

Emotional Intelligence: A Theoretical framework

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Abstract: The term Emotional Intelligence (EI) was first introduced in the scientific literature in 1990. Since then, the development of models of EI and research in this field has increased substantially. In this manuscript, a theoretical and empirical review of history of EI is presented, including the teachability and value of emotional intelligence within an educational and developmental context. First, the broad interest on this concept is shown through qualitative and quantitative indexes. Then, current theoretical models of EI: the mental ability model; the Bar-On Model of Emotional-Social Intelligence; and Goleman's model of EI are described in depth. Finally relevant keys about future considerations for research on EI, has been given. Specifically, 1) discusses the learning, development, and training potential of EI; and 2) considers the cross-cultural validity of EI. Overall this paper provides an encompassing look into the depth concept of emotional intelligence.

Key words: Emotional Intelligence, Emotional Regulation, Self-Awareness, Emotional Quotient, Social Intelligence, and Cognitive Intelligence.

Introduction

Intelligence is an old term that has been used by Greek philosophers such as Aristotle marked by cognitive aspects, like memory and solving problems. Another philosopher, Descartes, defined intelligence as the ability to judge true from false. In the early twentieth century, E. L. Thorndike (1920) introduced three types of intelligences: mechanical, social, and abstract, saying, a man has not some amount of intelligence, but varying amounts of different intelligences Thorndike was the first to identify EI in the 1920s as social intelligence. In the 1930s, Thorndike defined social intelligence as an ability to get along with others. Theorists and researchers suggest that Emotional Intelligenc (EI) skills are useful and essential in almost all areas of our life (Salovey & Grewal, 2005). Thorndike further defined social intelligence as the ability to understand and manage men and women, boys and girls to act wisely in human relations (Thorndike, 1920).

Ten years later, in 1940, David Wechsler wrote about EI and focused on non- intellectual abilities (Bar-On, Marea, & Elias, 2007). Wechsler suggested that intelligence is essential to success in life. According to Wechsler, EI is the ability to act, think, and deal with others effectively (as cited in Salovey, 1990).

Howard Gardner (1975), in his book *The Shattered Mind*, introduced multiple intelli-

gences. Gardner (1983) created a model of seven multiple intelligences, which defined social intelligence as a combination of intrapersonal development of the internal aspects of a person and interpersonal intelligence, the intelligence of human interaction. Interpersonal intelligence is an ability to monitor personal feelings and emotions, as well as those of others. Intrapersonal intelligence includes the ability to control and distinguish among feelings and then to benefit from this information by applying it to personal actions, thoughts, and behaviors (Gardner, 1990; Salovey & Mayer, 1990).

Mayer and Salovey (1990) incorporated Gardner's multiple intelligence theory in their work. They created an EI model focusing on perceiving and regulating feelings (Cherniss & Goleman, 2001). According to Mayer and Salovey (1990), EI is the ability to monitor one's own and others' feelings, to discriminate among them and to use this information to guide one's thinking and actions. The five domains of Mayer and Salovey's (1990) EI are knowing one's emotions, managing emotions, motivating oneself, recognizing emotions in others, and handling relationships. According to Mayer and Salovey, individuals with EI skills are equipped with a vast capability of positive mental health, are open to positive and negative aspects, contribute to well being, are aware of and understand their own and others' emotions, have empathy, and are pleasant to be around.

In 1990, Daniel Goleman, a psychologist at Harvard, adopted and expanded the work of Mayer, Gardner and Salovey by introducing the importance of EI at work. Daniel Goleman's (1995) bestselling book EI continues to explore the idea of EI. Goleman states that EI refers to the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships.

Relationship management provides inspiration, potential to influence, and the ability to help leaders grow in managing conflict, and emotional competency. In 1995, Goleman identified four EI concepts that are related to relationship management: self-awareness, self-management, social awareness, and relationship management (Goleman, Boyatzis, & McKee, 2002).

In 1998 Goleman created an EI-based theory of performance containing a set of guidelines for effectiveness and competencies for individual worker development. He claims EI is the capability to understand and control our emotions and feelings, and that this capability helps create effective, persuasive leaders. He also created five EI domains, which

include self-awareness, self-regulation, motivation, social skills, and empathy. The five domains include twenty-five competencies and consist of personal competence and social competence. Self-awareness is the ability to recognize and understand our moods and emotions and the effect of these emotions on others. Self-management is the ability to control emotions and reactions of oneself. Social skills are the ability to maintain good relationships and build a network. Motivation is the ability to face challenges and be optimistic (Goleman, 1998). Empathy was introduced into English from the Greek word *empathia*, feeling into, a term used initially by theoreticians of aesthetics to describe the ability to perceive the subjective experience of another person (Goleman, 1995). Emotional competence is a learned ability based on EI that leads to effective performance at the work place (Goleman, 1998).

Hong's (2005) research focused on the role of EI and leadership cognitive ability and personality as a way to predict college students' motivation to lead. Hong (2005) used Chan and Drasgow's (2001) Motivation to Lead (MTL) model and the Intrapersonal EI scale, which was developed by Wong and Law (2002), and Wesinger's (1998) Interpersonal EI scale for the study. As EI theory became more established, EI assessment tools were developed (Bar-On et al., 2007), though in 1988 Bar-On created the first assessment tool, which was called Emotional Quotient (EQ).

Goleman believes that EI skills are both inborn and learned and can be developed through both formal and informal life experiences (Goleman, 1995). While some researchers have found a genetic link to these skills (Goleman, 1995), nurture plays a role in EI development (Goleman, 1998).

The Emotional and Rational Mind Horace Walpole said, "Life is a comedy for those who think and a tragedy for those who feel". Harvard psychiatrist Peter Sifneos believes that there is a disconnect between the human brain's limbic system and the neocortex. Emotions are associated with the limbic system. The limbic system is the center of learning, memory, and processing emotions and has been called the emotional generator (Goleman, 1995). The neocortex is the center of rational thought and does not communicate or interpret emotions and feelings (Goleman, 1995). Goleman tends to expand our understanding of the influence of the limbic system. The limbic system is at the center of the EI competencies that are associated with EI traits such as empathy and collaboration (Cherniss & Goleman, 2001), while the neocortex is responsible for the rational part of the brain and aids in grasping

concepts and logic. The limbic system is responsible for controlling emotions, emotional responses, mood, motivation, and pain and pleasure sensations. According to Goleman (1995), the limbic brain contains two powerful tools, learning and memory. Based on this understanding of the brain, Goleman claims that we have two kinds of intelligence: emotional and rational.

Training of skills of emotional intelligence

The emotional mind is quicker than the rational mind because the human body reacts first to the brain's signal and thinks later. For example, anger, fear, and sadness create negative reactions. The rational mind works in a robotic way. Leaders who think rationally rather than emotionally make decisions based on logic alone. For instance, when people are afraid or in a panic (e.g., fear of failing), they might make decisions that might cause harm to others. Goleman (1995) contends that both the rational and emotional mind must work together for a person to have EI. Balancing emotions with reason helps people generate more thoughtful responses (Thompson, 2002). Research in the newly emerging field of affective neuroscience offers a fine-grained view of the neural substrates of the EI-based range of behavior and allows us to see a bridge between brain function and the behaviors described in the EI models of performance. (Cherniss & Goleman, 1981). Because the limbic system is the EI center, EI curriculum developers should create training programs that are based on the engagement of both the limbic system and the neo-cortex.

Emotional Intelligence Training Programs and the Emotional Brain in his 1998 work, Goleman introduced the belief that acquiring EI skills is possible through a desire to learn and an opportunity to practice. He believes training programs are essential. Some educators have created training programs and curriculum without much sensitivity to the idea that there is a connection between learning and the brain, specifically the limbic system. However training can be damaging if not delivered properly. Conventional training methods that reinforce memorization and regurgitation of information are not as effective when working with EI development and adoption of EI skills (Bar-On et al., 2007; Goleman, 1998; Goleman et al., 2002). Intellectual abilities like verbal fluency, spatial logic, and abstract reasoning; in other words, the components of IQ (Intelligence Quotient) are based primarily in the specific areas of the neocortex (Chernish & Goleman, 2001). As part of training programs, extended practice and feedback are critical. Practice is therefore essential to

application. This is because two parts of the brain are related to EI. The limbic system learns through motivation, extended practice, and feedback. The neocortex, which aids in grasping concepts and logic, is the part of the brain targeted by most training programs.

Emotional Intelligence Training Models and Traits Many EI training models have been created to enhance EI understanding. EI program creators should learn about EI models to know how and when to teach each one of them. Current models (Bar-On, 1997; Goleman, 1998; Lynn, Bar-On, Mayer & Cobb, 2000; Salovey & Mayer, 1990; Wells & Matthews, 1999) attempt to teach EI skills that range from the simple to the complex. The simple EI skills are awareness, evaluation, and understanding of basic emotions for instance, learning and reacting to facial expressions, such as smiling or frowning faces. Intermediate skills are understanding and reasoning emotions. The complex level of EI is the ability to manage and regulate emotions in self and others. When emotions are regulated and managed, EI skills will be improved and performance of complex tasks will be achieved. Having the ability to calm down while angry, and the ability to help others control anxiety, will result in a stronger mind and positive energy that helps creativity (Mayer, Salovey, & Caruso, 2000). Skills that help better performance at the work place are flexible planning, creative thinking, mood-redirected attention, and motivating emotions (Salovey & Mayer, 1990). To improve EI skills, researchers have created tools to measure individuals' abilities to create improvement. Lynn, Goleman, Wells and Matthews (1999), Mayer and Salovey (1990), Mayer and Cobb (2000), and Bar-On (1997) are theorists and researchers in the EI field who have created training models to provide a better understanding of how EI can help individuals succeed in life and work. The basic EI skills include resilience, influence, assertiveness, integrity, and leadership (Cherniss & Goleman, 2001). One of the models that has been developed is the EQ (Emotional Quotient) Difference, created by Adele B. Her model contains the following elements:

Self-Awareness and Self-Control: The ability to use and manage emotions effectively. Managing emotions will not happen without knowing what triggered these emotions. Self-awareness enables people to understand the cause of the action to better manage their reaction. Techniques to increase self-awareness include: (a) exploring the way we react to people and events in our life, (b) assessing the way we react or interact with our senses, (c) getting in touch with our feelings, (d) exploring our intentions, (e) paying attention to both

action and reaction, (f) seeking feedback, and (g) keeping a feelings journal (Weisinger, 1998).

Empathy: The ability to listen without judgment and to understand what others think, feel, and need. Also, empathy is the ability to make people feel important, build trust, and deepen relationships (Mersino, 2007). According to Goleman (1995), empathetic people care about others' needs. Furthermore, empathy is the ability to see the world as it looks to others.

Personal Influence: Masters of purpose envision the ability to live a life based on meaning and values, and be genuine. (Wall & Wall, 2006). Another option, called the self-regulation executive function (SREF), is a model of negative emotions and cognition that was created by Wells and Mathews in 1999. This model works on accessing self-relevant knowledge and providing a general method to deal with immediate problems, including choices of coping and styles of self-regulation (Mathews, Zeidner, & Roberts, 2004). This model requires awareness of what to say and to do while emotions or feelings are aroused (Mortiboys, 2005).

The mental ability model of EI is cognition based. It focuses on how emotions affect thinking, adaptive behavior, and decision-making. This model focuses on skills such as non-verbal perception (Buck, 1984; Rosenthal et al., 1978) or empathy accuracy (Ickes, 1997). Mental ability helps identify and deal effectively with emotions (Mayer & Cobb, 2000). The mental ability model predicts that people who are EI skilled are more likely to (a) have grown up in bio-socially adaptive households, (b) be non-defensive, (c) be able to reframe emotions effectively, (d) choose good emotional role models, (e) be able to communicate and discuss feelings, and (f) develop expert knowledge in a particular emotional area such as aesthetics, moral or ethical feeling, social problem solving, leadership, or spiritual feeling. (Mayer & Salovey, 1995).

The mixed model, developed by Cobb and Mayer (2000), includes a multitude of traits that deal with leadership effectiveness. These traits are service orientation, diversity, commitment, political awareness, and being a change catalyst. The model also provides techniques that help reduce anxiety and depression. The mixed model is a set of skills that have been provided as lessons (Mayer & Cobb, 2000). This model distinguishes people who are authentic and sensitive from those who are ignorant and rude. Individuals with EI skills

tend to have future plans, are determined, have positive attitudes, and are optimists. Such traits are important for effectiveness at work and in life (Mayer & Salovey, 1997).

Mayer et al. (2000) introduced the four-branch model of EI: perceiving emotions, facilitating thought, understanding emotions, and managing emotions. Perceiving emotions is the ability to perceive emotions in oneself and others as well as in objects, art stories, music, and stimuli. Facilitating thought is the ability to generate, use, and feel emotions as necessary to communicate feelings or use them in other cognitive processes. Understanding emotions is the ability to understand emotional information, how emotions combine and progress through relationship transitions, and to appreciate such emotional meanings. Managing emotions is the ability to be open to feelings and to modulate them in oneself and others so as to promote personal understanding and growth.

The model of emotional-social intelligence by Bar-On (1997) defines EI as a set of non-cognitive capabilities, competencies, and skills that influences one's ability to succeed in coping with environmental demands and pressure. Bar-On's model explains why individuals with EI tend to succeed in life and at work more than others. It also discusses personality characteristics that are directly related to life success. These characteristics include intrapersonal skills, interpersonal skills, adaptability, stress management, and general mood (Bar-On, 1997). This model predicts success at home, at school, and at work. Among youth this model has helped lessen aggressiveness and rudeness, and leads to better decisions regarding sex, drugs, and alcohol. (Goleman, 1995).

The competency model was created by Goleman in 1995. It is also called a mixed model. It explains the importance of leadership, discusses the EI model, provides a list of EI skills, and displays EI skills that are important to leadership (Cherniss & Goleman, 2001). This model was developed from the five domains that Goleman discussed in his EI theory: self-awareness, self-regulation, motivation, empathy, and social skills. He also created two measurement tools for his model: The Emotional Competency Inventory (ECI) created in 1999, and the Emotional and Social Competency Inventory (ESCI) created in 2007. Both assessments can be used for self-report and as an assessment tool of emotional and social interaction. The model (ESCI) gives an estimate of an individual's social intelligence. Goleman's mixed model includes five areas of EI: (a) knowing one's emotions, (b) managing emotions, (c) motivating oneself, (d) recognizing emotions in others, and (e) handling

relationships (Goleman, 1995).

Another effective inventory that has been recently developed is the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). This tool helps collect data related to issues concerning EI skills and is used as a part of EI training. According to Peter Salovey, MSCEIT is a 40 minute battery that may be completed either on paper or computer. It includes a 141 item assessment created to measure EI skills such as: (a) perceiving emotions, (b) using emotions to facilitate thoughts, (c) understanding emotions, and (d) managing emotions (Mayer, Salovey, Caruso, & Sitarenios, 2003). Emotional recognition is measured with faces and pictures. Individuals who participated in the program are shown pictures of faces and are asked to respond to the faces. Their responses are based on emotions and sensations. Thus, this tool is more culturally reliable than other EI assessment tools because reading and writing skills are not required. For example, participants may look at a picture of a grimacing face that generates a feeling of anger and then decide how cold or hot is it. The MSCEIT assesses five tasks: sensations, facilitation, changes, and emotion management and emotional relationship tasks. This tool scores participants' experiential and strategic skills. By testing a person's ability on each on the four branches of EI, it generates scores for each of the branches as well as a total score. (Salovey & Grewal, 2005)

MSCEIT helps identify emotions that involve thinking and decision-making, provides scenarios and examples for individuals about how to deal with such situations, and provides suggestions about how to achieve a desired outcome. It also provides participants with a critique of EI, identifies where problems exist, and makes recommendations on how they can solve these problems (Murphy, 2006). At the full-scale level MSCEIT V2.0, r is between .64 to .88 (Mayer et al., 2001). MSCEIT helps assess the quality of EI skills among individuals and predicts EI abilities and outcomes. MSCEIT is an effective tool that measures EI areas such as: perceiving emotions, using emotions to facilitate thoughts, understanding emotions, and managing emotions (Brackett, Mayer, & Warner, 2003).

These models help educational institutions, businesses, and work place leaders measure their staff's EI ability and skills and create curriculums, tools, or programs to improve EI abilities and skills. Educators and people in the field of development who are interested in creating a program to teach EI skills and to assess students might find these assessment tools helpful to be used as a pre- and post-program.

Cognitive Intelligence

The study of intelligence quotient (IQ) started in 1905 by psychologists Alfred Binet and Theodore Simon (Siegler, 1992), and has historically been the standard measurement for intelligence (Colfax et al., 2010). IQ tests were used, in part, to predict individual success in school (Siegler, 1992) and life (Colfax et al., 2010). As cognitive intelligence research continued beyond the original Binet-Simon scale, Stanford University Professor Terman created an intelligence instrument using a score and classification system (Wechsler, 1944; 1958). According to Terman (1922), IQ was inherited and predicted individuals' success in life. Terman's IQ score ranged from a low of "Below 70" to a high of "140 and above," with corresponding low to high classification delineations of "Definite feeble-mindedness" to "Genius or near genius" (Wechsler, 1944). According to Weschsler (1944), there were two issues with Terman's scale: (1) IQ classification limitations, and (2) subjective "class intervals". According to Weschsler (1944), "why an IQ between 70 and 79 rather than between 72-84 was chosen to denote borderline intelligence," or "an IQ between 110 and 119 rather than between 113 and 126 to signify superior intelligence" was not fully addressed in Terman's research.

According to Siegler (1992), while Terman believed that IQ was the greatest predictor to success in life, the concept of intelligence was far greater than a single score produced by one test. After all, not all people who had higher IQs were successful nor did all successful people have higher IQs (Colfax et al., 2010). Explaining how an individual with a higher level of IQ failed while an individual with moderate IQ succeeded was not adequately addressed in the existing research (Akers & Porter, 2003; Colfax et al., 2010). The ability to uncover characteristics other than what traditional IQ measurements (e. g., test scores, grades) have shown was not new, nor was the desire to better explain variations in individual success in life not accounted for by traditional IQ measurements (Dulewicz & Higgs, 2000). According to Holt and Jones (2005), while "IQ was genetic and therefore could not be changed by life experiences", psychologists (Gardner, 1983; Sternberg, 1985; Thorndike, 1920) believed the 21 answer to variations in success not accounted for by IQ rested with other intelligences, including EI (Akers & Porter, 2003; Colfax et al., 2010). Therefore, research in the intelligence field continued.

Social Intelligence

The concept of social intelligence (SI) also referred to as social quotient (SQ) was brought to life in the 1920s and was found to be unique and separate from academic intelligence (Weis & Suss, 2007), or as Thorndike (1920) stated, mechanical or abstract intelligence. Thorndike (1920), a psychologist, discussed the idea of social intelligence during the first part of the 1900s and defined it as “the ability to understand and manage men and women, boys and girls – to act wisely in human relations”. Social intelligence focused on characteristics and attributes, such as acceptance of others and admitting wrong-doing (Salovey & Mayer, 1990).

Social intelligence was less rigorously explored than IQ, was plagued by definitional problems, and lacked differentiation with related constructs (Silvera, Martinussen, & Dahl, 2001). According to Salovey and Mayer (1990), Lee Cronbach, an American psychologist, found that, despite over 40 years of research, social intelligence lacked a lucid framework, including definitions and measurement capabilities. While the topic of social intelligence went dormant by the 1960s, it reemerged in the literature by other psychologists, including Yale University’s Robert Sternberg (1985). According to Goleman (1995), Sternberg supported Thorndike’s contention that “social intelligence is both distinct from academic abilities and a key part of what makes people do well in practicalities of life. Sternberg’s triarchic theory focused on personal experiences, social intelligence, and mental mechanisms (Sternberg & Grigorenko, 2000). According to Quinby (1985), social intelligence was created to better diagnose not only individual strengths, but weaknesses, in order to improve a wide spectrum of intelligence deficiencies, particularly social relationships.

While initially conceived as a single concept, focusing more on others rather than self, the social intelligence construct and its definition was expanded by Gardner (1983). According to Crowne (2009), Gardner said social intelligence was two different intelligences, including interpersonal and intrapersonal, which involved the understanding of others and of oneself. It was through the expansion of Thorndike’s social intelligence construct that Gardner developed his multiple intelligence construct.

Multiple Intelligence

In the 1980s, Gardner (1983), a psychologist and professor at Harvard University, wrote about personal and multiple intelligences (Colfax et al., 2010; Crowne, 2009; Dulewicz & Higgs, 2000; Pfeiffer, 2001; Weinberger, 2002). Because standardized tests focused on

logical skills and were limited, Gardner's (1983) contention was that there were multiple ways of being intelligent, in which he postulated his seven intelligences: verbal, mathematics/logic, spatial, kinesthetic, musical, interpersonal, and intrapersonal (Gardner & Hatch, 1989). Gardner's (1983) work included two primary domains, inter and intrapersonal intelligences, which extended Thorndike's (1920) social intelligence concept. According to Gardner (1983), interpersonal intelligence "is the ability to understand other people: what motivates them, how they work, how to work cooperatively with them", and was the primary focus of Thorndike's social intelligence construct. Gardner (1983) defined intrapersonal intelligence as "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". In other words, according to Bar-On (2005), Gardner's multiple intelligence theory was based on interpersonal (social) intelligence and intrapersonal (emotional) intelligence.

Emotional Intelligence

According to Zeidner, Matthews, Roberts, and MacCann (2003), because emotional intelligence was subsumed from the overarching intelligence construct, there are various definitions, explanations, and models of EI. According to Neisser and Boodoo (1996), "Scientific research rarely begins with fully agreed definitions, though it may eventually lead to them". Because of the differences in operationalization and definitions, emotional intelligence has historically been divided into two major conceptual models: ability-based and mixed-method models (Caruso, Mayer, & Salovey, 2002; Chiva & Alegre, 2008; Gantt & Agazarian, 2004; Holt & Jones, 2005; Salovey & Pizarro, 2003; Weinberger, 2002; Zeidner et al., 2003). The ability-based model has typically been associated with the works of Salovey and Mayer (1990; 1997), while the mixed-method models have been associated with Goleman (1995) and Bar-On (2007). According to the, Encyclopedia of Applied Psychology (as cited by Bar-On, 2005), three main models of emotional intelligence have been recognized: (1) the Salovey and Mayer model; (2) the Goleman model; and (3) the Bar-On model. The following sections provide a rich explanation of the primary theories and models encompassing emotional intelligence.

Differentiating Ability-Based and Mixed-Method Models

Before discussing the individual models of Salovey and Mayer, Goleman, and Bar-On, an explanation of the two primary conceptual models is needed. According to Dulewicz and

Higgs (2000), the EI construct “addresses individual traits, values, and behaviours”. According to Goleman (1995), EI is a competency and a developable trait. Bar-On (1997) said EI included capabilities, competencies, and skills. According to Salovey and Mayer (1990), EI is based on abilities. More succinctly stated by Weinberger (2002), ability-based models put greater parameters around the construct, including narrower definitions, while excluding personality characteristics. According to Weinberger (2002), mixed-method models tend to follow a more socio-emotional approach and focus on personality characteristics. The following sections will further discuss the similarities and differences of the ability-based and mixed-method models, while addressing the three primary theorists’ models.

Ability-Based Model

Salovey’s and Mayer’s Four-Branch Model

EI has taken “literatures that are often left less integrated” (Salovey & Mayer, 1990), like emotion and intelligence, and blended them into a heuristic construct (Salovey & Mayer, 1990). According to Mayer and Salovey (1993), they could have chosen the label “emotional competence” over emotional intelligence, “but we chose intelligence in order to link our framework to a historical literature on intelligence”. Salovey’s and Mayer’s (1990) research subsumed Gardner’s personal intelligence in the definition of emotional intelligence when they designed the first framework for emotional intelligence, saying it was a “type of social intelligence”. According to Goleman (1995), as the framers of emotional intelligence, Salovey and Mayer (1990) have taken a wider view of the overarching construct of intelligence because life’s success is predicated on more than IQ. To Mayer and Salovey (1993), EI involves intellectual processing and mental aptitude, and mental abilities cannot be divorced from intellect.

According to Mayer and Salovey (1993), while they have been criticized for “connecting emotion and intelligence”, an imperfect line between personality and intelligence exists. According to their prescribed definition, emotional intelligence “involves the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (Salovey & Mayer, 1990). As an example, exhibiting an extraversion personality trait is the result of a social skill or a “behavioral preference rather than an ability”. However, being able to discern the feelings of

another person, in contrast, “is a mental ability”. Therefore, according to Salovey and Mayer (1990), EI is an ability and a type of intelligence.

Prior to developing their four-branch model, Salovey and Mayer (1990) created an initial conceptualization of EI, which involved three primary abilities: (1) appraisal and expression of emotion; (2) regulation of emotion; and (3) utilization of emotion. Appraisal and expression of emotion involves the ability to discern and express emotion in self and others, as well as using verbal and non-verbal language (Salovey & Mayer, 1990). Empathy, or “comprehending another’s feelings and to re-experience them oneself” (Salovey & Mayer, 1990), is a critical piece of EI and involves appraising the emotion of others. Regulating emotion involves the ability to understand a wide range of emotions, including why emotions are felt and avoided, and the ability to “regulate and alter the affective reactions of others” (Salovey & Mayer, 1990). While the ability-based model is generally void of personality characteristics, Salovey and Mayer (1997) said their initial definition (Salovey & Mayer, 1990) of EI could be viewed more as a mixed-model. As Salovey and Mayer continued to explore and develop EI, they expanded their initial conceptualization of EI into a more formalized four-branch model.

Salovey’s and Mayer’s (1997) updated definition of EI, which involved the “abilities to perceive, appraise, and express emotion; to access and/or generate 30 feelings when they facilitate thought; to understand emotion and emotional knowledge; and to regulate emotions to promote emotional and intellectual growth”, included four unique abilities, which Salovey and Mayer referred to as branches. According to Salovey and Mayer (1997), the four branches are: (1) identifying emotions; (2) utilization of emotion; (3) understanding emotion; and (4) managing emotion. Branch one, identifying emotions, involves the ability to identify and express emotions accurately, or being able to discern between authentic and disingenuous emotions (Salovey & Mayer, 1997). Branch two, using emotions, involves the ability to create emotions that help in the decision-making process, understanding multiple points of view, and solving problems through a wide-variety of emotions (i. e., happiness can help generate creative ideas) (Salovey & Mayer, 1997). The ability to understand emotions, as discussed in branch three, involves the ability to understand the journey emotions take and to be able to understand the causes of emotions (Salovey & Mayer, 1997). The final branch, the ability to manage emotions, involves the ability to maintain self-awareness in the midst of

unpleasant emotions and to solve emotional problems without suppressing emotions that are negative in nature (Salovey & Mayer, 1997).

According to Zeidner et al. (2003), Salovey's and Mayer's four-branch model has been called the most "scientifically rigorous model of EI". According to Weinberger (2002), Salovey and Mayer "are the only researchers to put forward a more limited view of emotional intelligence, within the 'ability model' framework". Abilities-based models put greater parameters around emotional intelligence, including narrow definitions, and exclude many personality characteristics included in the mixed-models (Weinberger, 2002), which, according to Zeidner et al. (2003), create limitations with the model. Zeidner et al. (2003) said that because of the correspondences between emotional intelligence elements and temperament constructs like neuroticism and extraversion, a mixed-model is more applicable to the framework of emotional intelligence because of its greater focus on personality-like dimensions (Zeidner et al., 2003), which the ability-based model discounts.

Mixed-Models

Goleman's Emotional Competence Framework

One of the earliest proponents of the emotional intelligence mixed-model was Goleman (Weinberger, 2002). According to Weinberger (2002), through Goleman's study within the fields of psychology and neuroscience, he described emotional intelligence as a set of traits, which culminated into an individual's character. According to Boyatzis (2008), "Goleman's synthesis introduced the physiological level of this model by relating findings from neuroscience, biology, and medical studies to psychological states and resulting behavior". Goleman (1998) defined emotional intelligence as "the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships". While Goleman's (1995) seminal book titled, *Emotional Intelligence*, laid a solid foundation for his EI theory, Goleman's (1998) book titled, *Working with Emotional Intelligence*, provided his full EI framework.

Goleman's (1998) framework primarily focused on self-awareness, self-management, social-awareness, and social (relationship) management. According to Momeni (2009), Goleman's framework placed heavy emphasis on social relationships. According to Goleman (1998), the competencies that determine how to handle oneself are: (1) self-awareness, or knowing and recognizing individual emotions; (2) self-regulation, which involves managing individual

emotions; and (3) motivation, which involves self-motivation and the drive for achievement. The final two competencies that determine how to handle others (i. e., relationships) are: (4) empathy, or the awareness of others' emotions and feelings; and (5) social skills, which involve managing others' emotions (Goleman, 1998). Singh (2007) summarized Goleman's thoughts on emotional intelligence, saying it was about self-awareness of internal feelings, self-motivation, self-creativity, and effective relationship management. According to Goleman (1995), individuals operate with two brains, creating two different intelligences, the rational and the emotional. Individual life is determinate by both brains and both intelligences (Goleman, 1995). A proper balance of intellect (rational) and emotion impacts individual and career progression (Goleman, 1995). According to Dulewicz and Higgs (2000), Goleman believed that people who had a healthy mix of both IQ and emotional intelligence tended to be more successful in life.

According to Pfeiffer (2001), Goleman's writings may be viewed as too broad and general in nature; however, according to Boyatzis (2008), because Goleman's concept of emotional intelligence is more holistic in nature and more integrated in personality and relationships, it is a better framework for addressing EI than Salovey's and Mayer's model.

Bar-On's Emotional-Social Intelligence (ESI) Model

Bar-On's Emotional-Social Intelligence (ESI) model is composed of two primary parts: (Part I) theory and (Part II) psychometric (Bar-On, 2007). The theory portion provides a conceptualization, or context, to the ESI model; the psychometric portion of the model, represented by Bar-On's EQ-I (emotional quotient inventory) assessment, provides the ability to measure ESI (Bar-On, 2007).

According to Bar-On (2005), "emotional-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". Emotional-social intelligence, according to Bar-On (2007), was about clearly understanding oneself, expressing oneself, understanding others, relating to others, and effectively dealing with the pressures of daily life, including problems and unexpected changes. Bar-On's (2005) ESI model was first and foremost based on "one's intrapersonal ability to be aware of oneself, to understand one's strengths and weaknesses, and to express one's feelings and thoughts non-destructively". The interpersonal level of Bar-On's (2005)

model involves the ability to discern others' emotions, their needs, their feelings, and the ability to build and maintain healthy relationships. At its core, ESI is about emotions working for, rather than against people (Bar-On, 2005).

Bar-On's (2005) ESI model took over 17 years to develop, and included six distinct phases. Phase one involved the identification of ESI competencies and clusters; phase two focused on operationally defining the competencies and clusters; phase three generated over 1,000 ESI questions that could potentially be asked during interview sessions; phase four included reducing the initial 1,000 questions down to 133, as well as formalizing the 15 scales; phase five focused on creating the final version of the instrument after several rounds of testing; and phase six involved a continual process review of the instrument, including validity across multiple cultures and contexts (Bar-On, 2005).

Bar-On (2005) described his model of emotional-social intelligence as robust, comprehensive, and teachable. To show the robustness of a concept, "one must first show that it is actually describing what it was designed to describe" (Bar-On, 2005). According to Bar-On (2005), the EQ-i has been dually administered with other cognitive measurement assessments, such as the General Adult Mental Ability Scale, to over 4,000 individuals, and found "there is only minimal overlap between the EQ-i and tests of cognitive (academic) intelligence, which was expected in that this instrument was not designed or intended to assess this type of performance". Thus, Bar-On's (2005) research determined that, more than likely, cognitive and emotional-social intelligence are different constructs.

Bar-On (2005) related his research toward overall human performance, as well as organizational and educational systems. Bar-On (2005) has encouraged others to use the EQ-i within educational and organizational settings to further the research.

Summary of Ability-Based and Mixed-Method Models

From past to present, the definitions and models of EI tend to focus on the recognition of and understanding of emotions in oneself and others and, furthermore, the ability to process and take appropriate action based on the emotional information (Bar-On, 2005; Crowne, 2009). Because differences in EI conceptualizations have created operational differences (Zeidner et al., 2003), advocates have found legitimacy in both ability-based and mixed-method models (Brown, Bryant, & Reilly, 2006). According to researchers (Mayer & Salovey, 1993a; 1993; Salovey & Mayer, 1990), the ability model is "scientifically derived

and psychometrically independent from other measures of personality” (Brown et al., 2006). According to research advocates (Bar-On, 2005; Goleman, 1995), the mixed model of emotional intelligence “is highly correlated with desired organizational outcomes and of great value to organizational and leadership development” (Brown et al., 2006).

The Salovey and Mayer (1997) model is measured using an ability-based measurement; Goleman (1998) measures EI using a multi-rater assessment; and Bar-On’s (2005) ESI model is measured by a self-reporting assessment. Because this study employed the EQ-i, Bar-On’s view of the ability-based and mixed-method models is of particular relevance. Bar-On (2005) found that all models of emotional intelligence, whether ability or mixed, have overlapping measurements relating to both personality traits and cognitive intelligence. While the measurement overlaps may be small (no more than 20%), it does not justify using ability or mixed descriptors when attempting to categorize such models or measures (Bar-On, 2005). According to Bar-On (2005), all models of human behavior involve elements of cognitive intelligence, personality, motivation, and environmental influence, and are, therefore, by explanation mixed. Thus, according to Bar-On (2005), EI models should not be classified as ability or mixed, but simply as unclassified EI models.

A foundation has been laid regarding the historical lineage of intelligence, including the emergence of EI. A linkage between intelligence and emotion has been provided, particularly in the writings of Salovey and Mayer (1990), describing EI as a member of the intelligence classes (Mayer, Salovey, & Caruso, 2004). Finally, establishing the similarities and differences between the ability-based and mixed-method models of EI has been provided, along with an overview of the three primary models of Salovey and Mayer (1997), Goleman (1998), and Bar-On (2005).

The Learnability and Teachability of EI

According to many researchers, including Goleman (1995), Bar-On (2005), Cherniss (1999), and Cherniss and Goleman (1998), EI can be improved through learning. There are several studies that have found EI to be both learnable and teachable. Freedman’s (2003) study, which employed Bar-On’s youth version of the EQ-i, also referred to as the EQ-i:YV (Emotional Quotient Inventory Youth Version), conducted a pretest-posttest experiment using seventh grade students. Using the EQ-i:YV, students were tested at the beginning and the end of the school year to determine changes in ESI scores. In between the assessments,

students were provided a curriculum rich in ESI. At the end of the year, students were more self-aware of their emotions, were better able to relate to other students, and handled their emotions more appropriately (Freedman, 2003). Freedman (2003) found that between the beginning and the end of the academic year, ESI was enhanced after receiving a curriculum rich in EI.

Another study conducted by Sjolund and Gustafsson (2001) determined that ESI could be enhanced in adults. Sjolund's and Gustafsson's (2001) study evaluated 29 adults' EQ-i scores before and after attending a managerial skills workshop. In the workshop, several ESI competencies from the EQ-i were discussed and taught. Mean scores increased from 97 at pretest to 106 at posttest.

Additionally, of the 15 subscales within the EQ-i, nine showed significant improvements (Sjolund & Gustafsson, 2001). Sjolund and Gustafsson found that training programs could enhance EI. Slaski's and Cartwright's (2003) study found that EI training helped improve health and well-being in managers. According to Slaski and Cartwright (2003), "the aim of the study was to investigate whether emotional intelligence (EI) can be developed in managers, and if so, whether increased EI has a beneficial impact on health, well-being, and performance". Using the EQ-i and General Health Questionnaire (GHQ), Slaski and Cartwright (2003) found that the training group's EI mean score increased significantly.

According to Goleman (1998), "research and practice clearly demonstrate that emotional intelligence can be learned". While EI increases with age (Goleman, 1998), it can still be learned, even as young as age 12 (Freedman, 2003). While EI increases naturally with maturity (i.e., age), EI can be enhanced through training programs (Goleman, 1998). The question, according to Goleman (1995), is at which stage of life are EI interventions most effective? According to Dulewicz and Higgs (2000), teaching EI at later stages of life may be too late, and because EI capabilities are still being learned at young ages, training at young ages may be premature. According to Zeidner et al. (2003), as age increases, the parent-child relationship shifts, and the parents' roles may diminish while relationships with others (e.g., peers, colleagues, professors) increases. Therefore, perhaps the timeframe to begin targeting emotional intelligence training is at the traditional college ages of 18-23 and at the beginning phases of career development.

The timing of EI interventions and their effectiveness goes beyond age as the sole

criterion. While age is certainly a factor, the issue is more engrained in educational curriculum and the transition from academia to career. As previously mentioned, individuals must possess unique skills in order to be considered “workforce ready” (Casner-Lotto & Barrington, 2006). According to Seal, Naumann, Scott, and Royce-Davis (2011), “although higher education is generally lauded for developing academic knowledge in their students, its leaders are routinely criticized for not adequately preparing students for the types of roles and leaders that organizations need”. If these unique skills that are directly related to EI competencies are lacking, the transition from academia to career is hampered and may create negative career effects (Yoshimoto et al., 2007). According to Seal et al. (2011), producing solid technical experts is only a part of the piece to education. Seal et al. (2011) believed “Universities must also address the whole student (intellectual, emotional and social) to better prepare graduates for future success”. Therefore, the age at which individuals typically enter university, 18-24, is important to this study because this appears to be the demographic most likely in need of understanding and increasing “social and emotional capacity” (Seal et al., 2011) in order to minimize negative career effects and accelerate academic readiness.

As academic and business studies (Freedman, 2003; Sjolund & Gustafsson, 2001; Slaski & Cartwright, 2003) have shown, EI appears to be learnable and teachable, at least within certain contexts. Because EI is still at the beginning of the learning curve (Mayer, Caruso, & Salovey, 2004), Slaski and Cartwright (2003) believe that EI training, specifically its potential and effectiveness, is an important area for future research. A majority of the studies listed above used prescribed methods that included longer treatment timeframes, some as long as one academic year (Freedman, 2003). This study utilized a single experimental treatment lasting approximately 75 minutes; therefore, the challenge for this study involves the treatment timeframe and the prescribed treatment methods employed to improve EI. Is it possible for participants to enhance their EI after a single intervention that lasts approximately 75 minutes. Colleges and universities all over the world teach new concepts to students in 50-minute classes and then test them on the concepts to determine their levels of learning. This method of teaching has been the modus operandi of academia for decades. Pittsburgh Science of Learning Center (PSLC), which was founded by Carnegie Mellon University and the University of Pittsburgh in 2004, attempted to study how people learn and how they can learn better (Carnegie Mellon, 2009). PSLC is devoted to the exploration of

student thinking and learning, including “how to make learning faster, better, and more pleasurable” (Carnegie Mellon, 2009). Therefore, attempting to teach a new construct, such as EI, in a 75-minute timeframe is by no means unorthodox. According to Bacon and Stewart (2006), knowledge can be acquired in two distinct ways: surface level and deep level learning. Bacon and Stewart (2006) defined surface learning as “rote memorization” or short-lived learning. For learning to move to a deeper level, individuals must “find additional meanings in the material” (Bacon & Stewart, 2006). That is, the learner must be able to draw upon prior knowledge (Bowett, 2005). According to Bowett (2005), business students “have been learning about Business for much of their lives; from their own experience as consumers, from the hearsay of friends and family members who are employees (and occasionally owners), and from the media”. According to Bowett (2005), while the learning has been unstructured and sometimes inaccurate, students still have the ability to draw upon prior knowledge and can link newly acquired knowledge to existing knowledge, allowing the students to create their own individual relevance through greater context.

According to Bacon and Stewart (2006) and Bowett (2005), if material presented has the ability to resonate with the learner, the greater the likelihood that the material will be viewed as meaningful. While the timeframe is important, the ability to enhance EI may be more firmly anchored if EI resonates with the individual. Therefore, the 75-minute intervention must be relevant, appealing, and provide ways for individuals to draw upon their prior knowledge and experiences of emotion, while adding a new contextual perspective to emotional intelligence, including its potential relevancy in business curriculum and professional careers. Relevancy enhances retention (Bacon & Stewart, 2006; Bowett, 2005), and in order to increase the likelihood of EI’s relevancy, the treatment methods employed must involve active learning pedagogies. Therefore, what specific types of teaching methods should be employed in order to maximize the likelihood of improving EI after a single experimental treatment? The next section addresses this question.

Teaching EI – Pedagogical Methods

Existing literature focusing on the EI construct and its role in higher education is a relatively new phenomenon, with few articles existing before 2000 (Abraham, 2006). Additionally, the relative newness of incorporating EI into existing academic curriculum is new and, therefore, lacks standardized instructional frameworks. However, there are

researched pedagogical methods that may be conducive to promoting EI.

Critical thinking has shaped the pedagogy of higher education for hundreds of years (Halx & Reybold, 2005). According to Halx and Reybold (2005), emotional intelligence development requires critical thinking and “self-regulation”. As Mayer and Salovey (1993) said, emotional intelligence is about the regulation of emotion in oneself. Goleman’s (1998) model referred to self-regulation as self-management. Bar-On’s (2007) model referred to self-regulation as the ability to understand oneself. The research of Mayer and Salovey (1993), Goleman (1998), and Bar-On (2007) shows a natural relationship among critical thinking vis-a-vis self-regulation and emotional intelligence.

According to Halx and Reybold (2005), “Diverse research approaches, particularly case studies, broaden our understanding about critical thinking”, and should contain a contextual perspective (Tsui, 2002). When exploring emotional intelligence and its potential benefits, “considerations of context are severely under-represented” (Dulewicz & Higgs, 2000). While differences in theories of intelligence differ dramatically, successful intelligence is relevant across a broad spectrum of contexts because it provides a more broad understanding of the construct (Sternberg & Grigorenko, 2006). Halx’s and Reybold’s (2006) study found that students were supportive of pedagogical teaching methods rich in critical thinking, especially in liberal arts education. One of the most dynamic findings of Halx’s and Reybold’s (2006) study involved the issue of pedagogical experimentation. Techniques used should “stimulate” and “provoke critical thinking,” while actively, rather than passively, involving the students (Halx & Reybold, 2006), because critical thinking cannot occur through passivity (Van Gelder, 2005).

According to Sadri (2011), EI training can be effective when looking at the dimensions of the training design. More specifically, “training programs targeted at developing EI need to focus on the four dimensions of EI: self-awareness, self-regulation, awareness of others, and regulation of others” (Sadri, 2011). To isolate self-awareness, training should provide participants with the ability to look at their behavior; self-regulation training should provide evidence that particular behaviors are not working and, thus, should be changed; interaction with others should naturally promote self-awareness; and regulation of others can be enhanced through goal-setting (Sadri, 2011). Lastly, Sadri (2011) recommends using a valid and reliable EI instrument as part of the training program.

Cherniss and Goleman (1998) believed that EI training should occur in four distinct phases: (1) preparation; (2) training; (3) transfer; and (4) evaluation. In the preparation phase, learners should be encouraged to participate because of the personal and professional values that EI espouses (Cherniss & Goleman, 1998). Learners should also assess their own limits, which can be done by completing an EI assessment (Cherniss & Goleman, 1998). Most important in phase one, Cherniss and Goleman (1998) believed individuals should have a choice to participate in the training, as it increases learner motivation. In phase two, learners can take part in in-class exercises and activities aimed at both intra and interpersonal skills (Cherniss & Goleman, 1998). To target intrapersonal skills, Cherniss and Goleman (1998) recommended that learners take a few minutes to write down all the emotions they can think of and to isolate one or two emotions that they expect to experience the rest of the day, and to analyze the reason(s) why those emotions stand out. This type of activity, according to Cherniss and Goleman (1998), specifically targets self-awareness, self-motivation, and emotional management. Addressing interpersonal skills might involve a situation where someone was emotionally out of control, and analyze the situation in more detail. Using video vignettes can be enriching for EI learning, particularly in phase two (Cherniss & Goleman, 1998). Phase three involves the support of those around the learners, such as faculty and administration (Cherniss & Goleman, 1998). In an organizational context, it could involve colleagues, managers, and those in senior leadership positions. The final phase includes an evaluation to determine the skills learned, and the ability to continue EI training for continuous improvements (Cherniss & Goleman, 1998). While the treatment method is further discussed in Chapter 3, this experimental study followed Cherniss and Goleman's (1998) four-phase approach in a quasi-fashion.

Hess, Knox, and Hill (2006) studied the effects that different types of training had on teaching graduate trainees how to manage client anger. Three types of training, supervisor-facilitated, self-training, and biblio-training, were utilized to train trainees on how to effectively deal with angry clients (Hess et al., 2006). While all three training methods were of value, trainees preferred supervisor-facilitated training because it was viewed as more helpful than self-training and biblio-training (Hess et al., 2006). Video vignettes were utilized in order to provide a more realistic environment, "expressing anger directly at the camera (so that participants would feel that the anger was directed at them personally)" (Hess et al.,

2006). While the study did not directly relate to EI, anger is an emotion and represents a part of EI. Furthermore, the type of training methods utilized by Hess et al. (2006), including vignettes, self-reflections, and training timeframes (20 minutes for each type of training) were relevant to this experimental study.

According to Tucker et al. (2000), “social and emotional learning is likely to be challenging to university students”, because the training may produce results that differ from their assumptions about themselves. According to Jdaitawi, Azniza, and Mustafa (2011), “emotional intelligence training should be utilized as adjunct strategy” alongside traditional academic curriculum in order to provide students with the physical, social, academic, and emotional skills needed to traverse life’s challenges. EI training should include lectures, discussions, and other experimental methods (Jdaitawi et al., 2011).

Based on research recommendations (Cherniss & Goleman, 1998; Halx & Reybold, 2005; Hess et al., 2006; Jdaitawi et al., 2011; Sadri, 2011; Tsui, 2002), EI training methods should contain components that encourage critical thinking; focus on EI’s primary dimensions; include a valid and reliable EI assessment; provide intra and interpersonal learning methods; and provide more real-to-life experimental methods, such as video vignettes. This study’s treatment employed a mix of teaching methods, according to the research findings’ recommendations.

Emotional Intelligence in Academics

A number of studies (Dolan & Bradley, 2004; Esmond-Kiger, Tucker, & Yost, 2006; Latif, 2004; Lust & Moore, 2006; Moncada & Sanders, 1999) have been conducted regarding emotional intelligence in primary, secondary, and higher education. Undergirding these studies was the relevancy and value of emotional intelligence in education. According to Goleman (1998), IQ, cognitive, and technical skills are important; however, they should be viewed as “threshold capabilities”. In Latif’s (2004) research, curriculum content and pedagogy in pharmacy education were determined to be critical components; however, they should be viewed as “baseline competencies” and “threshold requirements”. According to Latif’s (2004) findings, emotional intelligence and its competencies should be engrained in all facets of the pharmacy curriculum because “Cognitive understanding and technical competence are necessary, but alone they are not sufficient for the patient-focused paradigm”. The missing link in pharmaceutical programs, according to Latif (2004), was the

emotional intelligence domain.

Dolan and Bradley (2004) conducted a study to determine the effects of instruction of EI on business students through the use of three separate instruments, focusing on emotional intelligence, stress, and attendant symptom. A course was developed using Goleman's research, while operating with the contention that EI was a "learned capability" and "can be enhanced through instruction" (Dolan & Bradley, 2004). While the results of the study were preliminary in nature, Dolan and Bradley (2004) found that, to some degree, EQ scores could change through the use of instructional methods.

In another study, Esmond-Kiger et al. (2006) compared EI scores and grade point averages among business students. Esmond-Kiger et al. (2006) discovered that while non-accounting majors had significantly higher levels of emotional intelligence than accounting majors, accounting majors had significantly higher grade point averages than non-accounting majors. The findings suggested that faculty members should place more emphasis on emotional aspects of the accounting profession, particularly with early employment, because accounting professionals lacked the emotional elements required to be more successful in their chosen professions (Esmond-Kiger et al., 2006). While the accounting literature has historically been void of behavioral issue concepts (Abraham, 2006), industry experts and researchers have placed greater emphasis on the value of emotional intelligence in relation to professional success (Akers & Porter, 2003). According to Abraham (2006), EI "provides the missing link between university results and career success".

In their 1999 study, Moncada and Sanders found that employers, faculty, and accounting students overemphasized IQ (e. g., grade point average) when dealing with first interviews. Unfortunately, in order to increase their chances of a second interview, thus their employability, students also needed to display EI traits, such as emotional maturity and interpersonal skills (Moncada & Sanders, 1999). Unfortunately, too few academic programs have formally integrated EI traits in their curriculum (Moncada & Sanders, 1999), leaving the burden of EI training on the employer (Abraham, 2006).

In a separate study involving pharmacy students, Lust and Moore (2006) found that after introducing emotional intelligence instruction into a single course, students "had positive perceptions" and "saw practical applications" to incorporating EI in existing pharmacy curriculum. Lust's and Moore's (2006) pedagogical and anagogical methods were adopted

from Cherniss and Goleman (1998), because according to Lust and Moore (2006), they “deferred to the experts in emotional intelligence”. Lust and Moore (2006) followed Cherniss’ and Goleman’s (1998) four phases, as previously discussed. The primary purpose of Lust’s and Moore’s (2006) study was to introduce EI competencies in a continually changing paradigm industry. Those in the medical field, including nursing, have long embraced the emotional intelligence construct because it espouses empathy, sensitivity, and emotional management, all of which are competencies required in the medical profession (Lust & Moore, 2006). Lust’s and Moore’s (2006) focus was not to diminish the importance of cognitive intellect, including knowledge, skills, and abilities (also referred to as KSA), but to add a construct that claims to increase career and professional success (Chrusciel, 2006; Lam & Kirby, 2002). According to Lust and Moore (2006), the medical community borrowed some successes from the business community, several of which are discussed below.

Assessment Instruments

There is much debate regarding emotional intelligence from its definition to its significance in the realm of educational research. Currently the pendulum has swung toward a view that the intellect has been overvalued, at the expense of emotions leading to lack of self-understanding and impoverished shallow relationships. Thus the interest generated by the current EI construct is phase of the current zeitgeist of modern Western society, which is increasingly recognizing the importance of emotions. (Matthews et al., 2002).

For Matthews et al. (2002), “Goleman’s conceptualization of EI and its biological and psychological roots appear at present to be too open-ended and loosely specified to constitute a good scientific theory, although in the future, it may develop to the point of being empirically testable”.

The basis for further study has certainly been laid out. Goleman, along with two other researchers, Boyatzis and Rhee, have grouped emotional intelligence attributes into four groups of competencies within four major categories, including self-awareness, self-management, social awareness, and social skills (Boyatzis, Goleman, & Rhee, 2000). These clusters and particular competencies are grouped in the theoretical and empirical clustering of competencies in the emotional intelligence model known as the Emotional Competence

Inventory (ECI). “The ECI is a multirater instrument that provides self, manager, direct report and peer ratings on a series of behavior indicators of emotional intelligence, based on the emotional competencies identified by Goleman” (Matthews et al., 2002). Although there seems to be something worthwhile to consider in the realm of emotional intelligence, there is also a series of issues surrounding the ECI that challenge researchers, including a possible conflict of commercial interest and a lack of demonstrable results as evaluated by the academic community at large.

Mayer and Salovey, highly respected in the field of emotional intelligence research, are responsible for first using the term “emotional intelligence,” in 1990 in published studies, although the term itself first appeared in an unpublished study in 1986 (Payne). Goleman’s (1995) publication of his book by the same name 5 years after Mayer and Salovey may have initially misled readers and the public that this construct and research was his. Goleman brought considerable attention to the field and openly acknowledged fellow researchers, particularly, Mayer and Salovey, for laying the groundwork.

The Mayer-Salovey-Carruso conceptualization of EI (2000) has been “the most influential in its scientific genesis” (Matthews et al., 2002). These researchers were the first to publish in peer-reviewed psychological journals in 1990 and their research became one of the foundations of Goleman’s book in 1995.

Work on EI is as an outgrowth of two areas of psychological research that emerged toward the end of last century. Ten years later, Mayer, Salovey, and Caruso (2000) developed their own performance based assessment instrument called the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). The authors describe its function as “operationalizing the four branch model of EI” (Salovey et al., 2004). In their key readings on the Mayer and Salovey Model, the authors seek to distinguish their original conceptualization from other constructs. Their work has been both a blessing and a curse to the field of psychology because the reader and researcher must separate the scholarly research from the pop psychology of emotional intelligence that is ubiquitous.

Arguing that other conceptions of EI are misleading, these researchers suggest that their specific use of the term stresses the concept of an intelligence that processes and benefits from emotions. From this perspective, EI is composed of mental abilities, skills or capacities. They have developed an extensive conceptual model (Matthews et al., 2002).

Mayer, Salovey, and Carruso (2000) present their conceptual model within the framework of an intelligence system, rather than limiting it to the emotional clusters or competencies as defined by Boyatzis, Goleman and Rhee (2000) and Bar-On (2000). “According to Mayer & Mitchell (1998), an intelligence system consists of a capacity for inputting information and a capacity for processing information, through both immediate manipulation of symbols and reference to expert knowledge” (Matthews, et al., 2002).

Mayer, Salovey and Carruso (2000) purport that “EI cuts across the cognitive, and emotional systems and is at one time unitary and multidimensional, being sub-divisible into four branches: emotional perception/identification, emotional facilitation of thought, emotional understanding and emotional management”. The MSCEIT is an ability-based assessment and unlike the other two instruments discussed here, it is not a self-report assessment. The MSCEIT is designed to measure the four branches of EI as defined by its authors (Mayer, Salovey & Caruso, 2000): emotional perception (identifying emotions in faces, designs, music and stories), emotional facilitation (translating feelings and using emotions to make judgments), emotional understanding (defining emotions, complex emotional blends, emotional transitions and emotional perspectives), and emotional management (managing one’s and others’ emotions).

Another leading researcher in the field of emotional intelligence is Reuven Bar-On (2002), who “has constructed the first commercially available operational index for the assessment of EI” (Matthews et. al, 2002). The authors state “Bar-On’s conceptualization of EI is not that far removed from Goleman’s in that he appears to invoke clusters of established personality traits”. Bar-On (1997) defines emotional intelligence as “an array of non-cognitive capabilities, competencies, and skills that influence one’s ability to succeed in coping with environmental demands and pressures”.

Bar-On reports a series of validation studies that are quite impressive in scope. The EQ-i has been normed in a large, diversified North American sample (N=3,831) and the scales seem to be statistically reliable in North American and other samples worldwide. There is also some evidence from single studies that the EQ-i predicts other criteria, such as academic success in university students, presence in clinical disorders and a response to alcoholism (Matthews et al., 2002).

Bar-On's EQ-i assesses five broad subtypes of EI. It is interesting to note that Bar-On is also compelled to group competencies or traits. The first is intrapersonal intelligence, which is composed of emotional self-awareness, assertiveness, self-regard, self-actualization, and independence. The second is interpersonal intelligence, which includes empathy, interpersonal relationship, and social responsibility. The third higher-order construct of the EQ-i is adaptability, which divides into problem solving, reality testing, and flexibility. Fourth is stress management, which comprises stress tolerance and impulse control. Finally, the EQ-i contains measures of general mood, which is composed of happiness and optimism (Matthews et al., 2002).

The development of the EQ-i proceeded in six phases over a period of 17 years: (i) identifying and logically clustering various emotional and social competencies, skills and facilitators thought to impact human performance and psychological well-being based on my clinical experience and review of the literature; (ii) clearly defining the individual key clusters of competencies and skills that surfaced; (iii) initially generating approximately 1,000 items based on my clinical experience, review of the literature and on input from experienced healthcare practitioners; (iv) determining the inclusion of 15 primary scales and 133 items in the 1997 published version of the instrument based on a combination of theoretical considerations and statistical findings generated primarily by item analysis and factor analysis; (v) initially norming the final version of the instrument on 3,831 adults in North America in 1996; and (vi) continuing to collect data, norm and validate the instrument across cultures around the world which is an ongoing endeavor. One difference in the three leading instruments is identified in the research literature as ability-based or trait-based emotional intelligence. The MSCEIT is a trait-based measurement, as opposed to the ECI, which has been identified as a mixed model (Matthews et al., 2002) or the EQ-i, which is an ability-based measurement. The Boyatzis, Goleman and Rhee (2000) ECI model is derived from the earlier research of Salovey and Mayer (2000), as is the Bar-On (2000) EQ-i model. All theorists recognize the need for grouping concepts by type of ability, trait, or competency, and all seem to agree that these competencies play a role in personal and psychological development of an individual.

A significant difference between the MSCEIT and the other two assessments is that it is not self-reported. While the ECI (Emotional Competency Inventory) and EQ-i are self-

reports, which certainly has its limitations (Derkson, Kramer, & Katzko, 2002), the MSCEIT is scored according to how participants assess a number of situations. The MSCEIT includes visual assessments and participants are asked to interpret what they see. What is striking is that all three constructs have groupings of traits or abilities into very similar semantic descriptions. Nearly all of the current literature on emotional intelligence that appears in peer-reviewed journals in the fields of college student development and counseling (Hamachek, 2000; Hernon & Rossiter, 2006); education (Berenson, Boyles, & Weaver, 2008; Coll & Stewart, 2008; Kingston, 2008; McCracken, 2008; Shapiro, 1997); business and computing (Ashkanasy & Dasborough, 2003; Belanger, Lewis, Kasper, Smith, & Harrington, 2007; Cherniss & Goleman, 2001; Daus & Ashkanany, 2005; Goleman, 2002; Lorenzetti, 2006), and nursing (Bellack, 1999; Glass, 2007; Radcliffe, 2007; Young-Ritchie, Laschinger, & Wong, 2007), among others cite one, or all three, of these theorists in their studies.

Conclusion

Since 1990 emotional intelligence has garnered considerable attention from the academic community, applied settings and mainstream society. Three competing models of emotional intelligence have emerged along with their own corresponding measurement strategy. While the pure model emphasizes cognitive ability and relies on an objective, performance-based measure of E.I., the mixed models assess both cognitive ability and personality traits using self-report measures. Interestingly, considerable debate remains regarding the legitimacy of the construct (one derived from the 'pure' model, the other from the 'mixed' model) and how it should be measured. Consequently, additional research is needed to gain not only theoretical consensus but also clarity regarding the most appropriate measurement strategy. Lastly, teachability and learnability of the Emotional intelligence skills are discussed. The effectiveness of E.I. training and E.I.-based hiring has been reviewed in applied settings.

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