



Emotional Intelligence

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In this module, we review the construct of emotional intelligence by examining its underlying theoretical model, measurement tools, validity, and applications in real-world settings. We use empirical research from the past few decades to support and discuss competing definitions of emotional intelligence and possible future directions for the field.

Learning Objectives

- Understand the theoretical foundations of emotional intelligence and the relationship between emotion and cognition.
- Distinguish between mixed and ability models of emotional intelligence.
- Understand various methods for measuring emotional intelligence.
- Describe emotional intelligence's evolution as a theoretical, success-oriented, and achievement-based framework.
- Identify and define key concepts of emotional intelligence (including emotion regulation, expression of emotion, understanding emotion, etc.) and the ways they contribute to decision making, relationship building, and overall well-being.

Introduction

Imagine you are waiting in line to buy tickets to see your favorite band. Knowing tickets are limited and prices will rise quickly, you showed up 4 hours early. Unfortunately, so did everyone

else. The line stretches for blocks and hasn't moved since you arrived. It starts to rain. You are now close to Will Call when you notice three people jump ahead of you to join their friends, who appear to have been saving a spot for them. They talk loudly on their cellphones as you inch forward, following the slow procession of others waiting in line. You finally reach the ticket counter only to have the clerk tell you the show is sold out. You notice the loud group off to the side, waving their tickets in the air. At this exact moment, a fiery line of emotion shoots through your whole body. Your heart begins to race, and you feel the urge to either slam your hands on the counter or scream in the face of those you believe have slighted you. What are these feelings, and what will you do with them?



After a serious disappointment or injustice how hard is it to keep control of your emotions? [Image: DCist, <https://goo.gl/o9EZOG>, CC BY-2.0, <https://goo.gl/zHmGV2>]

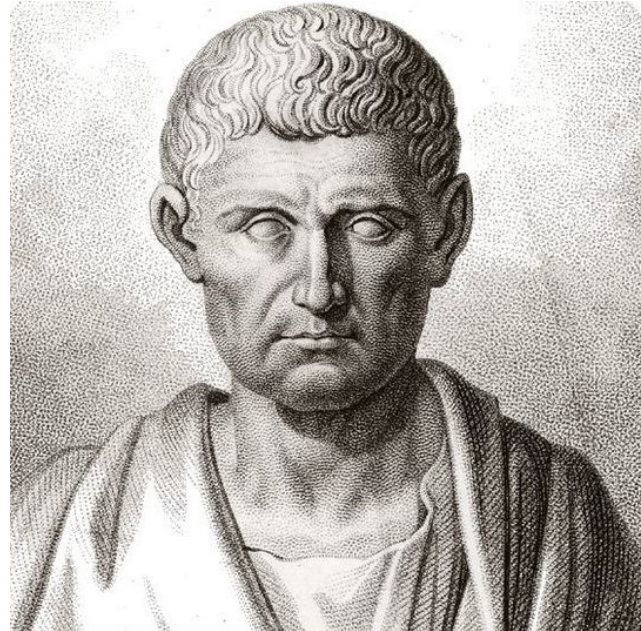
Emotional intelligence (EI) involves the idea that cognition and emotion are interrelated. From this notion stems the belief that emotions influence decision making, relationship building, and everyday behavior. After spending hours waiting eagerly in the pouring rain and having nothing to show for it, is it even possible to squelch such intense feelings of anger due to injustice? From an EI perspective, emotions are active mental processes that can be managed, so long as individuals develop the knowledge and skills to do so. But how, exactly, do we reason with our emotions? In other words, how intelligent is our emotion system?

To begin, we'll briefly review the concept of standard, or general, intelligence. The late American psychologist, David Wechsler, claimed that intelligence is the "global capacity of an individual to think rationally, act purposefully, and deal effectively with their environment" (Wechsler, 1944). If we choose to accept this definition, then intelligence is an operational process through which we learn to utilize our internal abilities in order to better navigate our surroundings—a process that is most certainly similar to, if not impacted by, our emotions. In 1990, Drs. Peter Salovey and John D. Mayer first explored and defined EI. They explained EI as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and use this information to guide one's thinking and actions" (Salovey & Mayer, 1990). EI, according to these researchers, asserts that all individuals possess the ability to leverage their emotions to enhance thinking,

judgment, and behavior. This module aims to unpack this theory by exploring the growing empirical research on EI, as well as what can be learned about its impact on our daily lives.

History of EI

Traditionally, many psychologists and philosophers viewed cognition and emotion as separate domains, with emotion posing a threat to productive and rational thinking. Have you ever been told not to let your emotions get in the way of your decisions? This separation of passion and reason stretches as far back as early ancient Greece (Lyons, 1999). Additionally, mid-20th century scholars explained emotions as mentally destabilizing forces (Young, 1943). Yet, there are traces throughout history where the intersection of emotion and cognition has been theoretically questioned. In 350 B.C.E., the famous Greek philosopher Aristotle wrote, “some men . . . if they have first perceived and seen what is coming and have first roused themselves and their calculative



Perhaps Aristotle might have revised his statement about people not being “defeated by their emotion” if he was ever stuck in rush hour traffic. [CC0 Public Domain, <https://goo.gl/m25gce>]

faculty, are not defeated by their emotion, whether it be pleasant or painful”(Aristotle, trans. 2009, Book VII, Chapter 7, Section 8). Still, our social interactions and experiences suggest this belief has undergone centuries of disregard, both in Western and Eastern cultures. These are the same interactions that teach us to “toughen up” and keep our emotions hidden. So, how did we arrive at EI—a scientific theory that claims *all* individuals have access to a “calculative faculty” through emotion?

In the early 1970s, many scientists began to recognize the limitations of the Intelligence Quotient (IQ)—the standardized assessment of intelligence. In particular, they noticed its inability to explain differences among individuals unrelated to just cognitive ability alone. These frustrations led to the advancement of more inclusive theories of intelligence such as Gardner’s multiple intelligences theory (1983/1993) and Sternberg’s triarchic theory of intelligence (1985). Researchers also began to explore the influence of moods and emotions on thought processes, including judgment (Isen, Shalcker, Clark, & Karp, 1978) and memory

(Bower, 1981). It was through these theoretical explorations and empirical studies that the concept of EI began to take shape.

Today, the field of EI is extensive, encompassing varying perspectives and measurement tools. Some attribute this growth to Daniel Goleman's popularization of the construct in his 1995 book, *Emotional Intelligence: Why It Can Matter More Than IQ*. Generating public appeal, he focused on EI's connection to personal and professional success. Goleman's model of EI includes a blend of emotion-related skills, traditional cognitive intelligence, and distinct personality traits. This embellished conceptualization of EI, followed by an increase in EI literature, contributed, at least in part, to conflicting definitional and measurement models within the field.

Models and Measures of EI

Many researchers would agree that EI theory will only be as successful as its form of measurement. Today, there are three primary models of EI: the ability model (Mayer & Salovey 1997; Salovey & Mayer, 1990), mixed models (Bar-On, 2006; Boyatzis & Sala, 2004), and the trait EI model (Petrides & Furnham, 2003).

Ability models approach EI as a standard intelligence that utilizes a distinct set of mental abilities that (1) are intercorrelated, (2) relate to other extant intelligences, and (3) develop with age and experience (Mayer, Caruso, & Salovey, 1999; Mayer, Salovey, Caruso, & Sitarenios, 2003). In contrast, both mixed and trait models define and measure EI as a set of perceived abilities, skills, and personality traits.

Ability Models: Mayer and Salovey Four-Branch Model of EI

In this section, we describe the EI (**Four-Branch**) model espoused by Mayer and Salovey (1997). This model proposes that four fundamental emotion-related abilities comprise EI: (1) perception/expression of emotion, (2) use of emotion to facilitate thinking, (3) understanding of emotion, and (4) management of emotion in oneself and others.

1. Perception of Emotion

Perception of emotion refers to people's capacity to identify emotions in themselves and others using facial expressions, tone of voice, and body language (Brackett et al., 2013). Those skilled in the perception of emotion also are able to express emotion accordingly and

communicate emotional needs. For example, let's return to our opening scenario. After being turned away at the ticket booth, you slowly settle into the reality that you cannot attend the concert. A group of your classmates, however, managed to buy tickets and are discussing their plans at your lunch table. When they ask if you are excited for the opening band, you shrug and pick at your food. If your classmates are skilled at perception of emotion, then they will read your facial expression and body language and determine that you might be masking your true feelings of disappointment, frustration, or disengagement from the conversation. As a result, they might ask you if something is wrong or choose not to talk about the concert in your presence.

2. Use of Emotion to Facilitate Thinking

Using emotion to enhance cognitive activities and adapt to various situations is the second component of EI. People who are skilled in this area understand that some emotional states are more optimal for targeted outcomes than others. Feeling frustrated over the concert tickets may be a helpful mindset as you are about to play a football game or begin a wrestling match. The high levels of adrenaline associated with frustration may boost your energy and strength, helping you compete. These same emotions, however, will likely impede your ability to sit at your school desk and solve algebra problems or write an essay.

Individuals who have developed and practiced this area of EI actively generate emotions that support certain tasks or objectives. For example, a teacher skilled in this domain may recognize that her students need to experience positive emotions, like joy or excitement, in order to succeed when doing creative work such as brainstorming or collaborative art projects. She may plan accordingly by scheduling these activities for after recess, knowing students will likely come into the classroom cheerful and happy from playing outside. Making decisions based on the impact that emotional experiences may have on actions and behavior is an essential component of EI.



Which emotions would serve you best during a football game? Would the same emotions be useful for a chess match? Matching the emotion to the task at hand is a valuable skill to have. [Image: Ian Sane, <https://goo.gl/IKuqyz>, CC BY 2.0, <https://goo.gl/zHmGV2>]

3. Understanding of Emotion

EI also includes the ability to differentiate between emotional states, as well as their specific causes and trajectories. Feelings of sadness or disappointment can result from the loss of a person or object, such as your concert tickets. Standing in the rain, by most standards, is merely a slight annoyance. However, waiting in the rain for hours in a large crowd will likely result in irritation or frustration. Feeling like you have been treated unfairly when someone cuts in line and takes the tickets you feel you deserved can cause your unpleasantness to escalate into anger and resentment. People skilled in this area are aware of this emotional trajectory and also have a strong sense of how multiple emotions can work together to produce another. For instance, it is possible that you may feel contempt for the people who cut in front of you in line. However, this feeling of contempt does not arise from anger alone. Rather, it is the combination of anger and disgust by the fact that these individuals, unlike you, have disobeyed the rules. Successfully discriminating between negative emotions is an important skill related to understanding of emotion, and it may lead to more effective emotion management (Feldman Barret, Gross, Christensen, & Benvenuto, 2001).

4. Management of Emotion

Emotion management includes the ability to remain open to a wide range of emotions, recognize the value of feeling certain emotions in specific situations, and understand which short- and long-term strategies are most efficient for emotion regulation (Gross, 1998). Anger seems an appropriate response to falling short of a goal (concert tickets) that you pursued both fairly and patiently. In fact, you may even find it valuable to allow yourself the experience of this feeling. However, this feeling will certainly need to be managed in order to prevent aggressive, unwanted behavior. Coming up with strategies, such as taking a deep breath and waiting until you feel calm before letting the group ahead of you know they cut in line, will allow you to regulate your anger and prevent the situation from escalating. Using this strategy may even let you gain insight into other perspectives—perhaps you learn they had already purchased their tickets and were merely accompanying their friends.

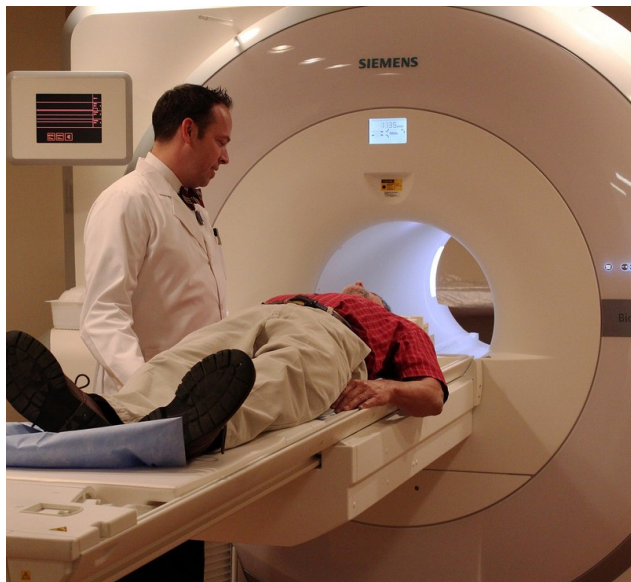
Measuring EI with Performance Measures

While self-report tests are common in psychology, ability models of EI require a different approach: performance measures. Performance measures require respondents to demonstrate their four emotion skills (Mayer & Salovey, 1997) by solving emotion-related problems. Among these measures, the [Mayer-Salovey-Caruso Emotional Intelligence Test](#)

(MSCEIT) (Mayer, Salovey, & Caruso, 2002) is the most commonly used. The MSCEIT is a 141-item test comprised of a total of eight tasks, two per each of the four emotion abilities. To measure emotion management, for example, respondents are asked to read through scenarios involving emotionally charged conflicts and then asked to evaluate the effectiveness of different resolutions. For a comprehensive review of the MSCEIT and other performance-assessment tools, please see Rivers, Brackett, Salovey, and Mayer (2007).

Mixed and Trait Models of EI

Unlike ability models, **mixed models** offer a broad definition of EI that combines mental abilities with personality traits such as optimism, motivation, and stress tolerance (see Cherniss, 2010, for a review). The two most widely used mixed models are the Boyatzis-Goleman model (Boyatzis & Sala, 2004) and the Bar-On model of emotional-social intelligence (Bar-On, 2006). The Boyatzis-Goleman model divides EI competencies into four groups: self-awareness, self-management, social awareness, and relationship management. Similarly, the Bar-On model offers five main components of EI: intrapersonal skills, interpersonal skills, adaptability, stress management, and mood. Developers of the trait EI model (Petrides & Furnham, 2003) explain EI as a constellation of self-perceived, emotion-related personality traits.



As an alternative to somewhat unreliable self-report measures, researchers have been using fMRI studies to detect changes in brain function when a self-report type of question is given to a participant. [Image: NIH Image Gallery, <https://goo.gl/aWZBvI>, CC BY-NC 2.0, <https://goo.gl/VnKlK8>]

Mixed and Trait Model Assessment: Self-Report

Self-report assessments—surveys that ask respondents to report their own emotional skills—are most often associated with mixed and trait models. Self-report measures are usually quick to administer. However, many researchers argue that their vulnerability to social-desirability biases and faking are problematic (Day & Carroll, 2008). In addition, there is wide speculation concerning the potential for inaccurate judgments of personal ability and skill on behalf of responders (e.g., Paulhus, Lysy, & Yik, 1998). Self-report measures have been shown to lack

discriminant validity from existing personality measures and have very low correlations with ability measures of EI (Brackett & Mayer, 2003; Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). According to Mayer and colleagues (2008), self-report tests may show reliability for individual personalities, but should not be considered EI because performance tests are the gold standard for measuring intelligence.

Although tensions between ability and mixed or trait model approaches appear to divide the field, competing definitions and measurements can only enhance the quality of research devoted to EI and its impact on real-world outcomes.

Room for Debate

While mixed and trait models shed some light on the concept of EI, many researchers feel these approaches undermine the EI construct as a discrete and measurable mental ability. EI, when conceptualized as an ability, most accurately describes the relationship between cognition and emotion by accounting for changes in individual outcomes that are often missed when focusing solely on cognitive intelligence or personality traits (O'Boyle, Humphrey, Pollack, Hawver, & Story, 2010). What's more, among adults, personality traits provide little room for malleability, making development in these areas difficult even when combined with emotional skills. For example, characteristics such as agreeableness and neuroticism, while contributing to personal and professional success, are seen as innate traits that are likely to remain static over time. Distinguishing EI from personality traits helps us better target the skills that can improve desirable outcomes (Brackett et al., 2013). Approaching EI with language that provides the opportunity for personal growth is crucial to its application. Because the ability model aligns with this approach, the remainder of this module will focus on ability EI and the ways in which it can be applied both in professional and academic settings.

Outcomes

Historically, emotions have been thought to have no place in the classroom or workplace (Sutton & Wheatly, 2003). Yet today, we know empirical research supports the belief that EI has the potential to influence decision making, health, relationships, and performance in both professional and academic settings (e.g., Brackett et al., 2013; Brackett, Rivers, & Salovey, 2011).

Workplace

Research conducted in the workplace supports positive links between EI and enhanced job

performance, occupational well-being, and leadership effectiveness. In one study, EI was associated with performance indicators such as company rank, percent merit increase, ratings of interpersonal facilitation, and affect and attitudes at work (Lopes, Grewal, Kadis, Gall, & Salovey, 2006). Similar correlations have been found between EI and a variety of managerial simulations involving problem solving, determining employee layoffs, adjusting claims, and negotiating successfully (Day & Carroll, 2004; Feyerherm & Rice, 2002; Mueller & Curhan, 2006). Emotion management is seen as most likely to affect job performance by influencing social and business interactions across a diverse range of industries (O'Boyle et al., 2010).



Think of a time when you made a choice to demonstrate emotional intelligence at work – what happened? [Image: Pricenfees, <https://goo.gl/8GOJPR>, CC BY 2.0, <https://goo.gl/BRvSA7>]

Leaders in the workplace also benefit from high EI. Experts in the field of organizational behavior are beginning to view leadership as a process of social interactions where leaders motivate, influence, guide, and empower followers to achieve organizational goals (Bass & Riggio, 2006). This is known as transformational leadership—where leaders create a vision and then inspire others to work in this direction (Bass, 1985). In a sample of 24 managers, MSCEIT scores correlated positively with a leader's ability to inspire followers to emulate their own actions and attend to the needs and problems of each individual (Leban & Zulauf, 2004).

Schools

When applied in educational settings, theoretical foundations of EI are often integrated into **social and emotional learning (SEL)** programs. SEL is the process of merging thinking, feeling, and behaving. These skills enable individuals to be aware of themselves and of others, make responsible decisions, and manage their own behaviors and those of others (Elias et al., 1997; Elbertson, Brackett, & Weissberg, 2010). SEL programs are designed to enhance the climate of a classroom, school, or district, with the ultimate goal of enhancing children's social and emotional skills and improving their academic outcomes (Greenberg et al., 2003). Adopting curricula that focus on these elements is believed to enable success in academics,

relationships, and, ultimately, in life (Becker & Luthar, 2002; Catalino, Berglundh, Ryan, Lonczek, & Hawkins, 2004).

Take a moment to think about the role of a teacher. How might emotions impact the climate of a classroom? If a teacher enters a classroom feeling anxious, disgruntled, or unenthused, these states will most likely be noticed, and felt, by the students. If not managed well, these negative emotions can hurt the classroom dynamic and prevent student learning (Travers, 2001). Research suggests that the abilities to perceive, use, understand, and manage emotions are imperative for effective teaching (Reyes, Brackett, Rivers, White, & Salovey, 2012; Brackett, Reyes, Rivers, Elbertson, & Salovey, 2011; Hargreaves, 2001). In a study that examined the relationship between emotion regulation and both job satisfaction and burnout among secondary-school teachers, researchers found that emotion regulation among teachers was associated with positive affect, support from principals, job satisfaction, and feelings of personal accomplishment (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010).

EI, when embedded into SEL programs, has been shown to contribute positively to personal and academic success in students (Durlak, Weissberg, Dymnicki, Tayloer, & Schellinger, 2011). Research also shows that strong emotion regulation can help students pay attention in class, adjust to the school environment, and manage academic anxiety (Lopes & Salovey, 2004; Mestre, Guil, Lopes, Salovey, & Gil-Olarte, 2006). A recent randomized control trial of RULER* also found that, after one year, schools that used RULER—compared with those that used only the standard curriculum—were rated by independent observers as having higher degrees of warmth and connectedness between teachers and students, more autonomy and leadership, less bullying among students, and teachers who focused more on students' interests and motivations (Rivers, Brackett, Reyes, Elbertson, & Salovey, 2013).

*RULER - Recognize emotions in oneself and in other people. Understand the causes and consequences of a wide range of emotions. Label emotions using a sophisticated vocabulary. Express emotions in socially appropriate way. Regulate emotions effectively.

Limitations and Future Directions

There is a need for further development in EI theory and measurement, as well as more empirical research on its associated outcomes (Mayer, Salovey, & Caruso, 2008). Despite its prominent role as the signature performance assessment of EI, the MSCEIT has a number of limitations. For example, it does not allow for the assessment of several abilities. These abilities include the expression of emotion and monitoring or reflecting on one's own emotions. (Brackett et al. 2013). Researchers must also address growing criticisms, particularly



Future directions for EI research include more study of those in cultures outside North America and Europe, and more attention to the dynamics of EI in the workplace and schools. [Image: CC0 Public Domain, <https://goo.gl/m25gce>]

also be paid to developmental trajectories, gender differences, and how EI operates in the workplace and educational settings (Brackett et al., 2013).

Although further explorations and research in the field of EI are needed, current findings indicate a fundamental relationship between emotion and cognition. Returning to our opening question, what will you do when denied concert tickets? One of the more compelling aspects of EI is that it grants us reign over our own emotions—forces once thought to rule the self by denying individual agency. But with this power comes responsibility. If you are enraged about not getting tickets to the show, perhaps you can take a few deep breaths, go for a walk, and wait until your physiological indicators (shaky hands or accelerated heartbeat) subside. Once you've removed yourself, your feeling of rage may lessen to annoyance. Lowering the intensity level of this feeling (a process known as *down regulating*) will help re-direct your focus on the situation itself, rather than the activated emotion. In this sense, emotion regulation allows you to objectively view the point of conflict without dismissing your true feelings. Merely down regulating the emotional experience facilitates better problem solving. Now that you are less activated, what is the best approach? Should you talk to the ticket clerk? Ask to see the sales manager? Or do you let the group know how you felt when they cut the line? All of these options present better solutions than impulsively acting out rage.

As discussed in this module, research shows that the cultivation and development of EI

those that stretch beyond the measurement debate and question the validity of the EI construct when defined too broadly (Locke, 2005). In order to advance EI research, there is a great need for investigators to address these issues by reconciling disparate definitions and refining existing measures. Potential considerations for future research in the field should include deeper investigation into the genetic (versus acquired) and fluid (versus crystallized) aspects of EI. The cultural implications and differences of EI also are important to consider. Studies should expand beyond the United States and Europe in order for the theory of EI to be cross-culturally valid and for its applications and outcomes to be achieved more universally. Greater attention should

contributes to more productive, supportive, and healthy experiences. Whether we're waiting in a crowded public place, delivering lesson plans, or engaging in conversation with friends, we are the ultimate decision makers when it comes how we want to feel and, in turn, behave. By engaging the right mental processes and strategies, we can better understand, regulate, and manage our emotional states in order to live the lives we desire.

Outside Resources

Article: Are you emotionally intelligent? Here's how to know for sure. Inc.com Retrieved from:

<http://www.inc.com/travis-bradberry/are-you-emotionally-intelligent-here-s-how-to-know-for-sure.html>

Article: Grant, A. (2014, January 2). The dark side of emotional intelligence, The Atlantic. Retrieved from:

<http://www.theatlantic.com/health/archive/2014/01/the-dark-side-of-emotional-intelligence/282720/>

Article: Gregoire, C. (2014, January 23) How emotionally intelligent are you? Here's how to tell. Huffington Post. Retrieved from:

http://www.huffingtonpost.com/2013/12/05/are-you-emotionally-intel_n_4371920.html

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

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

Discussion Questions

1. What are the four emotional abilities that comprise EI, and how do they relate to each other?
2. What are three possible implications for using ability-based and mixed or trait-based models of EI?
3. Discuss the ways in which EI can contribute positively to the workplace and classroom settings.

Vocabulary

Ability model

An approach that views EI as a standard intelligence that utilizes a distinct set of mental abilities that (1) are intercorrelated, (2) relate to other extant intelligences, and (3) develop with age and experience (Mayer & Salovey, 1997).

Emotional intelligence

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). EI includes four specific abilities: perceiving, using, understanding, and managing emotions.

Four-Branch Model

An ability model developed by Drs. Peter Salovey and John Mayer that includes four main components of EI, arranged in hierarchical order, beginning with basic psychological processes and advancing to integrative psychological processes. The branches are (1) perception of emotion, (2) use of emotion to facilitate thinking, (3) understanding emotion, and (4) management of emotion.

Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT)

A 141-item performance assessment of EI that measures the four emotion abilities (as defined by the four-branch model of EI) with a total of eight tasks.

Mixed and Trait Models

Approaches that view EI as a combination of self-perceived emotion skills, personality traits, and attitudes.

Performance assessment

A method of measurement associated with ability models of EI that evaluate the test taker's ability to solve emotion-related problems.

Self-report assessment

A method of measurement associated with mixed and trait models of EI, which evaluates the test taker's perceived emotion-related skills, distinct personality traits, and other characteristics.

Social and emotional learning (SEL)

The real-world application of EI in an educational setting and/or classroom that involves

curricula that teach the process of integrating thinking, feeling, and behaving in order to become aware of the self and of others, make responsible decisions, and manage one's own behaviors and those of others (Elias et al., 1997)

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