and the participant. The intent was for the dynamics of the interview to form the basis of a conversation, not a forum for a series of questions and answers. The interview provided a place where the participants told their stories instead of answering questions.

After the opening question, the interviewer prompted the interviewees with transition questions. These questions were intended to introduce a general topic of discussion and/or provide participants an opportunity to reflect on past experiences and their connection with the overall topic. An example of another question was, "Describe why you selected to attend an open-access branch campus" or "How have your

responsibilities changed as a result of your attending college?" These questions usually are not critical to the analysis. The questions were typically intended to generate conversation and interaction among the participants. The transition questions were designed to provide a logical link between the opening questions and the key questions. During the transition questions, the expectation was that participants would become aware of how others may view the topic.

After the opening and transition questions were presented, the key questions were introduced. The key questions were central to articulating the phenomenological essence of the study. Examples of key questions used in the study included the following: "what was your first impression of college life?" and "describe any barriers you feel might hinder your success in college." These questions received the greatest attention during the subsequent data analysis.

The final set of questions presented to the participants were called ending questions. These questions were designed to bring closure to the interview and enable the participants to reflect back on previous comments. An example of an ending question used in this study was: "describe the skills you have that are important to your success in college." The ending

questions were critical for analyzing the role emotion-management had on college performance and retention.

The coding strategies will be discussed later in the data-analysis section.

Data Collection

The quasi-experimental research design used the emotional intelligence pre-test and post-test scores from the two randomly selected comparison groups. The quantitative data was collected by analyzing the pre- and post-test MSCEIT V2.0 test scores. The pre-test MSCEIT V2.0 scores were collected during the first week of the spring 2006 quarter. The post-test MSCEIT V2.0 scores were collected during the last week of the spring 2006 quarter. Prior to the beginning of spring quarter 2006, the Assistant Dean of Student Services provided the researcher with coded data on each participant. Consequently, the researcher was able to determine participants' retention rates.

The qualitative data collection for the phenomenological research design included collecting participant stories from the interviews conducted prior to the study and from interviews conducted at the conclusion of the study. The interviews were conducted as group interviews. All interviews were audio-taped and transcribed. The central purpose in phenomenological research is to describe the meaning of a small number of

individuals who have experienced the phenomenon (Creswell, 1998). In keeping with this line of reasoning, the phenomenological research method was used to gain insight into how first-generation college research participants experienced college life.

The participants in the training group were taught the Freeze-Frame® emotion-management tool. Each participant was trained in the five step Freeze-Frame® procedure. The first step is to take time out to temporarily disengage from current thoughts and feelings. Step two asks the participants to shift their mental focus to the physical area around the heart. The third step is to make an effort to activate a positive feeling. Step four asks the participants to determine an efficient, effective attitude or action for dealing with the task at hand. The last step asks the participants to sense a change in perception or feeling relating to the current task and to sustain it (Childre, 1998).

Data-Analysis Procedures

A necessary feature of this analysis was statistical control of variability when an experimental control cannot be used. The t-test for paired samples was used. Two t-tests were used to analyze the data. One t-test was used to analyze the participant's emotional-intelligence scores to determine any

differences between the group mean scores on the MSCEIT. The other t-test was used to analyze differences between the two group mean retention rate data. The independent variable was training in the Freeze-Frame® emotion-management tool and the traditional methods used. The group means were analyzed to determine if training in Freeze-Frame® would improve the emotional-intelligence scores of the participants. The two dependent variables were the participants' emotional-intelligence scores and retention rate. The group means were analyzed to determine differences in retention rates between the two groups. Since the literature review states that several researchers, (EI Project, 2004; Wells, Torrie & Prindle, 2000; Barchard, 2003; Tapia & Marsh, 2003), indicate that emotional-intelligence is a skill set that can be developed, a directional hypothesis was used. In this research study, it was hypothesized that the training group will be expected to have increased emotional-intelligence scores and retention rates as compared to the traditional group. A one-tailed test at 0.05 critical value will be used. The results will be reported in a tabular display showing the differences between pre-and post-test emotional-intelligence scores. In order to provide a phenomenological perspective on the participant's experiences, the researcher will analyze the data collected from a series of open-ended

interviews. The interviews may bring out emerging themes on how the participants are experiencing emotionally charges situations and challenges to retention.

The data analysis for phenomenological research included the following steps. The interviews were coded. Codes were used to assign meaning to participants' verbal responses. Patterns developed which allowed the research to discover patterns that would be difficult if not impossible to detect by shifting through quantitative data alone. There are four steps to coding. The first step was known at initial coding. The researcher first read all stories in their entirety. Then the researcher extracted significant statements such as

> My husband lost his job and I don't have child care vouchers and the state wants him to watch the kids and the doctor thinks he should not. The kids are not safe with him. I am not able to stay in school if I do not have child care.

from each interview. Then the statements were formulated into meanings provided by the participants. Initial coding consisted of generating numerous codes by reading through the interviews and identifying data that were related without worrying about the assignment of categories. During this step the researcher looked for responses that were pertinent to answering the research questions. The research question provided a structure for what responses need to be coded and which ones to leave out.

Once identification is made regarding what should be coded, the researcher paraphrased or labeled the information that describes what is important to answering the research questions. At this stage the labels were not very precise. In addition, as new observations were made, new labels were produced.

The second step in coding qualitative data is called focused coding in which smaller categories are combined into larger ones. In addition, if there were large amounts of data assigned to the same code, the code was subdivided within the category. During the focused coding stage, the researcher identified repeating ideas and searched for a pattern of organization that would emerge into themes. Themes were composed of a connection of different codes.

Step three consisted of developing a conceptual schema from the data. The conceptual schema created a network that tied the data together, answered the research questions, in a coherent manner going beyond the obvious. The researcher automated the coding process. Once the researcher began to determine some broad concepts, participant interviews were examined and organized into categories or themes. The researcher then determined the connections, if any, between the categories.

The fourth step was to write the analysis. The themes were organized according to how the researcher discussed the themes.

At this point, when the researcher took each theme, sorted it, organized it and eliminated inconsequential information within it. The analysis was written according to the researcher's conceptual schema.

Conclusion

The researcher believes that the study was enhanced by using a concurrent triangulation design. As Patton (1990) states, "studies that use only one method are more vulnerable to errors linked to that particular method than studies that use multiple methods in which different types of data provide cross-data validity checks" (p. 188). Research that limits itself to only the qualitative approach may prevent generalizability of outcomes. The researcher who selects only the quantitative method may miss the opportunity to observe how the participants are actually experiencing a given phenomenon. Thus, this researcher used the quasi-experiential and phenomenological designs to provide robust explication of the research findings.

CHAPTER 4. DATA COLLECTION AND ANALYSIS

Introduction

The present study had a two-fold purpose. One purpose of the study was to capture the emerging phenomenological experiences of first-generation college students. Participants' college related experiences were recorded in the pre and post focus group interviews. The other function of this study focused on teaching participants in the training group to use the Freeze-Frame® emotion-management tool to gain more conscious control over their negative emotions to see if this would improve their emotional-intelligence scores and retention rates. In the next section, the researcher examined the quantitative and qualitative results of each research question.

Demographic Information

Frequency Tables and Bar Charts for Participants

Demographic information was obtained as part of the study. Participants provided their age and ethnicity when registering for the MSCEIT. The hours worked was reported during the focus group interview.

All participants in the study were first-generation, first quarter students at the open-access branch campus. A computerized virtual coin flip was used to randomly assign participants to either the training or traditional group. The

proposal called for 50 participants for the study. Table 3 shows the distribution of the sample among the traditional and training groups. The breakdown of participants was 52.8% in the traditional group and 47.2% in the training group.

Table 3

Frequency table for participants

Total Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
Traditional	28	52.8	52.8	52.8
Training	25	47.2	47.2	100.0
Total	53	100.0	100.0	

Table 4 shows the distribution of male and female participants.

Table 4.

Frequency table for gender

Participants by Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	16	30.2	30.2	30.2
Female	37	69.8	69.8	100.0
Total	53	100.0	100.0	

Figure 2 shows the distribution of ethnicity for this study. The open-access branch campus is located on the edge of Appalachia and there is a paucity of ethnic diversity in the college community as well as community at large. It is important

to note that the open-access branch campus' service area is primarily in a county that is 97% Caucasian. Therefore, the ethnic background of the participants is reflected in the service area.

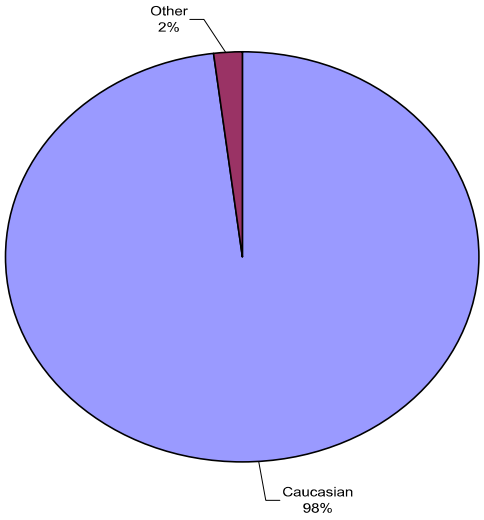


Figure 2. Pie chart for ethnicity for all participants

Descriptive Statistics and Histograms for Demographics

Table 5 shows the age and hours worked distribution among the participants in the study. Age is a factor that will be discussed later in how it impacts emotional intelligence. Because the open-access branch campus has an open access policy, the age of the student has a wider range than more traditional

colleges. This is also evident in the study. Over 65% of the participants worked 19.3 hours a week on average.

Table 5.

Statistics for demographic information

Statistics

	N					
	Valid	Missing	Mean	Median	Std. Deviation	Minimum	Maximum
Age	53	0	25.245	23.000	8.659	19	49
Hours Worked	53	0	19.264	20.000	12.393	0	40

Preliminary Analyses

Two sample t-test to answer the question: Is there a statistically significant difference in baseline pre-test and post-test MSCEIT scores between the Training and Traditional groups?

Figure 3 is an error bar chart(95% confidence interval) which shows the average baseline pre-test and post-test MSCEIT score, separately for the Training and Traditional groups. Information shown in figure 3 indicates that the groups are similar and that there is no statistical significance between the pre-test MSCEIT groups. There are no preexisting differences between the groups. Table 6 and 7, top of page 92, show the median (SD) baseline MSCEIT score was 99.95 (8.655)

versus 100.51 (11.663) for the training and traditional groups respectively, t-0.150; df-29; P-0.882. The range for the training group baseline MSCEIT scores was 87.757 to 114.820. The range for the traditional group baseline MSCEIT scores was 75.227 to 123.223. Table 8 and 9 shows the average baseline post-test MSCEIT score (95% confidence interval), separately for the training and traditional groups. This shows that the groups are similar and that there is no statistical significance between the post-test MSCEIT groups. The median (SD) baseline MSCEIT score and standard deviation was 102.77 (10.976) versus 100.66 (14.042) t-0.732; df 29; P 0.470. The range for the training group baseline MSCEIT scores was 85.20 to 130.309. The range of the traditional group baseline post-test MSCEIT scores was 70.7565 to 119.439.

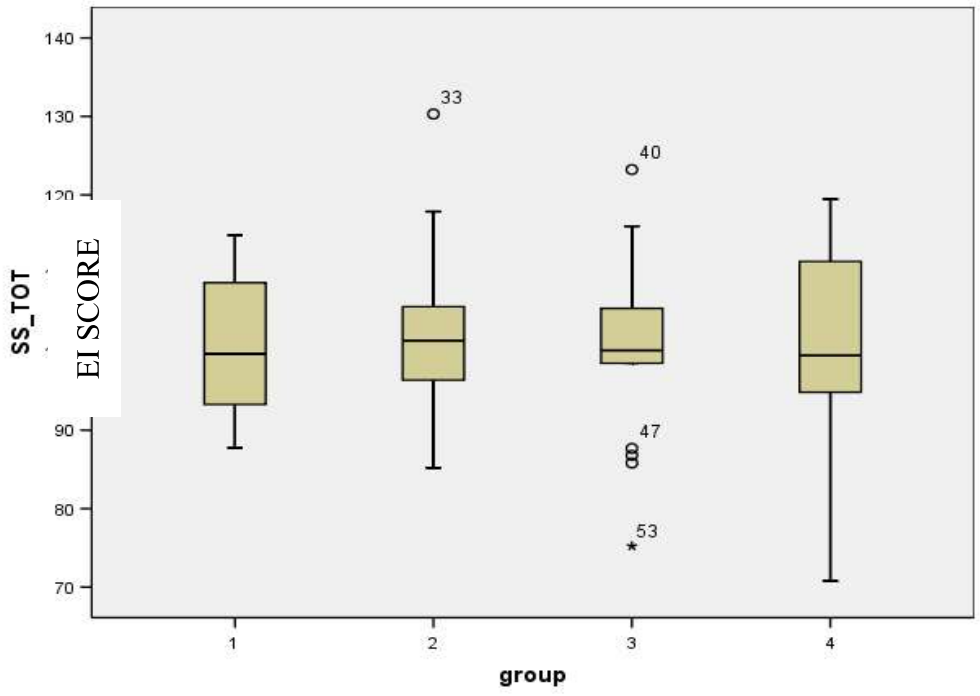


Figure 3 Baseline pre-test and post-test for both groups

Table 6.

Cumulative Pre-MSCEIT scores for Training and Traditional Groups

Statistics								
	Group	N		Mean	Median	Std. Deviation	Min	Max
		Valid	Missing					
MSCEIT	Training	14	0	99.95	99.70	8.655	87.757	114.820
	Traditional	17	0	100.51	100.18	11.663	75.227	123.223

Table 7.

Independent samples test for pretest MSCEIT

Independent Samples Test			
	t-tests for Equality of Means		
	t	df	Sig (2-tailed)
MSCEIT	-0.150	29	.882

Table 8. *Cumulative Post-test MSCEIT scores for Training and Traditional Groups*

	Group	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	102.77	101.45	10.976	85.2015	130.309
	Traditional	17	0	100.66	99.49	14.042	70.7565	119.439

Table 9

Independent samples test for posttest MSCEIT

Independent Samples Test

	t-tests for Equality of Means		
	t	df	Sig (2-tailed)
MSCEIT	.732	29	.470

Table 10 shows the distribution of the total pre- and post-test MSCEIT score by gender. Table 10 shows post-test MSCEIT with a low of 70.7565 to a high of 123.223 for females and a minimum of 85.1024 to a maximum of 130.309 for males. The data supports the findings that there is no significant difference of MSCEIT scores by gender.

Table 11 shows the distribution of pre- and post-test MSCEIT score by age. Figure 4 is a scatter plot which graphically depicts the relationship between age and baseline total MSCEIT score. The data shows that there is an inverse relationship between MSCEIT scores and age.

Table 10

MSCEIT by Gender

	Gender	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Female	46		99.8087	100.3185	11.0986	70.7565	123.223
	Male	16		103.7969	99.7877	12.2470	85.1024	130.309

Table 11

Age and MSCEIT

Correlations

		Age	SSTOTAL
Age	Pearson Correlation	1	-0.355
	Sig. (2-tailed)		.005
	N	62	62
SSTOTAL	Pearson Correlation	-0.355	1
	Sig. (2-tailed)	.005	
	N	62	62

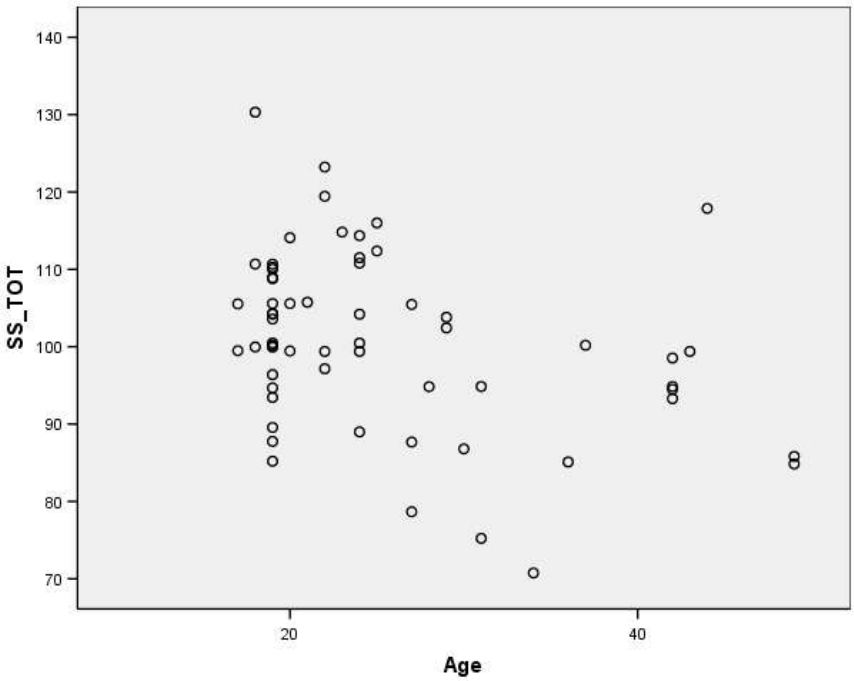


Figure 4. Age and MSCEIT

T-Test to Determine if the Change in MSCEIT from Pre to Post is Different for the Training versus Traditional Group

Table 12 shows the descriptive statistics for pre to post MSCEIT for training and traditional groups. Tables 13 and 14 show that there was not a statistically significant difference between the training and traditional group for total score between pre- and post-test. Table 13 shows the t-Test distribution t=-0.937;df=14; P=.366. Table 14 shows the t-Test distribution t=.145;df=17; P=.886.

Table 12

Descriptive statistics

	Group	Mean	Std. Deviation	N
Pre-MSCEIT	Training	99.80	8.655	14
	Traditional	102.77	10.976	17
	Total	100.258	10.0843	31
Post-MSCEIT	Training	100.66	11.633	14
	Traditional	100.43	14.042	17
	Total	101.863	12.5309	31

Table 13

t-Test for Independent Samples Pre- and Post-Test Training Total Score

	t-tests for Equality of Means		
	t	df	Sig (2-tailed)
MSCEIT	-0.937	14	.366

Table 14

t-Test for Independent Samples Pre- and Post-Test Traditional Total Score

	t-tests for Equality of Means		
	t	df	Sig (2-tailed)
MSCEIT	.145	17	.886

T-Tests to Analyze Total, Area, Branch and Task scores for Cumulative Pre-and Post-Test MSCEIT Scores for Training and Traditional Groups

The MSCEIT measures a respondent's emotional intelligence by using the total score and the area, branch, and task scores. Each score adds to the measurement of emotional intelligence. In Appendix E a summary of t-Tests for Area, Branch and Task scores

are available. There are general steps that must be followed in order to interpret an individual's emotional intelligence. The first step is to examine the total emotional intelligence quotient (EIQ) score, then review the area scores which include experiential EIQ and strategic EIQ, then examine the four branch scores and last review the task EIQ scores. Each of these scores will be discussed.

Total Score

The first step, examine the Total EIQ score. The total score compares an individual's performance to the normative sample. The Total score reviews a respondents ability to perform the following tasks: perceiving emotions, accessing, generating, and using emotions to assist thought, understanding emotions and emotional knowledge, and regulating emotions to promote emotional and intellectual growth (Mayer and Salovey, 2002, p. 18) Table 15 shows the t-test for both groups and pre- and post-test MSCEIT Total EIQ Score. Table 15 shows the t-Test distribution (95% confidence interval) t=0.732; df=29; P=.470. The data supports the findings that there is statistically no significant difference between the traditional and training group for total EIQ score.

Table 15

T-test for Total EIQ Score

	t-tests for Equality of Means		
	t	df	Sig (2-tailed)
MSCEIT Total Score	.732	29	.470

Area Scores

Table 16 reviews the experiential area score. The data in Table 16 shows no statistically significant difference at the 95% confidence interval. There are measures in the area score. The first is Experiential EIQ which measures the ability to perceive, respond, and manipulate emotional intelligence without necessarily understanding it. Experiential EIQ "indexes how accurately a respondent can "read: and express emotion, and how well a respondent can compare that emotional information to other sorts of sensory experiences. It may indicate how a respondent functions under the influence of different emotions" (Mayer, Salovey, Caruso, 2002, p. 18).

Table 16

Experiential EIQ by Training and Traditional Group

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	107.84	104.163	13.362	89.238	132.390
	Traditional	17	0	104.08	108.594	16.559	72.808	127.442

Table 17

Independent samples test for Experiential EIQ by Training and Traditional Group

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	97.61	95.565	9.342	95.565	116.407
	Traditional	17	0	96.54	96.186	11.145	67.853	116.899

Table 17 shows the distribution of strategic EIQ area scores. The data in Table 17 shows no statistically significant difference at the 95% confidence interval. This score measures the ability to understand and manage emotions "without necessarily perceiving feelings well or fully experiencing them. It indexes how accurately a respondent understands what emotions signify and how emotions in oneself and other can be managed" (Mayer, Salovey, Caruso, 2002, p. 18).

Branch Scores

There are four branch scores that examine the emotional abilities of respondent. The four areas are perceiving emotions, facilitating thought, understanding emotions, and managing emotions. The data in Tables 4.16, 4.17, 4.18 and 4.19 shows no statistically significant difference at the 95% confidence interval.

Perceiving Emotions

Table 18 shows the distribution for the first branch score. Perceiving emotions "refers to the ability to recognize how an individual and those around the individual are feeling" (Mayer, Salovey, Caruso, 2002, p. 19). According to Mayer, Salovey and Caruso (2002) emotional perception involves paying attention to and accurately decoding emotional signals in facial expressions,

tone of voice, and artistic expressions (p. 19). The questions are asked via images and consideration of emotions in others.

Facilitating Thought

Facilitating Thought score describes how much an individual's thoughts and other cognitive activities are informed by an individual's experience of emotions. The use of one's emotions may help a person solve problems. According to Mayer, Salovey, and Caruso (2002) cognition can be disrupted by emotions, such as when a person experiences excessive anxiety or fear (p. 19). "Emotions also may change the way people think, creating positive thoughts when a person is happy and negative thoughts when the person is sad" (p. 19). Table 19 shows the distribution of facilitating thought branch score.

Table 18

Independent samples test for Perceiving Emotion EIQ by Training and Traditional Group

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	109.15	107.136	15.522	88.194	132.4301
	Traditional	17	0	102.19	95.128	16.171	75.377	122.973

Table 19

Independent samples test for Facilitating Thought EIQ by Training and Traditional Group

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	105.25	102.407	12.154	89.938	127.304
	Traditional	17	0	104.82	101.157	14.090	74.177	129.909

Understanding Emotions

Table 20 shows the distribution of the third branch score. Table 20, Understanding Emotions, measures how much an individual understands what leads to various emotions. Mayer, Salovey, and Caruso, (2002) state that, "knowledge of how emotions combine and change over time is important in one's dealings with other people and in enhancing one's self-understanding (p.19).

Managing Emotions

Mayer, Salovey and Caruso (2002), state that managing emotions "means that at appropriate times, one feels the feeling rather than repressing it, and then uses the feeling to make better decisions. It also means working with feelings in a judicious way, rather than acting on them without thinking" (p. 19). Table 21 shows the distribution for managing emotions for the participants in the study.

Table 20

Independent samples test for Understanding Emotion EIQ by Training and Traditional Group

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	93.08	91.636	8.790	82.296	110.162
	Traditional	17	0	91.56	92.043	10.790	68.184	107.769

Table 21

Independent samples test for Managing Emotion EIQ by Training and Traditional Group

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	101.85	105.3952	10.796	84.488	118.056
	Traditional	17	0	100.84	104.284	11.123	70.16352	116.349

Task Scores

There are eight tasks scores for the MSCEIT. The task scores provide a range of an individual's ability. The data in Tables 22, 23, 24, 25, 26, 27, 28, and 29 show no statistically significant difference at the 95% confidence interval.

Perceiving Emotions

Table 22 and 23 shows the distribution of perceiving emotions through face and picture tasks. An individual is asked to identify the emotion that the facial expression is communicating. Picture tasks require an individual to indicate the extent to which images or landscapes express a variety of emotions.

Facilitating Thought

Tables 24 and 25 show how an individual's thoughts and cognitive activities are related to experience of emotions. The first task is sensations tasks. This task is "where an individual is to compare different emotions to different sensations, such as light, color and temperature" (Mayer, Salovey, and Caruso, 2002, p. 20). The second task in facilitating thought is facilitation task which is a measure of how different moods interact and support reasoning and thinking (p. 20).

Table 22

Independent Samples Test for Face Tasks EIQ by Training and Traditional Groups

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	126.04	142.859	24.254	84.742	142.935
	Traditional	17	0	111.42	100.152	33.708	47.536	142.868

Table 23

Independent Samples Test for Picture Tasks EIQ by Training and Traditional Groups

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	109.93	106.923	14.347	88.148	131.042
	Traditional	17	0	106.97	102.079	17.834	77.192	133.061

Table 24

Independent Samples Test for Sensation Tasks EIQ by Training and Traditional Groups

Statistics

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	94.10	93.439	10.185	79.224	116.059
	Traditional	17	0	93.96	94.065	10.077	78.302	107.479

Table 25

Independent Samples Test for Facilitation Tasks EIQ by Training and Traditional Groups

Statistics

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	102.97	105.064	10.826	81.049	117.891
	Traditional	17	0	101.00	104.019	11.130	73.507	115.895

Understanding Emotions

Understanding emotions measures an individual's ability to label or recognize emotions and related emotions. Tables 26 and 27 shows the distribution of blends and changes tasks in the subset of understanding emotions. Table 26 shows the blends task which assesses the individual's ability to analyze "blends of emotions into their parts" and "to assemble simple emotions together into complex feelings" (Mayer, Salovey and Caruso, 2002, p. 20). Table 27 shows the distribution of the changes task. The changes task measures the individual's "knowledge of how emotions transition from one to another" (p. 20).

Table 26

Independent Samples Test for Blends Tasks EIQ by Training and Traditional Groups

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	99.99	103.232	11.097	79.253	112.648
	Traditional	17	0	99.51	99.910	8.343	85.020	112.219

Table 27

Independent Samples Test for Changes Tasks EIQ by Training and Traditional Groups

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	99.28	100.894	7.203	86.545	112.377
	Traditional	17	0	101.50	99.602	8.519	81.450	115.750

Managing Emotions

Managing emotions according to Mayer, Salovey and Caruso (2002), state that it is the ability to manage emotions successfully often entails the awareness, acceptance, and use of emotions in problem solving (p.19). Table 28 shows the distribution of emotion-management. This task measures the individual's ability to incorporate their own emotions into making decisions. The test-taker must rate the effectiveness of alternative action in obtaining a result in situations where a person must regulate emotions (p. 20). Table 29, emotional relations, measures the individual's ability to incorporate emotions into decision making that involves other people. The test-taker must evaluate how effective different actions would be in achieving an outcome which involves other people (p. 20).

Table 28

Independent Samples Test for Emotion-Management Task EIQ by Training and Traditional Groups

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	94.07	95.132	7.850	79.527	104.367
	Traditional	17	0	91.10	92.133	12.359	53.766	108.057

Table 29

Independent Samples Test for Emotional Relations Tasks EIQ by Training and Traditional Groups

	Area	N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
MSCEIT	Training	14	0	99.45	102.882	9.744	80.743	111.412
	Traditional	17	0	99.28	99.372	9.954	74.364	111.412

Findings and Results

Research conducted by, Mayer, Salovey and Caruso, the authors of the MSCEIT, and the Institute of HeartMath, support the idea that emotional knowledge may be taught. Although, Mayer, Salovey and Caruso, suggest that emotional intelligence can be taught, this investigator was not able to identify any methods developed by these authors to teach emotional knowledge and skills. The Institute of HeartMath has developed tools and strategies to teach individuals to neutralize and lessen the effect of stress. Negative emotions such as frustration, hostility, and irritability when neutralized by generating positive emotions have been demonstrated by the Institute of HeartMath to improve higher order thinking, decision-making, enhance performance. The researcher wanted to see if findings by the Institute of HeartMath could be used to enhance retention rates. By integrating both the MSCEIT and HeartMath tools, specifically Freeze-Frame® technique, the study focused on assessing participants' level of emotional knowledge, provided participants with a method to teach emotion-management to strengthen their emotional knowledge, and finally to examine the influence on participants' retention rates.

The study began in March 2006 with 53 participants. Of the 53 participants, 28 were randomly assigned to the traditional

group and 25 were randomly assigned to the training group. All the participants were first-generation college students in their first quarter of college. The reason for the small sample size was due to the timing of the study which was in the spring quarter. Typically, the number of students that begin in the spring at the open-access branch campus is lower than in fall and winter quarters. Participants were selected from several freshmen, first quarter courses, including Preparatory Composition, Introduction to Psychology, and Introduction to Sociology. The participants were full-time day and evening students. Each participant was enrolled in at least 12 quarter hours of classes which is considered full-time course load at the College.

Students were asked to complete an informed consent form. Once the informed consent form was returned a computerized virtual coin flip was used to randomly assign the participants to the groups. Students were excused from class during the first two class meetings to participate in the focus group interview and to take the MSCEIT pre-test. After the pre-test and interview, students in the training group were assigned a time to meet with the Freeze-Frame® trainer to learn and practice the steps.

Each week the training participants met the Freeze-Frame® trainer to discuss progress on the use of Freeze-Frame®. Participants were taught to use the technique in classes, on exams, at work and in interpersonal situations. The students were required to meet once a week at a variety of times with the trainer. There were 25 participants in the training group. Fourteen training participants completed the study. This high attrition rate was due to the perceived time commitment. Several participants withdrew from the study because they did not want to take the extra time away from their coursework.

The participants in the traditional group were given the pre-test MSCEIT and participated in a focus group interview. The participants did not meet again until the end of the quarter. Seventeen of the participants in the traditional group completed the study. There was no opportunity to follow up with participants in the traditional group. There may be multiple reasons for this high attrition.

The post-test MSCEIT and the post-test interviews took place during exam week of spring quarter. In order to measure retention, the investigator had to wait until September 2006 to determine if the participants enrolled in the autumn 2006 quarter. Once the autumn quarter began, the retention was

measured. At this point all the data was collected and analyzed in order to answer the research questions.

This study addressed the following research questions:

1. How does low, moderate, or high emotional intelligence relate to spring quarter to autumn quarter retention?
2. In what direction will the Freeze-Frame® emotion-management tool influence emotional intelligence scores?
3. In what direction will Freeze-Frame® emotion-management tool influence spring quarter retention?

Each of these three questions will be discussed in length in the order listed.

Question 1: How does low, moderate, or high emotional intelligence relate to spring quarter to autumn quarter retention?

Although there were no statistically significant quantitative findings, the interviews with the participants provided rich details that provided a better answer to this research question. Out of the thirty-one participants that completed the study, twenty-four were retained. Seven participants were not retained. Three of the seven were of low EIQ and four had moderate EIQ. The scores were based on the post-test, total score from the MSCEIT.

Through the pre-test focus interview, participants shared experiences and emotions. Many issues that impact emotions were expressed. If the participants had the experiences of learning an emotion-management tool, possibly the participants may have been retained. Some of the emotions that were expressed were: Participant 1 said, "I found going to college made me nervous. I did not know what to expect." Participant 4 said, "I have so many barriers. Everything is a barrier. I am ill, I have a mental illness and struggle going to school." Participant 10 stated, "Chaotic and crazy. I have three kids, work full-time, and go to school full-time. I try to find time in the day for everything and then doing homework, taking care of kids and work." Participant 15 stated, "I am a single mom. I have to do everything. I can't give up anything." Participant 24 said, "Going to school is stressful because it is added on to the other multiple responsibilities that I have." Participant 26 stated, "I feel like I have so much pressure. I am expected to do well in school. I have to be responsible, get everything done, and worry about my financial situation." Another student, Participant 31 said, "Stressful because I take classes, have to work full-time and try to squeeze everything in and it takes away from my family and then I try to make up for it and with good intentions but not able to. School is an added pressure."

Participant 34 stated, “School is chaotic. I don’t sleep much. I usually sleep 2 ½ to 3 hours a night. Participant 41 stated, “I am seriously overwhelmed. I have three kids and it is overwhelming for me to go to school.” The participants all expressed feelings that could benefit from learning an emotion-management tool that might help them adjust to stressful demands and stay in school.

Another factor that might impact the EIQ score and retention is the participants’ first-generation status. Several students mentioned that family and friends do not know what they are experiencing. Participant 2 stated, “My parents are less supportive since I have returned to school.” Participant 11 states, “My mom is negative and puts me down.” Participant 13 states, “my parents don’t know what they are doing so I am the smart one.”

Question 2: In what direction will the Freeze-Frame® emotion-management tool influence emotional intelligence scores?

Freeze-Frame® did show slight increase in the emotional intelligence scores although it was not significant. The participants in the training group were exposed to the Freeze-Frame® emotion-management tool. As shown in figure 5 the influence of Freeze-Frame® on the MSCEIT was that 43% increased

their EIQ, 50% stayed the same as the pre-test score and 7% decreased their EIQ. In comparison as shown in figure 6, the traditional group that did not have the experience of learning Freeze-Frame®, experienced a 41% increased in EIQ scores, 47% of the participants remained the same and 12% decreased EIQ scores.

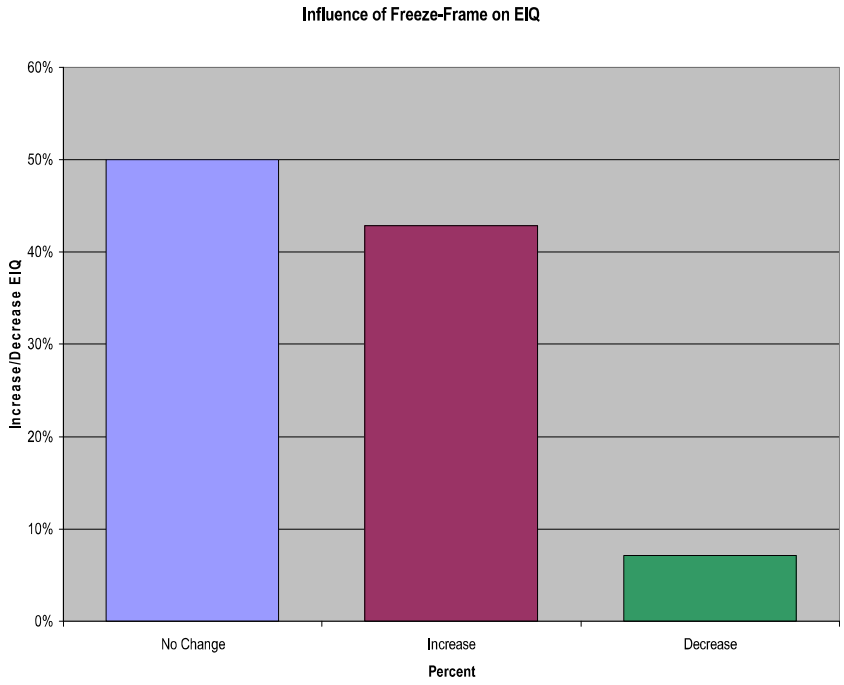


Figure 5. Training Group EIQ after Freeze-Frame®

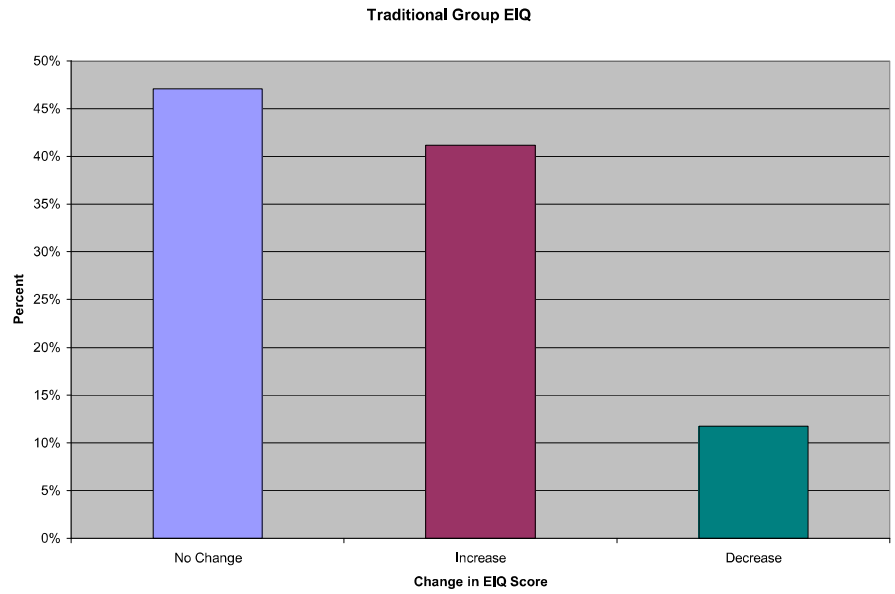


Figure 6. Traditional Group EIQ

Due to the small sample size, there was no statistical difference between the two groups. However, the training group participants' comments collected during the post interview did suggest that emotional intelligence may be a learned skill. The following participants stated how Freeze-Frame® training had a positive effect on them. Participant 7 said, "There are times when I am stressed out from work, leave work come to school and by using the Freeze-Frame® tool, I am able to restructure my thinking and calm down from my day at work." Participant 12 stated, "I use freeze-frame® so I can think rationally." Participant 23 stated, "I have a sense of calmness where I don't get so worked up around tests and papers." Participant 27

stated, “Freeze-Frame® would be good for all sort of people to do because if you are put in a stressful situation and you only take a few seconds to put yourself into check then it is going to make you react in a calm manner.” Participant 36 discussed, “I have noticed a difference but I don’t know how to explain it. I think once you use Freeze-Frame®, you calm down and start thinking the positive thoughts. Once you had so many bad things it is like that is all you see and that’s what really stresses me out.” Participant 49, “I still have stress but I am able to manage it better. Freeze-Frame® calms me down, but it is a way to manage it, it doesn’t go away, you just get more aware of it and are able to deal with it.” Participant 51 feels that Freeze-Frame®, “This is a great technique. I am going to use it forever. I used Freeze-Frame® for tests, studying, and personal issues.”

Training participants stated that the use of the Freeze-Frame® emotion-management tool allowed them to understand emotions thereby becoming more knowledgeable about emotions. By using the idea of EIQ and the research of Freeze-Frame® by HeartMath, a participant has the opportunity to learn a tool to help them with their emotions as well as deal with emotional situations.

Question 3: In what direction will the application of Freeze-Frame® emotion-management tool influence spring quarter retention?

Freeze-Frame® shows a positive influence on spring quarter retention. Retention was measured for the purpose of this research question by looking the participants that completed the spring quarter, completed the research study and enrolled in the autumn 2006. Figure 7 shows that out of the original 25 training participants, 19 or 76% were retained. The other 6 or 24% were not retained. Figure 7 also shows the original 28 traditional group participants, 54% or 15 participants were retained and 46% or 13 were not.

The participants that completed the study and the course from the training group were 100% retained. Sixty-five percent of the traditional group that completed the study, course and enrolled in autumn 2006 were retained.

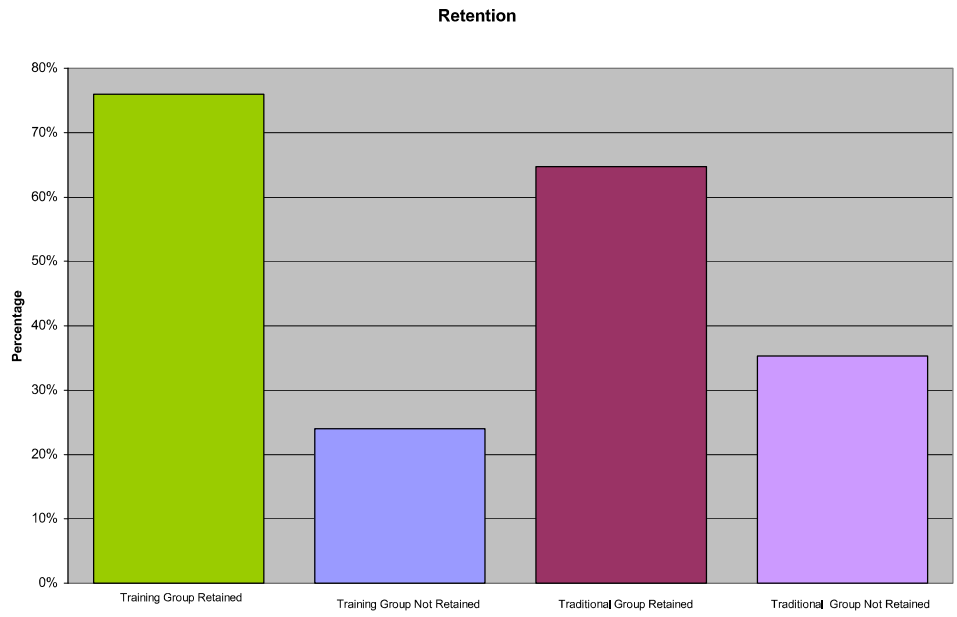


Figure 7. Training and Traditional Group Retention

Figure 8 shows those participants that completed the study, the course and enrolled in the autumn 2006 quarter. The training group had 14 participants that completed the study from start to finish, completed the quarter with grades, and enrolled as a full-time student in the autumn 2006 for a 100% retention rate. Figure 8 also shows the traditional participants that completed the study from start to finish, completed the quarter with grades and enrolled as a full-time student in the autumn 2006 for a 65% retention rate. So the traditional group consisted of 17 participants and 11 of the 17 participants were retained.

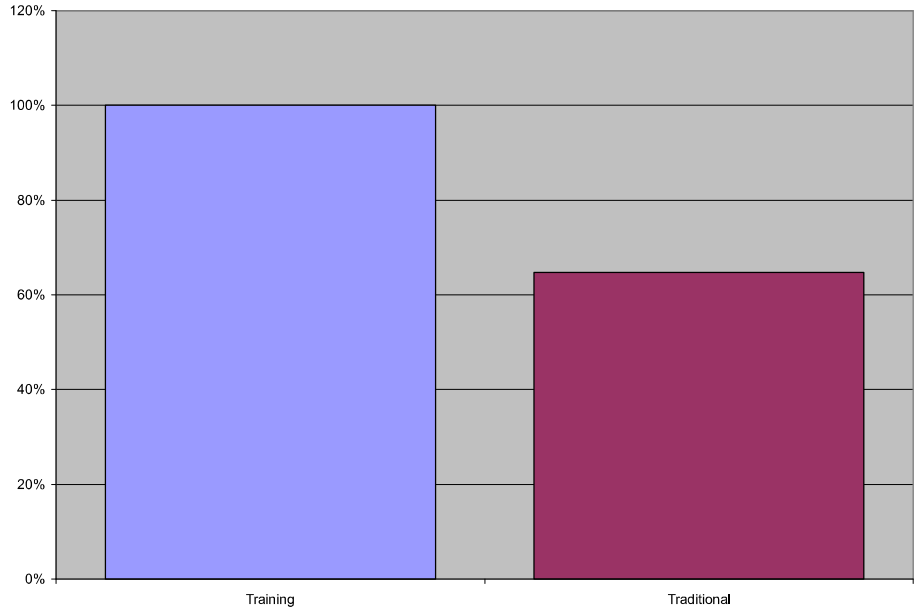


Figure 8. Retention Training and Traditional Groups That Completed Course, Quarter and Enrolled in Autumn 2006

Participant 9 states that the use of Freeze-Frame® "would be good for all sort of people to do because if you are put in a stressful situation, like school, you only take a few seconds to put yourself into check then it is going to help you react in a calm manner." Participant 16 stated, "I used Freeze-Frame® when taking tests and I used it when I did not know the answer or what to do. I did get good grades. I used it in my personal life because during the quarter, my grandfather has cancer so I used it to calm me down." Participant 48 stated, "It needs to be used widespread throughout the college."

So did Freeze-Frame® make a difference in whether a participant was retained? Even though there was no significant statistical difference, the focus interviews suggest that the emotion-management training may have been beneficial in helping participants manage their emotions and in turn help with retention. The interview technique allowed the investigator to collect phenomenological information generated from the participants. By using a phenomenological approach, the investigator was able to illuminate the specific details and identify phenomena from the perspective of the participants as they are perceived in a variety of situation. The dynamic human interactions provided by the interviews translated into an opportunity to gather information at a more in depth level and from a multi-dimensional perspective. It was important to this study to obtain information representing the perspectives of the research participants. The personal knowledge is powerful for understanding subjective experience, gaining insights into participants' motivations and actions that are unattainable using inferential statistical procedures taken-for-granted assumptions and conventional wisdom.

Summary

This chapter presented an extensive review of the mixed design research study of emotional intelligence and retention in the first-generation student at a two-year college. The chapter presented a review of the 25 training and the 28 traditional group participants. All of the participants were assessed on the pre- and post-MSCEIT, participated in a pre- and post-focus group interview, and if in the training group, taught the Freeze-Frame® emotion-management tool.

The first factor that was examined was the MSCEIT. The t-Test revealed that both groups were equal. There was also equality in regards to age and hours work between the two groups. The t-Test disclosed that there was statistically no significant difference between the pre-test MSCEIT for the training and traditional groups. There was also statistically no significant difference between the post-MSCEIT for the two groups. There was significant difference when examining age and the MSCEIT.

A t-Test was used to analyze the total, area, branch and tasks cumulative scores for the pre- and post-test MSCEIT for both groups. Again there was no statistical difference in regards to the two groups. Appendix E summarizes the t-Tests for the area, branch and tasks MSCEIT scores.

The second factor examined was retention. In addition to quantifying the data, the interviews were coded. There were themes that emerged from the interviews that were used to answer the research questions. Even though the research questions were not statistically significant, the phenomenological method provided an alternative answer to the question. In addition there is little research available that link emotional knowledge with retention. Linking emotional knowledge to retention may provide a productive means to address retention as indicated by some of the phenomenological findings. It would seem that the inferential statistical analyses were challenged by the small number of research participants.

CHAPTER 5. SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS

Introduction

Chapter five provides an overview of the study, a summary of the findings and conclusions, implications for developing procedures to improve the performance of first-generation college students, and recommendations for future research.

Summary of the Study

As has been discussed in the literature review, emotional intelligence is comprised of skills that can be developed or learned. However, there has been a paucity of research attention directed toward teaching students in general or first-generation college students in particular how to improve their emotional intelligence.

The present study recognized this as a limitation in the literature. Consequently, the researcher made a conscious effort to design the study in such a manner that participants would have an opportunity to improve their emotional intelligence and retention by teaching them to use the Freeze-Frame® tool. Participants in the training group who were recipients of emotional management training were consistent in reporting how effective the freeze-frame® steps were in helping them improve

their decision-making and reduce their stress when experiencing negative emotions.

To examine the relationship between teaching participants a strategy to improve their emotional intelligence skill set and retention rate, this researcher used a mixed-design research method. Essentially, there were two groups. One group, the traditional group received no specialized emotion-management training. The second group was taught to use an emotion-management tool designed to improve emotional intelligence.

Most of the studies reviewed in the literature have relied primarily on qualitative research methods. The present study used a mixed-design method in an attempt to combine the strengths of these methods during the interpretation phase of the study. The assumption was made that the two methods would allow for more diversity in the analysis of data, which the researcher reasoned would strengthen the findings.

An analysis of the data indicated that the quantitative results provided by the t-tests revealed no significant differences between group means. However, there were important trends in the qualitative data which was harvested from participant interviews. Specifically, the trends were found among participants in the training group. For example, these participants made a number of positive statements about how the

Freeze-Frame® emotion-management steps allowed to make better decisions and manage stressful situations in a more constructive manner. The emotion-management training appeared to make a difference in how these participants adapted to the college environment.

This researcher discovered that the college may be well advised to consider providing students with programs and experiences which would afford them the opportunity to develop their emotional intelligence skill set. A more detailed discussion about these trends and their implication for program development and future research will be presented later in the chapter.

What follows is an overview of the study with particular emphasis on the following factors: demographics of the sample, explanation of the results, a thorough discussion regarding the research questions in light of the results evident in the data, conclusions from the study, implications, and recommendations for future research in the field of emotional intelligence enhancement and retention of first-generation students in a two-year open access college.

Summary of the Findings and Conclusions

Question 1: How does low, moderate, or high emotional intelligence relate to spring quarter to autumn quarter retention?

Thirty-one of the 53 participants completed the study. Seventy-six percent of the participants who completed the study and scored in the low EI score range were retained. Seventy-six percent of the participants who scored in the moderate range and completed the study were also retained. Although the quantitative results showed no significant difference between emotional intelligence scores and retention rate, 100% of the participants in the training group who completed the study and who had high emotional intelligence scores were retained.

The pre-and post-interviews experiences shared by participants revealed possible answers to this question. Content analysis of participant responses suggest that higher emotional intelligence scores and retention rates may be related to such factors as: familial support, supportive friends, and academic preparedness. Conversely, factors that relate to lower emotional intelligence scores and retention rate may be related to individuals being academically under-prepared, financial difficulties or lack of support of family and friends.

The findings of this study are consistent with other research for first-generation learners. The National Center for Education Statistics (2000) demonstrates that almost half of the first-generation students who enter higher education will leave before completing an associate's degree. This is also consistent with the retention rate of the open-access branch campus. The most recent open-access branch campus retention rate data (2007) shows a -6.0% decrease in retention of associate degree seeking students. The current retention rate is 62.8% (Office of Institutional Research, March 2007).

Finding 1. Participants reported barriers associated with first-generation learners and retention. As the number of first-generation learners at the open-access branch campus continues to represent the majority of the student population, issues with barriers and retention will continue to flourish. According to the Office of Institutional Research, 60% of the open-access branch campus population is identified as first-generation. The participants in this study represented the typical first-generation learner. In fact, the first-generation population at the open-access branch campus is higher than the national average of 47% (Dugan, 2001). The literature is extant with examples of potential stressors and the ensuing challenges presented by these obstacles which first-generation learners may

confront. These stressors may lead to anxiety, prolonged levels of high stress, and a host of other negative emotions which may promote poor decision making and a lack of critical thinking. The ultimate effect of these dynamics may be frequently reflected in lower emotional intelligence scores and an increasingly lower retention rate.

Upon closer scrutiny of the information, the researcher found that interviewees reported barriers that included both socio-cultural and psychological factors. Some of the barriers surfaced before classes ever began such as not knowing how to apply for financial aid, contacting faculty or finding the necessary resources for academic success. The participants reported how they lacked knowledge about the college culture and expectations which led high levels of stress and uncertainty.

Participants revealed how they were not involved in campus organizations, had few friends at college, and primarily maintained relationships with friends prior to attending college. Many of the participants described how they would arrive a few minutes prior to class, attend class and leave immediately. Most of the participants either had to leave to go to work or go home to take care of a dependent.

The participants also said that they made contact with classmates just to have someone to ask a question or get notes

from. They did not engage in activities with classmates outside of class in order to establish new friendships. Many of the participants stated that their best friends were not students at the open-access branch campus or even in college. The friends were friends prior to the participant beginning college. This supports the literature by Terenzini & others (1994) which found that first-generation students delayed involvement in the social systems of college until they were assured that they could perform academically. It can be concluded that high stress levels may give rise to feelings of frustration, fear of failure, uncertainty, and low self-esteem. All of these negative emotions are energy draining and may foster patterns of avoidance behavior and essentially retreat from college (London, 1992).

Finding 2. The open-access branch campus provides a setting that is attractive to first-generation learners. The open-access policy of the open-access branch campus has led to growth in the number of first-generation learners. Participants in this study expressed that their reason for selecting the open-access branch campus was because it has an open-access admission policy, lower tuition, preparatory classes, safe location, and small class sizes. The participants comments regarding why they chose to attend an open-access branch campus were commensurate with

previous findings that indicated that first-generation learners tended to select a two-year college because of its smaller and receptive environment. The literature frequently shows that first-generation learners are more likely to enroll in a two-year college versus a four-year. A majority of the interviewees indicated they lived at home, with a significant other or with friends (Richardson & Skinner, 1992; Striplin, 1999; McConnell, 2000; Choy, 2001; Duggan, 2001).

Another reason that the open-access branch campus was the participant's choice is because of the open-access opportunity. The first-generation learner may not be academically prepared so an open-access college is a place to start. The mission of the open-access branch campus supports the first-generation learner. The mission states "embraces life-long learning in a dynamic and supportive open-access educational community." The open-access branch campus provides a pathway to education that would not have been available if not for its location and open-access policy. By having the supportive, open-access environment, students may have less stress, frustration or other negative emotions that may compromise their emotional intelligence scores and retention rate.

Finding 3. Non-traditional first-generation students have a lower MSCEIT score. There was an inverse relationship between

emotional intelligence scores and the age of the participants. The older the non-traditional participant was; the lower his or her MSCEIT score. The explanations for this finding are supported by the comments made by the older interviewees. For example, many of the older participants reported having more stress and anxiety about attending college, than did the younger participants. Many of the older students' lives were in flux as a result having lost established careers due to these careers or jobs no long existing primarily from change in technology, downsizing or outsourcing.

The non-traditional first-generation learner typically has dependents. Along with having dependents, they are compelled to have a job. This was evident in the participants of the study. The impact of having a job demands, full-time course load, and responsibilities for dependents can present a formidable challenge and may often lead to a prolonged state of high stress which may in turn spawn lower-emotional intelligence scores and a tendency to retreat from college.

In many cases the grandparents and parents of the first-generation did not complete high school (London, 1992). Furthermore, many of the parents of first-generation learners work in blue collar jobs. Consequently, the first-generation learner, unlike second-generation learners, typically may not

have a role model at home who can transmit the cultural and procedural expectations of college life to them.

Finding 4. Participants with outside support were able to persist. The qualitative data revealed that support from a variety of sources enabled the participants to remain in school. The support was in many different ways. For instance participants who able to persist, had encouraging spouses, had parents or a significant other to help with household duties so they could study. Also during midterms or finals, the participant may not be able to work as many hours to meet their financial obligations; however they could rely on an outside source for finances to help them meet family and school duties.

The support from others included someone to talk when they were frustrated or having difficult times. The interesting finding was that the support person usually did not any have any college experiences to convey to the participant. What emerged from the interviews was that the participants often reported that their support person wanted to help them because they had not been able to attend college or had lacked the desire to go to college. As stated previously, this finding emerged from the interview information. The researcher had not anticipated this finding.

Finding 5. Retention may be impacted by a variety of factors. The study found many factors that may have played a role in retention. The factors are under-preparedness, unrealistic expectations, lack or education or career goal, or difficulty transitioning to college (King, 1993). In addition, institutional factors may impact retention. These include student-faculty interaction and campus climate.

The participants in the training group had 100% retention rate. Participants in the traditional group had a retention rate of 65%. The difference in the two groups was that the training group received the training in how to refocus negative emotions. Essentially, training participants were introduced Freeze-Frame® emotion-management training procedure. Training the participants to refocus their negative emotions is supported by Bean's attrition model suggests.

The retention model by J.P. Bean suggests that student's intentions are shaped by prior experiences and attitudes and this may have a deleterious effect on retention or attrition. Bean also suggests that the under-prepared student may have more negative experiences, hence negative emotions and attitudes, which may lead to fear of failure and increased anxiety. Bean's description of the under-prepared student supports the idea that if students are trained to become more aware of these emotion-

management tools they will be in a position to consciously and effectively refocus their negative emotions, thus increasing retention (Smith, 2002, p. 4).

Finding 6. Retention for the traditional group was in line with the overall college rate. The traditional group retention rate was 65%. This is closely aligned to the retention rate for spring to autumn retention for the open-access branch campus which is 62.8%. Retention at the open-access branch campus continues to decline. Over the past seven years the open-access branch campus retention rates have fluctuated with a high of 69.3% to a low of 57.6%. The open-access branch campus is in line with other university branch campuses which have a range of 54% to 85%.

The plight of the traditional group participants may be reflected in the academic- and social-integration model devised by Tinto in which he suggests that individuals who are "unable to become integrated into and to establish membership within their society" (King, 1993, p. 24). Students who do not integrate into the social and academic system of higher education may not be retained. The social barriers often exist with barriers described in previous findings, that is, stress bought on by the unfamiliarity with academic procedures or low emotional intelligence skills. One's ability to integrate into

an academic setting may require a certain amount of emotional intelligence. If the students at the open-access branch campus are deficient in their emotional intelligence skills, this may be a central reason for the low retention rate at the open-access branch campus. The emotional intelligence skills have not been systematically addressed at the open-access branch campus and that may explain the continued decline in retention rate.

Question 2: In what direction will the Freeze-Frame® emotion-management tool influence the emotional intelligence scores.

The quantitative analysis showed no statistically significant difference between the emotional intelligence scores of the training group versus the traditional group. Although there was not significant difference there was a slight increase in the emotional intelligence scores of participants in the training group. The results of the data showed that 93% of the training group either stayed the same or increased their EI score. Only 7% of the participants in the training group experienced a decrease in their EI scores. By comparison, the traditional group had a 14% decrease in its EI scores. In other words, 86% of the traditional group participants wither increased or obtained the same EI score.

This researcher speculates that the training group participants may have benefited in part from applying the Freeze-Frame® procedure to refocus their attention to positive emotions when they experienced negative, counter productive emotions. The Institute of HeartMath has research findings that suggest that negative emotions inhibit cortical function and thus may compromise higher-order thinking and emotional intelligence.

Finding 7. The MSCEIT is an effective tool in measuring emotional intelligence. One of the central notions advanced in the present study is that emotional intelligence is a skill set that can be developed. Consequently, the MSCEIT was used because it is an ability-based emotional intelligence assessment tool rather than a self-reporting instrument. The MSCEIT focused on the four emotional intelligence skill areas: perceiving, facilitating, understanding and managing emotions (Mayer, Salovey, Caruso and Sitarenios, 2003).

By using the MSCEIT, the researcher was able to effectively assess emotional intelligence as a skill set and gage the participant's capacity for reasoning within an emotional context. Participant responses were measured against a criterion of correctness rather than a subjective self-report of perceived emotional skills. The criterion-based design of the instrument

made it difficult for the participant to give a socially desirable response. Another useful feature of the MSCEIT was that it attempted to measure whether the participant knew how to manage emotions. This feature was valuable in a study with the intent of ascertaining if emotional intelligence is a skill set that can be developed.

It seems plausible to conclude that MSCEIT enabled the research to establish that there was a trend in the results which indicated that the training group participants all of whom completed the study had the higher emotional intelligence scores. Furthermore, this trend may suggest the intriguing speculation that the higher the emotional intelligence score the greater the retention rate.

Question 3: In what direction will the application of the Freeze-Frame® emotion-management tool influence spring quarter to autumn quarter retention?

As discussed earlier, T-test analyses showed no significant difference between the two groups with respect to the post-test result on EI scores. However, the qualitative information gained through the interviews revealed an interesting pattern. For example, all the participants in the training group who completed the study were retained in the autumn quarter. By

contrast, sixty-five percent of the participants in the training group were retained. This finding suggests that the training group participants may have benefited from the emotional management training. Perhaps these participants were able to shift from negative to more positive emotions and in turn able to redirect their energy to improve their decision making and performance to persist in the pursuit of their educational goals.

Finding 8. Participants in the training group were able to identify, understand and self-regulate emotions. Several researchers, Bodine and Crawford (1999) and Matthews, Zeidner and Roberts (2002) view emotional intelligence as the ability to understand one's emotions as well as those of others. The Institute of HeartMath discovered that intervening at the emotional level is often the most efficient way to initiate change in previously established mental patterns and processes. The Institute of HeartMath suggests the idea that individuals can gain more conscious control over the process of creating increased balance within and among mental and emotional systems (2001). In fact, one of the training group participants indicated that

> I have noticed a difference that I don't know how to explain it. I think once you use Freeze-Frame® you can calm yourself down and start thinking the positive

> thoughts then that's what helped to put you back into check because things do see so bad. Once you have so many bad things it is like all you see and that's what really stresses me out, but once I realize there are some good things in the bad then I start coming back.

The researcher attempted to extend the Institute of HeartMath's position by presenting training group participants with the opportunity to practice identifying, understanding, and self-regulating their emotions. Such training it was reasoned would provide the subtext for emotional intelligence skill development.

Finding 9. Freeze-Frame® influenced participants' retention rates. It appeared that the participants in the training group were able to take charge of their emotions and refocus negative emotions into positive emotions. The ability to shift to positive emotions may have helped the training group participants adjust to the social and academic pressure of college life. For example, one participant expressed that "it (Freeze-Frame®) helped me because I was very skeptical. I used it when taking tests and I used it on things I did not know the answer or what to do. I used the Freeze-Frame®. I did get better grades." Another participant stated, "This is a great technique. I am going to use it forever. I use Freeze-Frame ® for tests, studying for test, personal issues." The qualitative information was consistent in showing that the training participants were

functioning in a more positive way which was reflected in their 100% retention rate (Institute of HeartMath, 2002). Freeze-Frame® provided the training group participants with a conceptual framework for disengaging from negative mental and emotional experiences by shifting their attention to the area around the heart and self-generating a positive emotional state. By using Freeze-Frame® participants were able to reverse the body's normal destructive stress response. The participants were able to think clearly and be in charge of their own emotions and performance.

In summary, as described in the findings identified above, the use of Freeze-Frame® emotion-management tool appeared to have played a key role in improving emotional intelligence which may have directly facilitated an improved retention rate. The qualitative analysis provided information disclosed by training group participants that they had learned how to understand how to deal with negative feelings and stressful situations thereby increasing emotional intelligence which in turn may have facilitated retention in the first-generation learner.

Recommendations

Recommendation 1. Future first-generation students should take the MSCEIT as an emotional intelligence assessment. Currently, all full-time first-generation learners are assessed

on their academic skills in the area of math, English and keyboarding. The assessment of emotional-intelligence skill level will provide a way to determine who would benefit from emotional skill development training.

The literature indicates that emotional intelligence is a skill set that is enhanced through training. Student should be provided with the opportunity to participate in a one hour seminar once a week. The first-generation students would have the opportunity to acquire experience in perceiving, facilitating, understanding and managing their emotions. Exposure to experiences in these areas may provide first-generation students the sorely needed avenue to overcome the traditional barriers they experience in the academic context.

Recommendation 2. Future first-generation students should be assigned a learning community. Emotional intelligence skill set training should be integrated into the autumn 2007 learning communities at the open-access branch campus. First-generation students would take the MSCEIT as part of their overall academic assessment. The learning communities will be comprised of incoming students in Developmental English, Developmental Math and Introduction to Psychology classes. The learning community will stay intact the entire 2007-2008 academic year. In addition all participants of the learning community will participate in a

weekly Freeze-Frame® workshop. The emotional assessment and subsequent emotional management training would be infused into the curriculum. All students would receive academic credit which would alleviate much of the high attrition rate experienced in the present study.

Recommendation 3. The open-access branch campus student services should implement a retention model to address the needs of the first-generation learner. Retention continues to decline at the open-access branch campus. It is recommended that the open-access branch campus Student Services unit adapt a retention model. The match between the student and institution is important for student retention. The retention models suggest that the students' ability to adept to the academic setting is as important as the institution adapting to the needs of the student's.

The three retention models discussed in the literature, academic and social integration, student-faculty informal contact and attrition, all view retention as an outcome of a complex set of interactions. These interactions include, student – faculty, student – college support services, and student – student. Since the university already addresses academic under-preparedness, the issue of social integration including emotional intelligence development training should be addressed.

If services are in place to address these complex set of interaction, the open-access branch campus would hopefully see an increase in retention.

Recommendations for Future Research

This study has served to embrace a notion put forth in the literature, namely that emotional intelligence is a skill set that can be developed. There were studies that examined emotional intelligence and retention but not a great deal of literature regarding how to improve the use of emotional intelligence in an academic setting. The present study assumes a credible position in the literature in that it has attempted to provide a study that deliberately provided research participants training in emotional intelligence skill development. In the next section, two recommendations for future research are presented.

Recommendation 1. Further research should be considered in an academic program. The use of learning communities as a format for future research would align the academic curriculum with the real-life goals of the participants. For example, under-prepared participants in need of emotional development would be placed in a setting that would not only address their academic needs but their emotional intelligence needs as well. In other words, the learning communities would position the research participants to

take gateway courses such algebra II and English 101 and 102 which are necessary to advance in technical and professional career paths. Currently, many first-generation students lower their goals and put limits on what they might achieve. To reverse this tendency, would enhance the potential academic success to be gained and has a chance to foster positive influence on student retention.

Future research on emotional intelligence skill development should embrace and take place in the context of mainstream activities of the institution. Research participants are better served when they are matriculated in academic programs in which emotional intelligence assessment and emotion-management tools would be a core part of their experience. This study has led the researcher to posit the integration of emotional assessment and emotion-management would bring about institutional change in the direction of improved academic performance and increased retention rate.

Recommendation 2. Expand the participants in a study to include all freshmen. The present study was limited to first-generation learners at an open access college. The trends identified in the qualitative analysis of the present study suggest that future research should include all freshmen. With retention an issue across most college campuses, assessing

students' emotional intelligence development may be an important strategy for increasing retention rate. This study and others to come in the future would be instrumental in shedding light on new strategies and programs address the need to increase retention rate.

Implications

All colleges have to focus on retention. Successful institutions will take the lead in establishing goals, timetables, measurable objectives, and innovative strategies to partner with students to help them remained in college. Every stakeholder in the institution must be committed to and engaged in planned change that is driven by sound systematic research All levels of the university discuss ways to address retention.

It was stated by other theorists (EI Project, 2004; Wells, Torrie & Prindle, 2000; Barchard, 2003; Tapia & Marsh, 2003) that emotional intelligence could be learned however, what this researcher did in this investigation, was to offer a positive attempt to contribute to the literature by teaching participants a strategy for emotional intelligence skill development In addition, the present study adds to the growing body of research on emotional intelligence by using the Freeze-Frame® emotional management tool with college research participants.

The Institute of HeartMath (IHM), the developers of the steps to Freeze-Frame® emotional management tool, has typically used this technique in educational settings with middle school and high school level research participants. However, the present study has extended Freeze-Frame® technique to first year, first-generation adult college level research participants. The phenomenological data provided by these participants trained in using the Freeze-Frame® revealed positive trends important for developing and learning emotional intelligence skill sets.

Finally, the decision to use the mixed design methodology proved to be a valuable approach. While the quantitative analysis provided by the t-test revealed no significant main effects, the phenomenological qualitative data provided by the interviewees proved to be extremely useful in providing explanations on how to create programs and experiences to maximize participants emotional intelligence skills set development and learning.

REFERENCES

Attinasi, L. C. (1989). Getting in: Mexican Americans' perceptions of university attendance and the implications for freshman year persistence. *Journal of Higher Education*, *60*(3), 247-277.

Barchard, K. (2003) Does emotional intelligence assist in the prediction of academic success? *Educational and Psychological Measurement*. V. 63, No. 5. p. 840-858.

Bodine, R. & Crawford, D. (1999). Developing emotional intelligence. Champaign: Research Press.

Brown, C., George-Curran, R. & Smith, M. (2003). The role of emotional intelligence in the career commitment and decision-making process. *Journal of Career Assessment.* V. 11, No. 4. p. 379 – 392.

Childre, D. 1998. Freeze-Frame® a scientifically proven technique for clear decision making and improved health. Boulder Creek: Planetary Publications.

Choy, S. (2001). *Students whose parents did not go to college: postsecondary access, persistence, and attainment. Findings from the Condition of Education, 2001.* (Eric Document Reproduction Service No. ED460660).

Ciarrochi, J., Forgas, J. & Mayer, J. (ed.) (2001). Emotional intelligence in everyday life: a scientific inquiry. Philadelphia: Psychology Press.

Creswell, J. (1998). *Qualitative inquiry and research design choosing among five traditions.* Thousand Oaks: Sage Publications, Inc.

Creswell, J. (2003). *Research design: quantitative, qualitative and mixed methods approaches*. 2nd ed. Thousand Oaks: Sage Publications, Inc.

deMarrais, K. & Tisdale, K. (2002) *What happens when researchers inquire into difficult emotions?: reflections on studying women's anger through qualitative interviews.* Educational Psychologist. 37(2), 115-123.

Duggan, M. (2001). *Factors influencing the first year persistence of first-generation college students.* (Eric Document Reproduction Service No. ED459673).

EI project building emotional intelligence via student learning communities: a business case, 2003. Retrieved May 1, 2004, from http://www.uc.edu.learningcommunities/ei_project.htm

Gall, M., Gall, J. & Borg, W. (2003) *Educational research An Introduction*. 7th ed. Boston: Allyn and Bacon.

Goleman, D. (1995). Emotional intelligence. New York: Bantam Books.

Goleman, D. (1998). Working with emotional intelligence. New York: Bantam Books.

Harvey-Smith, A. (2002). An examination of the retention literature and application in student success. Center for the Study of College Student Retention.

HeartMath LLC. 2002. The inside story-understanding the power of feelings. Boulder Creek: Institute of HeartMath.

HeartMath Research Center. (2001). Science of the heart-exploring the role of the heart in human performance. Boulder Creek: Institute of HeartMath.

King, M. (1993). Academic advising: organizing and delivering services for student success. *New Directions for Community Colleges*. No. 82, p. 21-31.

London, H. (1989). Breaking away: a study of first-generation college students and their families. *American Journal of Education,* 97, 144 – 170.

Lynn, A. (2002) The emotional intelligence activity book 50 activities for promoting EQ at work. New York: American Management Association.

Mayer, J.D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.). Emotional Development and Emotional Intelligence: Implications for Educators (p. 3-31). New York: Basic Books.

Mayer, J. D., Salovey, P., Caruso, D., & Sitarenios, G. (2003) Measuring emotional intelligence with the MSCEIT V2.0. *Emotion*. V. 3, 1, p. 97-105.

Matthews, G., Zeidner, M., & Roberts, R. (2002). Emotional intelligence: science and myth. Cambridge: The MIT Press.

McConnell, P. (2000). What community colleges should do to assist first-generation students. *Community College Review, 28,* 75 – 88.

National Center for Education Statistics. Findings from the condition of education. 2002.

Nunez & Carroll, First-generation students: undergraduates whose parents never enrolled in postsecondary education, 1998

Ohio Board of Regents. 2003. First to second year retention. Retrieved September 3, 2004 from http://www.regents.state.oh.us/perfrpt/persist%20public%20ver2.xls

Ohio Board of Regents. 2003. Head count enrollment in AU 2002 by rank. Retrieved September 3, 2004 from http://www.regents.state.oh.us/perfrpt/enroll%20HC%20ver2.xls

Ohio Board of Regents. 2004. 2003 Ohio colleges and universities: profile of student outcomes, experiences, and campus measures. Retrieved September 3, 2004 from http://www.regents.state.oh.us/perfrpt/2003-II.html

Ohio Board of Regents. 2003. 2003 vision, mission, goals, strategies and measures. Retrieved November 29, 2005 from http://www.regents.state.oh.us/mainpages/OBR%20Policies.pdf

Parker, J., Summerfeldt, L., Hogan, M., & Majeski, S. (2003). Emotional intelligence and academic success: examining the transition from high school to university. *Personality and Individual Differences*. 36. p. 163-172

Patton, M. (1990) *Qualitative evaluation and research methods*. 2nd ed. Newbury Park: Sage Publications, Inc.

Salovey, P. & Sluyter, D. (ed). (1997). Emotional development and emotional intelligence. New York: BasicBooks.

Simmons, S. & Simmons, Jr., J. (1997) Measuring emotional intelligence. Arlington: The Summit Publishing Group.

Striplin, J. (1999). *Facilitating transfer for first-generation community college students.* (Eric Document Reproduction Service No. ED430627).

Tapia, M. & Marsh, II, G. (2003). *A validation of the emotional intelligence inventory.* P. 2-12.

Terenzini, P., Rendon, L., Upcraft, M., Millar, S., Allison, K., Gregg, P., Jalomo, R. (1994). The transition to college: diverse students, diverse stories. *Research in Higher Education*, *35*(1), 57-73.

Thompson, C., Locander, W. & Pollio, H. (1989). Putting consumer experience back into consumer research: the philosophy and method of existential-phenomenology. *Journal of Consumer Research*. 16. p. 133-146.

University of Cincinnati Clermont College Mission Statement. (2003). Retrieved May 15, 2005, from http://www.uclermont.com/mission_statement.asp

University of Cincinnati Clermont College. Clermont vision 2004: a vision in progress. Retrieved November 29, 2005 from http://www.ucclermont.edu/eClermont/strategic_planning.htm

APPENDIX A

SAMPLE MSCEIT

Section A Question 1

MSCEIT™

Mayer-Salovey-Caruso Emotional Intelligence Test

Section A B C D E F G H



INSTRUCTIONS: How much is each feeling below expressed by this face?
(Please select a response for each item.)

1	No happiness	○ 1	○ 2	○ 3	○ 4	○ 5	Extreme happiness
2	No fear	○ 1	○ 2	○ 3	○ 4	○ 5	Extreme fear
3	No surprise	○ 1	○ 2	○ 3	○ 4	○ 5	Extreme surprise
4	No disgust	○ 1	○ 2	○ 3	○ 4	○ 5	Extreme disgust
5	No excitement	○ 1	○ 2	○ 3	○ 4	○ 5	Extreme excitement

Next Item >>

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Section B Question 4

MSCEIT™
Mayer-Salovey-Caruso Emotional Intelligence Test

Section A B C D E F G H

4. What mood(s) might be helpful to feel when figuring out what caused a fight among three young children? Each of the three young children is telling a different story about how the fight started. Figuring out what happened requires attending to the details of the stories and weighing many facts.

	Not Useful				Useful
a. happiness	○ 1	○ 2	○ 3	○ 4	○ 5
b. surprise	○ 1	○ 2	○ 3	○ 4	○ 5
c. sadness	○ 1	○ 2	○ 3	○ 4	○ 5

Section C Question 1

MSCEIT™
Mayer-Salovey-Caruso Emotional Intelligence Test

Section A B C D E F G H

INSTRUCTIONS: Select the best alternative for each of these questions.

1 . Marjorie felt more and more ashamed, and began to feel worthless. She then felt _____.

○ 1	a. overwhelmed
○ 2	b. depressed
○ 3	c. ashamed
○ 4	d. self-conscious
○ 5	e. jittery

Section D Question 4

MSCEIT™

Mayer-Salovey-Caruso Emotional Intelligence Test

Section A B C D E F G H

INSTRUCTIONS: Please select an answer for every action.

4 . Nothing seems to be going right for Ed. There just isn't much in Ed's life that he enjoys or that brings him much pleasure. Over the next year, how effective would each of the following actions be at making Ed feel better?

Action 1: Ed started to call friends he hadn't spoken to in a while and made plans to see a few people.

○ 1	a. Very ineffective
○ 2	b. Somewhat ineffective
○ 3	c. Neutral
○ 4	d. Somewhat effective
○ 5	e. Very effective

Action 2: He started to eat better, to get to bed earlier, and to exercise more.

○ 1	a. Very ineffective
○ 2	b. Somewhat ineffective
○ 3	c. Neutral
○ 4	d. Somewhat effective
○ 5	e. Very effective

Action 3: Ed felt that he was bringing people down and decided to stay by himself more until he could work out what was bothering him. He felt he needed time alone.

○ 1	a. Very ineffective
○ 2	b. Somewhat ineffective
○ 3	c. Neutral
○ 4	d. Somewhat effective
○ 5	e. Very effective

Action 4: Ed found that relaxing in front of the TV at night, with a beer or two, really helped him to feel better.

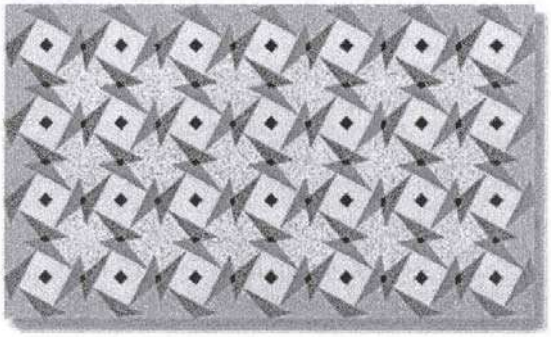
○ 1	a. Very ineffective
○ 2	b. Somewhat ineffective
○ 3	c. Neutral
○ 4	d. Somewhat effective
○ 5	e. Very effective

Section E Question 5

MSCEIT™

Mayer-Salovey-Caruso Emotional Intelligence Test

Section A B C D E F G H



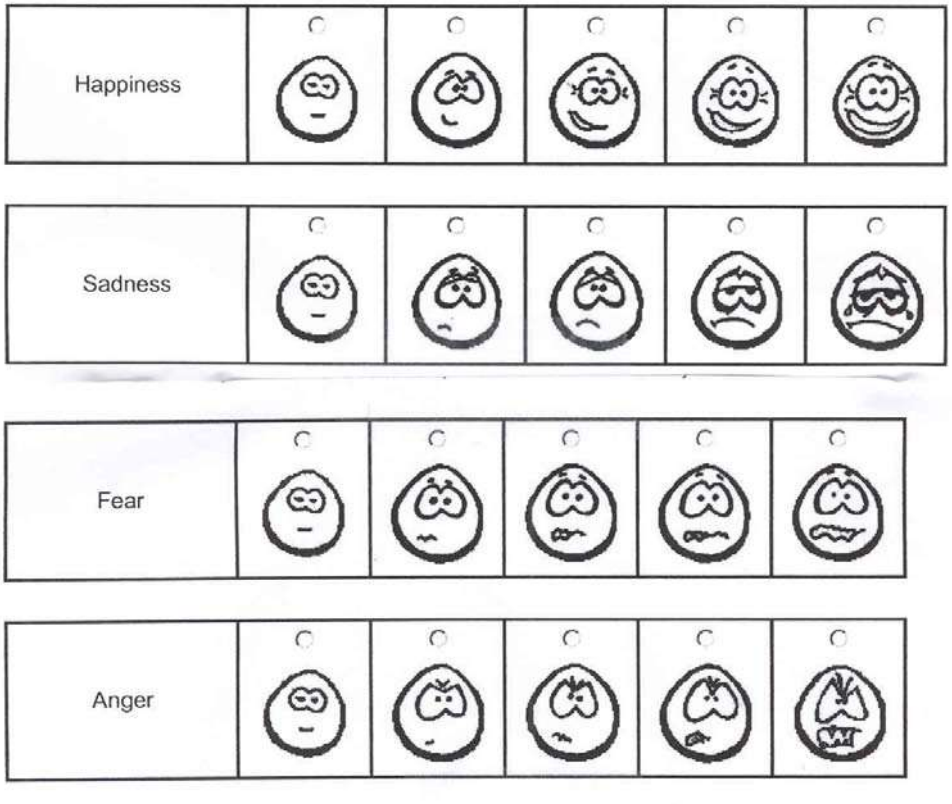
INSTRUCTIONS: How much is each feeling below expressed by this picture?
(Please select a response for each item.)

1. Happiness

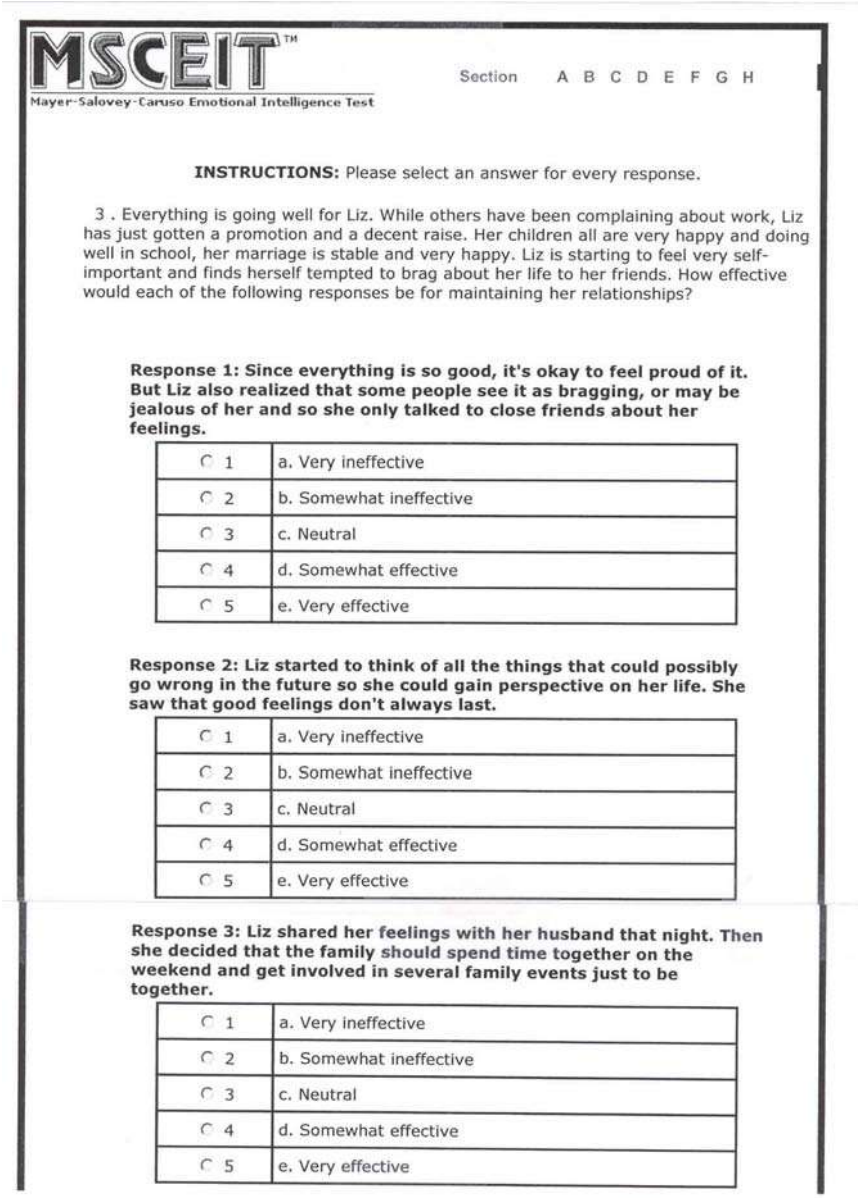
2. Sadness

3. Fear

4. Anger



Section H Question 3



MSCEIT™
Mayer-Salovey-Caruso Emotional Intelligence Test

Section A B C D E F G H

INSTRUCTIONS: Please select an answer for every response.

3 . Everything is going well for Liz. While others have been complaining about work, Liz has just gotten a promotion and a decent raise. Her children all are very happy and doing well in school, her marriage is stable and very happy. Liz is starting to feel very self-important and finds herself tempted to brag about her life to her friends. How effective would each of the following responses be for maintaining her relationships?

Response 1: Since everything is so good, it's okay to feel proud of it. But Liz also realized that some people see it as bragging, or may be jealous of her and so she only talked to close friends about her feelings.

○ 1	a. Very ineffective
○ 2	b. Somewhat ineffective
○ 3	c. Neutral
○ 4	d. Somewhat effective
○ 5	e. Very effective

Response 2: Liz started to think of all the things that could possibly go wrong in the future so she could gain perspective on her life. She saw that good feelings don't always last.

○ 1	a. Very ineffective
○ 2	b. Somewhat ineffective
○ 3	c. Neutral
○ 4	d. Somewhat effective
○ 5	e. Very effective

Response 3: Liz shared her feelings with her husband that night. Then she decided that the family should spend time together on the weekend and get involved in several family events just to be together.

○ 1	a. Very ineffective
○ 2	b. Somewhat ineffective
○ 3	c. Neutral
○ 4	d. Somewhat effective
○ 5	e. Very effective

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APPENDIX B

INDEPENDENT SAMPLES TEST MSCEIT				
		t-tests for Equality of Means		
		t	df	Sig (2-tailed)
AREA Experiential		.685	29	.499
AREA Strategic		.285	29	.777
BRANCH Perceiving Emotion		1.215	29	.234
BRANCH Facilitating Thought		.090	29	.929
BRANCH Understanding Emotion		.424	29	.675
BRANCH Managing Emotion		.256	29	.799
TASKS Face Tasks		1.357	29	.185
TASKS Picture Tasks		.501	29	.620
TASKS Sensation Tasks		.040	29	.969
TASKS Facilitation Task		.497	29	.623
TASKS Blends Tasks		.138	29	.891
TASKS Change Tasks		-.773	29	.446
TASKS Emotion-Management Tasks		.778	29	.443
TASKS Emotional Relations		.050	29	.961

APPENDIX C

FREEZE-FRAME® STEPS

THE FIVE STEPS OF FREEZE-FRAME®
Adapted from the original Freeze-Frame® technique
For TestEdge™ and The Inside Story
(HeartMath, 2002, p. 27)

1. Recognize
   Recognize that you are feeling stress and take a timeout so that you can put your thoughts and feelings on hold.

2. Shift
   Shift your focus to the area of your heart-now breathe as if your breath is flowing in through the center of your chest and out through your stomach area.

   Practice breathing this way to ease into the technique. Take 4 to 5 seconds on the in-breadth and 4 to 5 seconds on the out-breath. Breathe quietly and naturally. Continue this breathing as you do the rest of the steps.

3. Activate
   Make a sincere effort to activate a positive feeling. This can be a genuine feeling of appreciation or care for someone, some place, or something in your life. It's important to really feel the feeling and not just to think about it.

4. Ask
   Ask yourself what would be a better way to handle this situation or what action would reduce your stress. Try to select a less stressful perspective, even if you can't feel it yet.

5. Notice
   Notice any change in the way you think and feel about the situation.
   Try to remember any new thoughts and feelings for as long as you can.

APPENDIX D

FREEZE-FRAME® WORKSHEET

(HeartMath, 2002, p. 30)

1. Recognize the stress.
   In a few words describe your thoughts and feelings about a stressful situation in the space below.

   _____

   _____

   _____

   _____

2. Go through Freeze-Frame® Steps 2, 3, 4 and 5.

3. Write down any ideas you got about a better way to handle this situation, or an action or attitude that would reduce your stress.

   _____

   _____

   _____

   _____