ABSTRACT OF CAPSTONE

Michael C. Melton

The Graduate School

Morehead State University

April 8, 2016

THE IMPACT INSTRUCTION HAS ON EMOTIONAL INTELLIGENCE IN AN APPALACHIAN KENTUCKY HIGH SCHOOL

Abstract of capstone

A capstone submitted in partial fulfillment of the
Requirements for the degree of Doctor of Education in the
College of Education
At Morehead State University

By

Michael C. Melton

Whitesburg, Kentucky

Committee Chair: Dr. Shane C. Shope, Assistant Professor

Morehead, Kentucky

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THE IMPACT INSTRUCTION HAS ON EMOTIONAL INTELLIGENCE IN AN APPALACHIAN KENTUCKY HIGH SCHOOL

This research study examined the impact that Emotional Intelligence (EI) instruction could have on a sample of participants from a single rural Appalachian Kentucky high school. The study consisted of a randomly selected sample of 50 students grades 9-12 that were further randomly selected into a Treatment Group and a Control Group. The Treatment Group received ten one-hour EI instructional lessons one per week for ten weeks. The Six Seconds® Social Emotional Learning-Youth Version (SEL-YV) was used as the primary instrument to determine an EI score and scores for the Six Seconds® Model that consists of three pursuits, eight competencies, and five "Life Barometers" or outcomes. This study utilized a pre/post-test design using the SEI-YV to measure the influence that EI lessons over the period of ten weeks and also a mixed-methods design administering the Social Emotional Learning General Survey (SELGS) developed by the researcher to the whole sample. The 25 Treatment Group participants participated in an individual exit interview with the researcher. The data was analyzed with a one-way dependent t-test and there were results of significance that EI instruction could increase EI.

KEYWORDS: Emotional Intelligence, Instruction, Six Seconds®, SEI-YV, SELGS

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Candidate Signature

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Date

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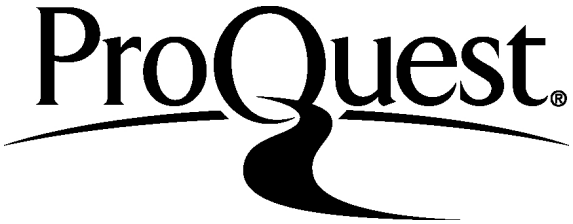

DEDICATION

I would be remise if I did not first and fully express my appreciation and debt to my loving wife and companion, Londa, who has endured this journey with me. The sacrifices, the late nights and early mornings, and the weekends dedicated to reading, researching, statistical analysis, and writing that I know all too well she would have enjoyed doing something other than watch me work. This research study is dedicated to the memory of my dad, Gale Melton, and my grandparents, Edley Hampton, Henry Melton, and Bulah Melton. Through this journey, I learned more about the many ways in which they had taught me and touched my soul when I did not fully understand that I was learning. I would also like to dedicate this work to my mother, Margarette Whitaker, and my stepfather, Manual Dean Whitaker, whose continued support, encouragement, advice, and ready ear have guided me not only in this endeavor but in my pursuit of purpose in life. I also need to dedicate this work to my second mom, Brenda Adams, who has always been a constant source of love and support.

I would also like to express my appreciation to my extended family members that I work with - April Frazier and Jennifer Wampler - who are like sisters to me. Their constant encouragement, proofreading, and humor have kept me focused on the task at hand. I would also like to extend my gratitude to Dr. Scottie Billiter, who introduced me to the study of emotional intelligence and for supporting me in this endeavor every step of the way.

No work of this magnitude would have been possible without the support of my administrative team: Stephen R. Boggs, Gracie Maggard, Dr. Scottie Billiter, and Robert Hammonds. I appreciate each of them more than they can ever fully comprehend.

I also find it necessary to dedicate this work to my grandchildren: Tyson Blake and Kamryn Reese McIntyre. I also feel blessed to dedicate this work to my special niece and nephews: Travis Michael Melton, Brandi Nicole Gay, Hunter Chase Barrett, and Jayce Alexander Kendricks. Their unconditional love and appreciation have reaffirmed what is truly important in life.

But, I save the best for last. I find it impossible not to thank God and my savior, Jesus Christ, for guiding and keeping me during this journey and blessing me daily with life more abundantly. Without that eternal security and a lively hope, I'm not sure I would have been able to have completed this work or at least truly felt the joy and accomplishment that has come through these last few years.

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Chapter I

Introduction

Emotional intelligence (EI) is the study of assessing the emotions of oneself and of those of the individuals that they interact and their emotional/behavioral response. Each individual possesses a level of EI, which is represented numerically with an emotional quotient (EQ) score when assessed with one of the various EI assessments. I was introduced to the study of emotional intelligence (EI) after serving as a participant in Billiter's (2013) study *The Heart of Teaching* that focused on measuring the impact that teacher emotional intelligence may have on student academic performance. The study was a pre-test/post-test design where teacher-participants were given an assessment that measured each of the participant's emotional quotient (EQ) which is a term that is often used interchangeably with EI. During the initial assessment the EI instrument showed that I had an extremely high EQ. I began to examine what made my EQ higher than many of my other colleagues in the study. I began to reflect on the life experiences, events, and lessons that had led me to have a higher than average EQ. I started brainstorming and what I found was that I had been raised in an emotionally intelligent family. I had been reared in a faith-based, caring, supportive, and service-oriented family that respected your opinion but expected appropriate, acceptable behavior. There were rewards for appropriate behavior but there was always chastisement and consequences for failure

to meet the behavioral expectations. During my adolescence I often felt the expectations levied upon me were unreasonable, unfair, and in excess, when compared to many of my peers, but hindsight has proven to me the validity of those expectations and I am thankful. My mantra to this day is "I can do better". No matter how well I completed an assignment, product, performance, or chore I was always reminded that I could do better. As the years have steadily moved forward that mantra has guided my pursuits professionally and personally. I look at the details because it is the little things that make the greatest impact. It was not that my family lacked pride in me or that I ever felt that I was a disappointment, but it was made evident to me that I was always to strive to reach perfection although it be evanescent.

I have an anthology of illustrations that I could share at this point but I will select three that can give you a peak into my upbringing. The first was a time that I watched my Papaw (grandfather) shake hands at church with another man and inside his hand he had a fifty dollar bill. At the time I thought it was strange but I did not ask that day why he had given this man money in a secretive way. Some years later at my Dad's funeral I found out that the man that my Papaw had given the money was out of work and was going through a very difficult time. The man that received the $50.00 handshake was one of the ministers officiating my Dad's funeral as he was eluding to the personal history our family had with his. Though my Papaw was gone, as was my Dad, their legacy lived on in my memory. It is better to give than to receive. We should not give for our glorification. It is far better to be humble servant with a kind heart. Having empathy for others and evaluating life situations that others

are enduring and how we respond is an important construct of EI. One of the major components of the Six Second® organizations EI construct is that of giving of yourself. In order to truly give of ourselves we must know ourselves and choose ourselves. These are the other two major components of the Six Seconds® construct of EI that will be explained more in detail later in this work.

Years prior to that we were doing some remodeling in a house that we moved into when I was not even in my teens and we needed some lumber late on a Saturday evening and there were not any lumber stores open. My Dad got in the truck and went over to a local sawmill and the mill was closed for the day and everything was locked up. Dad worked for a company that used a lot of Master Locks and he had nearly every core that came with one of those locks at that time. It just happened that he had a key that opened the padlock on the gate. Dad picked out the lumber that we needed, counted it, and left a note to the owner (which we knew very well) of what he had done, the amount of lumber that he took, and that he would come over Monday evening and settle the debt. I remember thinking that it would have just been as easy to have taken the lumber and never made arrangements to pay for the lumber. Who would have ever known? What I learned was that Dad knew and that was all that mattered. You will never be wrong for doing the right thing. Knowing oneself, as mentioned previously, possessing strong emotional literacy, and pursuing noble goals are important for giving of oneself. Emotional intelligence is built on life experiences and each experience albeit seemingly insignificant can make an intelligible imprint on our future emotional responses.

The last example that I will give happened at a family dinner where we had guests. We were having one of my favorite meals, country ham, sweet potatoes, green beans, potato salad, and hot yeast rolls. As the meal progressed there were only two rolls left in the basket and I knew that I could eat both of those rolls, so I grabbed both. The chastisement that followed established an intelligible principle that has guided me for the remainder of my life. Even though there were more rolls in the oven and they would soon be out, it was inappropriate for me to take the last two rolls. Till this very day, I will not take the last of anything. I learned from this experience that I should always consider the needs of others above my own wants. That is a powerful principle to guide one's life. These are just three of the many instances that I learned self-awareness, self-management, self-direction, compassion, and empathy for myself and those around me. I learned these attributes from my family that are paramount aspects of emotional intelligence that I can only hope to someday master, promote, and teach others.

I also examined my education and realized that I was a product of a supportive and warm school community. I attended a small K-12 public school in rural, southeastern Kentucky with approximately 700 students in the entire school. When I reflected on my elementary and high school years as a student I could not think of a single teacher that did not support me and make a positive difference in my development. I realize that not every one of my former classmates would probably be able to express similar memories, but it was a point that made me think deeply. The thought that crossed my mind was, "Did the way that I presented myself and interact

with my teachers when I was a student make a difference in the impact that those teachers had on me personally?" I had a strong belief that it did but I did not have data to support that belief. Several researchers allude to our ability to build positive relationships and process our emotions affects cognitive effectiveness and that it is imperative that families and school focus on the positive impacts of molding emotionally competent students (Elias, Zins, Weissberg, Frey, Greenberg, Haynes, Kessler, Schwab-Stone, & Shriver 1997; Durlak, Dymnicki, Taylor, Weissberg, & Schellinger, 2011). "Schools have an important role to play in raising healthy children fostering not only their cognitive development but also their social and emotional development" (Durlak et al, 2011, p. 406).

I also looked at my life experiences outside of the ideal world of education. I have often stated that the most important school I attended was the Harry Wendlestedt Umpire School in January of 1992. I have made that statement on several occasions and people have had a peculiar look of amazement on their face saying, "Is this guy for real?" But, as I looked back I realized that the training I received concerning the skills of conflict management, conflict resolution, being aware of body language, professional presentation, and communicating with irate individuals in game situations, directly correlated with my success of dealing with difficult situations as an educator. It was that understanding and honed ability to deescalate stressful and anxious situations that had allowed me to excel as a minor league umpire, NCAA sports official, and eventually as an educator.

Waters & Sroufe's (1983) described the characteristics of emotional competency as "to generate and coordinate flexible, adaptive responses to demands and to generate and capitalize on opportunities in the environment" (p. 80). Our ability to assess emotional stimuli and make appropriate emotional and behavioral response has a direct correlation with future success. Being emotionally intelligent may not guarantee success 100% of the time but it does greatly increase the likelihood of success. Nelson, Low, & Ellis (2007) stated, "[E]motional intelligence is a learned ability to think constructively and behave wisely. Emotional intelligence is best developed by learning and developing cognitive and experiential thinking skills that engender wise and effective behavior" (p. 30). Emotionally intelligent responses are connected to our cognitive experiences and the more critical thinking and problem-solving skills necessary to make an appropriate emotional response the more significant the lesson learned. According to Epstein (1998), "Few realize that their emotions are determined by how they interpret events, not by the events themselves" (p. ix). These skills of self-awareness, self-regulation, and relationship building were skills that I learned from my family and from my education outside the walls of academia.

I was employed as a P-8 principal in 2005 and came from a career high school mentality. It was my first experience as a principal and I knew I had a lot to learn but I thought mostly about curriculum and finance not how I was treating people. I could not visualize how my staff saw me; I could not see myself through their eyes. I had always had positive experiences with work relationships previously but never as an

elementary school administrator. In the first month and the half of the school year I began to institute changes and requirements to bring the school in-line with the other schools in the district. What I began to notice was by the middle of September the morale at the school was in the cellar and I was on dangerous ground of losing the school. I drew on the lessons that I learned from my childhood of how to treat other people. Something that I had forgotten in my haste to make the school an efficient teaching and learning institution was the people. Fortunately, I was able to see the error of my beginning and changed my leadership style. I moved from an authoritative leader to that of a servant leader.

The authoritative or autocratic leader is one of absolutism. The leader has complete control of the factors of production and manipulates them, according to their perceived goals and objectives. According to Cherry (2014),

> Authoritarian leaders, also known as autocratic leaders, provide clear expectations for what needs to be done, and how it should be done. There is also a clear division between the leader and the followers. Authoritarian leaders make decisions independently with little or no input from the rest of the group. (para. 2)

The autocratic leader attempts to guide and prod his team's vision, goals, and objectives sometimes with little guidance suggesting the most productive means or best practices to achieve those ideals (Benincasa, 2012). The autocratic style should not be used if it develops a negative, resentful, and uncomfortable climate with the majority of the team (Leadership Styles, n.d.). This style should only be used for

short durations when necessary as it may lead to a negative long term impact ("The Six Leadership," n.d.). According to Benincasa (2012), "It (autocratic) is not the best fit when the leader is working with a team of experts who know more than him or her" (para. 10).

With my leadership challenges I decided to build on positive and supportive relationships with my staff. I developed a servant leadership philosophy even though I did not then know that there was a servant leadership style. Sergiovanni (2007) expressed that it became apparent to Greenleaf (1977) that "a new moral principle is emerging which holds that the only authority deserving one's allegiance is that which is freely and knowingly granted by the led to the leader in response to, and in proportion to, the clearly evident servant stature of the leader" (p. 79). "For Greenleaf, the great leader is a servant first" (Sergiovanni, p. 79). According to Sergiovanni (2007), servant leadership promotes life-long learning where the principal should be the chief example. Servant leadership provides confidence in those that follow, and shared leadership leads to servant leadership; the leadership style becomes less important than the moral focus. To be an effective servant leader requires the ability to evaluate others emotional needs. Servant leadership will include *purposing* that is providing clear direction; *empowerment* which is freedom of action based on agreed upon core values; and "*leadership by outrage*" is that the leader shows their emotions and passions rather than be reserved (Sergiovanni, 2007). If all of these are present in an institution, then servant leadership is the guiding force. Sergiovanni (2007) describes it as a covenant, a promise that guides all actions (p.

84). Servant leadership is "A practical philosophy focusing on people who choose to serve first and then lead as a way of expanding service" (Leadership Styles, slide 35). To be an effective servant leader requires the ability to evaluate and build positive and supportive relationships. The ability to build positive and supportive relationships is one of the major characteristics of emotional intelligence.

I took the time to build positive relationships not based on education but focused on knowing the people. The social atmosphere of the school transformed in half the time that it took me to destroy it. As I moved forward with my new leadership philosophy the school blossomed and produced at levels that placed it as the highest scoring elementary and middle school in the district. According to Ingram & Cangemi (2012), "How one chooses to deal with not only one's own emotions, but the emotions of others as well, will determine a great deal about the experience one has both in life and in leadership situations" (p. 771). Leaders that have high EI recognize, evaluate, predict, and regulate emotional responses in ways that establish positive work relationships and increase the capacity to motivate those around them (George, 2000; Sadri, 2012).

These were the points that I began to consider and wet my intellectual appetite considering that I wanted to know more about emotional intelligence and the impact that it could have not only myself but the students that I taught. I was not yet in a position to conduct professional research but I did start personal research in the field.

When I entered my doctoral pursuit it was only short leap to consider that I would like to do my research in emotional intelligence. The question I faced was

which direction to go with my research in EI. My literature review and research led me to have a desire to investigate the impact that EI instruction may have on students.

Introduction to Emotional Intelligence

Emotional intelligence (EI) is a construct that is in its early years of development and has been one that has gained popularity from the classroom level to the boardrooms (Richburg & Fletcher, 2002). EI was made popular by Daniel Goleman's (1995) book *Emotional Intelligence* and the concept intrigued the world of academia and the common man alike because of the promise that has been suggested. The realization that "the most talented are not always the most successful, happy, or wealthy" has long been a scenario that has confounded intellectuals (Richburg & Fletcher, 2002, p. 31). Researchers agree that emotional intelligence characteristics are observable and measurable traits, abilities, and skills that are learnable (Bar-On, 1997; Durlak & Weissberg, 2007; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Goleman, 1995; Weisinger, 1998; & Brown, 2013). According to Brown (2013),

> While distinctly unique, the major models of emotional intelligence all suggest that emotional intelligence can be defined as a set of skills or abilities relating to the recognition of emotions in self and in others, the regulation of emotions, and the adaptation of emotion to specific events or experiences. (p. 1)

Our ability to evaluate our emotions and the emotions of those that we interact with is a powerful skill that can be improved with instruction and focus.

Statement of the Problem and Research Questions

The purpose of this action research project is to study a group of students from Letcher County Central High School to measure their individual emotional intelligence (EI) or emotional quotient (EQ) and to assess whether an emotional intelligence instructional unit can raise student EQ over a twelve week period. The original research design was to select a sample with a stratified random method where one-hundred and twenty students would be selected with thirty students per grade levels 9-12. The sample would then be divided into a control group and a treatment group using stratified random sampling methods; sixty students in each respective group.

The research design changed after the distribution of consent forms and excluding those that did not give consent. From the remaining population I randomly selected 120 students but only 50 students gave their assent to participate in the study. With 50 students remaining from the random selection I then randomly selected the remaining participants into a control group of 25 and a treatment group of 25 participants.

The study will indicate whether there is a need for increased EI instruction and an emphasis on EI concepts in a rural Appalachian Kentucky high school. This research will be a mixed-methods approach with quantitative and qualitative data from a pre-test/post-test model using the Six Seconds Social Emotional Intelligence-Youth Version (SEI-YV) instrument and a researcher designed Social Emotional

Learning General Survey (SELGS). The research will attempt to answer the primary research questions:

1. What is the effect that Emotional Intelligence instruction has on student emotional intelligence (EI) level or emotional quotient (EQ)?
2. Is it possible to increase student emotional intelligence level or emotional quotient (EQ) over the course of ten weeks?

The two null hypotheses for this study will be as follows:

Ho1: Emotional intelligence (EI) instruction has no effect on student emotional intelligence (EI) level or emotional quotient (EQ).

Ho2: It is not possible to increase student emotional intelligence (EI) level or emotional quotient (EQ) over the course of ten weeks.

In this research study, I used a dependent one-way t-test to determine if statistical significance exists between the pre-test/post-test student scores. Both the control and experimental groups will be given a socio-economic status and demographic survey to provide anecdotal information to provide a more complete picture of the sample.

Background of the Problem

My experience in working with students from the rural southeast region of Kentucky has led me to believe that many students would benefit from instruction designed to improve their emotional intelligence, social skills, relationship building abilities, and conflict resolution skills. Living in a region that is isolated physically,

culturally, and socially has hampered many generations of the students of this region to communicate and succeed at a level below their intellectual ability or potential. In a time in our history where isolation is not as paralyzing as it once was the necessity of being able and willing to communicate and interact virtually is imperative for future success. Emotional intelligence instruction will greatly improve future student success.

Purpose

The purpose of this research project was to study a group of students from a rural Appalachian Kentucky high school that were enrolled in grades nine through twelve and to measure their individual emotional intelligence (EI). The sample originally was to be approximately one-hundred and twenty students; thirty students from each of the grade levels. The sample was to be selected with a stratified random method and the sample was to be further divided into control and treatment groups using a stratified random method to equally divide the participants in each of the grade levels. The design of the study had to be altered due to a significant number of denials of parental consent and participants denying assent. This change in design will be discussed later in Chapter 3 of this work. This study provided some insight that EI instruction can increase individual student emotional quotient (EQ) and EI components can be increased over a period of a ten of weeks of EI instructional lessons. The study appears to indicate there is a need for increased EI instruction and an emphasis on EI concepts in the rural Appalachian Kentucky school district.

Definition of Terms

The terms that are associated with the study of emotional intelligence can often be used interchangeably, may overlap, or may be interpreted in various ways.

Emotional Intelligence (EI)

The concept of emotional intelligence is most frequently contributed to Daniel Goleman (1995) and he defined EI as "abilities such as being able to motivate oneself and persist in the face of frustrations; to control impulse and delay gratification; to regulate one's moods and keep distress from swamping the ability to think; to empathize and hope" (p. 34). Salovey and Mayer's (1990) defined EI as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions" (p. 186). Bar-On & Parker (2000) and Brown (2013) described EI as a variety of intrapersonal and interpersonal skills and abilities that guide individual adaptability with the stressers and pressures. The opportunity to lead a productive and fulfilling life requires the ability to be self-aware and regulate individual emotions and the emotions of others. Having empathy, the ability to build positive, supportive personal as well as professional relationships, and the ability to effectively prioritize and understand how to live positively with stress (Bar-On & Parker, 2000).

Emotional Quotient (EQ)

Emotional quotient is a term that was developed by Ruben Bar-On that allowed the assigning of a numeric score to an individual's level of emotional intelligence in relation to general intelligence (Labby, Lunenburg, & Slate, 2012).

Bressert (2012) stated that EQ is the ability to understand others motivations, feelings, and how to build interactive work and personal relationships. EQ maybe most easily understood with the following definition, "A measure of personality and emotional intelligence in comparison to others in the population" (Colfax, Rivera, & Perez, 2010, p. 89).

Social Intelligence

Is the ability that is necessary in creating and managing personal relationships and includes social awareness and social facility. Social awareness involves the ability to empathize, show interest, and comprehend how social interactions affect relationships. Social facility is the ability to predict others feelings, the meaning of body language and the awareness of personal body reactions to social stimuli to act and react in socially acceptable ways concerning others (Goleman, 2006; Brown, 2013). Social intelligence is the successful management of interpersonal relationships and is necessary for efficient learning and a better understanding of social emotional learning and emotional intelligence (Thorndike, 1920; Kvapil, 2007).

Cognitive Intelligence

This type of intelligence is dependent on the speed, efficiency, and accuracy by which the brain processes, analyzes, evaluates, and synthesizes information in the process of higher-order thinking (Brown, 2013). It includes the traditional intelligences of crystallized and fluid that will be discussed in greater detail later.

General Intelligence

This intelligence is includes both cognitive and emotional intelligences (Bar-On & Parker, 2000).

Social-Emotional Learning (SEL) Programs

These are instructional programs developed to increase the skills, traits, and abilities associated with positive and productive emotional responses to social stimuli. The plethora of programs focus on skills in self-awareness, self-regulation, intrapersonal and interpersonal skills, stress management, conflict resolution, adaptability, team building, and personal confidence (Brown, 2013).

Adaptability

The ability to improvise, overcome, and adapt to various emotional situations includes three related abilities. The ability to assess one's own emotions in real time, possessing the flexibility to adapt and adjust emotions, thoughts, and reactions to change, and the ability to effectively solve problems by assessing emotions, people, and situations and providing productive solutions. If a person possess the abilities to realistically assess emotions in real time (reality testing), being flexible in decision-making, and be an effective problem solver then they are going to be a more productive participant in society (Bar-On & Parker, 2000; Brown, 2013).

Interpersonal Skills

Possessing these skills allows and individual to effectively relate and interact with others. There are three related abilities that are necessary for productive interpersonal skills: empathy, social responsibility, and interpersonal relationship. Empathy is the ability to effectively feel compassion and understand the emotions of

others; being able to see the world through their eyes. Social responsibility is the ability to participate as a constructive and productive member of a team, group, or community. Interpersonal relationship is the ability to connect to others in a caring, supportive, and trusting relationships that promotes emotional closeness and support (Bar-on & Parker, 2000; Brown, 2013).

Gardner (1983) states:

> Interpersonal intelligence builds on a core capacity to notice distinctions among others; in particular contrasts in their moods, temperaments, motivations, and intentions. In more advanced forms, this intelligence permits a skilled adult to read the intentions and desires of others, even when these have been hidden. This skill appears highly sophisticated form in religious or political leaders, teachers, therapists, and parents. (p. 23)

Intrapersonal Skills

Intrapersonal skills are those that enable individuals to self-manage their emotions. This self-management and self-awareness includes the constructs of self-control, self-regard, initiative, adaptability, self-responsibility, and transparency (Labby, Lunenburg, & Slate, 2013, Bar-On & Parker, 2000b). The ability to honestly evaluate oneself and assess one's potential is an important characteristic of interpersonal development. Having above average intrapersonal skills allows emotional independence (Bar-On, 2000). Gardner (1983) defines intrapersonal intelligence as:

> Knowledge of the internal aspects of a person: access to one's own feeling life, one's range of emotions, the capacity to effect discriminations among these emotions and eventually to label them and to draw upon them as a means of understanding and guiding one's own behavior. (p. 24)

Summary

The components, traits, and/or abilities that are a part of emotional intelligence for many people may seem like common sense but it often appears that we are in an era where common sense is no longer common. Depending on our cognitive ability, our personal experience, and the multitude of events that we face in life all are pieces of the puzzle that shape our toolbox of emotional responses. Can we manage our emotional responses is a question that we have all asked ourselves repeatedly during our lives. Why do we say and do things that we either eventually are aware are not in our best interest or are hurtful to those around us. Can we learn to manage our emotions and increase our emotional intelligence? Those are questions that I continued to ponder as I began to research the literature on emotional intelligence.

Chapter II

Review of Literature and the Historical Concepts of Emotional Intelligence

The culture of education today is one of high stakes accountability and greater demands on educational leaders, teachers, and students than ever before. Initiatives of various types have always been a constant in education and presently the federal legislative initiatives of No Child Left Behind (NCLB) and Race to the Top (RTTT) are increasingly changing the landscape of public education (Gardiner, Canfield-Davis, & Anderson, 2008; Holiday, 2013). A catalyst of these initiatives in Kentucky is Senate Bill 1 which directed comprehensive reform to include rigor and relevance, alignment of assessment, effective leadership and teaching, innovation in the classroom, and continuous school improvement (Senate Bill 1). These legislative statutes and administrative regulations have greatly changed teaching, learning, and academic expectations. Initiatives include increased teacher and student use of technology and websites e.g. Khan Academy, Study Island, and Novel Star, and many more have become constants in student instruction and learning (www.khanacademy.org, www.studyisland.com, & www.novelstars.com). On that same line of innovation, Kentucky's adoption of Quality Core Standards, end-of-course (EOC) assessments, College and Career Readiness (CCR), and the inclusion of a new Professional Growth and Evaluation System (PGES) have greatly increased teacher and student expectations of academic performance. A significant part of the

PGES is the development of student growth goals (SGG) as a part of teacher accountability (Student growth within). Even though much of this is in its infancy, it has definitely increased the academic performance expectations as well as the apprehension of the unknown about the new initiatives.

With the ever increasing expectations placed on academic performance, there has been increased focus in professional development on teaching and learning theories in Kentucky's public schools (Student growth within). There has been implementation of professional learning communities (PLCs), strategies of the Characteristics of Highly Effective Teaching and Learning (CHETL) (Characteristics of highly, 2013), and Classroom for Student Learning (CASL) (Stiggins, Arter, Chappuis, & Chappius, 2004), and now the adaptation of the Danielson Teaching Framework are supposedly reinventing the science of teaching and learning (Danielson, 2014). The concentration of these programs and initiatives has been strongly emphasized in the cognitive aspects, but there has been little focus on the emotional aspects of the learner. Although the Danielson framework does evaluate on appropriate, positive emotional interaction with students as a part of the criteria, student cognitive performance is the ultimate goal and the emotional content is an underlying concept. It is the area of emotional intelligence that there could be an opportunity to also impact the academic performance in our schools through instructing students with the skills to cope with and utilize their emotional stimuli. "IQ, personality, and EQ (Emotional Quotient) are distinct qualities we all possess" (Bradberry & Greaves, 2009, p. 19). According to Low and Nelson (2000) that

"emotional knowledge, skills, and intelligence hold the major key to improving education and helping students and teachers, in all academic disciplines and career fields, attain higher degrees of achievement, career success, leadership, and personal well-being" (para. 10). The teaching of character, responsibility, conflict resolution skills, communication skills, relationship building, and grooming students to become productive members of society is essential to maintaining an innovative, democratic society. These are all a part of the Kentucky Practical Living Curriculum in Health and Physical Education but are determined by each individual district to how much those characteristics are emphasized beyond that one year. Therefore, it is imperative to have an understanding of the different theoretical types of intelligence: cognitive and emotional.

The Traditional Two Types of Intelligence

There are two types of intelligence that are measured on standardized IQ tests: crystallized and fluid. According to Cherry (2014), Psychologist Raymond Cattell introduced the concepts of the two types of intelligence and developed his theory in conjunction with John Horn. "Crystallized intelligence involves knowledge that comes from prior learning and past experiences" (Cherry, 2014, p. 1). According to Nisbett (2014), "Crystallized intelligence refers to the individual's store of knowledge about the nature of the world" (p. 6). Crystallized intelligence is all of the facts, vocabulary, concepts, theories, and experiences that an individual is able to learn and store in their brain. Not necessarily the ability to tie them together and solve problems or situations. Crystallized intelligence according to Bloom's taxonomy

would rest at the levels of knowledge and comprehension which are the two most basic levels. For example, this type of intelligence would be in mathematics simple addition and subtraction or in history just being able to recall random facts but not being able to establish relationships between those facts.

New Version

In 1956, Benjamin Bloom headed a group of educational psychologists who developed a classification of levels of intellectual behavior important in learning. During the 1990's a new group of cognitive psychologists, led by Lorin Anderson (a former student of Bloom), updated the taxonomy to reflect relevance to 21st century work. The two graphics show the revised and original Taxonomy. Note the change from nouns to verbs associated with each level.

Note that the top two levels are essentially exchanged from the traditional to the new version.

Old Version

Remembering: can the student recall or remember the information?	define, duplicate, list, memorize, recall, repeat, reproduce state
Understanding: can the student explain ideas or concepts?	classify, describe, discuss, explain, identify, locate, recognize, report, select, translate, paraphrase
Applying: can the student use the information in a new way?	choose, demonstrate, dramatize, employ, illustrate, interpret, operate, schedule, sketch, solve, use, write.
Analyzing: can the student distinguish between the different parts?	appraise, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test.
Evaluating: can the student justify a stand or decision?	appraise, argue, defend, judge, select, support, value, evaluate
Creating: can the student create new product or point of view?	assemble, construct, create, design, develop, formulate, write.

Figure 1. Example of Bloom's Taxonomy. Source: Bloom's Taxonomy, www.centergrove.k12.in.us/Page/7844

Benjamin Bloom's (1956) taxonomy is a classification for the level academic understanding required to perform a specific task. The original version (the right triangle on the diagram above) started with the acquisition of knowledge to comprehension, application, analysis, synthesis, and the highest level of evaluation (Bloom's Taxonomy, n.d.; Adams, 2015). During the 1990's another group of

educational psychologists retitled the levels of the Bloom's to more recognizable terminology for the 21st century (the left triangle on the diagram above) (Bloom's Taxonomy, 2014). This group led by one of Bloom's former student Lorin Anderson renamed the lowest level remembering to understanding, applying, analyzing, evaluating, and their highest level creating (Bloom's Taxonomy, 2014; Adams, 2015). According to both taxonomies the lower levels require very little thought but simply the rote memorization and recall. The higher you move up the taxonomy the more intellectual ability is required to complete a task. In the highest three levels of the taxonomy the intellectual abilities and skills required to be successful are comparing, contrasting, differentiating, experimentation, defending a position, judging, evaluating, constructing, designing, and problem-solving (Adams, 2015).

"Fluid intelligence consists of the ability to solve novel problems that depend relatively little on stored knowledge, as well as the capacity to learn" (Nesbitt, 2014, p. 6). What Nesbitt (2014) is explaining is that the use of fluid intelligence is necessary to research and develop innovative solutions to new problems. "Cattell defined fluid intelligence as '…the ability to perceive relationships independent of previous specific practice or instruction concerning those relationships'" (Cherry, 2014, p. 1). In essence that means fluid intelligence is the individual ability to problem solve and reason abstractly. Fluid intelligence is found in the higher-order thinking levels of Bloom's which include the ability to analyze, synthesize, and evaluate information and make decisions.

Crystallized intelligence continues to grow through the entire life span whereas fluid intelligence peaks during the adolescent years and begins to decline in early adulthood (Cherry, 2014; Nesbitt, 2014). According to Nesbitt (2014), "Changes in fluid and crystallized intelligence across teenage years can be substantial, and those changes are independent of one another and are associated with changes in gray matter in different parts of the brain" (p. 6). Taking the information on types of cognitive intelligence into consideration and the declining problem solving abilities of the human brain as we age that it is imperative to consider the impact that emotions and interaction may have on academic performance.

Maslow's Hierarchy of Needs

When considering the motivation of individuals it is necessary to examine the work of Abraham Maslow and his Hierarchy of Human Needs. The human desire to achieve fulfillment for perceived needs is a major motivation factor and failure to fulfill these needs could impede future and further psychosocial advancement (Peters, 1997). Maslow is one of the most, if not the best, well-known behavioral psychologists (Gambrel & Cianci, 2003; Kroth, 2007; and Dumore, 2013). Maslow's hierarchy is one of the most-recognized theories focusing on needs-based motivation (Stum, 2001; Koltko-Rivera, 2006; Dye, Mills, & Weatherbee, 2005; and Dunmore, 2013). "According to this theory, human beings have needs and wants that motivate their behavior" (Dunmore, 2013, p. 73).

The work of Maslow was an integral step that gratification of emotions are a powerful influence on cognitive function. Fried (2011) stated Maslow's impact was

that he altered the course of teaching and learning when he promoted that emotional ability can be enhanced and be an important catalyst of cognitive development. Emotions are a part of effective cognition and may have a greater influence on learning and motivation (Fried, 2011; Linnenbrank & Pintrich, 2000; and Billiter, 2013). According to Maslow's Hierarchy of Human Needs the inability of an individual to meet their needs is a powerful motivating factor. Negative or unsatisfactory emotions created by an individual's inability to achieve their needs or perceived needs can be a powerful impediment to effective, working memory and the effectiveness of the memory is significant in operational cognition (Billiter, 2013).

Maslow's hierarchy began with the basic needs of physiological; these included air, food, water, clothing, and shelter. The second level is safety and security and includes structure, security, stability, and meaning in life. For safety to exist there must be order, stability, schedule, routine, and predictability (Norman & Winger, 2010). If an individual has had their physiological and safety and security needs met then they can move to the third level which is love, affection, and belonging. If the love needs are met then an individual can move to the next level which is self-esteem. Self-esteem is the ability to achieve and be successful. It is human nature to be successful, respected, and to have a positive opinion of one's self. The inability to achieve self-esteem is constituted by a failure to give and receive love is the most predominant cause of dysfunctional and psychopathological disorders in people (Norman & Winger, 2010). If an individual has been able to move successfully through the first four stages then it is possible to move to the fifth and

final level of Maslow's original hierarchy and that is self-actualization. Self-actualization is the ability to be comfortable within one's own self and having a healthy state of mind; kind of a sense of nirvana.

"Many of our students come to us on a daily basis with their most basic physiological, safety and security needs being unmet" (Billiter, 2013, p. 15). According to Maslow's theory a student that lacks these basic needs will be unable to feel safe, secure, confident, loved, possessing a positive self-esteem, and cannot become a self-actualized adult thus enduring a life unfulfilled. This lack of self-actualization negatively affects cognitive processes. A student concerned with basic needs being unmet cannot focus on something as trivial as an education.

Figure 2. Example of Maslow's Hierarchy of Human Needs

Source: www.communicationtheory.org

Gardner's Multiple Intelligence

Howard Gardner, Ph.D., a Professor of Education at Harvard University developed the Theory of Multiple Intelligences. "Gardner's early work in psychology and later in human cognition and human potential led to the development of the initial six intelligences. Today there are nine intelligences and the possibility of others may eventually expand the list" (Howard Gardner's theory, n.d., p. 1). He suggested that intelligence be described as the combination of psychological and biological characteristics that enable individuals to solve problems or create products that are valued in one or more cultures (Fierros, 2004). These intelligences are normally referenced as competencies and are based on an individual's unique cognitive abilities and their preferred construct to express those abilities. The nine competencies are:

1. Verbal-linguistic intelligence - learning best from hearing information and generally has a well-developed vocabulary and sensitivity to sound.
2. Logical-mathematical intelligence – learning best that centers on the logical, mathematical order and patterns.
3. Spatial-visual intelligence – thinking best dealing with images, pictures, visualizations of materials.
4. Bodily-kinesthetic intelligence – learning best from using body movement and hands-on activities.

5. Musical intelligence – the ability to learn through producing and performing according to rhythms, pitches, and timber.
6. Interpersonal intelligence – the competency to evaluate moods and respond accordingly positively.
7. Intrapersonal intelligence – the ability to be self-aware connected with one's personal feelings, emotions, values, and thinking with them.
8. Naturalist intelligence – the competency to recognize and categorize plants, animals, and natural phenomena.
9. Existential intelligence – the preference to think about the human condition at philosophical levels. (Howard Gardner's theory, n.d., p. 1)

These competencies/learning styles suggest that the human brain works in various capacities than what was once considered. That we all receive and output information differently and in order to best understand how individuals are able to interact with other people and stimuli we must consider abstract concepts as well as those that are concrete.

The two most important of the multiple intelligences related to emotional intelligence are interpersonal and intrapersonal. Gardner (1983) explained interpersonal intelligence, "is the ability to understand other people: what motivates them, how they work, how to work cooperatively with them" (p. 25). Interpersonal intelligence is "a correlative ability turned inward. It is a capacity to form an accurate, veridical model of oneself and to be able to use that model to operate

effectively in life" (p. 25). Bar-On described Gardner's multiple intelligence theory as one based on social intelligence which was interpersonal intelligence and emotional intelligence which was intrapersonal intelligence (Davis, 2013). This interdependence of intelligences and emotions was necessary to fully understand and effectively study emotional intelligence (Mayer, Salovey, & Caruso, 2004).

Emotional Intelligence

The genealogy of emotional intelligence can be traced to "social intelligence" (Kelly, 1955; Thorndike, 1920), non-intellectual intelligence (Wechsler, 1940), and two subtypes of personal intelligence: intrapersonal and interpersonal intelligence (Gardner, 1983)" (Colston, 2008). Social intelligence was found to be different from cognitive intelligence (Weis & Suss, 2007; Davis, 2013). Thorndike (1920) defined social intelligence as, "the ability to understand and manage men and women, boys and girls – to act wisely in human relations" (p. 228). The difficulty with social intelligence is that a working definition did not evolve and there was not a differentiation with cognitive and personality constructs because there was a lack of a conceptual framework and experimental measures (Silvera, Martinussen, & Dahl, 2001; Salovey & Mayer, 1990; & Davis, 2013). Even considering these deficiencies Gardner (1983) would use Thorndike's (1920) social intelligence to develop his multiple intelligences construct. Gardner theorized that social intelligence was two different types of intelligence, interpersonal and intrapersonal, which theorized being aware of those around you and being self-aware of oneself (Davis, 2013). Gardner's work served as a segue into the theory of emotional intelligence.

Emotional intelligence is the awareness and the ability to manage one's emotions under varying stimuli and circumstances and to efficiently and positively act upon the situation (Goleman, 1998; Kobe, Reiter-Palmon, and Rickers, 2001). "Mayer and Salovey (1995) discussed emotional intelligence as the ability to process emotional information efficiently" (Kobe, et al., 2001, p. 155). It is assumed that our emotions affect our ability to think, perform, and act according to various stimuli. How well we address our emotional response to conflicting stimuli in many ways defines who we are as individuals or how others perceive us. According to Nasir and Munaf (2011), "EI shows that individuals with higher than average Emotional Quotient (EQ), are in general more successful in meeting environmental demands and pressures (Bar-On & Parker, 2000)" (p. 94). A person with a high emotional intelligence will most likely possess the ability and discipline to assess the situation and make a positive emotional response rather than being impulsive and reacting negatively.

> Bar-On differentiated emotional intelligence and general intelligence by asserting that the focus of emotional intelligence is on the personal, emotional, and social competencies and not on the cognitive dimensions of intelligence….He also suggested that unlike cognitive intelligence, emotional intelligence predicts an individual's success because it reflects how a person applies knowledge to the immediate situation (Kobe, 2001, p. 155).

Barchard (2003) quoted Daniel Goleman (1995) that "EI can predict success at home, at work, and at school, as well as or better than IQ" (p. 840). In recent years

there has been an increased interest among professionals to examine the role that personality plays in academic performance and socio-emotional adjustment at school (Mavroveli & Sanchez-Ruiz, 2011, p. 113). According to Goleman (1996) the emotional intelligence of children is lower and thus could negatively impact their level of achievement academically and socially. The literature, though not conclusive, supports the general consensus that EI plays some role in the overall success of an individual's future success in areas that depend on social competency and personal interaction. The significance of that influence is yet to be determined beyond a reasonable doubt or in what premise that EI is most influential.

According to Nowack (2012),

> It often is unclear if EI is just another label for social intelligence, interpersonal competence, self-awareness, emotional control, relationship intelligence, aspects of the "big five" personality constructs, emotional competence, emotional resilience, core self-evaluations, transformational leadership, intrapersonal intelligence, or other related concepts (or aspects of all of them). (p. 60)

Others who study the field of EI have included variables e.g. persistence, optimism, decision-making based upon emotion and feelings, rather than logic, and their reactions both verbally and nonverbally to an EI instrument (Barchard, 2003). "Openness (Intellect) and Conscientiousness, have been related to scholastic achievement…Conscientiousness effects on academic achievement are similar to that of intelligence" (Mavroveli & Sanchez-Ruiz, 2011, p. 113). What becomes evident in

the literature is that there are different schools of thought on what EI is, what it means, is it significant to the improvement of the individual, and does it significantly indicate social and/or intellectual success. Further research is needed in this relatively infant field of emotional intelligence.

According to Nowack (2012) there are four models that are most often recognized and mentioned in the literature based on the following: personality, competency, mental ability, and trait based (p. 62). For each of the different areas of EI study there have been different measurement and reporting systems created to measure the results from each of the four areas above. Some of the measures correlate with other measures but in the area of competency based assessments there appears to be very little overlap between measurement results (Nowack, 2012). That might seem confusing that the different measures of emotional intelligence do not all correlate but there are measures based upon emotional abilities, emotional traits, and then there is the competency model which primarily is Goleman's work and is based upon self-assessment emotional strengths and weaknesses that effect success in the workplace.

According to Barchard (2003) she stated,

> The concept of EI overlaps with constructs such as social intelligence (the ability to understand others and act wisely in social situations), empathy (the ability to understand others' feelings and the tendency to experience others' emotions vicariously), alexithymia (difficulty understanding and describing feelings), and emotion regulation (the ability to regulate ones' emotions as

> desired). (p. 841)

So the concepts of EI are varied and the results are also varied pertaining to the specific emphasis of the research. There is limited research evidence on the impact of EI on academic performance but much of the research that exists concludes positively the impact that high EI has on academic performance. Bradberry and Greaves (2009) stated,

> When emotional intelligence was first discovered, it served as the missing link in a peculiar finding: people with the highest levels of intelligence (IQ) outperform those with average IQs just 20 percent of the time, while people with average IQs outperform those with high IQs 70 percent of the time. (p. 7)

That statement in itself appears to justify the need for educators to focus efforts on emotional intelligence instruction to improve student emotional quotients (EQ).

The Ability Model of Emotional Intelligence

Mayer, Caruso, and Salovey (1997) created the ability model on emotional intelligence that focused on that with increased understanding of emotions will also increase intelligence. Mayer, Caruso, and Salovey's theory is that EI is an intellectual ability and not just a collection of experiences and competencies (Fatum, 2008). That is saying emotional intelligence is a kind of intelligence all its own (Colston, 2008). Mayer, Caruso, and Salovey (1999) stress it is essential to view emotional intelligence (EI) as a cognitive ability in order to definitively assess how EI contributes to behavior and productive emotional expression. According to Brackett and Mayer (2003) EI is a distinct set of mental abilities and that accordingly there is

evidence of incremental validity. The Mayer, Caruso, and Salovey (1997) believes in the concept of mastering specific abilities in the domain of EI (Fatum, 2008). Mayer, Salovey, and Caruso (2002) attempt to assess performance based criteria of emotional intelligence and the Mayer, Salovey, and Caruso Emotional Intelligence Test (MSCEIT v 2.0) has commonly been the instrument used for this ability measure.

According to Fatum (2008), studies by Izard (2001) and Greenberg, Kusche, Cook, Quamma (1995) support the Mayer and Salovey ability model of emotional intelligence. These studies appear to suggest that developing elementary children's EI abilities can predict increased academic performance later in life.

According to Mayer and Salovey (2004)

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

Considering that information is that if individuals are required to think critically about their emotions and the consequences that may be attributed to those emotional behaviors then the will more likely exhibit appropriate and acceptable behaviors.

According to Mayer and Salovey (2004) the mental ability model "makes predictions about the internal structure of the intelligence, and also the implications it can have on someone's life" (p. 87). The characteristics of an emotionally intelligent individual according to Mayer and Salovey (2004) include:

a. Being raised in a socially adaptive and accepting home.
b. Being non-defensive
c. The ability to reframe emotions effectively
d. Having good emotional role models
e. The ability to communicate and discuss feelings, and
f. To develop expert knowledge in a particular knowledge in a particular emotional area such as aesthetics, moral or ethical feeling, social problem-solving, leadership, or spiritual feeling. (p. 88)

The Trait Model of Emotional Intelligence

"[E]motional-social intelligence is a cross-section of interrelated emotional and social competencies, skills and facilitators that determine how well we understand and express ourselves, understand others and relate with them, and cope with daily demands" (Bar-On, 2005, p. 3). "Bar-On's (2000) model is a trait model of EI" (Fatum, 2008, p. 29). Bar-On measures the following five composites of EI: Interpersonal, Intrapersonal, Stress Management, Adaptability, and General Mood (Fatum, 2008). The Bar-On model uses a self-report assessment instrument known as the Bar-On Emotional Quotient Inventory (EQ-i) to measure the various components of EI. This model is highly correlated with traditional measures of personality (Saklosfske, Austin, & Minske, 2003; Fatum, 2008). According to Colston (2008),

> The Bar-On EQ-I, a validated instrument that measures emotional intelligence, allows test takers to examine their skills across the various scales. After the test, a total EQ [Emotional Quotient] standard score is produced as

> well as scores for the five composite and 15 EQ-i subscales. A standard score of 100 on any of the scales suggest that that participant's EQ is average. On the other hand, individuals with standard scores of 130 or above are considered significantly above average, while test takers with standard scores of 85 are somewhat below average. Low EQ scores are noted with strategies so that improvements can be made in order to increase overall emotional and social intelligence. (p. 22)

The Competency Model of Emotional Intelligence

The competency model is Goleman's (1995, 1998) focused on more general emotional competencies that can increase the success in the workplace. Goleman's model specifically looked at the impact of EI in the work performance and that differentiated it from Bar-On's and Mayer, Caruso, and Salovey's (1997) which also examined educational outcomes based on EI (Fatum, 2008). Goleman's theory is that with increased awareness of EI that workers will be more likely to problem solve, team build, and benefit their industry overall.

The Goleman model uses a different approach from self-assessment, it "sometimes favors a 360-degree model that gathers feedback from superiors, peers, and individuals who report to the individual being measured" (Fatum, 2008, p. 31; Boyatzis, Goleman, & Rhee, 2000). According to Boyatzis, Goleman, and Rhee (2000) this 360 degree method has proven to be both reliable and valid as it captures accurate views of both self and those who come in contact with the subject. Goleman's (2000) in his research determined that there were 25 social/emotional

competencies. From those 25 competencies he further disseminated them into the five major dimensions of self-awareness, self-regulation, motivation, empathy, and social skills. He then divided his five dimensions into the two categories or components of personal competence and social competence. Personal competency included the dimensions of self-awareness, self- regulation, and motivation; empathy and socials skills were incorporated in the social competencies. Goleman (1997) suggested that these five competencies (self-awareness, self-regulation, motivation, empathy, and social skills) enrich and increase life and learning performance for culturally diverse individual.

It is worth noting that Goleman (1995) believes that humans behave with two separate brains that have two unique intelligences, which are rational brain and the emotional brain. Our life is guided by both of those brains and both of these intelligences (Goleman, 1995). The goal of future study is to determine how to best use both of these brains in the most efficient and positive manner.

The Significance of Emotional Intelligence

Depending on what school of thought you consider with the field of emotional intelligence the literature appears to indicate that student emotions have a significant impact on their future success not only as a student but also in their later life. According to Weisinger (1998),

> [E]motional intelligence can be nurtured, developed, and augmented – it isn't a trait that you either have or don't have. You increase your emotional intelligence by learning and practicing the skills and capabilities that make up

> emotional intelligence. These include self-awareness, emotional management, and self-motivation. (pp. 1-2)

It appears that studying emotional intelligence concepts and examining ways in which instruction can improve individual student emotional intelligence has promise for future success.

What Emotional Intelligence Is Not

It has been established that there are multiple definitions of emotional intelligence, there is not definitive agreement as to whether emotional intelligence is an ability or a set of competencies, and there is not a single agreed upon measurement instrument (Stein & Book, 2003). It is for these reasons that it is necessary at this point to specify what emotional intelligence is not.

Emotional intelligence is not a cognitive construct but it may be influenced by cognitive developments in memory, comprehension, visualization, analytical and evaluative thinking, achievement, or personality constructs (Cory, 2006). Emotional intelligence also does not just pertain to feeling good about one's self or making a conscious effort to be nice to others. It is not determined by genetics nor is it synonymous with personality (Goleman, 2000; Stein & Book, 2003; & Colston, 2008).

Emotional intelligence is not solely cognitive and is not directly the same as personality but in critically examining emotional intelligence it is a probability that emotional intelligence encompasses constructs from both cognitive and personality constructs.

Chapter III

METHODOLOGY

The Problem Statement

The purpose of this research study was to examine a group of students from a large rural Appalachian Kentucky high school to measure their individual emotional intelligence (EI) or emotional quotient (EQ) and to assess whether an emotional intelligence instructional unit could raise student EQ over a twelve week period with ten instructional lessons. The participants took part in a researcher designed student demographic and interest survey titled the Social Emotional Learning General Survey (SELGS), a pre/post EI assessment using the Six Seconds® Social Emotional Learning-Youth Version (SEI-YV) instrument, and the study treatment group would participate in a set of EI instructional activities. There would be one EI instructional lesson each week for approximately one hour. The sample was originally planned to be selected with a stratified random method where one-hundred and twenty students were to be selected numbering thirty students per grade level nine through twelve. The sample was to then be divided into a control group and an experimental group using stratified random sampling methods; sixty students in each respective group. The purpose of the study was to provide data for analysis to assess whether EI could be increased significantly over twelve weeks and ten, one hour instructional lessons but the study may also suggest whether there is a need for increased EI instruction and an emphasis on EI concepts in the district as a whole. This research was a mixed-methods approach with quantitative and qualitative data from a pre-test/post-test

model using the Six Seconds® Social Emotional Intelligence-Youth Version (SEI-YV) instrument and a researcher designed SELGS. The Treatment Group participants each were given an individual exit interview with the researcher.

The research design changed when a significant number of the randomly selected students chose not to participate in the study. A parental consent form was given to every student enrolled in the school at the beginning of the semester and those students whose parents declined for their child to participate were removed from the study population. The remaining population that parental permission had been granted then were used to select the random, stratified sample population of thirty participants per grade level 9 through 12. Once these groups were selected I notified the participants by letter and provided a student ascension form to gain their willingness to participate. Of the one-hundred and twenty students selected from the population with parental permission, seventy students chose not to participate. Since only fifty students were willing to participate the research design was altered. The fifty students that were willing to participate were then taken as the population and were randomly assigned to either the instructional treatment group or the control group of twenty-five students each. These two groups were not stratified by grade level as was originally planned because of the smaller number of participants available and that one grade level had a larger population compared to the others.

The research attempted to answer the primary research questions:

1. What is the effect that Emotional Intelligence instruction has on student emotional intelligence (EI) level or emotional quotient (EQ)?

2. Is it possible to increase student emotional intelligence (EI) level or emotional quotient (EQ) over the course of ten weeks?

The two null hypotheses for this study will be as follows:

Ho1: Emotional intelligence (EI) instruction has no effect on student emotional intelligence (EI) level or emotional quotient (EQ).

Ho2: It is not possible to increase student emotional intelligence (EI) level or emotional quotient (EQ) over the course of ten weeks.

In this research study, I originally planned to use an analysis of variance (ANOVA) to determine if statistical significance exists between the pre-test/post-test student scores. Due to the decrease in willing participants in the original design and the inability to randomly stratify the sample, an dependent t-test was selected to determine if significance existed with the instructional treatment group and the control group. Both the instructional treatment and control groups were given SELGS to provide personal information to illustrate a more complete picture of the sample.

Context Statement

Letcher County, Kentucky is located in the heart of the Appalachian Mountain range in the southeastern corner of the state sharing a border with Wise County, Virginia. The total population for the county is 20,486 of which 4,296 are three years or older enrolled in school (Letcher County School District c). According to proximityone.com, the socio-economic status of the county has 55.9% of the

households earning $24,999 which is below, at, or just above the U. S. Health and Human Services poverty level estimate for a family of four at $23,850 (2014 Poverty Guidelines, 2014). Of that number 21.3% of families have been under the poverty level in the past 12 months; 28.4% with children under 18 years of age; and 35.6% with children under the age of 5 (Letcher County School District c). Fifty-five percent of the household incomes in the county come from Social Security and/or Supplemental Security Income (Letcher County School District c).

The county school district was one of two K-12 school districts in the county; the other being an independent school district. According to the 2012-2013 Letcher County District Report Card the LCPS serves approximately 3,204 students (Letcher County District, n.d.). The district was comprised of two K-8 schools, three elementary schools, three middle schools, and one central high school. The central high school serves approximately 950 students grades 9-12.

This particular central high school was established in 2005 and is located within the city limits of the county seat, Whitesburg. The school campus is located approximately 15 miles from the Kentucky-Virginia border. The school campus encompasses nearly 35 acres and is on U. S. Hwy 119.

It has long been the perception that students in this school district and many southeastern Kentucky school districts have scored below those schools in the central region of the state. This may be the general rule based upon the yearly rankings of schools published by the Kentucky Department of Education but there are increasing exceptions to that rule (School Report Card, n.d.). Rural schools often have higher

populations of students who qualify for free and reduced lunch programs and the greater the percentage of student participation in that program the more likely that the school will be one that is a lower performer (Reeves & Bylund, 2005). Another indicator that Reeves and Bylund (2005) found was that the school districts that generally had the most per pupil expenditures also typically were among the lowest performing. They went on to explain that the funding mechanisms of Kentucky schools provided more state and federal funding for schools who had higher incidence of poverty. All of these students are accountable across the state for knowledge of the same content. We have for many years examined the effects that poverty, isolation, school environment, school culture, and diversity, among a multitude of other factors, have on the education of southeastern Kentucky students. Even with that we seemingly have made limited progress in the accountability content areas. Rural schools accountability data has shown increasing progress but in many cases below that of small towns, large towns, and urban areas (Reeves & Bylund, 2005). Reeves and Bylund, 2005) also state, "The negative effect of student poverty on school performance is more prominent in metro and large town locations. In adjacent, small town, and rural schools the effect of student poverty is significantly less negative" (p. 377). Because students from diverse social backgrounds may be assigned classes together in smaller rural districts as compared to larger urban districts that may more segregate students with similar social and ethnic backgrounds (Reeve & Bylund, et al.).

We are in a new era where graduation rate and college and career readiness is playing a greater role in school accountability and it is in these areas that southeastern Kentucky schools are focusing their efforts. These are areas that have some amount of manageable data in the short run but as schools around the state all grasp and adapt to the concept, then emphasis will again return to the academic indices. There is a silver lining to the dilemma; these rural schools have a buffer, though it might be brief, to bring effective change focusing on raising the academic indices as well. Emotional intelligence instruction could be an important piece of the puzzle to increase academic performance.

Background of the Problem

My experience in working with students from the rural southeast region of Kentucky has led me to believe that many students would benefit from instruction designed to improve their emotional intelligence, social skills, relationship building abilities, and conflict resolution skills. Living in a region that is isolated physically, culturally, and socially has hampered many generations of the students of this region to communicate and succeed at a level below their intellectual ability or potential. In a time in our history where isolation is not as paralyzing as it once was the necessity of being able and willing to communicate and interact virtually is imperative for future social and economic success. Emotional intelligence instruction could greatly improve future student success personally and professionally.

Purpose

The purpose of this research project was to study a group of students from a large rural Appalachian Kentucky high school that were enrolled in grades nine through twelve and to measure their individual emotional intelligence (EI) or emotional quotient (EQ). The sample consisted of fifty students grades 9-12. The original sample was selected with a stratified random method and one-hundred and twenty students were a part of the original selection. Due to seventy students choosing not to participate in the study, the remaining fifty students were then randomly selected into a predetermined instructional treatment group and a control group with the use of a random numbers list for a total of 25 participants per group. This study appears to suggest that EI instruction can increase individual student emotional quotient (EQ) and EI or some of its components can be increased through ten, one hour EI instructional lessons conducted over a twelve weeks. This study at least suggests that a need for increased EI instruction and an emphasis on EI concepts in the districts central high school and across the district's elementary and middle schools has merit.

The Study

Prior to beginning the study the researcher applied for an exemption from the Morehead State University Institutional Review Board (IRB) to conduct the research study with student participants. On receiving clearance and the exemption from the IRB, the parents of the students were given an explanation of the purpose of the study and written parental consent form. Each student that was randomly selected after

gaining parental permission was given a participant consent form. The participant consent/ascension form specified the purpose of the study, the design of the study, allowed a participant to decline participation, and how they could be exempted without penalty once the study was ongoing.

The study was conducted over a period of a twelve weeks from late August to early November 2015. The participants were given the Social Emotional Learning General Survey (SELGS) which was a socio-economic status and demographic survey to provide student demographic data. The week following the Social Emotional Intelligence-Youth Version (SEI-YV) was conducted to measure the emotional intelligence level of each individual student and provide a general level of their individual and group emotional quotients (EQ). The SEI-YV instrument is the adolescent version of the SEI that was designed by Six Seconds. The instrument was given by the researcher in the central high school computer lab under his direct supervision. The participants were assigned a number known only to the researcher to protect student confidentiality. The results were kept by the researcher either in his possession, on a password protected computer, or in a locked cabinet in a secure location when not in use.

The participants were not informed of their initial EQ score but were informed after the initial assessment which group that they had been randomly selected, instructional treatment or control group. A series of ten lessons were presented to the instructional treatment group over a ten week period focusing on Goleman's (2000) EI components: self-awareness, self-regulation, motivation, empathy, and social

skills. The EI instructional lessons will be developed by the researcher using resources from EQ Toolbox (www.eqtoolbox.org) and The Self-Science Curriculum (6seconds.org). At the end of the ten week instructional period both the control and treatment groups were given the SEI-YV post-test. The pre-test and the post-test were compared and analyzed with the use of a one-way dependent t-test to determine if the EI instructional component may have a statistically significant impact on student individual emotional quotient (EQ). The data from the initial Social Emotional Learning General Survey (SELGS) was analyzed, calculated, and inferences drawn from that survey data.

The lessons that were presented to the participants were EI instructional lessons from www.eqtoolbox.org and whose sources were www.self-science.com and the Ohio National Guard Family Readiness and Warrior Support Programs emotional intelligence activities for children age thirteen to eighteen whose source is located at http://ong.ohio.gov/frg/FRGresources/emotional_intellegence_13-18.pdf. The following lessons were presented in the following order:

1. Empty Your Wallet, Pockets, or Purse;
2. Naming Feelings;
3. Watch Your Words;
4. Trust Thermometer;
5. Celebrate New Goals;
6. Things are not Always as They Seem;
7. But We Always Do It This Way;

8. Don’t Lose Your Cool;
9. It Is All In Your Head; and
10. The Best Day of My Life

The *Empty Your Wallet, Pockets, or Purse* lesson focused on students describing how their exposed possessions described who they are. It also caused the participants in their small groups to use their observational skills of their personal belongs and those other members of the group. There is also a component having the participants visualize what they would have in their possession in five years as a part of goal setting.

The *Naming Your Feelings* instructional activity focused on having students examine their individual and group vocabulary describing feelings. The activity also promoted the concept that individuals can change their feelings if they are self-aware of their feelings.

The third lesson, *Watch Your Words*, focused on the impact that the words that we say have on others. It focused on “killer statements” that individuals have a tendency to say and not realize the effect that these statements have on those around them. Part of the exercise is to do a cost/benefit analysis of what we say and the establishment of ground rules in different groups and social settings.

The fourth lesson, *Trust Thermometer*, required the participants to consider their level of trust in different social settings. The participants after examining their individual levels of trust were asked to reflect on what shaped their level of trust.

The fifth lesson, *Celebrate New Goals,* caused the participants to consider the characteristics of someone that they considered to be a great influence on society. The activity required the participants to consider actions, morals, behaviors, and the impacts of actions. The students will examine if change is caused externally or internally.

Things are not Always as They Seem, is the sixth lesson where students were asked to remember a time in which they jumped to a conclusion on hearsay, gossip, or just their own perception and said something, posted something, or exhibited a negative behavior. Students completed a graphic organizer according to the acronym TRUTH: *T*rigger event, *R*eference, *U*nhealthy response, *T*ruth, and *H*ealthy response; and evaluate the event when they jumped to a conclusion.

The seventh activity is *But We Always Do It This Way*, where students were presented a scenario where they were placed in a position of responsibility for the day that they normally would not face. The students were then asked to write a story of how and what that day would look like and how they would adapt to meet the needs of those they were responsible.

Don't Lose Your Cool, the eighth lesson focused on controlling ones anger. The students were given a graphic organizer where they self-assessed stressors in their lives. Students also had blank slots on the graphic organizer to add stressors not listed on the graphic organizer. Students then joined with a partner and participated in a think-pair-share activity.

The ninth lesson, *It is All in Your Head*, the students were given a diagram of the human brain and how it process emotions. The students were then asked to use optimistic words and fill the sections of a diagram with a single optimistic term. Then students will colored those blocks with a color that they felt represented that term.

The tenth and final lesson, *The Best Day of My Life*, students were asked to write a brief description of what the best day of their life would look like. They will then be asked to describe the characteristics that would make that day the best day of their life. Student will then be asked how that day may have differed at the beginning of the lessons.

At the conclusion of the tenth EI lesson all of the participants, both control and experimental groups, will be given the SEI-YV post-test. The participants will again take the instrument and receive a new EI and EI component scores. The Treatment Group participants also participated in an individual, confidential exit interview conducted by the researcher. The researcher will take the data received and analyze that data using a one-way dependent t-test to determine statistical significance. The qualitative data from the SELGS and the exit interviews will be analyzed based upon the occurrence of respondents' answers.

The Data Collection Instrument and the Social Emotional Learning General Survey

The Social Emotional Learning General Survey (SELGS) that was given after the initial administration of the SEI-YV pre-test was examined and analyzed to determine the socio-economic and demographic characteristics of the sample.

The founding president of Six Seconds Anabel Jensen, Ph.D. and Carina Fiedeldey-Van Dijk, Ph.D. developed the SEI-YV based on the "Six Seconds Model of Emotional Intelligence" (Sei-yv assessors manual, 2012, p. 6). "The SEI Youth Version provides a full emotional intelligence assessment for youth ages 7-18, and , like the regular SEI, puts the feedback in the context of important work/life outcomes" (Sei emotional intelligence, 2013, p. 24). The SEI is designed to measure "eight fundamental skills divided into three pursuits, people are better able to develop and use their emotional intelligence to create more positive, healthy, and meaningful lives" (Sei emotional intelligence, 2013, p. 13). Six Seconds developed a model based upon the work of Daniel Goleman, Peter Salovey, and John Mayer. "The model's purpose is to integrate leading thinking and research on this emerging science into a practical structure that promotes problem solving, decision-making, and creativity/invention" (Sei emotional intelligence, et al., p.13). The model is divided into three (3) major categories: knowing yourself, choosing yourself, and giving of yourself. Those three (3) major categories according to the SEI-YV Assessors Manual (2012) can best be described as follows:

a. Know Yourself: Having a self-awareness of what you are feeling, the stimuli causing those feelings, and the ability to collect the social and emotional data

effectively. This major category includes emotional literacy and recognition of social and emotional patterns.

b. Choose Yourself: Possessing the ability to self-manage, avoid impulsiveness, and possess the ability to make appropriate, positive social and emotional decisions. Choosing yourself includes the ability to think orderly with consequences in mind, navigating and managing emotions, being intrinsically motivated, and being able to express and exhibit optimism in a variety of social and emotional scenarios.

c. Give Yourself: Can best be described as what motivates an individual, self-direction, and allows an individual to prioritize actions and responses in both their personal and professional lives. Giving yourself requires the ability to be empathetic to those around you whether you know them or not and to that your daily goals have a purpose or "Noble Goals" (p. 10).

Those major three (3) categories are further divided into eight (8) competencies:

a. Enhance Emotional Literacy (EEL) – Our personal feelings are complicated, multidimensional constructs that make each of us unique. Our ability to identify and assess personal feelings makes up our self-awareness. Self-awareness also enables us to determine where those feelings originate. "Just as learning to read begins with literacy of letters and sounds, learning to interpret and manage feelings begins with emotional literacy" (Sei emotional intelligence, 2013, p. 15).

b. Recognize Patters (RP) – We learn how we deal with social stimuli; it is habitual. We perceive new situations differently than we do everyday incidents. Our brain categorizes experiences into chunks and evaluates new experiences based upon past experiences. The way our brain works will lead an individual under stress to react in a way that is unconscious, without thought. This use of generalized emotional responses will not lead to optimal performance. "Learning to recognize patterns lets us be more conscious of our own reactions – which is the first step to changing them" (Sei emotional intelligence, 2013, p. 15).
c. Apply Consequential Thinking (ACT) – Learning to evaluate and analyze the ramifications of our cause and effect behavioral choices is imperative to positive personal emotional decision-making. This skill promotes being emotionally proactive rather than reactive (Sei emotional intelligence, et al.).
d. Navigate Emotions (NE) – In many setting people are expected to control their emotions e.g. anger, excitement, apathy, empathy, and/or fear. Feelings are powerful catalyst and if emotions are channeled appropriately can lead to great results. Being able to journey through ones emotions "is a non-cognitive skill that lets us tap the energy and information and allows us to select the most productive response (Sei emotional intelligence, et al., p. 16).
e. Engage Intrinsic Motivation (EIM) – Motivation that comes from within has a greater chance of being long lasting. "Emotions can reveal our inner motivations….The feelings we associate with particular values and

commitments give them significance, which in turn gives us the strength to act" (Sei emotional intelligence, et al.).

f. Exercise Optimism (EO) – Being optimistic allows vision. We can see the future being a place of bright possibilities and because of that vision individuals are more positive that they can own their future. "This skill blends thinking and feeling to shift our beliefs and attitudes to a more proactive stance" (Sei emotional intelligence, et al., p. 17).

g. Increase Empathy (IE) – "Empathy is the ability to recognize and appropriately respond to other people's emotions" (Sei emotional intelligence, et al.). It is the human emotional concern for others beyond one's self. Empathy is how we can better understand others and develop long-lasting and trusting relationships.

h. Pursue Noble Goals (PNG) - Our noble goals, our belief systems, influence our long-term decision-making. "Noble goals activate all of the other elements of EQ….A Noble Goal is a brief, inspiring statement of enduring purpose: (Sei emotional intelligence, et al.). A Noble Goal requires more than just emotional intelligence but leads to emotional wisdom. A Noble Goal serves as a catalyst for putting emotional intelligence into action.

Pursuit	Competency	Definition
Know Yourself: Increasing self-awareness, recognizing patterns, and identifying feelings lets you understand what "makes you tick" and is a 1st step to growth. *Notice what you do*	EEL: Enhance Emotional Literacy	learning to accurately identify and appropriately express feelings
	RP: Recognize Patterns	consciously identifying our own habitual reactions
Choose Yourself: Intentionally. Building self-management and self-direction allows you to consciously redirect your thoughts, feeling, and actions (vs. reacing unconsciously). *Do what you mean*	ACT: Apply Consequential Thinking	assessing the short and long term costs and benefits of our choices (emotionally as well as tactically)
	NE: Navigate Emotions	managing feelings to access the wisdom and energy they offer
	EIM: Engage Intrinsic Motivation	gaining energy from personal values and commitments versus being driven by others
	EO: Exercise Optimism	taking a perspective of choice and opportunity
Give Yourself: Purpose. Aligning your daily choices with your values, combined with compassion, allows you to increase your wisdom and achieve your vision. *Do it for a reason*	IE: Increase Empathy	recognizing and appropriately responding to others emotions
	PNG: Pursue Noble Goals	connecting your daily choices with your deep sense of purpose.

(Note the colors used in the model are significant: Blue=reflect. Red=pause. Green=go!)

Table 1: Sei emotional intelligence, et al., p. 14.

Included in the SEI-YV are also five (5) Life Barometers: Good Health, Relationship Quality, Life Satisfaction, Personal Achievement, and Self-Efficacy (Sei-yv assessors manual, 2012, pp. 11-12). These five life barometers measure a participant's level of current function in these very important indicators necessary for a successful social and emotional life (Sei-yv assessors manual, 2012).

a. Good Health: valuing proper nutrition, getting the necessary amount of rest and sleep, being physically and mentally fit in order to be an active participant in society.
b. Relationship Quality: having an active and positive social life and network that is constructive, meaningful, and respectful of oneself and others.
c. Live Satisfaction: having the feelings of being content with their station in life and being able to balance their needs and their wants. It is important to be able to put life into perspective in a variety of social and emotional situations.
d. Personal Achievement: exhibiting conscientious behavior and being trustworthy and dependable. Being punctual, exhibiting perseverance and responsible are important attributes and abilities for future personal success.
e. Self-Efficacy: is the ability to confidently complete tasks and possessing realistic expectations for oneself and others. There is a drive to excel and achieve through the opposition of life.

"It is helpful to gauge how you are doing now so you can set goals for the future….A life barometer is an indicator or a measure that you can use independently or in combination when taking stock on your life" (Sei-yv assessors manual, 2012, p. 11).

Examining the Eight Components of the Six Seconds Model

Emotional Literacy. An adolescent who exhibits low emotional literacy will be a concrete thinker and will most like lack the awareness of the feelings and in many cases will be overwhelmed and anxious about their emotional positions. Whereas an adolescent who has high emotional literacy will be able to express themselves emotionally and will have the confidence to express themselves without fear of rejections because of their feelings.

Recognizing Patterns. An adolescent with low recognition of emotional patterns will most likely not have a good grasp on their own behaviors much less being aware of those people's emotions around them. The have difficulty seeing how the world sees them. Possessing a high skill of recognizing patterns allows the adolescent to be insightful, caring, warm, and are able to quickly assess social and emotional settings but may have a tendency to overanalyze situations and be over conscious.

Consequential Thinking. An adolescent who is low in consequential thinking will be impulsive and will most likely not reflect on the consequences of their actions whereas one that is high in consequential thinking will be more considerate of the consequences to their actions to the point that they might be hesitant to act for fear of consequences.

Navigating Emotions. Adolescents who are very low in navigating their emotions will most likely exhibit rage and be abrasive in their emotional responses or will be totally ignorant of their emotional responses. Rarely will their responses be designed to produce positive social and emotional scenarios. The adolescent with very high

emotional navigation may have difficulty choosing a set emotional state and may bounce from emotion to emotion. Emotions are like a drug to the adolescent with a very high emotional navigation level because it provides them energy and may make them feel useful.

Engage Intrinsic Motivation. The adolescent with a very low intrinsic motivation will most like be lethargic and if motivated most likely will require outside stimuli to produce an emotional response. They may have the tendency to be easily swayed by others and thus are a follower rather than a leader. Those with very high intrinsic motivation are self-confident, driven, assured but may depend on their own understanding and feelings more than they should. Generally, high motivated adolescents are impatient and may be rude without being aware of their behaviors and feelings.

Exercise Optimism. Adolescents with very low optimism see themselves as helpless and that they do not have the means of escaping their caste in life. The have challenges in their lives that are the fault of someone else or society and that is just the way that it is. Those with high optimism seeming attempt to grasp the "bull by the horns" and move forward to formulate solutions to their life's problems. They believe they can fix what is wrong even though it might take time, they are willing to put forth the effort to make the change.

Increase Empathy. Empathy is the ability to recognize and evaluate the emotions of others and make appropriate emotional responses. Empathy requires cognitive processing of situational data to understand and make an emotionally intelligent

response (Sei-yv assessors manual, 2012). The individual with low empathy is most likely going to be oblivious to those around them and their emotions. They will most likely have few, if any, close personal relationships. Those that have exceptional empathy will have close and deep relationships with others. They will be a trust builder but may also become to involved in the emotional needs of others that may affect them negatively (Sei-yv assessors manual, 2012).

Pursue Noble Goals. This is the emotional component that evaluates an individual's level of direction and drive to accomplish. It is this component that helps us to realize our importance in relation to others and society. "This clear sense of purpose creates the courage and conviction to handle difficult situations" (Sei-yv assessors manual, p. 16, 2012).

The individual who exhibits a low command of purpose and pursuing noble goals will most likely have difficulty making long-term goals or successfully perform on projects that take concerted, dedicated effort. Lacking the ability to establish goals will most likely lead to individuals who lack the ability to focus. The individual that has a high sense of purpose will most likely exhibit what society considers necessary for leadership. These individuals may very well be charismatic and may be transformational or visionary in their leadership style. The negative is that a person who has high levels of purpose or pursuing noble goals may have difficulty see others points of view (Sei-yv assessors manual, 2012).

Some Examples of Emotional Intelligence Component Combinations

It is possible to be emotionally intelligent in some components and be

deficient or challenged in others, just like cognitive abilities. For example it is possible to be highly developed in evaluating consequences to actions, pursuing goals, recognition of behavior patterns, and be highly literate emotionally but may be deficient in empathy and working through their own emotions. Six Seconds provides the following examples of the combinations of the components that they have developed; these are not intended to make any level of clinical psychological diagnosis but may be a useful tool for providing individual direction.

Here are some examples of possible imbalances and implications between the three "Pursuits" of Know Yourself, Choose Yourself, and Give Yourself that are necessary for efficient functioning

Combination	This person could be…
Low Know and High Give	Self-sacrificing, lacks confidence, easily persuaded.
High Give Choose and Lo	Missing long-range goals; good self-management but focused more on self than others.
Low Know and High Choose	Taking action without sufficient data; not solving the important issues for her/himself.

Table 2. (Sei-yv assessors manual, p. 17, 2012)

When evaluating the finding from the SEI-YV it is also important to look at the eight competencies defined previously:

- Enhance Emotional Literacy (EEL),
- Recognize Patterns (RCP),
- Apply Consequential Thinking (ACT),
- Navigate Emotions (NVE),

- Engage Intrinsic Motivation (EIM),
- Exercise Optimism (EOP),
- Increase Empathy (ICE), and
- Pursue Noble Goals (PNG).

Examine the following examples and suggested emotional behavior characteristics provided by Six Seconds®. Note these are possible examples and do not include all of the possible combinations, also this is not to be used for the purpose of clinical psychological diagnosis but rather a point to begin personal emotional analysis and growth.

Combination	This person could be…
Low RCP, Low ACT	Might struggle with impulsity; may be perceived as overactive or a behavior problem; may no tbe able to look ahead or anticipate.
High EEL, Low ICE	May take analytical approach to emotions; may be very articulate, but lack social problem-solving behaviors; may be perceived as aloof.
High EIM, Low PNG	May be motivated only in the short term.
Low NVE, High ICE	May become overwhelmed by others' feelings; might depend on ohters to make emotional decisions o rhave difficulty leading others.
High EEL and ACT, Low ICE	May take an analytical approach with people; may be overly cautious and may come across as disconnected; may need to find a more accepted method of expressing feelings.
High NVE, High ICE, High PNG	May be a leader; may be service oriented.
Low EOP, High ACT	May over-analyze the pros and cons. May take a pessimistic view of the world and see only the problems without the rewards. May exhibit inflexibility.
High EOP, Low ACT	Might under-analyze the pros and cons. May have an upbeat disposition and always believe that they can make a positive happen. Most likely will be an idealistic and lack realistic grounding.

High ACT, Low EEL/ICE	Might over evaluate situations looking for more information; may become too concerned with other people and be unable to address emotionally challenging situations; may have a tendency to become stuck on an issue and not be able to move on.
High RCP, Low ACT/EIM	Most likely can recognize good and bad habits but may not have the ability or lack the will to replace negative habits/behaviors with acceptable positive emotional responses.
High PNG, Low ICE	May be abrasive and overbearing in accomplishment of their purpose. The end justifies the means, so to speak. Their intentions may be noble but their course of action may offend others.
Low EIM, Low EOP	Most likely passive, disengaged, and hopeless. In many cases they have become dependent on others to the point that they may be emotionally functionally disabled/inept.
Low ICE, High EIM/ACT	Most likely will have difficulty being told they are not correct or that they could do better. Will in many cases be inflexible and possess tunnel vision.
High EIM, High EOP	Is most likely a self-starter and driven individual who accels with difficult situations and novel solutions to diverse problems.

Table 3. (Sei-yv assessors manual, p. 17-18, 2012)

The SEI-YV also examines five life measures or "Life Barometers":

- Good Health
- Life Satisfaction
- Personal Achievement
- Relationship Quality
- Self-efficacy

Once a score for the barometer is developed by the participant the three highest of the eight components are identified as the "Most Significant EQ Contributors" (Sei-yv assessors manual, p. 19, 2012). The average scores of the three categories, eight components, and five barometers are all 100 and the standard deviation is 15 points

above or below the mean.

Score	Score	Score	Score	Score
55-70	71-85	86-115	116-130	131-145
Challenged	Below Most	Like Most (*Mean*: 100)	Above Most	Challenged

Table 4. The SEI-YV standard score breakdown.

By examining these scores it is possible to analyze where a participant is emotionally competent and in what areas growth would be beneficial. The category scores that are considered drivers of a specific "Life Barometer" and it is beneficial to know whether they are above the barometer score or below. If a component score is above that of the barometer then it is possible that that emotional strength could be used to increase the barometer score more easily than just addressing the lower of the component scores.

It is through this statistical analysis that coaching and an emotional growth plan can be developed with appropriate strategies to improve the participants overall EQ. It is important to note here that in order to increase EI and EQ the participant must be willing to constructively evaluate and regulate their emotions and make socially accepted emotional responses that may differ from their initial instinct.

The SEI-YV Psychometrics

The SEI-YV, version V2.1, was most recently statistically validated based upon a sample of almost 5700 participants from 2007 to the beginning of 2011 (Sei-yv assessors manual, 2012). Outlier and inconsistent responses were eliminated to measure optimal credibility to establish the baseline for individual and group responses standardization and comparison.

In the validation process there was one male for every two females in the sample population and the mean age of the females was 12 years of age whereas the males were approximately 14 years of age; the mean age of the norm population was 13 years and 4 months (Sei-yv assessors manual, 2012). Each of the eight gender-age categories have hundreds of participants which places trust in the statistical comparison (Sei-yv assessors manual, 2012). According to Six Seconds® the combined categories were distributed as follows:

Age Category	Percentage	Divided into Gender
7-10 years	9.05%	of which 51.41% were females
11-13 years	49.08%	of which 76.60% were female
14-15 years	24.57%	of which 58.73 were females
16-18 years	17.30%	of which 61.55% were females
Overall, 67.12% of the norm sample was female.		

Table 5. (Sei-yv assessors manual, p. 21, 2012)

"Females significantly outperformed males on all scales (EQ components and Life Barometers) despite age distribution, including the validity indicators. Importantly, the found differences lie in the strength of individual EQ component scores, but not necessarily between EQ component scores when they are viewed across as EQ profiles" (Sei-yv assessors manual, p. 23, 2012). It has also become evident the older the adolescent the more negatively they respond and their scores are lower than participants of young ages. "It may be that as children mature, they become more

discriminating" (Sei-yv assessors manual, p. 23, 2012).

According to Six Seconds® the psychometric characteristics of the SEI-YV have held steady over the many statistical validations with evidence that the number and order of items appear to function effectively (Sei-yv assessors manual, 2012). The results of the assessment may have a positively skewed distribution and this is considered normal in a "self-judged measures where Likert-type response scales are used" (Sei-yv assessors manual, p. 24, 2012). According to Six Seconds®, "The kurtosis (i.e. peakedness) of the distributions varies close to zero across the scales as well, which is desirable" (Sei-yv assessors manual, p. 24, 2012). The kurtosis is higher with the response inconsistency (IC) scores which in this case is more desirable. According to the manual

> The raw IC value is positively skewed (meaning in general and for the norm population as a whole, the scores are on the low side) and highly peaked (in other words, consistently so). This means that if an individual youth shows a high IC score, this can be interpreted as exceptional and meaningful. (Sei-yv assessors manual, p. 25, 2012)

Scale (score range 20-100)	Mean	SD	Skewedness	Kurtosis
Total EQ raw	73.75	8.99	-0.191	-0.393
KNOW raw	75.22	10.05	-0.297	-0.246
CHOOSE raw	71.83	9.12	-0.149	-0.295
GIVE raw	74.20.	10.91	-0.292	-0.204
EEL raw	75.09	11.06	-0.335	-0.146
RCP raw	75.68	10.86	-0.350	-0.060
ACT raw	71.00	11.14	-0.214	0.121
NVE raw	68.35	11.38	-0.152	-0.119
EIM raw	75.78	11.59	-0.223	-0.342
EOP raw	72.31	12.06	-0.220	-0.174
ICE raw	77.10	11.29	-0.443	-0.018
PNG raw	71.3	12.5	-0.194	-0.184
OVERALL LIFE BAROMETER raw	73.9	9.52	-0.353	0.087
GHHEALTH raw	67.96	15.83	-0.225	-0.279
RELQUAL raw	80.65	11.8	-0.642	0.414
LIFESAT raw	74.63	12.61	-0.405	-0.007
PERSACH raw	75.44	13.45	-0.408	-0.051
SELFEFF raw	70.07	10.85	-0.029	0
PIN raw	74.57	12.6	-0.289	0.042
IC raw (score range 0-4)	0.76	0.48	1.368	3.899

Table 6. (Sei-yv assessors manual, p. 25, 2012)

It is important when considering the table above that the scores listed are raw scores and not standardized scores that are used in SEI-YV reports and publications. The standardization of scores on the SEI-YV allow for the comparison of individual participants to other individuals and groups because of an established norm population baseline (Sei-yv assessors manual, 2012).

Validity

There are four validity indicators that are measured:

- General Frame of Mind
- Positive Impression

- Number of Missing Items
- Response Inconsistency

General frame of mind is assessed with three items at the beginning of the instrument and the participant rates these items using a Likert-type scale similar to the other items on the instrument. The three items are "I feel great", "I think positively", and "I am in a good mood". It is assumed that the participant will give a positive score on these three items (Sei-yv assessors manual, 2012).

Scores for positive impression are closely tied to the other EQ scale scores. It is a standardized score with a mean of 100 and a fifteen standard deviation (Sei-yv assessors manual, 2012). Scores that are one standard deviation above or below the mean are labeled as "possibly invalid"; scores larger than two standard deviations are labled as "probably invalid" (Sei-yv assessors manual, p. 27, 2012).

The number of missing items is important because 94% completion of the instrument is required to have a validated EQ score and profile of the participant (Sei-yv assessors manual, 2012). If the 94% is reached but there are items that have not been completed the score is calculated with the provided data rather than zeroing out the questions left blank. It is suggested that there is some loss in the psychometry but that this is the most accurate assessment of the youth that is current.

Response inconsistency is determined by five pairs of similarly worded questions scattered throughout the instrument. The purpose of these items are to determine the consistency in which the participant has honestly answered. If the participant reads the instrument items carefully and answers honestly most likely

these scores should be very close. According to the Six Seconds® the standard deviation on these consistency items is 0.48 (Sei-yv assessors manual, 2012). If an IC is larger than five then the consistency is questioned. The older the group of adolescents the more closely IC scores need to be considered; younger participants with less life experience may be more inconsistent.

Construct Validity

Construct validity with the SEI-YV is difficult to accurately determine because according to Six Seconds®, "we found that the factorial structure of the SEI-YV is uni-factorial" (Sei-yv assessors manual, p. 29, 2012). "This is also a point of critique against EQ measures in general, which is well debated in academic literature" (Sei-yv assessors manual, p. 29, 2012).

Concurrent Validity

The instrument assesses the Life Barometers separate from the specific constructs that affect their day-to-day lives. In general, adolescents score themselves lower in the barometers when compared to the EQ components. Due to the participants completing the Life Barometers section immediately after completing the EQ components the instrument validity is considered concurrent rather than predictive (Sei-yv assessors manual, 2012). The difficulty with determining the *Overall* Life Barometer score is being studied to have a better understanding of how a healthy lifestyle can affect emotional intelligence. "It is also helpful to keep in mind that the EQ components contribute value as they work together to explain the variance in Life Barometer scores from the norm base" (Sei-yv assessors manual, p.

33, 2012). All eight EQ components are significant in the progressing development of emotional intelligence and the Life Barometers.

Internal Consistency

The internal consistency of the SEI-YV has been analyzed with the use of Cronbach's coefficient alpha. It has to be kept in consideration that Cronbach's alpha is influenced by the varying numbers of items per EQ scale. The higher the number of items the more likely the alpha score will increase and may introduce some redundancy (Sei-yv assessors manual, 2012). The following table lists the alpha statistics and average scores for each of the EQ components and the Life Barometers.

Scale	Alpha	Number of items	Average score (out of 5)
EEL	0.74	11	3.75
RCP	0.63	7	3.77
ACT	0.64	8	3.55
NVE	0.63	9	3.42
EIM	0.78	9	3.78
EOP	0.74	8	3.62
ICE	0.74	9	3.86
PNG	0.71	7	3.57
PIN	0.70	6	3.73
Life Barometers	0.84	25	3.69

Table 7. (Sei-yv assessors manual, p. 36, 2012)

Summary on the SEI-YV

"Overall, the statistical validation of the SEI-YV is standing the test of time,

growing in strength, and supportive of practices related to emotional intelligence (EQ), as well as social and emotional learning (SEL)" (Sei-yv assessors manual, 2012, p. 37). The SEI-YV stands on its own even though it is similar to the SEI adult instrument. The validity, reliability, and results are non-transferable between the adult and youth versions and due to significant separate studies, normalized populations, and manuals the SEI-YV stands independently.

The Social Emotional Learning General Survey

The "Social Emotional Learning General Survey" was given to all fifty participants with the initial SEI-YV assessment. The survey was a researcher-designed survey to illicit personal demographic information from the randomly selected participants including race, gender, age, grade level, parents' ages, and socioeconomic data. Other factors that data were examined by the survey were student attendance, GPA, post-secondary plans, importance of education, discipline, exercise, internet access, and other technology.

The intent of the survey was to provide a more complete picture of the participants and to examine if the data could suggest interesting factors that may provide valuable data to help explain the results from the SEI-YV.

The Treatment Group Exit Interview

At the conclusion of the study and the administration of the SEI-YV post-test each of the twenty-five participants were given a confidential, individual exit interview that asked questions e.g.:

"Did the EI lessons make you think more about your emotions?"

"Do you find you are more aware of your feelings since you participated in the EI instructional lessons?"

"Do you find that you are more concerned about the feelings and emotions of those around you after participating in the EI instructional lessons?"

The remainder of the exit survey can be examined in Appendix E of this document. The interviews were also used as an opportunity to share with the participants of the Treatment Group their individual scores and what pursuits and competencies that they performed the highest.

Chapter IV

DATA ANALYSIS AND RESULTS

Introduction

The purpose of the study was to examine a sample of fifty students from a large rural Appalachian Kentucky high school to measure their emotional intelligence (EI) or emotional quotient (EQ) and EI components and to measure whether an emotional intelligence instructional unit could increase student EI or EQ over a twelve week period with ten instructional lessons.

The original research design was to incorporate 120 students selected randomly along the strata of thirty students per grade level for grades 9-12. Due to the number of selected students choosing not to participate the study was reduced to the fifty students that gave accession to participate in the research. Those 50 students were then randomly selected into a treatment group and a control group equally with twenty-five participants per group. Accordingly, because of the small number of participants and that the participants were not divided equally among grade levels, the opportunity to select the groups according to the strata of grade levels was lost.

The research was a mixed-method design with the use of the Social Emotional Learning-Youth Version (SEI-YV) instrument/survey which is a product created by Six Seconds®. The researcher received a grant from Six Seconds® to utilize this assessment to measure the participants EI and the components of EI. The SEI-YV has evidence that it is both valid and reliable in the measure of EI and the individual components of EI, as was mentioned in Chapter Three. The participants took the

SEI-YV pre-test as online assessment in a computer lab while supervised by the researcher. Each of the participants upon completion of the SEI-YV also completed the researcher designed Social Emotional Learning General Survey (SELGS). The Student Demographic and Interest Survey was a collection of questions that focused on general family, socio-economic level, and education data. The survey also asked questions about participant interests with the use of technology and social networking.

The participants were notified individually of their selection in the treatment group after the completion of the SEI-YV pre-test. The treatment group was presented a mini-curriculum of ten emotional intelligence instructional lessons, one per week, for the following ten weeks. Due to the fact that the students were from multiple grade levels and that these EI instructional lessons were presented during the regular instructional day the EI instructional lessons were presented in an afternoon rotation of classes fourth through seventh. This rotation was designed to protect as much instructional time for the participants in their regularly scheduled classes as possible but also to protect the integrity of the ten emotional intelligence instructional lessons.

Upon the completion of the ten instructional emotional intelligence lessons presented to the treatment group all fifty of the participants, treatment and control groups, were given the SEI-YV post-test. The SEI-YV was again given to the participants online in a computer laboratory under the direct supervision of the researcher. At the conclusion of the study the Treatment Group participants

participated in an individual exit interview with the researcher.

The data collected from the SEI-YV was provided to the researcher from Six Seconds® in Microsoft® Excel spreadsheet and was emailed to the researcher. The data was then transposed into a Microsoft® Excel spreadsheet designed by the researcher for analysis of the data. Due to the small size of the sample the researcher chose to utilize a dependent, one-way t-test. The researcher employed a Microsoft® Excel t-test calculator received in a graduate statistics class for the purpose of determining statistical significance.

The two research questions were:

1. What is the effect that emotional intelligence (EI) instruction has on student emotional intelligence (EI) or emotional quotient (EQ)?
2. Is it possible to increase student emotional intelligence (EI) level or emotional quotient (EQ) over the course of ten weeks?

The two null hypothesis were:

Ho1: Emotional intelligence (EI) instruction has no effect on student emotional intelligence (EI) level or emotional quotient (EQ).

Ho2: It is not possible to increase student emotional intelligence (EI) level or emotional quotient (EQ) over the course of ten weeks.

Data Analysis of the SEI-YV Results

The fifty participants in the study were given the SEI-YV as a pre-test during week one of the study and the post-test during week twelve at the conclusion of the study. The study was conducted between late August and mid-November of the

school year during the first semester of a traditional two semester school year. The Treatment Group received ten emotional intelligence instructional lessons, one per week for ten weeks between the pre and post-tests. The Control Group did not receive any direct emotional intelligence instruction during the ten weeks between the pre and post-test.

The Six Seconds® Model assesses the participants according to the three pursuits of Know Yourself, Choose Yourself, and Give Yourself (see Table 1, p. 56). The SEI-YV also examines the eight competencies or skills: Enhance Emotional Literacy, Recognize Patterns, Apply Consequential Thinking, Navigate Emotions, Exercise Optimism, Increase Empathy, and Pursue Noble Goals. Included in the SEI-YV are also five (5) Life Barometers: Good Health, Relationship Quality, Life Satisfaction, Personal Achievement, and Self-Efficacy (Sei-yv assessors manual, 2012, p. 11-12). The SEI-YV also provides an emotional intelligence (EI) score for each participant as well as an overall Life Barometer Outcome score.

Table 8.

Emotional Intelligence Scores Pre-test and Post-test of the Treatment Group and the Control Group.

Treatment Group		Control Group	
EI Score	EIS2	EI Score	EIS2
106	105	105	116
97	97	98	97
123	123	83	93
104	107	98	106
91	95	68	95
95	102	95	98

75	88	111	104	
65	57	89	85	
129	127	91	100	
117	124	85	85	
118	105	85	89	
119	118	96	89	
106	111	75	79	
99	100	91	90	
78	68	108	118	
90	123	97	97	
135	129	95	87	
86	89	98	103	
90	105	102	98	
77	78	106	99	
105	103	92	102	
109	116	92	94	
125	124	86	80	
87	88	82	83	
103	104	105	100	
101.16	103.44	93.32	95.48	**(Means)**

Treatment Group $p > .05$, $\bar{X}$ difference between Pre and Posttest was 2.28. The SD of the pre-test was 18.15 and for the post-test it was 18.41.

Control Group $p > .05$, $\bar{X}$ difference between Pre and Posttest was 2.16. The SD of the pre-test was 10.34 and the post-test was 9.92.

The EI scores for both the Treatment Group and the Control Group are listed in Table 8. The data was analyzed with a one-way dependent t-test to measure significance. The difference between the Treatment Group means was an increase of 2.28 but was insignificant at the 0.05 level. The standard deviation of the Treatment Group for the EI score was 18.15 for the pre-test and 18.41 for the post-test. The Control Group difference between the means was an increase of 2.16 which was insignificant at the 0.05 level as well. The standard deviation for the Control Group

on the pre-test was 10.34 and 9.92 for the post-test. The Treatment Group had a 7.84 higher mean on the pre-test than the Control Group mean and a 7.96 higher mean on the post-test. The scores were more dispersed for the Treatment Group on both the pre and post-tests. According to the data analysis the two hypotheses are rejected and the two nulls accepted.

Table 9.

Know Yourself Pursuit and Related Compemtencies for the Treatment Group.

KNOW YOURSELF	KY2	ENHANCE EMOTION LITERACY	EEL2	RECOGNIZE PATTERNS	RP2
95	90	99	99	91	83
97	100	99	97	95	102
127	122	126	126	122	114
101	107	92	99	110	114
85	85	82	82	91	91
91	95	82	97	102	95
79	91	80	82	83	102
64	62	60	60	75	71
112	126	126	121	95	126
115	126	121	121	106	126
123	102	124	102	118	102
114	113	119	114	106	110
98	109	102	107	95	110
100	109	94	99	106	118
80	72	77	75	87	75
93	122	97	119	91	122
127	120	131	119	118	118
79	86	87	84	75	91
91	108	89	104	95	110

79	80	80	77	83	87	
94	102	94	104	95	99	
109	111	102	107	114	114	
127	120	126	119	122	118	
105	109	94	114	114	102	
98	113	87	109	110	114	
99.32	103.2	98.8	101.48	99.96	104.56	Means

Know Yourself was $p < .05$, $\bar{X}$ difference of 3.88. The SD was for the Pre-test 16.97 and for the Post-test was 17.01.

Enhance Emotional Literacy was $p > .05$, $\bar{X}$ difference was 2.68. The SD for the Pre-test was 18.88 and for the Post-test was 16.92.

Recognizing Patters was $p < .05$, $\bar{X}$ difference was 4.6. The SD for the Pre-test 13.97 and for the Post-test was 15.14.

The pursuit of Know Yourself and the competencies of Enhance Emotional Literacy and Recognize Patterns that are used to determine the Know Yourself score. The Treatment Group means increased 3.88 for the Know Yourself pursuit and was determined significant at the 0.05 level with the use of the one-way dependent t-test. The difference between the standard deviations from the pre and post-test was 0.04 which was a negligible increase in dispersion.

The competency of Enhance Emotional Literacy means were a difference of a 2.68 increase. The difference between the means was shown to be insignificant at the 0.05 level with the use of the one-way dependent t-test. The standard deviation for the pre-test was 18.88 and the dispersion decreased to a standard deviation of 16.92 for the post test.

The competency of Recognize Patterns means were a difference of 4.6 which

was an increase from the pre-test mean of 99.96. According to the one-way dependent t-test the difference in the means was significant at the 0.05 level. The null hypotheses were rejected and the second hypothesis was accepted. The standard deviation for the pre-test was 13.97 and was 15.14 for the post-test. According to the data the dispersion increased on the post-test from the pre-test.

Table 10.

Know Yourself Pursuit and Related Compentencies for the Control Group.

KNOW YOURSELF	KY2	ENHANCE EMOTION LITERACY	EEL2	RECOGNIZE PATTERNS	RP2
102	113	102	117	102	106
97	96	92	94	102	99
83	92	94	102	75	83
90	102	107	102	75	102
78	99	89	104	71	95
91	99	84	104	99	95
102	93	109	89	95	99
89	90	89	87	91	95
99	100	104	94	95	106
78	82	84	80	75	87
82	83	80	82	87	87
97	94	97	94	99	95
82	88	84	94	83	83
111	103	114	112	106	95
99	108	99	112	99	102
92	92	102	102	83	83
91	75	82	67	102	87
89	104	104	102	75	106
100	95	102	97	99	95

106	101	112	92	99	110	
93	102	89	102	99	102	
80	87	77	89	87	87	
86	85	84	89	91	83	
90	84	92	84	91	87	
100	104	102	104	99	102	
92.28	94.84	94.96	95.8	91.16	94.84	**Means**

Know Yourself was $p > .05$, $\bar{X}$ difference of 2.56. The SD was for the Pre-test 8.92 and for the Post-test was 9.14.

Enhance Emotional Literacy was $p > .05$, $\bar{X}$ difference was 0.84. The SD for the Pre-test was 10.60 and for the Post-test was 11.22.

Recognizing Patterns was $p > .05$, $\bar{X}$ difference was 3.68. The SD for the Pre-test 10.51 and for the Post-test was 8.44.

The Know Yourself means for the Control Group had a difference of 2.56 increase from the pre-test to post-test. According to the one-way dependent t-test the difference in the means was shown to be insignificant at the 0.05 level. The null hypotheses were accepted. The standard deviation for the pre-test was 8.92 and for the post-test was 9.14 which showed only a slight increase in dispersion on the post-test.

The means of the Enhance Emotional Literacy were shown to be insignificant at the 0.05 level as well and the nulls were accepted. The difference in the means was only a 0.84 increase on the post-test and the standard deviation was 10.60 on the pre-test and was 11.22 on the post-test so there was little change in the dispersion from the pre-test and post-test.

The means for Recognize Patterns for the Control Group were shown to be

insignificant at the 0.05 level and the nulls were accepted. The difference between the means was an increase of 3.68 on the post-test. The standard deviation for the pre-test was 10.51 and the post-test was 8.44 so the dispersion decreased on the post-test when compared to the pre-test mean.

Table 11.

Choose Yourself Pursuit and the competency of Applying Consequential Thinking scores of the Treatment Group.

CHOOSE YOURSELF	CY2	APPLY CONSEQUENTIAL THINKING	ACT2
106	113	119	122
90	104	78	99
122	122	115	122
83	90	109	102
94	94	99	105
91	97	92	89
76	86	62	68
64	62	72	75
137	119	126	112
113	118	109	115
116	108	105	99
119	117	115	112
114	113	112	112
85	80	89	85
84	69	99	68
89	114	82	99
136	130	122	115
82	90	78	85
99	98	95	99
74	76	92	85

111	102	105	102
108	108	112	102
111	113	99	92
82	77	85	75
101	93	102	92
99.48	99.72	98.92	97.24

Choose Yourself was $p > .05$, $\bar{X}$ difference was 0.24. The Pre-test SD was 19.12 and the Post-test SD was 17.81.

Applying Consequential Thinking was $p > .05$, $\bar{X}$ difference was -1.68. The Pre-test SD was 16.42 and the Post-test was 15.71.

The Treatment Group means difference on the Choose Yourself Pursuit was only an increase of 0.24 on the post-test. The difference in the means was shown to be insignificant at the 0.05 level and the null hypotheses were accepted. The dispersion decreased on the post-test with a decrease in the standard deviation by 1.31.

The mean for the Applying Consequential Thinking decreased by 1.68 on the post-test from the pre-test. The standard deviation for the post-test also decreased 0.71 from the pre-test which was very little change in the scores dispersion from the pre-test to post-test. The difference in the means was shown to be insignificant at the 0.05 level and the nulls were accepted.

Table 12.

Choose Yourself Pursuit remaining compentencies for the Treatment Group.

NAVIGATE EMOTIONS	NE2	ENGAGE INTRINSIC MOTIVATION	EIM2	EXERCISE OPTIMISM	EO2
89	112	114	114	97	94
92	107	100	100	97	106
107	118	123	111	125	119
83	98	74	85	82	85
101	98	91	88	91	91
95	101	88	103	97	97
74	89	85	94	100	103
74	80	60	60	82	66
133	110	131	131	128	106
121	121	97	100	113	119
107	86	120	126	119	113
121	107	111	114	113	119
110	101	114	120	110	110
71	80	97	85	94	85
92	71	85	91	75	72
98	92	114	131	72	122
136	130	123	123	131	125
86	89	94	97	85	97
95	95	103	88	103	113
63	83	77	71	88	85
101	101	111	97	116	106
95	110	106	108	113	106
107	104	108	120	119	125
71	80	97	77	88	94
92	98	114	97	94	91
96.56	98.44	101.48	101.24	101.28	101.96

Navigating Emotions was $p > .05$, $\bar{X}$ difference was 1.88. The Pre-test SD was 18.82 and the Post-test SD was 14.34.

Engaging in Intrinsic Motivation was $p > .05$, $\bar{X}$ difference was 0.24. The Pre-test SD was 17.13 and the Post-test SD was 18.63.

Exercising Optimism was $p > .05$, $\bar{X}$ difference was 0.68. The Pre-test SD was 16.67 and the Post-test SD was 16.05.

The remaining competencies of Navigate Emotions, Engage in Intrinsic Motivation, and Exercise Optimism that are incorporated in the Choose Yourself pursuit with the Treatment Group were all shown to be insignificant at the 0.05 level and the null hypotheses were accepted. The difference in the means between the pre and post-test in Navigate Emotions was 1.88; Engage in Intrinsic Motivation was 0.24; and for Exercise Optimism was 0.68. The standard deviation for Navigate Emotions was 18.82 for the pre-test and 14.34 for the post-test. The standard deviation for the Engage in Intrinsic Motivation increased in dispersion on the post-test by 1.5 over the pre-test. The dispersion for Exercising Optimism decreased from 16.67 to 16.05 on the post-test.

Table 13.

Choose Yourself Pursuit and the competency of Applying Consequential Thinking scores of the Control Group.

CHOOSE YOURSELF	CY2	APPLY CONSEQUENTIAL THINKING	ACT2
105	119	102	115
96	99	115	99
69	85	68	102
98	104	82	92
70	91	82	89
96	100	89	89
108	109	115	119
80	81	68	82
91	98	92	95
85	77	95	89

94	95	109	99
96	93	109	105
71	76	75	89
90	85	65	65
104	114	102	109
95	100	112	102
99	100	105	105
100	117	119	95
97	97	95	105
96	85	99	99
93	99	78	85
89	97	92	95
88	81	105	78
80	79	102	102
112	92	109	95
92.08	94.92	95.36	95.96

Choose Yourself was $p > .05$, $\bar{X}$ difference was 2.84. The Pre-test SD was 11.26 and the Post-test SD was 12.05.

Applying Consequential Thinking was $p > .05$, $\bar{X}$ difference was 0.60. The Pre-test SD was 15.88 and the Post-test SD was 11.65.

The Control Group difference between the means was 2.84 and was determined to be insignificant at the 0.05 level. The standard deviation for the pre-test was 11.27 and the post-test standard deviation was 12.05. The scores for Applying Consequential Thinking were also shown to be insignificant at the 0.05 significance level. The nulls were accepted for the compentency of Applying Consequential Thinking. The standard deviations were 15.88 and 11.65 with a more narrow dispersion on the post-test distribution.

Table 14.

Choose Yourself Pursuit remaining competencies for the Control Group.

NAVIGATE EMOTIONS	NE2	ENGAGE INTRINSIC MOTIVATION	EIM2	EXERCISE OPTIMISM	EO2
101	112	111	117	100	116
89	107	85	106	97	88
71	77	80	88	82	85
101	98	100	111	110	110
74	83	68	100	82	100
107	121	85	97	106	94
107	104	106	106	97	100
95	86	85	80	88	91
104	110	88	94	88	94
89	86	103	80	66	72
80	95	94	97	97	94
89	80	94	94	97	97
83	83	71	71	78	82
118	101	103	94	82	91
112	110	103	120	97	106
95	101	94	106	85	91
80	77	114	123	97	94
104	124	88	123	91	110
89	89	103	97	103	100
89	80	91	85	106	88
98	107	106	100	94	103
80	83	103	108	91	103
92	95	71	83	94	85
71	69	88	85	75	78
95	89	117	94	116	97
92.52	94.68	94.04	98.36	92.76	94.76

Navigating Emotions was $p > .05$, $\bar{X}$ difference was 2.16. The Pre-test SD was 12.58 and the Post-test SD was 14.64.

Engaging in Intrinsic Motivation was $p > .05$, $\bar{X}$ difference was 4.32. The Pre-test SD was 13.29 and the Post-test SD was 13.95.

Exercising Optimism was $p > .05$, $\bar{X}$ difference was 2,00. The Pre-test SD was 11.48 and the Post-test SD was 10.33.

The remaining competencies in the Choose Yourself pursuit are listed in Table 14. Those competencies are Navigate Emotions, Engage in Intrinsic Motivation, and Exercising Optimism and the difference between the means were shown to be insignificant at the 0.05 significance level for all three competencies and the null hypotheses were accepted. The standard deviations for Navigating Emotions were 12.58 and 14.64 respectfully; 13.29 and 13.95 for Engaging in Intrinsic Motivation; and 11.48 and 10.33 for Exercising Optimism respectfully.

Table 15.

Give Yourself Pursuit and related competencies scores for the Treatment Group.

GIVE YOURSELF	GY2	INCREASE EMPATHY	IE2	PURSUE NOBLE GOALS	PNG2
116	111	116	107	114	114
105	91	98	89	110	93
113	117	110	107	114	124
123	119	125	122	117	114
97	107	95	110	100	104
103	111	95	89	110	110
77	89	71	57	86	97
76	60	83	101	73	69
129	127	119	107	134	128
117	120	110	116	121	121
110	104	116	83	104	93
119	118	122	104	114	114
104	108	101	68	107	110
109	109	110	86	107	107
78	72	83	119	76	76

90	124	92	101	90	131	
131	127	122	92	134	131	
99	94	98	98	100	97	
84	108	77	83	93	107	
85	84	89	98	83	86	
110	105	107	113	110	110	
108	122	101	125	114	128	
129	128	122	98	131	128	
78	80	80	92	80	73	
108	103	107	98	107	107	
103.92	105.52	101.96	98.52	105.16	106.88	Means

Give Yourself was $p > .05$, $\bar{X}$ difference was 1.60. The Pre-test SD was 17.06 and the Post-test SD was 17.96.

Increasing Empathy was $p > .05$, $\bar{X}$ difference was -3.44. The Pre-test SD was 15.61 and the Post-test SD was 15.99.

Pursuing Noble Goals was $p > .05$, $\bar{X}$ difference was 1.72. The Pre-test SD was 16.98 and the Post-test SD was 17.95.

The Treatment Group scores for the Give Yourself pursuit and the related competencies of Increase Empathy and Pursue Noble Goals are shown in Table 15 above. The Give Yourself pursuit difference in means was 1.60 which was an increase from the pre-test to post-test. The difference in the means was shown to be insignificant at the 0.05 significance level and the nulls were accepted. The Increase Empathy competency means for the actually decreased 3.44 on the post-test to the pre-test scores. The change in means was not found to be significant at the 0.05 level and the nulls were accepted. The Pursue Noble Goals competency had an increase in the post-test mean of 1.72 but that difference in the means was also shown to be insignificant at the 0.05 significance level and the nulls were accepted.

Table 16.

Give Yourself Pursuit and competencies scores of the Control Group.

GIVE YOURSELF	GY2	INCREASE EMPATHY	IE2	PURSUE NOBLE GOALS	PNG2	
107	111	110	107	104	114	
101	98	86	92	114	104	
100	104	107	116	93	93	
107	110	98	101	114	117	
66	95	65	83	73	107	
99	97	95	101	104	93	
120	109	119	110	117	107	
100	89	92	83	107	90	
87	101	86	122	90	100	
95	100	98	95	93	93	
84	94	80	116	90	93	
96	85	95	119	97	90	
79	80	77	110	83	93	
75	85	71	71	83	86	
118	125	116	113	117	128	
104	101	107	92	100	100	
96	92	92	86	100	93	
106	89	92	101	117	93	
108	101	116	119	100	100	
114	109	104	107	121	117	
92	103	89	101	97	107	
107	99	113	71	100	97	
89	81	74	98	104	93	
82	91	92	92	76	86	
101	102	95	98	107	110	
97.32	98.04	94.76	100.16	100.04	100.16	Means

Give Yourself was $p > .05$, $\bar{X}$ difference was 0.72. The Pre-test SD was 13.26 and the Post-test SD was 10.44.

Increasing Empathy was $p > .05$, $\bar{X}$ difference was 5.40. The Pre-test SD was 14.57

and the Post-test SD was 14.24.

Pursuing Noble Goals was $p > .05$, $\bar{X}$ difference was 0.12. The Pre-test SD was 12.98 and the Post-test SD was 10.83.

The Give Yourself pursuit and the related competencies of Increase Empathy and Pursue Noble Goals are shown in Table 16. The means between the pre-test and post-test means increased on the pursuit and the two competencies but were all three shown to be insignificant at the 0.05 significance level and the null hypotheses were accepted. The Give Yourself difference in means was 0.72, the Increase Empathy was 5.40; and the Pursue Noble Goals was 0.12. The dispersions of each of the distributions from Table 16 were less dispersed on the post-test data.

Table 17.

Outcomes Scores for the Treatment Group.

OUTCOME GOOD HEALTH	OGH2	OUTCOME LIFE SATISFACTION	OLS2	OUTCOME PERSONAL ACHIEVEMENT	OPA2
121	116	103	103	92	92
116	116	93	96	96	101
92	78	110	110	110	110
107	107	83	83	78	78
88	92	93	93	87	92
83	83	93	96	96	105
83	88	110	96	78	74
88	78	83	66	87	65
107	102	113	113	114	118
107	107	120	117	105	105
107	107	117	117	114	110

107	102	110	110	123	127
121	116	117	120	105	118
107	102	89	72	92	87
102	74	66	59	87	74
88	130	72	130	74	127
121	116	123	120	105	110
64	92	83	89	87	96
92	92	110	83	105	83
92	78	62	76	78	83
83	97	110	113	101	101
116	111	100	103	110	105
130	121	120	113	114	105
78	92	86	86	96	101
78	59	86	59	96	78
99.12	98.24	98.08	96.92	97.2	97.8

Outcome Good Health was $p > .05$, $\bar{X}$ difference was -0.88. The Pre-test SD was 16.79 and the Post-test SD was 17.17.

Outcome Life Satisfaction was $p > .05$, $\bar{X}$ difference was – 1.16. The Pre-test SD was 17.56 and the Post-test SD was 20.04.

Outcome Personal Achievement was $p > .05$, $\bar{X}$ difference was 0.60. The Pre-test SD was 13.26 and the Post-test SD was 16.86.

Table 17 provides data from the Six Seconds® Life Barometers for the Outcomes of Good Health, Life Satisfaction, and Personal Achievement. The means decreased on the post-test by 0.88 on Good Health and 1.16 on Life Satisfaction. The Personal Achievement mean score on the post-test only increased 0.60 from the pre-test mean. All three of these Life Outcomes were shown to be insignificant at the 0.05 level and the null hypotheses were accepted. For each of the distributions of scores the standard deviation increased on the post-test from the pre-test. The Outcome Good Health standard deviation went from 16.79 to 17.17; for Life

Satisfaction the standard deviation increased from 17.56 to 20.04 on the post-test; and on Personal Achievement the standard deviation increased from 13.26 to 16.86 on the post-test. The distributions had a wider dispersion on each of the post-test data sets.

Table 18.

Outcome Scores Continued for the Treatment Group.

OUTCOME RELATIONSHIP QUALITY	ORQ2	OUTCOME SELF-EFFICACY	OSE2	OUTCOMES OVERALL	OO2
94	99	103	114	105	107
84	94	97	103	98	104
125	114	114	119	112	106
84	79	81	75	83	80
79	99	97	97	84	92
74	89	97	108	84	94
104	104	86	81	89	84
84	58	92	86	82	60
89	109	125	119	113	116
114	114	97	114	112	115
104	104	125	119	117	115
114	120	103	108	116	118
109	104	114	114	118	120
79	74	103	114	92	86
84	64	97	70	83	57
79	104	75	119	70	132
120	125	130	114	127	123
94	89	86	108	75	93
94	74	103	86	101	78
64	64	81	75	68	67
114	114	103	108	101	108
109	99	114	103	114	106

120	104	130	125	131	119
89	94	86	75	82	87
69	89	92	64	78	58
94.92	95.24	101.24	100.72	97.4	97

Outcome Relationship Quality was $p > .05$, $\bar{X}$ difference was 0.32. The Pre-test SD was 17.31 and the Post-test SD was 18.02.

Outcome Self-Efficacy was $p > .05$, $\bar{X}$ difference was -0.52. The Pre-test SD was 15.48 and the Post-test SD was 18.42.

Outcome Overall was $p > .05$, $\bar{X}$ difference was 0.40. The Pre-test SD was 18.29 and the Post-test SD was 21.68.

Table 18 depicts the remaining Life Barometer outcomes and the overall outcome score for the life barometers. The Life Barometers of Relationship Quality, Self-Efficacy, and the Overall score are shown in this table. The difference in the means for the two barometers and the overall score were all shown to be insignificant at the 0.05 significance level and the null hypotheses were accepted. The difference in the means for all three of these data sets were less than 1.0. The distributions also had a wider dispersion on the post-test when compared to the pre-test. The post-test mean of Self-Efficacy decreased by 0.52 and that was the contributing factor to the Overall Outcomes mean score to decrease by 0.04.

Table 19.

Outcome scores for the control group.

OUTCOME GOOD HEALTH	OGH2	OUTCOME LIFE SATISFACTION	OLS2	OUTCOME PERSONAL ACHIEVEMENT	OPA2
111	92	106	89	114	110
83	107	89	86	105	110
83	102	83	89	105	101
107	111	113	106	92	105
69	111	103	113	92	101
88	97	113	113	96	87
88	78	117	117	114	110
78	55	93	96	96	87
92	88	96	117	114	105
69	64	79	66	92	69
97	97	100	106	96	101
97	102	93	83	110	110
83	97	86	79	83	60
59	64	96	93	69	65
130	130	103	117	105	118
88	88	89	89	101	96
92	107	83	66	101	105
83	74	89	103	92	110
78	78	96	100	96	101
116	92	108	86	87	87
102	111	100	106	87	92
97	102	86	93	96	101
116	78	103	55	78	69
102	97	66	66	78	87
121	121	106	103	110	101
93.16	93.72	95.84	93.48	96.36	95.52

Outcome Good Health was $p > .05$, $\bar{X}$ difference was 0.56. The Pre-test SD was 17.29 and the Post-test SD was 18.29.

Outcome Life Satisfaction was $p > .05$, $\bar{X}$ difference was 2.36. The Pre-test SD was 11.96 and the Post-test SD was 17.51.

Outcome Personal Achievement was $p > .05$, $\bar{X}$ difference was 0.84. The Pre-test SD was 11.95 and the Post-test SD was 15.69.

The data listed in Table 19 is the results for the Control Group on the Life Barometers of Good Health, Life Satisfaction, and Personal Achievement. The means decreased on the post-test in Life Satisfaction and Personal Achievement. The mean for Good Health increased only by 0.56 on the post-test. The difference in the means were shown to be insignificant at the 0.05 significance level and the nulls were accepted. The standard deviations for the Good Health were 17.29 and 18.29; for Life Satisfaction were 11.96 and 17.51; and for Personal Satisfaction 11.95 and 15.69. The distributions of these three data sets were wider dispersed on the post-test when compared to the pre-test scores.

Table 20.

Outcome Scores Continued for the Control Group.

OUTCOME RELATIONSHIP QUALITY	ORQ2	OUTCOME SELF-EFFICACY	OSE2	OUTCOMES OVERALL	OO2
104	89	119	119	115	99
84	89	125	108	95	100
89	99	75	92	83	96
74	89	125	103	103	105
89	94	97	119	85	110
104	120	108	130	101	111
104	104	114	108	109	103

79	84	81	86	80	73
104	99	86	114	98	105
79	74	70	86	69	60
89	84	92	108	93	99
99	94	108	86	102	94
74	69	81	108	75	76
79	79	86	92	68	69
114	109	103	114	117	125
94	84	103	119	92	92
69	79	92	81	83	85
99	74	103	58	90	79
94	104	103	92	90	92
94	64	97	86	101	78
99	94	103	103	97	102
104	99	108	108	97	101
89	74	103	75	98	60
74	74	64	70	70	73
114	84	114	108	118	106
91.8	88.24	98.4	98.92	93.16	91.72

Outcome Relationship Quality was $p > .05$, $\bar{X}$ difference was -3.56. The Pre-test SD was 12.84 and the Post-test SD was 13.54.

Outcome Self-Efficacy was $p > .05$, $\bar{X}$ difference was 0.52. The Pre-test SD was 16.16 and the Post-test SD was 17.53.

Outcome Overall was $p > .05$, $\bar{X}$ difference was -1.44. The Pre-test SD was 14.20 and the Post-test SD was 16.78.

Table 20 provides the remaining Life Barometers of Relationship Quality, Self-Efficacy, and Outcomes Overall score for the Control Group. The means for Relationship Quality decreased by 3.56 on the post-test from the pre-test. The means for Self-Efficacy increased 0.52 on the post-test. The means for the Outcomes Overall score decreased by 1.44 on the post-test. All three differences in the means were shown to be insignificant at the 0.05 significance level on the one-way

dependent t-test and the null hypotheses were accepted. The dispersions of the distributions were also more widely dispersed on the post-test data.

Summary of the SEI-YV Results

The results from the SEI-YV with the treatment group only resulted in a finding of significance in the Know Yourself pursuit and competency of Recognizing Patterns. It can be assumed that the finding of statistical significance with the competency of Recognizing Patterns had a statistically significant influence on the pursuit of Know Yourself being also statistically significant at the 0.05 level. There were two other categories that were close to be statistically significant using the one-way dependent t-test and they were the emotional intelligence (EI) score and the Enhance Emotional Literacy score both of which were within 0.424 of being statistically significant.

The Control Group results did not show the emotional intelligence score or any of the pursuits or competencies to be statistically significant. This was expected as the Control Group only had familiarity with emotional intelligence just from exposure to taking the SEI-YV since they were not a part of the instructional component of the study.

Analysis of the Social Emotional Learning General Survey

The Social Emotional Learning General Survey (SELGS) was administered at the same time the SEI-YV pre-test was given. There were fifty participants that participated in the study who were randomly selected out of a school population of 907 students. Those that were randomly selected using a random numbers list were

randomly selected a second time using a random numbers list to assign the Treatment Group and the Control Group. The participants were not notified until after they had completed the SEI-YV and the Social Emotional Learning General Survey of which group that they had been selected.

The results of the SELGS were as follows:

1. 92% of the participants were Caucasian.
2. There were 25 each of males and females.
3. Nearly 25% of the participants' fathers were between the ages of 45 and 54.
4. 62% of the participants' mothers were between the ages of 35 and 44.
5. 40% of the participants lived with both biological parents; 42% lived with one biological parent.
6. 40% of the participants had lived in the same home for more than 10 years but 16% had lived in their current home for less than one year.
7. 34% of the respondents answered that their family income was between $55,000 and $75,000 or more but 42% of the participants were not sure of their family income.
8. Approximately 35% of the participants' parents only had a high school education. Approximately 38% had post-secondary education with at least some technical education or above but only 8% had a bachelor's degree or above. Approximately 8% had not achieved a high school education and nearly 20% of the respondents were unsure of the level of education

attainment of their parents.

9. The whole group consisted of eight seniors, twenty-one juniors, eleven sophomores, and ten freshmen.
10. 34% of the respondents had missed school five days or less. 34% were absent from school six to ten days. 10% of those that participated responded that they had missed twenty or more days of school in the previous school year.
11. 69% answered that they had been tardy to school between one to five times and 10% responded that they had been tardy to school more than twenty times in the previous school year.
12. 24% responded that they had a 3.5 or higher GPA and 40% had a 3.0 to 3.4 GPA. Only 4% responded that they had a GPA of below 2.0.
13. 80% planned to attend college.
14. 88% of the participants answered that the quality of their education was important to them but only 58% answered that they give their best effort in all of their academic classes.
15. 58% of the participants answered that they studied between one to five hours per week and 28% responded that they studies less than one hour per week.
16. Nearly 71% had a working computer in the home and 83% had internet access at home.
17. 90% of the participants had a smart phone that allowed them to use the

internet.

18. 92% participated in social networking sites.
19. 20% of the participants felt that their grades suffered because of the time they spent using technology.
20. 30% responded that they become defensive or secretive when anyone asks what they do online at least some of the time.
21. 48% either consistently lost sleep or lost sleep some of the time because of technology use.
22. 36% answered that not being able to use their technology made them moody or depressed at least some of the time.
23. Over 50% answered that they use technology as an escape at least some times.
24. 84% answered that they either sometimes or always check their messages and texts before doing something they need to do.
25. 62% of the respondents were involved in extracurricular activities.

The SELGS results describe the group as a highly homogenous group that was Caucasian, middle class, and with generally stable family dynamics. The responses suggested that there was not a strong emphasis on education in the families as 28% of respondents' parents did not have a high school education or the students were not aware of the education attainment of their parents. Only 8% of the participants answered that they had parents that had attained a bachelor's degree or higher.

School attendance also appears to be an issue among the sample with more

than a third of the participants having missed between one to five days and a third that had been absent six to ten days during the past school year. Ten percent had missed twenty or more days of the school the previous school year. These responses establish a concern for future consideration dealing with the academic performance of the school.

Eighty percent expressed that they plan to attend college and 88% answered that the quality of their education was important to them. In contrast though, the participants answered that only 58% of them gave their best effort in all of their classes. Fifty-eight percent of the respondents answered that they only studied between one to five hours a week with only 4% studying ten hours or more. Part of the distraction from education may be the student dependence and infatuation with technology, smart phones, and social networking sites. Students expressed at least some interference with their education from their use of technology for personal reasons. Almost fifty percent lost sleep because of technology usage at least some of the time. Also nearly fifty percent used technology some of the time to escape from their reality. It is these areas that appears to suggest that there is a greater need for emotional intelligence instruction especially in the areas of emotional literacy, consequential thinking, intrinsic motivation, and pursuit of noble goals.

Exit Interviews with the Treatment Group Participants

At the conclusion of the study the researcher performed exit interviews with each of the Treatment Group participants individually to protect participant confidentiality. Sixty-four percent of the participants expressed that the emotional

intelligence instructional lessons had caused them to think more constructively about how their emotional responses effected their own emotions. Sixty-four percent also answered that they at least occasionally were more aware of their own feelings. Forty-five percent answered that they were more able to make positive emotional decisions because of the EI lessons. Thirty-one percent expressed that their personal relationships had improved due to their participation in the EI lessons. A third of the participants expressed being happier in their everyday lives since they had participated in the EI lessons and 41% expressed that they planned to continue using EI strategies to improve their personal relationships. Forty-three percent of the Treatment Group felt that all students would benefit from EI lessons and over 31% answered that they would like to participate in more EI lessons in the future.

The exit interviews appeared to present the researcher with compelling evidence that suggested that the participants felt positive about the EI instructional lessons and that they expressed that the lessons made a positive impact on their lives even in the brief period of ten instructional lessons over ten weeks.

Chapter V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study examined the impact that ten 1-hour emotional intelligence (EI) instructional lessons, one per week could have on increasing participant emotional intelligence. A randomly selected sample of 50 students each completed the Social Emotional Learning-Youth Version (SEI-YV) an instrument from Six Seconds® and the researcher designed Social Emotional Learning General Survey (SELGS). Upon the conclusion of completing the two instruments the participants that had been randomly selected to participate in the Treatment Group of the study. The Treatment Group participated in ten 1-hour lessons, one per week. The lessons were adapted from the Self-Science Curriculum (www.self-science.com) that was created by Six Seconds® and can be located on www.eqtoolbox.org and from the Ohio National Guard Family Readiness and Warrior Support Programs emotional intelligence activities for children age thirteen to eighteen that can be located at the following website http://ong.ohio.gov/frg/FRGresources/emotional_intellegence_13-18.pdf.

The Six Seconds® SEI-YV measures participant EI, the three pursuits of Know Yourself, Choose Yourself, and Give Yourself. In the pursuit of Know Yourself the competencies (skills) of Enhance Emotional Literacy and Recognize Patterns are measured. In the pursuit of Choose Yourself the competencies (skills) of Apply Consequential Thinking, Navigate Emotions, and Engage Intrinsic Motivation are measured. Finally, the pursuit of Give Yourself examines the competencies (skills) of

Increase Empathy and Pursue Noble Goals. The SEI-YV also examines five "Life Barometers" or life measures of Outcome Good Health, Outcome Life Satisfaction, Outcome Personal Achievement, Outcome Relationship Quality, and Outcome Self-efficacy.

The study attempted to address if high school participants' emotional intelligence could be increased significantly over the diminutive period of ten weeks, one 1-hour lesson per week. It has been established that emotional intelligence can be increased through instruction (Goleman, 1995; Mayer, Salovey, & Caruso, 2000; Bar-On, 2005; and Kvapil, 2007). The Six Seconds® SEI-YV was selected as the instrument to measure whether there was a significant increase in the Treatment Groups' EI because it measures a variety of emotional constructs and the research also was able to secure a grant from Six Seconds®. The Six Seconds® program began to be developed in 1997 by Anabel Jensen and Joshua Freedman and were influenced by the works of Karen Stone McCown, Joshua Freedmen, Anabel Jensen, and Marsha C. Rideout in their work the *Self-Science: The Emotional Intelligence Curriculum*; the Mayer-Salovey-Caruso model, Daniel Goleman's writings, and others e.g. Candace Pert, Antonio Damasio, and Joseph LeDoux (Sei-yv assessors manual, p. 8, 2012). There were two research questions that guided this study the first asked what effect that emotional intelligence instruction has on student EI level or their emotional quotient (EQ)? The second question examined if it was possible to impact student EI or EQ over the course of ten weeks?

The major topics of this research included: (a) defining the tradition two

types of intelligence; (b) examining the various definitions of emotional intelligence; (c) tracing the development of emotional intelligence; (d) consideration of the ability, trait, and competency models of emotional intelligence; and (e) the SEI-YV instrument and its validity and reliability.

This study analyzed the emotional intelligence level utilizing the Six Seconds® organization's three pursuits, eight competencies, and five life barometers data of fifty rural Appalachian Kentucky high school students. The SEI-YV was the instrument used to collect the data and this instrument was given in a pre/post-test design. Each of the participants was also given the Social Emotional Learning General Survey (SELGS) that was designed by the researcher. The SELGS collected basic demographic data that included age, gender, race, and socioeconomic status as well as areas of interest dealing with education aspirations and technology usage. After the pre-test the Treatment Group was notified of their random selection and the schedule of EI instructional lessons of one 1-hour EI lesson per week for ten weeks. At the completion of the ten instructional lessons the fifty participants in the study (twenty-five in each the Treatment Group and the Control Group) were given the SEI-YV as a post-test. The twenty-five participants in the Treatment Group were given an individual exit interview conducted by the researcher to protect student confidentiality answering questions about their participation in the EI instructional lessons.

Discussion of Findings and Conclusions

Data were analyzed using a one-way dependent t-test to determine if there

were significant differences in the means between the pre and post-test scores for participant EI; the three pursuits of Know Yourself, Choose Yourself, and Give Yourself; the eight competencies of Enhance Emotional Literacy, Recognize Patterns, Apply Consequential Thinking, Navigate Emotions, Engage Intrinsic Motivation, Exercise Optimism, Increase Empathy, and Pursue Noble Goals; and the five "Life Barometers" of Outcome Good Health, Outcome Life Satisfaction, Outcome Personal Achievement, Outcome Relationship, and Outcome Self-efficacy for the Treatment Group and the Control Group. The independent variable of this study was the EI instructional lessons presented to the Treatment Group. The dependent variables were the EI scores, three pursuits, eight competencies, and five outcomes.

Research Question One

What is the effect that Emotional Intelligence instruction has on student emotional intelligence (EI) level or emotional quotient (EQ)?

The one-way dependent t-test did not show a significant difference between the means of the Treatment Group pre and post-test EI scores. The one-way dependent t-test did show significance on the pursuit of Know Yourself and the competency of Recognizing Patterns that is one of the competencies that is related to that pursuit. The other pursuits, competencies, and outcomes were shown to be insignificant at the 0.05 significance level. These results with the data suggests that there were some statistically significant increases with the Treatment Group (Know Yourself and Recognizing Patterns). The Treatment Group means increased in the following EI score, pursuits, competencies, and outcomes: EI (2.28), Know Yourself

(3.88), Choose Yourself (0.24), Give Yourself (1.60), Enhance Emotional Literacy (2.68), Recognize Patterns (4.6), Navigating Emotions (1.88), Exercising Optimism (0.68), Pursue Noble Goals (3.44), Outcome Personal Achievement (0.60), and Outcome Relationship Quality (0.32). There were decrease between the means of the competencies of Apply Consequential Thinking (-1.68) and Increase Empathy (-3.44). The following outcome means decreased: Outcome Good Health (-0.88), Outcome Life Satisfaction (-1.16), and Outcome Self-efficacy (-0.52).

The results of the study may have been influenced by the selection of the EI instructional lessons, that there was only one hour of instruction weekly for ten weeks, the short time span of the instructional unit, the lack of reflection time for the instructional activities, and perhaps the engagement of the participants.

Research Question Two

Is it possible to increase student Emotional Intelligence (EI) level or Emotional Quotient (EQ) over the course of ten weeks?

The data listed above suggests that it is possible to impact some components of EI over the course of ten weeks with one 1-hour lesson per week. But results were also mixed as some components had a decrease in the means from the pre-test to post-test. It is possible that due to the instructional component that participants may have answered on the post-test more critically as they were more aware of the concepts of EI. The researcher had personal experience in another study that he participated where his post-test EI score on another instrument decreased because he answered more critically on the post-test. It is also conceivable that instrument familiarity may

also have had some impact on the participants' increases in scores in some components of EI.

Implications of the Study

This study enlarges the on-going body of research in the construct of emotional intelligence in the following important ways: (a) determining the necessary length of time to augment adolescent emotional intelligence, (b) that emotional intelligence or at the least some components of emotional intelligence can be increased through emotional intelligence instruction, (c) increased data results with the SEI-YV, and (d) the effectiveness of emotional intelligence or social emotional learning programs.

The findings indicate that there can be increases in EI and its' components in as short a period of time as ten weeks with one 1-hour EI instructional lesson. The results for the pursuit of Know Yourself and the competency of Recognizing Patterns shown significant increases between the means. There were also increases in means for the Treatment Group in the following areas: EI, Know Yourself, Choose Yourself, Give Yourself, Enhance Emotional Literacy, Recognize Patterns, Navigating Emotions, Exercising Optimism, Pursue Noble Goals, Outcome Personal Achievement, and Outcome Relationship Quality. This study's results suggest similar findings to that of Brown (2013), Freedman (2003), and Greenberg, Kusche, Cook, & Quamma (1995) all found significant components or indicators of increases of emotional intelligence through emotional intelligence instruction or social emotional learning programs.

The data added fifty students to the growing number of adolescent participants that have been emotionally assessed through the use of the SEI-YV worldwide. The development of the SEI-YV based upon the work of noteworthy emotional intelligence advocates as Mayer-Salovey-Caruso, Goleman, Bar-On, and others gives a sense of legitimacy to the instrument as well as the validity and reliability statistics of the over five-thousand adolescents who have used it.

Limitations of the Study

Although this study did provide some significant findings that emotional intelligence or some of the components of EI can be increased over the abbreviated period of ten weeks, it does project several limitations. The sample size (n=50) and the size of the Treatment Group (n=25) were relatively small. There was not sufficient time available for effective participant reflection on the previous instructional lessons. The participants were for all statistical purposes were racially, culturally, and socioeconomically homogenous. All of the participants attended the same rural Appalachian Kentucky high school. While this study did have a control group that strengthens the data, the Control Group and Treatment Group each were small (n=25). Another limitation or factor that could have affected the final results was that the Treatment Group's EI mean score was 7.84 higher than the Control Group on the SEI-YV pre-test and 7.96 on the SEI-YV post-test. Even though the participants were randomly selected from the overall population to form the sample and were randomly selected from the sample into the Treatment and Control Groups it does support consideration of how the data may have differed if the randomization

had yielded different group assignments. There were also issues with some teachers that would not allow students who had their class to participate during specific class times even though with the rotating after lunch schedule the most any student would miss a single class during the ten week instructional component was three times. Of the twenty-five students in the Treatment Group the most that were present for any single instructional lesson were 23 and that only occurred once. The lowest number in attendance for an instructional lesson were eleven and that occurred twice. The mean number in attendance for the EI instructional lessons were 16.8 which was only a mean of 67% present for the whole series of ten lessons.

Recommendations for Further Study

The researchers and advocates for emotional intelligence promote the necessity for additional research and study in the field of EI instruction and social emotional learning programs (Bar-On, 2006; Brown, 2013; Cherniss, Extein, Goleman, Weissberg, 2006; Emmerling & Goleman, 2007; & Goleman, 1995). The research on the emotional intelligence of rural Appalachian Kentucky high school students rouses the need for more study as well as increased study in the emotional intelligence of adolescents in general. The data suggests that further study over a longer period of time may yield greater gains. It could also be beneficial to increase the number of instructional lesson per week and allow more time for participant reflection. It is also recommended that a larger sample be instituted in future research and more advanced preparation with a future population to minimize resistance and maximize study participation. A larger sample size of the Treatment Group and

Control Group would allow for increased use of statistical tools to determine significance according to more variates. It is also recommended to do an extensive amount of advanced preparation with the school faculty to better support the importance of the research. It is also recommended in future research that the researcher train and include practitioners in conducting the lessons and the research.

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Appendix A

Informed Consent for My Child to Participate in a Research Study

Focusing on a Character Education and Service Learning Pilot Program

Dear Parent/Guardian,

I am a teacher at Letcher County Central High School and I am conducting a set of instructional activities focusing on a **Character Education and Service Learning Pilot Program**. The purpose of this study is to provide data for the improvement of education for the children of our district.

I would like to have your permission to work with your child for approximately 12 hours on a research study pertaining to Character Education and Service Learning. If your child is selected to participate he/she will be administered an on-line Social and Emotional Learning (SEL) assessment, will be provided 10 instructional activities on SEL over a twelve (12) week period, and will be reassessed on the same SEL assessment for a posttest score.

Your child's scores and information will only be known to me, the researcher. None of the data will be identifiable to any individual student and no individual student's name will be used in this study.

You DO NOT have to allow me to include your child as a part of this study. Your decision to allow it or not allow it will not help or hurt your child's grades in any way at school. This study is completely separate from your child's school requirements, although the district and school have given me permission to conduct the study if parents give permission. If you give permission to include your child and then change your mind, you may withdraw your permission at any time and all of our activity with your child will stop and I will leave them out of the study. You may withdrawal your child by contacting me or the LCCHS administration at any time.

A review of this study proposal has been conducted by the Morehead State University Institutional Review Board and it has been determined that there is no risk to the children who will be involved. All information about your child's performance in the study as well as their educational records will be kept strictly confidential and not shared with anyone. Your name, the name of the students, the school and the school district will not be shared with anyone. All of the hard copy information gathered will be kept in a locked filed cabinet in my office at Letcher County Central High School and all digital files will be kept on a password protected computer.

Again, allowing your child to be involved in this research is completely voluntary. Questions about this research and how the information will be used may be directed to **Michael C. Melton** by calling (606) 633-2339.

Sincerely,

Michael C. Melton

If you give permission for me to work with your child for the 2015 school year with the research scheduled to occur in the fall semester and to use your child's SEL data, you do not need to return this form. By not returning this form you are giving consent for your child to participate in the above study. If you do not wish for your child to be considered to participate in this research, please complete the section below.

Child's Name (print):_____

Parent/Guardian Name (print): _____

Date: _____

Appendix B

Informed Student Assent for to Participate in a Research Study

Focusing on a Character Education and Service Learning Pilot Program

Dear Student,

I, Michael C. Melton, am conducting a study focusing on increasing Character Education and Service Learning in a pilot program as a part of my doctoral studies at Morehead State University. I would like to study if the constructs of Character Education and Service Learning can be increased with one (1) instructional activity per week over a ten (10) week period. Your parent/guardian has already given consent for you to be considered to participate in this study. It is important to me that you are aware that you may choose not to participate in this set of activities at any time, the present or any time in the future. Your choosing to participate or not participate will in no way affect your grades either positively or negatively in any particular class.

No one other than I, Michael C. Melton, and your fellow participants will know what the concepts in the instructional activities. No one other than I, Michael C. Melton, will be privileged to your pre-test and post-test data. All of that information will be kept under lock and key and on a password protected computer. The risks in this study are minimal and many individuals feel the activities are fun and beneficial. This study will be conducted over twelve (12) weeks with one (1) class meeting per week during the afternoon on a scheduled day. Week one (1) and twelve (12) will consist of taking a Social Emotional Learning assessment as part of a pre-test/post-test design. Weeks two (2) through eleven (11) will consist of one (1) Character Education/Service Learning/Social Emotional Learning instructional activity for one class period.

Do you have any questions? If so you can ask me personally or contact my supervisor.

You are aware that your participation is totally voluntary and that you were randomly selected and everybody had equal opportunity to be selected. **YES** **NO**

Do you give permission for me, Michael C. Melton, to work with you during this Character Education/Service Learning Pilot Program? **YES** **NO**

_____ _____

Printed Name of Student Participant Date

_____

Signature of Student Participant

Appendix C

Social Emotional Learning General Survey (SELGS)

What best describes your race?

- Caucasian/White
- African American
- Hispanic American
- Asian American
- Native American
- Other

What is your gender/sex?

- Male
- Female

In which age category does your father currently fall?

- 25-34
- 35-44
- 45-54
- 55-64
- 65 or older
- Other

In which age category does your mother currently fall?

- 25-34
- 35-44
- 45-54
- 55-64
- 65 or older
- Other

Which of the following best describes your family/home situation?

- Live with both biological parents
- Live with one (1) biological parents
- Live with your grandparent(s)

- You live with another family member
- None of above

How long have you lived in your current home?

- Longer than ten (10) years
- Between five (5) to ten (10) years
- Between one (1) to four (4) years
- Less than one (1) year

What is the best estimate of your families' income?

How much money does your family bring home for the year?

- Less than $24,999
- $25,000 to 34,999
- 35,000 to 44,999
- $45,000 to 54,999
- $55,000 to 64,999
- $65,000 to 74,999
- $75,000 or more
- Not sure

What is the highest educational level of your father?

- Graduate School (College beyond a four (4) year degree)
- Bachelor's Degree (4 year college degree)
- Associate Degree (2 year college degree)
- Some College
- Technical School
- High School Diploma/GED
- Less than a High School Diploma
- Not sure

What is your current grade level?

- Senior
- Junior
- Sophomore
- Freshman

Your current age?

- 14

- 15
- 16
- 17
- 18
- 19
- 20

How many days of school did you miss school last year?

- 0-5
- 6-10
- 11-15
- 16-20
- More than 20

How many times were you late (tardy) to school last year?

- 0-5
- 6-10
- 11-15
- 16-20
- More than 20

What is your current school GPA in high school?

- 3.6 to 4.0 (A student)
- 3.1 to 3.5 (Some B's)
- 2.6 to 3.0 (Some C's)
- 2.1 to 2.5 (Mostly C's)
- 2.0 or less (Some grades below C's or all C's)

Do you plan to attend college?

- Yes
- No
- Maybe

Do you plan to attend a technical school?

- Yes
- No
- Maybe

Is the quality of your education important to you?

- Yes
- No
- Sometimes
- Maybe

Do you give your best effort in all of your classes?

- Yes
- No
- Sometimes

How many hours do you study on average for a school week?

- Ten (10) hours or more per week
- Six (6) to nine (9) hours per week
- One (1) to five (5) hours per week
- Less than an hour per week

Do you have a working computer at home?

- Yes
- No

Do you have internet access at home?

- Yes
- No

Do you have a smart phone?

- Yes
- No

Do you participate in social networking sites e.g. Facebook, Instagram, Twitter, etc.

- Yes
- No

Do you feel that you stay on-line, texting, or playing games longer than you intended?

- Yes
- No
- Sometimes

Do you prefer the excitement of technology rather than spending times with friends and family?

- Yes
- No
- Sometimes

Do you feel that your grades or school work suffers because of the amount of time you spend using technology?

- Yes
- No
- Sometimes

Do you become defensive or secretive when anyone asks you what you do on-line or with your technological devices?

- Yes
- No
- Sometimes

Do you lose sleep due to late night technology usage?

- Yes
- No
- Sometimes

Do you sometimes feel depressed, moody, or nervous when you are not using technology, which subsides once you are able to use your technology?

- Yes
- No
- Sometimes

Do you snap, yell, or act annoyed if someone interrupts you while you are on-line, texting, etc?

- Yes
- No
- Sometimes

Do you block out disturbing thoughts about your life by using the internet, social media, games, etc.?

- Yes
- No
- Sometimes

Do you check your mail, text messages, or social media account(s) before something else that you need to do?

- Yes 1
- No
- Sometimes

How many times were you referred to the principal last year for your negative behaviors?

- Zero (0)
- One (1) to three (3)
- Four (4) to Six (6)
- Seven (7) to ten (10)
- Eleven (11) or more

How many times have you been referred to the principal for your negative behavior?

- Zero (0)
- One (1) to Three (3)
- Four (4) to Six (6)
- Seven (7) to ten (10)
- Eleven (11) or more

How many hours per week do you exercise?

- Ten (10) or more
- Five (5) to nine (9)
- One (1) to four (4)
- Less than one (1)

Do you participate in extra-curricular activities at school (marching band, sports, academic teams)?

- Yes
- No

If you do participate in extra-curricular activities, do you feel that the quality of your school work suffers?

- Yes
- No
- I do not participate in extra-curricular activities

Appendix D

Sample of Emotional Intelligence Lessons

Emotional Intelligence
Learning Activity 1

The Empty Your Pockets, Purse, Wallet, or Backpack Experiment

Step One

1. In a group of 5, move the desks into a table.
2. Empty your pockets, purse, or wallet on to your desk. (You do not have to share every single item that you have but do share some of your items. Do not leave anything of monetary value on the desk.)
3. Describe your personal items on the desk to the other students in your group.
4. Then you are to describe the contents of each of the other group members.

Step Two

1. Be a detective: Examine the evidence for each person and make a list of what you think their habits, likes, dislikes, and possible hopes and/or fears might be from the contents.
2. You have to list the entry items of the content as supporting evidence.
3. Once you have completed your profiling you may ask clarifying questions from the other individuals in the group.

Step Three

1. Write a letter to the teacher describing what you expect to have in your wallet, purse, or backpack one year from now; five years from now.

Source: Self-Science EQ Curriculum; http://www.eqtoolbox.org/toolbox/ex3.php
Discussion/Guiding Questions:

1. What are your feelings when you compare your items to other people's?
2. What are you censoring or not showing? What are you protecting by not showing it?
3. What feelings are you having about individual items of yours—Sadness, pride, etc.? Are you surprised by what others show?
4. How are the contents of your wallet/purse/backpack the same as the others? How are they different?
5. Do you have vivid memories associated with some of the things? What feelings did you have then? What are your feelings about that memory right now?

Additional Discussion Questions:

1. What did you say to yourself immediately after I gave instructions? How did your feelings change during the activity? What was happening when they changed?
2. Did you make any discoveries during this activity?
3. What things would have made you feel better if they had been in your wallet/purse/backpack?
4. What will be in your pocket/wallet/purse/backpack when you are the person you want to be?

Source: Self-Science EQ Curriculum; http://www.eqtoolbox.org/toolbox/ex3.php

Appendix E

Social Emotional Learning Study Exit Survey

1. Did the emotional intelligence lessons make you think more about emotions? Y or N
2. Did you find that you are more aware of your feelings since you participated in EI lessons? Y or N
3. Do you find that you are more concerned about the feelings and emotions of those around you? Y or N
4. Do you find that you are more able to control your emotions and make positive decisions because of the EI lessons? Y or N
5. Do you find that your relationships with those around you are better because of the EI lessons in classes, public relations, and normal relationships? Y or Occassionally or N
6. Do you feel your intimate relationships have been positively impacted from participating in the EI lessons? Y or Occassionally or N
7. Do you feel you are happier since participating in the EI lessons? Y or Occassionally or N
8. Do you plan to continue using EI strategies in the future? Y or N
9. What EI strategy made the most impact on you?
10. Do you feel the lesson would be useful for your peers? Y or Maybe or N
11. Would you like to participate with more EI lessons in the future? Y or Maybe or N

12. Do you feel you will utilize EI competencies with your family, adults, friends, and classmates in the future? Y or Occassionally or N
13. Is there something you most enjoyed or would like to add to the exit interview?

VITA

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EDUCATION

May, 1991	Bachelor of Arts Alice Lloyd College Pippa Passes, Kentucky
July, 1996	Master of Arts Morehead State University Morehead, Kentucky
May, 2005	Masters of Arts Union College Barbourville, Kentucky
Pending	Doctor of Education Morehead State University Morehead, Kentucky

PROFESSIONAL EXPERIENCES

July 2014-Present	Athletic Director Letcher County Central High School Whitesburg, Kentucky
2012	Teacher Effectiveness Subcommittee Kentucky Department of Education Whitesburg, Kentucky
2005	Principal Martha Jane Potter Elementary Kona, Kentucky
2004	Assistant Principal Whitesburg High School Whitesburg, Kentucky

1996	Teacher Whitesburg High School Whitesburg, Kentucky