

# Emotional Intelligence: Implications for Personal, Social, Academic, and Workplace Success

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## Abstract

This article presents an overview of the ability model of emotional intelligence and includes a discussion about how and why the concept became useful in both educational and workplace settings. We review the four underlying emotional abilities comprising emotional intelligence and the assessment tools that have been developed to measure the construct. A primary goal is to provide a review of the research describing the correlates of emotional intelligence. We describe what is known about how emotionally intelligent people function both intra- and interpersonally and in both academic and workplace settings.

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The facts point in one direction: The job offer you have in hand is perfect – great salary, ideal location, and tremendous growth opportunities. Yet, there is something that makes you feel uneasy about resigning from your current position and moving on. What will you do? Ignore the feeling and choose what appears to be the logical path, or go with your gut and risk disappointing your family? Or, might you consider both your thoughts and feelings about the job in order to make the decision? Solving problems and making wise decisions using both thoughts and feelings or logic and intuition is a part of what we refer to as emotional intelligence (Mayer & Salovey, 1997; Salovey & Mayer, 1990).

Linking emotions and intelligence was relatively novel when first introduced in a theoretical model about twenty years ago (Salovey & Mayer, 1990; but see Gardner, 1983/1993). Among the many questions posed by both researchers and laypersons alike were: Is emotional intelligence an innate, nonmalleable mental ability? Can it be acquired with instruction and training? Is it a new intelligence or just the repackaging of existing constructs? How can it be measured reliably and validly? What does the existence of an emotional intelligence mean in everyday life? In what ways does emotional intelligence affect mental health, relationships, daily decisions, and academic and workplace performance?

In this article, we provide an overview of the theory of emotional intelligence, including a brief discussion about how and why the concept has been used in both educational and workplace settings. Because the field is now replete with articles, books, and training manuals on the topic – and because the definitions, claims, and measures of emotional intelligence have become extremely diverse – we also clarify definitional and measurement issues. A final goal is to provide an up-to-date review of the research describing what the lives of emotionally intelligent people ‘look like’ personally, socially, academically, and in the workplace.

## What is Emotional Intelligence?

### *Initial conception of emotional intelligence*

Emotional intelligence was described formally by Salovey and Mayer (1990). They defined it 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. 189). They also provided an initial empirical demonstration of how an aspect of emotional intelligence could be measured as a mental ability (Mayer, DiPaolo, & Salovey, 1990). In both articles, emotional intelligence was presented as a way to conceptualize the relation between cognition and affect. Historically, ‘emotion’ and ‘intelligence’ were viewed as being in opposition to one another (Lloyd, 1979). How could one be intelligent about the emotional aspects of life when emotions derail individuals from achieving their goals (e.g., Young, 1943)? The theory of emotional intelligence suggested the opposite: emotions make cognitive processes adaptive and individuals can think rationally about emotions.

Emotional intelligence is an outgrowth of two areas of psychological research that emerged over forty years ago. The first area, *cognition and affect*, involved how cognitive and emotional processes interact to enhance thinking (Bower, 1981; Isen, Shalke, Clark, & Karp, 1978; Zajonc, 1980). Emotions like anger, happiness, and fear, as well as mood states, preferences, and bodily states, influence how people think, make decisions, and perform different tasks (Forgas & Moylan, 1987; Mayer & Bremer, 1985; Salovey & Birnbaum, 1989). The second was an evolution in models of intelligence itself. Rather than viewing intelligence strictly as how well one engaged in analytic tasks associated with memory, reasoning, judgment, and abstract thought, theorists and investigators began considering intelligence as a broader array of mental abilities (e.g., Cantor & Kihlstrom, 1987; Gardner, 1983/1993; Sternberg, 1985). Sternberg (1985), for example, urged educators and scientists to place an emphasis on creative abilities and practical knowledge that could be acquired through careful navigation of one’s everyday environment. Gardner’s (1983) ‘personal intelligences,’ including the capacities involved in accessing one’s own feeling life (intrapersonal intelligence) and the ability to monitor others’ emotions and mood (interpersonal intelligence), provided a compatible backdrop for considering emotional intelligence as a viable construct.

### *Popularization of emotional intelligence*

The term ‘emotional intelligence’ was mostly unfamiliar to researchers and the general public until Goleman (1995) wrote the best-selling trade book, *Emotional Intelligence: Why it can Matter More than IQ*. The book quickly caught the eye of the media, public, and researchers. In it, Goleman described how scientists had discovered a connection between emotional competencies and prosocial behavior; he also declared that emotional intelligence was both an answer to the violence plaguing our schools and ‘as powerful and at times more powerful than IQ’ in predicting success in life (Goleman, 1995; p. 34). Both in the 1995 book and in a later book focusing on workplace applications of emotional intelligence (Goleman, 1998), Goleman described the construct as an array of positive attributes including political awareness, self-confidence, conscientiousness, and achievement motives rather than focusing only on an intelligence that could help individuals solve problems effectively (Brackett & Geher, 2006). Goleman’s views on emotional intelligence, in part because they were articulated for/to the general public, extended

beyond the empirical evidence that was available (Davies, Stankov, & Roberts, 1998; Hedlund & Sternberg, 2000; Mayer & Cobb, 2000). Yet, people from all professions – educators, psychologists, human resource professionals, and corporate executives – began to incorporate emotional intelligence into their daily vernacular and professional practices. Definitions and measures of emotional intelligence varied widely, with little consensus about what emotional intelligence is and is not.

### *Alternative models of emotional intelligence*

Today, there are two scientific approaches to emotional intelligence. They can be characterized as the ability model and mixed models (Mayer, Caruso, & Salovey, 2000). The ability model views emotional intelligence as a standard intelligence and argues that the construct meets traditional criteria for an intelligence (Mayer, Roberts, & Barsade, 2008b; Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2008a). Proponents of the ability model measure emotional intelligence as a mental ability with performance assessments that have a criterion of correctness (i.e., there are better and worse answers, which are determined using complex scoring algorithms). Mixed models are so called because they mix the ability conception with personality traits and competencies such as optimism, self-esteem, and emotional self-efficacy (see Cherniss, 2010, for a review). Proponents of this approach use self-report instruments as opposed to performance assessments to measure emotional intelligence (i.e., instead of asking people to demonstrate how they perceive an emotional expression accurately, self-report measures ask people to judge and report how good they are at perceiving others' emotions accurately).

There has been a debate about the ideal method to measure emotional intelligence. On the surface, self-report (or self-judgment) scales are desirable: they are less costly, easier to administer, and take considerably less time to complete than performance tests (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). However, it is well known that self-report measures are problematic because respondents can provide socially desirable responses rather than truthful ones, or respondents may not actually know how good they are at emotion-based tasks – to whom do they compare themselves (e.g., DeNisi & Shaw, 1977; Paulhus, Lysy, & Yik, 1998)? As they apply to emotional intelligence, self-report measures are related weakly to performance assessments and lack discriminant validity from existing measures of personality (Brackett & Mayer, 2003; Brackett et al., 2006). In a meta-analysis of 13 studies that compared performance tests (e.g., Mayer, Salovey, & Caruso, 2002) and self-report scales (e.g., EQ-i; Bar-On, 1997), Van Rooy, Viswesvaran, and Pluta (2005) reported that performance tests were relatively distinct from self-report measures ( $r = 0.14$ ). Even when a self-report measure is designed to map onto performance tests, correlations are very low (Brackett et al., 2006a). Finally, self-report measures of emotional intelligence are more susceptible to faking than performance tests (Day & Carroll, 2008).

For the reasons described in this section, we assert that the ability-based definition and performance-based measurement of emotional intelligence should be preferred. This makes it possible to both operationalize the construct distinctly and assess its unique contribution to important life outcomes over and above personality attributes. This viewpoint is supported by researchers not associated with any of the established measures of emotional intelligence (e.g., Matthews, Zeidner, & Roberts, 2002). The focus for the remainder of this article, therefore, is on the ability model of emotional intelligence. A more thorough review of the validity of both ability and mixed models of emotional

intelligence can be found in a recent meta-analysis (O'Boyle, Humphrey, Pollack, Hawver, & Story, 2010).

### **The Mayer and Salovey Model of Emotional Intelligence**

The Mayer and Salovey (1997) model of emotional intelligence defines four discrete mental abilities (also referred to as 'branches') that comprise emotional intelligence: (i) perception of emotion, (ii) use of emotion to facilitate thought, (iii) understanding of emotion, and (iv) management of emotion. These four inter-related abilities are arranged hierarchically such that more basic psychological processes (i.e., perceiving emotions) are at the base or foundation of the model and more advanced psychological processes (i.e., conscious, reflective regulation of emotion) are at the top. Empirical demonstrations of whether the higher-level abilities are dependent, to some extent, upon the lower-level abilities, have yet to be conducted. Here, we provide a brief description of the four abilities, which are described more fully elsewhere (Mayer & Salovey, 1997; Mayer et al., 2008a,b).

The first branch, 'Perception of emotion,' includes the ability to identify and differentiate emotions in the self and others. A basic aspect of this ability is identifying emotions accurately in physical states (including bodily expressions) and thoughts. At a more advanced level, this ability enables one to identify emotions in other people, works of art, and objects using cues such as sound, appearance, color, language, and behavior. The ability to discriminate between honest and false emotional expressions in others is considered an especially sophisticated perceiving ability. Finally, appropriately expressing emotions and related needs represents more complex problem solving on this branch.

The second branch, 'Use of emotion to facilitate thinking,' refers to harnessing emotions to facilitate cognitive activities such as reasoning, problem solving, and interpersonal communication. A basic aspect of this ability is using emotions to prioritize thinking by directing attention to important information about the environment or other people. More advanced skills involve generating vivid emotions to aid judgment and memory processes, and generating moods to facilitate the consideration of multiple perspectives. Producing emotional states to foster different thinking styles (e.g., people's thinking is more detail-oriented, substantive, and focused when in sad versus happy moods) constitutes an especially high level of ability on this branch.

The third branch, 'Understanding and analyzing emotions,' includes comprehension of the language and meaning of emotions and an understanding of the antecedents of emotions. Basic skill in this area includes labeling emotions with accurate language as well as recognizing similarities and differences between emotion labels and emotions themselves. Interpreting meanings and origins of emotions (e.g., sadness can result from a loss, joy can follow from attaining a goal) and understanding complex feelings such as simultaneous moods or emotions (feeling both interested and bored), or blends of feelings (e.g., contempt as a combination of disgust and anger) represent more advanced levels of understanding emotion. Recognizing transitions between emotions (e.g., sadness may lead to despair which may lead to devastation) is an especially sophisticated component of this branch.

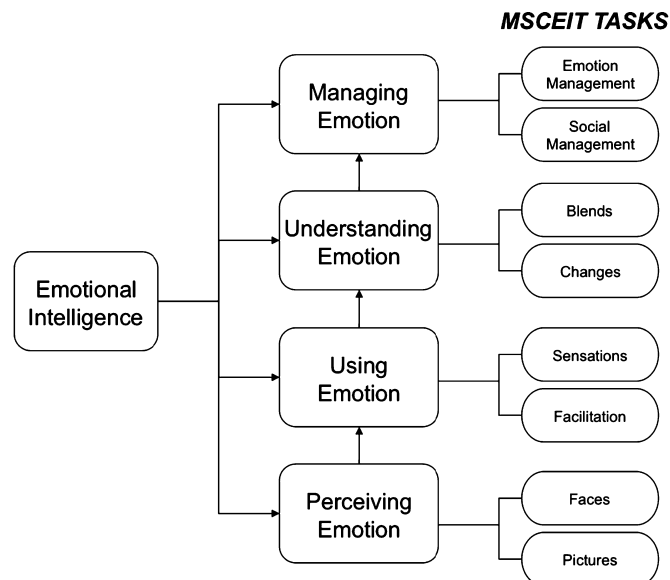
The fourth branch, 'Reflective regulation of emotions,' includes the ability to prevent, reduce, enhance, or modify an emotional response in oneself and others, as well as the ability to experience a range of emotions while making decisions about the appropriateness or usefulness of an emotion in a given situation. Basic emotion regulation ability involves attending to and staying open to pleasant and unpleasant feelings, while more

advanced ability involves engaging or detaching from an emotion depending on its perceived utility in a situation. Monitoring and reflecting on one's own emotions and those of others (e.g., processing whether the emotion is typical, acceptable, or influential) also represents more complex problem solving within this branch.

### *Measuring emotional intelligence*

There are a number of published performance tests that measure distinct components of emotional intelligence (i.e., one or more of the branches of Mayer and Salovey's model, but not all branches). For example, two frequently used measures of perceptual accuracy of emotion are the Diagnostic Analysis of Nonverbal Accuracy Scales (DANVA and DANVA-2; Nowicki & Duke, 1994). Elsewhere, these and other measures are described in detail (Brackett & Geher, 2006; Mayer et al., 2008a,b). A comprehensive performance test of emotional intelligence is the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT; Mayer et al., 2002) for adults and the Mayer–Salovey–Caruso Emotional Intelligence Test, Youth Version (MSCEIT–YV; Mayer, Salovey, & Caruso, 2005) for adolescents (ages 12–17). These are considered performance tests because they require individuals to solve tasks pertaining to each of the four abilities defined by the theory (Mayer, Salovey, Caruso, & Sitarenios, 2003). The adult version of the MSCEIT has eight tasks (two for each of the four branches), as depicted in Figure 1. The test takes about 45 minutes to complete and yields scores for each of the four branches and a total score. Here, we provide a brief overview of the adult version of the test. More detailed descriptions of both the adult and youth versions of the tests can be found elsewhere (Rivers, Brackett, & Salovey, 2008).

The first branch, Perceiving Emotions, is measured by asking respondents to identify the emotions expressed in photographs of people's faces (Faces) as well as the feelings suggested by artistic designs and landscapes (Pictures). For example, in the Faces task, participants are presented with a picture of a person expressing a basic emotion like joy.



**Figure 1** Graphical representation of the Mayer-Salovey-Caruso model of Emotional Intelligence.



Below the picture is a list of five emotions; the test-taker is asked to rate on a five-point scale how much of each particular emotion is expressed in the picture.

The second branch, Using Emotion to Facilitate Thought, is measured by two tests that assess people's ability to describe emotional sensations and their parallels to other sensory modalities using a non-feeling vocabulary (Sensations) and identify the feelings that might facilitate or interfere with the successful performance of various cognitive and behavioral tasks (Facilitation). For example, the task measuring Sensations presents participants with a sentence asking them to imagine feeling an emotion such as guilt. Participants are then given a list of adjectives pertaining to other sensory modalities (e.g., warm, blue, and sour) and are asked to rate on a five-point scale from 'Not Alike' to 'Very Much Alike' how much the feeling of guilt is similar to the adjectives.

The third branch, Understanding Emotion, is measured by two tasks that pertain to a person's ability to analyze blended or complex emotions (Blends) and to understand how emotional reactions change over time or how they follow upon one another (Changes). For example, a question on the Blends task presents a statement such as 'Anticipation and joy often combine to form...'. Participants are then presented with a list of response alternatives and choose the most appropriate.

The fourth branch, Managing Emotions, has two subtests that assess how participants would manage their own emotions (Emotion Management) and how they would manage the emotions of others (Social Management). For example, the Social Management task asks participants to read a vignette about another person, and then determine how effective several different courses of action would be in coping with emotions in the vignette. Participants rate a number of possible actions ranging from 'Very ineffective' to 'Very effective.'

On the MSCEIT, better and worse answers are determined by consensus or expert scoring. Consensus scores reflect the proportion of people in the normative sample (over 5,000 people from North America) who endorsed each MSCEIT test item. Expert norms were obtained from 21 investigators, including psychologists and philosophers who were members of the International Society for Research on Emotion (ISRE). These scientists and scholars provided their expert judgment on each of the test's items based on findings from the professional literature on emotion. Scores are weighted by the proportion of the normative or expert sample that provided the same answer. Full-scale MSCEIT scores based on both the consensus and expert norms correlate quite highly,  $r = 0.91$  (Mayer et al., 2003). Generally, correlations with various outcomes are replicated across the two scoring methods as well. The MSCEIT is reliable at the full-scale level and at the area and branch levels (Mayer et al., 2003), but it should not be scored at the level of individual tasks.

Mayer, Salovey, Caruso, and Sitarenios (2001b) and Mayer et al. (2003, 2008a,b) claim that the MSCEIT meets the criteria for a test of intelligence because: (i) it has a factor structure congruent with the four branches of the theoretical model; (ii) the four abilities have expected convergent and discriminant validity (Brackett & Mayer, 2003; Gil-Olarte, Palomera Martin, & Brackett, 2006; Mayer, Salovey, & Caruso, 2004; Lopes, Salovey, & Straus, 2003; Van Rooy et al., 2005; Warwick & Nettelbeck, 2004); that is, they are statistically independent from other well established constructs (including personality traits), are meaningfully related to other mental abilities such as verbal intelligence, and are associated with conceptually-related constructs such as empathy; (iii) emotional intelligence develops with age and experience, and finally; (iv) the abilities are measured objectively.

The MSCEIT has been criticized on a number of grounds (for reviews see Matthews et al., 2002; Rivers et al., 2008). Here, we point out a few valid concerns about the test.

First, the MSCEIT was designed as an easy-to-administer test that can be completed using either paper-and-pencil or online versions. This structure does not allow for the direct assessment of certain skills such as the appropriate expression of emotion and the ability to regulate emotions in realtime, which would require either sophisticated technology or experimental conditions. Thus, the MSCEIT may be more closely related to crystallized intelligence (the ability to use skills and knowledge) rather than fluid intelligence (the capacity to think logically and problem-solve) (Farrelly & Austin, 2007). Second, certain dimensions on the MSCEIT, like the perception of emotion, have a small number and range of facial expressions. The test also taps a limited scope of non-verbal channels; it does not capture gesture, voice, or posture (O'Sullivan & Ekman, 2004).

With respect to scoring, both consensus and expert methods have their limitations. Day (2004) questioned whether high EI individuals know what everyone else knows about emotion or know more about emotion. It may be that agreement with the consensus reflects average emotional intelligence, not high emotional intelligence. MacCann, Roberts, Matthews, and Zeidner (2004) found that emotion ability measures using veridical scoring (i.e., tasks that have a true or real answer as opposed to those that are rated as more or less effective according to a consensus; Geher & Renstrom, 2004) might be ideal because they converge better with other ability measures than those using consensus-based scoring.

### **Emotional Intelligence in Everyday Life**

Even though the Adult Version of the MSCEIT was published in 2002 and the Youth Version is still under development, a number of studies have provided evidence supporting the validity of both tests. The findings with adults, in particular, indicate that the MSCEIT is measuring something different than other intelligence and personality assessments, and that it predicts psychological constructs and behavior above and beyond existing measures of intelligence and personality (see Cherniss, 2010; Mayer et al., 2008a,b, for reviews). Scores on the test are associated with relevant outcomes across multiple dimensions, including cognitive and social functioning, psychological well being, psychopathology, academic performance, and leadership and other behaviors in the workplace. In this section we provide an overview of studies that demonstrate the validity of both versions of the test.

#### *Relation to cognitive abilities*

According to the ability model of emotional intelligence, each ability influences how individuals utilize emotions to facilitate thinking or regulate emotions to focus on important information. For these reasons, emotional intelligence is hypothesized to correlate moderately with other intelligences, like verbal-propositional intelligence (Mayer & Salovey, 1997). A recent meta-analysis of 18 studies that used the MSCEIT and its predecessor test, the Multi-factor Emotional Intelligence Scale (Mayer, Caruso, & Salovey, 1999) supports these hypotheses. Van Rooy et al. (2005) reported correlations in the 0.30 range between MSCEIT scores and assessments of both verbal and spatial intelligence. Other studies have shown that MSCEIT scores correlate moderately ( $r_s = 0.20-0.50$ ) with verbal SAT scores (Brackett, Mayer, & Warner, 2004; David, 2005), WAIS-III scores (Lopes et al., 2003), ACT scores (O'Connor & Little, 2003), reasoning ability (O'Connor & Little, 2003), academic giftedness (Zeidner, Shani-Zinovich, Matthews, & Roberts, 2005), and measures of general intelligence (e.g., Gil-Olarte et al., 2006). In general,

scores on the test correlate more highly with measures of crystallized rather than fluid intelligence. The Understanding of Emotion domain on the MSCEIT tends to have the strongest relationship to measures of general cognitive function ( $r_s = 0.40\text{--}0.60$ ). This is not surprising as this subtest relies on knowledge of a sophisticated emotional vocabulary (Lopes et al., 2003).

MSCEIT scores are related to the amount of cognitive effort employed to solve problems (generally) and performance on emotion-laden social problems, in particular. In one study, individuals with higher MSCEIT scores used less cognitive effort while solving emotion-laden problems, as assessed by patterns in theta and alpha frequency bands of electroencephalographic activity of the brain (Jausovec, Jausovec, & Gerlic, 2001). In another study, individuals with higher MSCEIT scores solved social problems that were affective in content more quickly than those with lower scores (Reis et al., 2007). These studies provide preliminary evidence for the neural correlates of emotional intelligence.

### *Mental health and well being*

The most common complaints that lead people to psychotherapy are anxiety and depression. The skills associated with emotional intelligence, therefore, should help individuals to deal effectively with unpleasant emotions and to promote pleasant emotions in order to promote both personal growth and well being. MSCEIT scores correlate ( $r_s = 0.10\text{--}0.40$ ) with psychopathologies that have roots in emotional disturbances, including depression, social anxiety disorder, and schizophrenia. David (2005) reported negative correlations between MSCEIT scores and depression and anxiety. O'Connor and Little (2003) showed that MSCEIT scores correlated negatively with anxiety. Gardner and Qualter (2009) found a relationship between MSCEIT scores and Borderline Personality Disorder (BPD) criteria in a large sample of non-clinical adults. MSCEIT scores also were lower among inpatients diagnosed with major depressive disorder, substance abuse disorder, and BPD when they were compared to a matched control group sample (Hertel, Schutz, & Lammers, 2009). In another study, patients with schizophrenia performed significantly worse than controls on the MSCEIT. Among the patients, lower MSCEIT scores also were associated with higher negative and disorganized symptoms, as well as worse community functioning (Kee et al., 2009). On the positive side, among college students, MSCEIT scores correlated positively with measures of psychological well being (Brackett & Mayer, 2003; Lopes et al., 2003). It also appears that individuals with higher MSCEIT scores are more likely to seek psychotherapy in times of need (Goldenberg, Matheson, & Mantler, 2006).

Rivers et al. (2010) conducted an initial validity test of the MSCEIT-YV using student and teacher reports of academic, social, and personal functioning on the Behavior Assessment System for Children (BASC; Reynolds & Kamphaus, 1992). Students scoring higher on the MSCEIT were less likely to be rated by their teachers as having externalizing problems (e.g., hyperactivity, aggression, conduct problems), internalizing problems (e.g., anxiety, depression), and school problems. The association between MSCEIT scores and school problems was particularly high ( $r = -0.57$ ), indicating that students with higher emotional intelligence may have better attention skills and fewer learning problems. Finally, in a study with 54 adolescents recruited from both psychiatric clinics and the community, MSCEIT scores were shown to moderate the association between sexual abuse and both suicidal ideation and attempts (Cha & Nock, 2009). It may be that



emotional intelligence is a protective factor for serious psychological problems among adolescents.

### *Social functioning*

Emotional intelligence is postulated to promote positive social functioning by helping individuals to detect others' emotion states, adopt others' perspectives, enhance communication, and regulate behavior. Indeed, people with higher MSCEIT scores tend to be more socially competent, to have better quality relationships, and to be viewed as more interpersonally sensitive than those with lower MSCEIT scores (Brackett, Warner, & Bosco, 2005; Brackett et al., 2006a; Lopes, Salovey, Côté, & Beers, 2005; Lopes et al., 2003, 2004). Most of these associations remain statistically significant ( $r$ s in the 0.30 range) even after controlling for established personality traits such as neuroticism and general intelligence.

Mayer–Salovey–Caruso Emotional Intelligence Test scores have been associated positively with self-perceived supportive relationships with friends and parents, and negatively associated with antagonistic and conflictual relationships with close friends (Lopes et al., 2004). For example, college students with higher MSCEIT scores were viewed by their peers as more interpersonally sensitive and prosocial (Lopes et al., 2005). Higher MSCEIT scores were associated strongly ( $r$ s > 0.50) with judges' positive ratings of 'the ability to work well with others' and 'overall social competence' using a videotaped 'getting acquainted' social interaction, but for men only (Brackett et al., 2006a). Finally, MSCEIT scores correlated significantly with secure attachment styles, which reflect emotional closeness to others as well as feeling comfortable both depending on others and having others depend on oneself (Kafetsios, 2004).

Emotional intelligence should facilitate successful navigation through the emotion-laden situations one encounters in romantic relationships. In one study, dating and married couples with higher MSCEIT scores reported more satisfaction and happiness in their relationships (Brackett et al., 2005). Moreover, if both partners had low MSCEIT scores, relationship quality was lower and both conflict and maladaptive relationship behaviors were higher than when both partners had high MSCEIT scores (Brackett et al., 2005). Individuals may even select partners initially based on similarity of emotional intelligence scores (Brackett, 2006), although evidence for such a phenomenon may reflect the possibility that partners' emotional intelligence converges over time. How emotional intelligence contributes to relationship quality and satisfaction is still unknown; longitudinal research will provide insights.

Among teenagers, those lower in emotional intelligence were rated in one study as more aggressive than others and tended to engage in more conflictual behavior than their counterparts who scored higher in emotional intelligence (Mayer, Perkins, Caruso, & Salovey, 2001a; Rubin, 1999). Middle school students' MSCEIT-YV scores were correlated positively with teacher ratings of adaptive skills including social skills and leadership ability. Emotional intelligence scores correlated with student self-reports of the same outcomes. Finally, MSCEIT-YV scores correlated positively with student reports of having healthy social relationships, high self-reliance, and better-quality relationships with their parents (Rivers et al., 2010).

Emotional intelligence has been negatively associated with maladaptive lifestyle choices. Lower MSCEIT scores among male college students were related to higher levels of drug and alcohol use as well as stealing and fighting (Brackett et al., 2004; Mayer et al., 2004). Inner-city adolescents' smoking also was related to lower MSCEIT scores (Trinidad &

Johnson, 2002). It appears that emotional intelligence may help individuals both to navigate their social worlds more effectively and make better choices about engaging in self-destructive behavior.

### *Academic performance*

Emotional intelligence is hypothesized to aid in prioritizing thinking and to enable one to manage emotions in anxiety-provoking situations, such as taking standardized tests. Evidence supporting the role of emotional intelligence in academic settings is mixed. Some studies show positive associations (Barchard, 2003; Brackett & Mayer, 2003), whereas others show no links at all (O'Connor & Little, 2003; Rode et al., 2007). In two studies with college students, MSCEIT total scores and grades were correlated modestly (Barchard, 2003; Brackett & Mayer, 2003). However, the correlations in these studies became non-significant once verbal intelligence scores were controlled. A study with high school students in Spain, however, demonstrated the incremental validity of emotional intelligence in the predication of grades. Scores on the MSCEIT, which was administered at the start of the academic year, correlated with final grades after controlling for both personality and academic intelligence (Gil-Olarte et al., 2006). Among middle school students, MSCEIT scores correlated significantly with year-end academic and behavior grades after controlling for scores on verbal standardized tests ( $ps = 0.34, 0.21$ , respectfully) (Rivers et al., 2010). The findings from middle and high school students may be stronger than those using college student samples due to a restricted range of grades among college student samples.

Although more research is necessary to unpack whether (and how) emotional intelligence relates to academic performance, it appears that emotional intelligence may influence other aspects of student performance in school. Students scoring higher on the MSCEIT-YV were less likely to be rated by their teacher as having school problems, including attention and learning problems. Students scoring higher on the MSCEIT-YV also were less likely to report negative attitudes toward school and toward their teachers (Rivers et al., 2008).

### *Workplace performance*

Emotional intelligence is hypothesized to influence the success with which employees interact with colleagues, the strategies they use to manage conflict and stress, and overall job performance (Ashkanasy & Daus, 2005; Lopes, Côté, & Salovey, 2006a). Preliminary findings with the MSCEIT suggest that emotional intelligence positively contributes to several aspects of workplace performance. In a health insurance company, analysts and clerical employees from the finance department with higher MSCEIT scores had higher company rank and received greater merit pay increases than employees with lower MSCEIT scores. Employees with higher emotional intelligence also received better peer and/or supervisor ratings of interpersonal facilitation, stress tolerance, and leadership potential than those with lower emotional intelligence (Lopes et al., 2006b). Similarly, among middle and high school teachers, MSCEIT scores were associated positively with job satisfaction and negatively with burnout. These associations were mediated by teacher reports of experiencing positive emotions in school and their perceived support from their school principal (Brackett, Palomera, Mojsa, Reyes, & Salovey, 2010a).

Emotional intelligence has been associated with the extent to which managers conduct themselves in ways that are supportive of the goals of the organization, according to the

ratings of their supervisors (Côté & Miners, 2006). MSCEIT scores for 38 manufacturing supervisors' managerial performance correlated positively with managerial performance ratings by nearly 1,300 employees (Kerr, Garvin, Heaton, & Boyle, 2006). MSCEIT scores of senior executives predicted leadership effectiveness as rated by managers (Rosete & Ciarrochi, 2005). With few exceptions, most of the associations in the above studies remained statistically significant after controlling for age, gender, education, verbal ability, and personality traits. More thorough discussions on the role of emotional intelligence in the workplace, including both job performance and leadership, can be found elsewhere (Ashkanasy & Daus, 2005; Côté, Lopes, Salovey, & Miners, 2010; O'Boyle et al., 2010).

### Conclusion and Future Directions

Scientific findings on emotional intelligence support the notion that emotions are functional when the information they provide is attended to, interpreted accurately, integrated into thinking and behavior, and managed effectively. According to emotional intelligence theory, the cognitive, physiological, and behavioral changes that accompany emotional responses are adaptive – these changes prepare us to respond to the event that caused the emotion to occur (Lazarus, 1991). The theory also asserts that emotions serve important social functions, conveying information about other people's thoughts, intentions, and behavior (Ekman, 1973; Keltner & Haidt, 2001). Indeed, the ability to integrate emotional information into cognitive activities is essential to effective functioning across the life course (Damasio, 1994).

Think back to the scenario that opened this article. You had a choice: stay in your current job or accept a new one that has great benefits. Logically, the choice was obvious – accept the new job. But you felt uneasy about this choice. How could you integrate the information from this feeling to make a wise decision? Recognizing that the feeling is a discomforting one may prompt you to reflect upon the aspects of your current job that are unsatisfying, as well as the aspects of the prospective job that may make it not as desirable as it seems. In your current job, perhaps you are not recognized often for your contributions. In the new job, perhaps you will be required to travel more often and thus lose valuable time with your family. Understanding the causes and consequences of the uneasiness is informative to both managing the feeling and making a decision. Maybe the uneasiness is connected to apprehension about having to establish yourself in a new place with a new group of colleagues. In this case, asking a respected colleague or mentor for a pep talk might be sufficient to reduce your nervousness. If the cause is the increased travel, then talking with your spouse and children about the implications of the new job might help you to manage the emotion and also help you make a choice. For individuals with high emotional intelligence, the above process may happen automatically and regularly. For many others, it is likely that formal learning opportunities will be necessary to acquire this problem-solving skill. Ideally, skill development in this area begins early, and is on-going.

Other research we have conducted shows that the emotion knowledge and skills that comprise emotional intelligence can be taught and developed (Brackett, Rivers, Reyes, & Salovey, 2010b). Our school-based prevention programs, called The RULER Approach, are designed to provide skill-building opportunities for students, teachers, school leaders, and family members to develop the skills of recognizing, understanding, labeling, expressing, and regulating emotions (the RULER skills) in order to make better decisions, form and maintain mutually supportive relationships, behave in prosocial ways, and regulate their feelings in order to experience greater well being. Findings from a randomized-controlled

experiment testing The RULER Approach suggest that it creates a more positive learning climate (Brackett et al., 2010b). RULER classrooms were rated as having more interactions reflecting positive relationships and respect; more prosocial behavior; greater enthusiasm about learning; fewer instances of bullying between students; less frequent expression of anger or frustration by teachers. Teachers in RULER classrooms were also more supportive of students, encouraging them to be autonomous in their learning and to share their ideas. Other research shows that an emotionally positive learning climate is a primary precursor to both academic engagement and achievement (Reyes et al., 2010).

Thus, how educators and students feel, and how they utilize and respond to their feelings, influences the school environment in ways that support learning and development. A recent meta-analysis examining the impact of social and emotional learning programming shows that a systematic process for promoting the social and emotional development of students is the common element among schools that report an increase in academic success, improved quality of relationships between teachers and students, and a decrease in problem behavior (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, forthcoming). Applications of emotional intelligence theory extend beyond the classroom – we have created training programs for businesses, medical professionals, and parents. Each of these applications strives to develop the skills of emotional intelligence. Empirical investigations examining whether adults can raise their emotional intelligence are underway.

What we know about emotional intelligence suggests that the construct is operationalized best as a set of mental abilities involving emotion-based problem solving measured with performance tests, as opposed to a set of traits and perceived abilities measured with self-report batteries. Preferring ability models makes it possible to both develop valid performance assessment tools and analyze the extent to which the construct contributes unique variance to a person's everyday behavior. Although research in this field is in its incipient stages, what we have learned thus far is promising: emotional intelligence can be measured objectively, it predicts important life outcomes, and it appears that the skills that comprise the construct can be learned. Over the next few decades, the field will advance as researchers continue to test and revise emotional intelligence theory and assessments, conduct validation studies, and create professional development programs.

### Short Biographies

Marc A. Brackett, Ph.D., is a Research Scientist in the Department of Psychology at Yale University. He also is Deputy Director of the Health, Emotion, and Behavior Laboratory and Head of the Emotional Intelligence Unit in the Edward Zigler Center in Child Development and Social Policy. Dr. Brackett is the author of more than 70 scholarly publications, including seven social and emotional learning curricula. He is the lead developer of The RULER Approach to Social and Emotional Learning, which posits that teaching the skills of recognizing, understanding, labeling, expressing, and regulating emotion contributes to positive development. Dr. Brackett's grant-funded research focuses on examining the impact of emotion-based skills training on child and adult outcomes related to psychological health, social competence, and both academic and work performance. In 2009, he was awarded the Joseph E. Zins Award from CASEL for his contributions to research on social and emotional learning. He works in school systems and corporations around the world in the areas of assessment and training.

Susan E. Rivers, Ph.D., is an Associate Research Scientist in the Department of Psychology at Yale University, where she earned her doctorate. She also is the Associate

Director of the Health, Emotion, and Behavior Laboratory at Yale. Her research draws from both social and health psychological perspectives to understand the conditions that promote and impede healthy living across the life span. She is a co-developer of The RULER Approach as well as several curricula designed to teach emotion skills. In her grant-funded research, she investigates how emotional skills training affects positive youth development and creates supportive learning environments. She also conducts research looking at how the RULER skills prevent risk-taking behaviors and bullying, and promote healthy relationships and wellness. Dr. Rivers is the co-author of many scholarly articles and papers, a consultant to businesses and schools, and works as an educational advisor on children's television programs, providing expertise on both resources to teach children emotional literacy and best practices for evaluating such programs.

Peter Salovey, Ph.D., Provost of Yale University, is the Chris Argyris Professor of Psychology. He joined the Yale faculty in 1986 after receiving an A.B. and A.M. from Stanford University and a Ph.D. from Yale. Professor Salovey has authored or edited thirteen books translated into eleven languages and published more than 350 journal articles and essays, focused primarily on human emotion and health behavior. With John D. Mayer he developed a broad framework called 'Emotional Intelligence,' the theory that just as people have a wide range of intellectual abilities, they also have a wide range of measurable emotional skills that profoundly affect their thinking and action. In his research on health behavior, Professor Salovey investigates the effectiveness of health promotion messages in persuading people to change risky behaviors relevant to cancer and HIV/AIDS. Professor Salovey served as president of the Society for General Psychology and treasurer of the International Society for Research on Emotion. He was the founding editor of the *Review of General Psychology* and an associate editor of *Emotion* and *Psychological Bulletin*.

## Endnote

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