

# Emotional intelligence in gifted students

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**Abstract**

This article aims at shedding light on the emotional intelligence (EI) of gifted and high ability students. We begin by presenting a brief overview of EI theory and research and its relevance to gifted education. We then present theoretical considerations bearing on the nature of the relationship between cognitive and EI. This is followed by a survey of correlational and individual difference research bearing on the EI-high ability nexus. We then move on to present a number of general guidelines for the development of an EI training program designed to foster emotional and social competencies in gifted students. We conclude by offering some broad generalizations about EI in gifted students and point out the areas of needed future research.

**Keywords**

Giftedness, gifted students, emotional intelligence, emotional, competencies

**Emotional intelligence in gifted students**

The gifted education movement has traditionally been associated with conceptions and definitions of giftedness that primarily consider extraordinary cognitive abilities and talents in specific domains (Feldhusen, 1998). This movement, to a large extent, grew out of the pioneering work of two stellar psychologists devoted to the adaptive development of gifted children and youth—Lewis Terman and Leta Stetter Hollingworth (Pfeiffer, 2001). Following the tradition set by these psychological pioneers, most theorists have

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defined giftedness as involving an especially high intellectual or technical aptitude in one area or another (e.g. Renzulli, 2005). In addition, a dose of creativity and novelty, along with heightened motivation or energy, have also been considered hallmarks of giftedness (Sternberg and Davidson, 2005).

In recent years, however, particularly since the popularization of the emotional intelligence (EI) concept in the early 1990s, a more encompassing approach to the study of intelligence and talent has gradually gained widespread acceptance. Accordingly, it is contended that the traditional conception of intelligence is much too constrained and should be expanded to include not only cognitive abilities but also the experience, expression, and regulation of emotions. This trend has been supported through the works of a number of psychologists, most notably Gardner (1999), Sternberg (2012), and Mayer and Salovey (1993).

The gifted education literature over the past two decades also attests to the growing interest among educators and psychological researchers in fathoming the emotional characteristics of gifted and talented students. This surge of interest is largely motivated by the claimed role of affective and social characteristics of individuals as forces impacting both the talent development and well-being of the gifted (Shani-Zinovich and Zeidner, 2013). Yet, research on the psychosocial and emotional attributes of gifted and talented students has traditionally been given short shrift, especially when compared to the massive amount of research on the cognitive facets of giftedness, along with instructional and pedagogical issues in teaching gifted children and youth.

Although the socioemotional status and profile of gifted students is currently being debated (see Zeidner and Shani-Zinovitch, in press, for a review), systematically addressing emotional issues in gifted education should help reach gifted students, relieve their anxieties about being gifted, contribute to the development of strong social networks, and help them create meaningful lives (VanTassel-Baska, 2006). EI training may be especially valuable to those gifted students who are vulnerable to social-emotional deficits. For those gifted students who are characterized by troubling social, emotional, or interpersonal behaviors, the EI construct offers a useful conceptual framework to assist the counselor in designing helpful therapeutic interventions.

According to Schwean et al. (2006), two central issues regarding cognitively gifted children are currently of focal concern in the literature. The first relates to the unique profile of social-emotional competencies characteristic of gifted students. The second issue focuses on the appropriate educational settings and programs aimed at training and cultivating the academic and personal development of gifted children and youth. This article addresses both foregoing issues. Accordingly, we begin by presenting a brief overview of EI and its constituent competencies and discuss what we currently know about the relationship between cognitive and EI and the specific emotional competencies of gifted students. We then offer a number of tentative guidelines for the development of training programs designed to foster emotional and social competencies in gifted students.

## **EI: An overview**

“Educating the mind without educating the heart—is no education at all.” These perspicacious words, often attributed to Aristotle, are now being given serious attention by

educators, policy makers, and scholars in the field of education in general and gifted education in particular (Brackett et al., 2009). In fact, social and emotional skills have been recently touted as an important subset of “21st Century Skills,” essential for academic and occupational success and thriving in modern society (Kyllonen, 2012).

It is readily apparent that gifted students encounter a wide array of both positive and negative emotions of varying intensity in the classroom and in daily life, each of which may engage their emotional aptitudes and skills. Thus, these students may experience pride in successfully accomplishing a challenging task, display interest when studying novel school subjects, and enjoy various meaningful social activities. They may also experience anxiety when tackling a difficult problem in math or the sciences, envy when considering the successes of talented peers, anger when treated unfairly by classmates or teachers, and guilt or shame when intentionally harming or letting down significant others or failing to live up to the expectations of others. Given the myriad emotions students experience, emotional competencies of emotion understanding and control are central to their success.

EI refers to a set of hierarchically organized core competencies and skills for identifying, expressing, processing, and regulating emotions—both in self and others. The first systematic research on EI was conducted by Jack Mayer and Peter Salovey in the late 1990s. These psychologists popularized the concept in the academic community and developed the first ability-based measure of the construct. However, the popularity of EI over the years appears to reflect, in large part, the impact of a single book, Goleman’s (1995) *Emotional Intelligence*. In addition to being an international best seller, it turned out to be the stimulus for massive media coverage across the globe. Based on some of the exuberant claims made by Goleman and others in the popular press, EI was touted as a panacea for many of modern society’s ills, with EI training in schools, workplaces, and psychiatric clinics offered as a solution to many of the maladies afflicting contemporary society.

A number of factors may have combined to secure the widespread popularity and phenomenal success of EI (Zeidner et al., 2009). These are the modern “Zeitgeist,” emphasizing human emotions and the emotional side of one’s personality; the purported pivotal role of emotional competencies in applied settings (occupational, educational, social, clinical, health); the commonly held belief that EI is more egalitarian than general intelligence (assessed by Intelligence Quotient [IQ] tests), hence offering more hope for an egalitarian society; the assumption that EI is both more mutable and trainable than IQ; the widespread public antagonism toward IQ scores and consequences of their use (e.g. labelling, selection, tracking, placement); the intuitive folk belief that EI exists as a fact of nature; and the observation that EI strikes a resounding chord with the daily experience of most people.

However, despite a high level of public and scientific interest, many issues are still being debated and cardinal questions remain unanswered (Zeidner et al., 2009). Thus, despite over two and a half decades of intensive research, there appears little consensus over how EI should be conceptualized or assessed. Broadly, there are currently two different conceptual frameworks and related assessment models of the EI construct briefly discussed below.

The first model, the ability-based model, views EI as a cognitive ability, best measured via performance-type tests (e.g. *Mayer–Salovey–Caruso EI Test* (MSCEIT);

Mayer et al., 2002). The four-branch ability model of Mayer and Salovey is the most influential conceptualization of this kind. Under this framework, EI consists of four branches or facets of emotion abilities: *perception* (identification and expression of emotion), *assimilation* (integration of emotions in thought processes), *understanding* (understanding of antecedents, effects, blends, and transitions of emotions), and *management* (emotion regulation in order to modulate negative emotions and sustain and enhance positive emotions).

The second perspective, referred to as a “trait” or “mixed” model of EI, views EI as a noncognitive trait or personality disposition, best measured via self-report inventories, such as the Schutte Self-Report Inventory (SSRI: Schutte et al., 1998) and the *Trait EI Questionnaire* (Petrides, 2009). Proponents of this model view EI as a conglomerate of affective, personality, and motivational traits and dispositions and have been concerned with the relationship between EI, personality theory, traits, and cognate constructs. Trait EI may also be defined as the person’s perceptions of their own emotional self-efficacy (Petrides, 2009).

EI theory, research, and training may be of particular relevance for the field of gifted education (see Mayer et al., 2001). Indeed, amid the growing public efforts to promote the development and socioemotional learning in school-aged youth, EI has emerged as an important protective factor in the process of resilience and adaptation. There appears to be considerable evidence showing that emotionally skilled student tends to flourish (Brackett et al., 2009), with both ability-based and mixed or trait models of EI predicting a wide array of outcomes related to adaptive coping with stress, and well-being (Zeidner et al., 2012). High emotionally intelligent youth have been reported to have more positive relationships, are less likely to engage in risk-taking behaviors, experience fewer emotional symptoms, and perform better academically (see Matthews et al., 2012, for a review).

As noted by Matthews et al. (in press), high ability EI may confer advantages on gifted individuals over and above those of high cognitive ability. In young children, high emotional knowledge may support the transition to kindergarten and elementary school and subsequent academic accomplishment. Studies of high school and college students also suggest a modest enhancement of scholastic performance derived from EI. Indeed, gifted children may have a double academic advantage. First, their high cognitive ability, by definition, contributes to their academic attainment and success. Second, emotionally intelligent gifted students may do even better by coping adaptively with academic stressors, which further strengthen their academic performance. However, because giftedness has traditionally been defined by the child’s cognitive functioning and abilities, this has left open questions of how being gifted might impact social–emotional competencies. Conceivably, the high academic self-concept and self-efficacy that typically accompany giftedness (McCoach and Siegle, 2007) might support both emotional self-efficacy and objective social–emotional skills, but evidence is lacking.

## **The cognitive ability and EI nexus**

What do we currently know about the relationship between cognitive giftedness and EI? Regrettably, EI scholars have had rather little to say about the nexus of relations between

EI and academic giftedness. In an early study, Mayer et al. (2001) described a number of case studies of gifted and talented individuals that indicate how emotional giftedness may be distinct from intellectual giftedness. However, the article leaves open the issue of how the two forms of giftedness may be related and no control group was included. Thus, very little is presently known about the role of EI in the development and flourishing of the intellectually gifted. In the passages to follow, we examine theoretical considerations bearing on the relationship between cognitive and EI.

### *Theoretical considerations*

The standard psychometric theory of general intelligence (Spearman, 1927) predicts that social-emotional abilities, subsumed under the broader rubric of EI, should be positively related to cognitive ability. In fact, according to psychometric theory, any measure designed to assess an intelligence, including measures of EI, should show convergent validity by being significantly and meaningfully correlated with general ability.

As stipulated by Mayer et al. (2008), the EI label implies a number of criteria for evaluating the validity of the construct that should be instantiated by any measure designed to validly gauge EI. First, EI assessments should show a substantial positive correlation to other tests of intelligence, demonstrating what psychometricians term “the positive manifold” (i.e. consistent positive correlations among measures of ability). Secondly, EI scores should not relate too strongly to any one specific type of intelligence. That is, correlations between EI and existing intelligence constructs should indicate that EI measures a unique type of intelligence—not exactly the same type of intelligence that other tests already assess (e.g. verbal ability). Third, EI should relate positively to indicators of emotional function, indicating that this form of intelligence operates in the domain of emotions (e.g. empathy to the plight of others, adaptive coping with stress, positive social interactions). Finally, as EI is conceptualized as intelligence, rather than a personality trait, EI tests should relate to personality in the same way that other tests of intelligence do (i.e. modest correlations). These four criteria refer to important evidence for the construct validity of EI. Thus, based on the criteria specified above, especially the first two criteria, EI is predicted to be moderately related to measures of cognitive ability.

Kong (2014) notes that EI entails two different types of ability: (a) *crystallized ability* components (largely verbal) that require acquired emotion knowledge (e.g. accurately identifying and labeling a specific emotion regulation strategy) accumulated over time and (b) *fluid ability* components (largely nonverbal) that require reasoning (effectively implementing a self-regulation strategy in a novel emotionally evocative situation). It follows that ability-based EI should be significantly and meaningfully correlated with both verbal (crystallized) and nonverbal (fluid) forms of ability as well as general ability (IQ).

In addition, emotional and cognitive abilities may be developmentally linked during childhood with verbal ability in particular constraining the acquisition of emotional and social competencies (Matthews et al., in press). Zeidner et al. (2003) proposed an investment model of emotional competence, suggesting that a child’s verbal ability constrains their learning of the rules for socially appropriate feelings and displays of emotion,

components that are an important basis for emotional development in early childhood. In older children, metacognitive abilities that support insights into personal and social functioning assume increasing importance.

### *Empirical evidence*

Little research has directly addressed the relationship between intellectual giftedness and EI. In the passages below, we review correlational research bearing on the EI-cognitive ability nexus and move on to review studies targeting gifted students.

*Correlational research.* A recent meta-analysis by Kong (2014) reported that ability-based EI, assessed by the MSCEIT or the Multifactor EI Scale (MEIS), was positively correlated with three indices of intellectual ability: overall intelligence (mean  $r = 0.30$ ), verbal intelligence (mean  $r = 0.26$ ), and nonverbal intelligence (mean  $r = 0.23$ ). Gender was shown to moderate the relationship between overall MSCEIT/MEIS and verbal intelligence alone, suggesting that the convergence of overall ability EI and verbal intelligence may be stronger among men than among women. Men tend to be lower in ability EI than women, and so use of cognitive ability to compensate for limited emotional competency may be more prevalent in males. Also, the relationship between EI and ability was observed to increase with age. Overall, high intelligence appears to be positively associated with higher EI (when assessed as ability).

By contrast, studies of intelligence and trait EI provide a more clouded picture. Across studies, no consistent association has been found between trait EI and high cognitive ability, and contradictory findings on facets of trait EI have been reported (for a review, see Matthews et al., in press). Albeit, trait EI is linked modestly to grades, suggesting that those gifted children who happen to be low in trait EI may underachieve.

*Research with gifted students.* In this section, we begin by addressing several studies employing inadequate research designs, followed by a survey of studies employing an adequate methodology.

*Inadequate design.* Two studies by Chan (2004, 2007) assessed EI in gifted Chinese adolescents, without including a control group of non-identified students. EI was reported to be inversely related to stress in gifted adolescents, with the effects of EI on stress outcomes mediated by social coping (Chan, 2004). Furthermore, gifted Chinese students perceived greater self-strengths in social skills and utilization of emotions than management of emotions and empathy (Chan, 2007). It is unclear that these findings are unique to gifted individuals.

Lee and Olszewski-Kubilius (2006) examined the self-report (trait) EI of 234 gifted students in grades 10–12, attending summer programs for gifted adolescents. Data were collected on a number of personal variables, including moral judgment and leadership. The study had no control group, but relative to national age norms, female—but not male gifted students—showed lower trait EI ( $d = -0.42$ ). Further analyses showed that in both genders, gifted students scored higher on adaptability (e.g. confidence in

problem-solving) but lower on stress management and impulse control. Moreover, when compared to the gifted males, the gifted females had higher interpersonal abilities that included being aware of understanding and caring of others' feelings and emotions. Curiously, correlations computed among measures of academic ability (SAT-Verbal, SAT-Math, and SAT-Combined) and EI were small and not statistically significant among gifted students. Possibly, correlations were attenuated due to restricted range of ability.

*Adequate design.* To date, only two studies allow valid comparison between gifted and non-identified students on EI. The first study, conducted by Zeidner et al. (2005), compared academically gifted ( $N = 83$ ) and non-identified ( $N = 125$ ) students on both ability-based and self-report measures of EI. Israeli adolescent participants completed the MSCEIT, the SSRI, and the Vocabulary subtest of the Hebrew version of the Wechsler Intelligence Scale for Children-Revised (WISC-R-95). The gifted group was significantly higher in ability EI, measured by the MSCEIT ( $d = 0.39$ ), but obtained lower SSRI scores on average ( $d = -0.57$ ). The effect on the MSCEIT was significant only for the Emotion Understanding and Management branches ("strategic" EI: Mayer et al., 2003). It was also fully explained by group differences in vocabulary, pointing toward the importance of lexical processing in emotional functioning (Zeidner et al., 2003). Thus, differences in EI between gifted and control groups turned out to be highly dependent on the measure used.

The second study, conducted by Schwean et al. (2006), looked at the association between EI and giftedness in 169 gifted Canadian school children in grade 4–8, who were administered the EQi Youth Version (EQ-iYV) (Bar-On and Parker, 2000), a self-report measure of EI for youth. In addition, ratings of students' EI by both parent and teacher were obtained. When scores for the total gifted groups were compared with a matched sample (by age and gender) of non-identified children, the non-identified group scored higher on average on their interpersonal abilities, while the gifted student scored higher on the intrapersonal and adaptability scale of the EQiYV. Specifically, gifted students scored more highly on subscales for adaptability and intrapersonal functioning, whereas the non-identified control group obtained higher scores on interpersonal functioning. Furthermore, parents of gifted children tended to rate their children higher on total EI, adaptability, and stress management. Thus, self and parent ratings of the advantages of giftedness agreed only for adaptability, perhaps reflecting its dependence on cognitive problem-solving. Schwean et al. (2006) suggested that their findings countered the myth that intellectually gifted children are psychologically vulnerable.

In addition, the scant literature on EI in gifted versus non-identified students is ambiguous. The two studies using adequate design and allowing sound inferences point to different conclusions. Accordingly, the Zeidner et al.'s (2005) study suggests that results are measure dependent: compared to their non-identified counterparts, gifted students score higher on ability and lower on trait measures of EI. By contrast, Schwean et al.'s study (2006), based on a self-report measure alone, suggests that the results are ability dependent: gifted students score higher on intra-personal ability and lower on interpersonal ability, compared to their non-identified counterparts.

## **Training EI competencies in gifted students**

The rising popularity of EI in educational circles has spurred on efforts to address the emotional and social problems of both non-identified and gifted students through school-based intervention programs. Advocates for EI (e.g. Zins et al., 2007) have claimed that thoroughly revamping the school program to educate students systematically in affective competencies across the school years, complementing traditional academics, may be the best way to remedy issues currently plaguing the school system (low achievement, high crime and student violence, drug and alcohol abuse, high dropout rate). Social and emotional education, it is claimed, may give students the crucial foundations and skills for becoming caring, empathic, responsible, and compassionate citizens as well as advancing their personal development, including educational outcomes.

### *Social and emotional learning programs*

In view of the meaningful empirical link between student EI and academic success and well-being (see Matthews et al., in press), it is not surprising that educators have shown an interest in programs and activities targeting the development and training of various EI competencies in child and youth in both elementary and secondary schools. In fact, the implementation of programs that target emotional and social competencies has become a priority in many schools, with training programs for individuals to become more emotionally intelligent mushrooming in recent years.

Interventions designed to foster EI in the classroom fall under the general rubric of social and emotional learning (SEL) programs. These interventions focus on the various processes through which children enhance their ability to integrate thinking, feelings, and behaving to achieve life tasks (Zins et al., 2004). Curricular-based SEL programs seek to educate children about the value of EI as well as to foster the development of specific skills including recognition of emotions in self and others, empathy, management of emotions, and conflict resolution. These programs aim also to enhance educational achievements in the classroom, through promoting effective teacher–student collaboration, engagement in learning, and constructive stress management. Recent research supports the many positive impacts of soundly implemented SEL interventions in the schools on learning and social outcomes (Durlak et al., 2011). Furthermore, their cost effectiveness has also been attested by recent analyses (Belfield et al., 2015).

### *Social and emotional training for gifted students*

Programming for gifted children has historically been concerned with offering enriched learning opportunities in various academic subjects with little emphasis on the social and emotional needs of these children. A glance at the many SEL programs described in the literature (see Zeidner et al., 2009, for a review) suggests that few, if any, have been specifically developed and targeted for gifted children and youth.

In the passages to follow, we present a number of basic guidelines and broad principles for the development of EI training programs tailored to the needs of gifted children. Helping gifted children develop emotional skills may yield numerous



cognitive, affective, and social benefits for both the student and her social environment that accrue over time. Accordingly, gifted students may benefit from learning EI skills as they learn to interact more effectively with others. Schools may also reap benefits if training programs instill in participants a sense of personal growth and motivation, contributing to a positive classroom atmosphere.

A number of basic working assumptions underlie the development of social-emotional learning programs for the gifted students. First, it is assumed that giftedness does not carry with it any inherent risk for emotional problems. When emotional problems do arise, it is often due to a misfit between the gifted child's social and emotional needs and the affordances of the child's familial, social, and educational environment, coupled with a lack of nurture and care for the child. Second, gifted students may benefit from EI training, and their social and intellectual functioning can be enhanced by teaching these students age appropriate emotional and social skills (emotional adjustment, peer relationships, managing stress, and performance). Third, a failure to explicitly target the affective and social components characteristic of gifted and talented students may compromise the actualization of their cognitive potential, social adaptation, and well-being. Finally, as a rule, teachers, counselors, and health professionals are not adequately trained to recognize emotional needs of gifted students nor are they sufficiently trained to help develop socioemotional competencies of these individuals.

### *Guidelines for developing EI training programs*

We now present a number of broad guidelines for consideration in the development of EI training programs. It is important to keep in mind when reviewing these tentative guidelines that it is presently rather unclear how we should go about designing training programs tailored to be effective for gifted children (Lopes et al., 2006). We emphasize that gifted children are a diverse group, some of whom show high levels of social-emotional competency, whereas others may be vulnerable to stress, social isolation, or impulsive behaviors (Matthews et al., in press). Thus, interventions need to be based on assessment of a multiplicity of personality traits, competencies, and vulnerabilities, not just identification of "giftedness". Also, it is less than clear what kind of results we can expect from these training programs and to what extent these programs are likely to be more or less effective than alternative types of social and emotional training.

**Conduct careful needs assessment.** A careful preplanning phase is central to a successful implementation of an EI training program. Thus, before planning, designing, and implementing the program, EI program planners would do well to conduct a needs and resource assessment in the school or school district under consideration. The assessment is needed at this stage to (a) gather empirical data on the psychosocial profile, strengths, and vulnerabilities of gifted students; (b) identify the specific needs for an EI training program among the school's or districts' gifted population; (c) evaluate to what degree the new program fits with the existing practice and culture of the school/district and expectations of the administrators, school principal, and teachers (stakeholders); (d) assess school readiness to implement the EI training program, (e) identify possible barriers toward successful implementation of the EI training program; and (f) evaluate

needed resources (funding, personnel, professional development, venues for conducting the training activities). A preliminary budget and resource allocation plan needs to be formulated at this stage.

Furthermore, the researcher needs to educate stakeholders (principals, teachers, counselors, parents) about why the program should be conducted for gifted students in the first place. All relevant stakeholders for the gifted (principal, teachers, parents, etc.) need to be presented with the theoretical model foundational to the program; the explicit links between the program and the policies and current practices of the school; illustrate how the programs can help achieve the desired goals, emphasizing the social, emotional, and academic growth of gifted students.

*Base social and emotional intervention programs on a solid conceptual framework.* Past experience indicates that emotional and social intervention programs are most effective when they are rooted in sound psychological and education theory (Zins et al., 2004). Accordingly, social and emotional programs for the gifted should be based on a clear theory or model of EI and a coherent conceptualization and definition of EI and its constituent components.

Different conceptualizations of EI would lead to different intervention programs, techniques, measures, and perhaps even outcomes. For example, if one were to adopt an ability-based model of EI, one would strive to foster such EI facets as emotion awareness and identification, differentiating and monitoring emotions, emotion expression, utilization of emotions, and regulation and control of emotions. By contrast, if a program is based on a “trait model” of EI (Petrides, 2009), the program could alternatively focus on a number of broad traits and specific competencies, such as well-being (self-esteem, trait happiness, trait optimism), self-control (emotion regulation, stress management, impulsiveness), emotionality (emotion perception, emotion expression, trait empathy, relationship), and sociability (social awareness, emotion management, assertiveness). Thus, the model of EI underlying the program dictates the specific competencies targeted, the relevant measures, and objectives assessed during program evaluation.

*Carefully specify program goals and behavioral outcomes.* At the developmental stage, EI programs should identify and specify program goals and objectives. Thus, EI training programs should be based on a coherent rationale for the specification of program *goals*, representing the desired program outcomes, and *objectives*, the operational procedures leading to the desired outcomes (Rossi and Freeman, 1993). The eventual outcome measures employed are empirical indicators of whether or not desired goals are achieved.

General but vague program objectives (e.g. “equip gifted students with social and emotional skills to succeed in school and in life”), often phrased as abstract idealized statements of desired outcomes, need to be clarified and be broken down into specific components or competencies. Thus, the desired outcomes of the EI training program should be stated in terms of the specific skills to be learned and the assessment methods to be used to evaluate skill acquisition.

Consider a program framed according to an ability model, designating “the development of emotion understanding” as a key goal. Following are some illustrative relevant objectives that may be specified: “Understand how varying cognitive appraisals of situation can activate different emotions”; “Understand how emotions can influence cognitions (feeling sad can lead to retrieval of depressed memories)”; Explain how emotions influence behavior (e.g. how anger and hostility can lead to an aggressive outburst)”; “Perceive causes and consequences of discrete emotions (e.g. pride, shame)”; “Analyze how different emotions are related (e.g. shame and guilt)”; “Predict likely transitions and procession between emotions”; “Interpret complex feelings, such as emotional blends (e.g. anger and contempt leads to disgust) and contradictory feeling states (being both happy and sad in reaction to an event, such as daughter’s wedding).”

*Translate program goals into specific program components.* The program goals and objectives need to be translated into specific program components and activities (for myriad exercises, see Bracket and Katulak, 2007). Activities should be highly interactive and engage students in a creative multifaceted approach that incorporates multiple targets of instruction, including divergent thinking, creative writing, and active problem-solving.

EI training needs to employ experiential exercises applying to the world of the gifted learner, including case studies and role playing. Furthermore, the contents and activities of the program, even in the affective domain, must be sufficiently challenging to engage the intellect of gifted learners (VanTassel-Baska, 2006). School performance can be enhanced by addressing the cognitive affective and social dimension of learning. Rather than drilling a narrow set of skills over and over again, emotional skills training should emphasize raising awareness, broadening people’s coping repertoire, and helping gifted students to learn from experience.

A wide array of program activities can be employed to achieve specific objectives. For example, an EI ability-based training program with the objective of “strategically using emotions to facilitate thinking” may design the following program activities for students: evaluating which emotion would best facilitate specific tasks (brainstorming, forging of a creative essay or poem, engaging in philosophical contemplation about the meaning of life); considering specific problems from the perspective of a person experiencing a negative mood versus the perspective of a person experiencing positive mood; or use of a diary to reflect on the specific emotions employed to enhance problem-solving in different situations.

*Integrate the EI program into the classroom curriculum.* Ideally, an EI training program should be fully integrated into the classroom curriculum and be an essential ongoing part of gifted children’s education over the course of their schooling. It would not be judicious to treat social and emotional skills as “add-ons” or to create another “special class” or “pull-out” program for the gifted. Instead, we recommend that EI training programs should be designed to integrate seamlessly into the curriculum, with lessons on emotions and emotional competencies blended into all subject areas, such as history, language arts, music, science, and math. In this type of integrated program, gifted students can learn how to harness aggressive emotions in gym class, how to handle

stress or frustration in math or science class, or how to empathize with one another while reading powerful literature or analyzing fictional or historical personae.

Teachers of the gifted can also be of service in supporting program implementation by intentionally exploring ways emotional competencies can be extended into history, art, music, literature, physical education classes, and among other subjects. As noted by Brackett et al. (2009), the very nature of the teacher's job offers teachable moments for emotion literacy skill development. In any case, instructional methods and program content should be field tested and piloted to assure their appropriateness to the specific gifted student participants.

*Base program goals, objectives, and activities on careful assessment on the special needs of the gifted.* The EI training program needs to meet the special psychosocial characteristics and distinctive emotional and social needs of the gifted to assure appropriate talents are developed. These should include both (a) *potential risks* (e.g. specific social stressors, low social self-concept, feelings of being different, alienation, competitiveness, perfectionism, heightened sensitivity to others, poor peer relations, and conditional acceptance) and (b) *protective factors and mechanisms* (e.g. high cognitive abilities, high academic self-concept, adaptive coping with stress, strivings for excellence, grit).

Furthermore, EI programs need to target a number of reported concerns of gifted children (Strop, 2002), including getting along with siblings, establishing positive relationships with peers, dealing with over-sensitivities about what others say and do, developing the ability to relax and relieve tension, dealing with the desire for perfectionism, and developing tolerance toward others. Such a list, in way of example, could be used for developing instructional units or activities for discussion and writing with gifted students.

Furthermore, EI training programs need to provide developmentally and culturally appropriate instruction, taking into account the cognitive, social, and emotional skills of gifted children in different grade levels. This would require that the program instructional unit content and activities need to be differentiated as a function of age, gender, minority status, and exceptionality (e.g. dyslexic, Attention Deficit Hyperactivity Disorder [ADHD]). Likewise, special consideration should be given to extremely gifted students, when compared to average and moderately gifted individuals, in that the former may experience a host of psychological difficulties in terms of communicating with their peers as well as their self-perception and esteem (Powell and Haden, 1984).

Given past research pointing to the hardships of gifted students in social communication and establishing positive relations with their peers, the EI training program needs to address the underlying emotional skills that will help foster the well-being, healthy social interaction, and improved academic performance of students. Thus, a variety of social skills can be introduced into the program, depending on the specific needs of gifted and objectives. These might include social communication and expressivity, building bonds, collaboration and cooperation, team capabilities, conflict management, social control, and behaving in a socially appropriate way.

For planning purposes, prior research is needed in order to map out the kinds of emotional competencies gifted students display and to assess those competencies that are both strong and relatively weak in gifted students, both from an ipsative

(intra-individual) and normative (interindividual) reference framework. EI training programs could focus on enhancing relatively strong competencies of the gifted, strengthening relatively weak competencies, and developing new ones. For example, if in the course of preplanning, gifted students in the program are reported to experience anxiety when labeled and stereotyped (“nerd”, “geek”, “bookworm”), special exercises for dissipating verbal insults and disassociating from the verbal attack would help these victimized gifted students (see Ciarrochi and Mayer, 2007).

*Make provisions for practice, feedback, and for generalizing the domain of emotional skills across different classes of behavioral performance.* Emotional skills, like cognitive skills, require practice of what is learned as well as environmental feedback on one’s performance. Accordingly, for the EI training to be successful, it is necessary provide opportunities for students to apply emotional and social skills both in and out of the classroom, particularly in emotion-laden situations. Homework exercises would be particularly helpful in inculcating these skills at, in the schoolyard, and in the neighborhood. The program needs to capitalize on informal learning or learning from experience as well as formal instruction.

Furthermore, research on coaching and expertise suggests that people learn most effectively when they receive prompt, clear, and objective feedback about their performance (Ericsson and Charness, 1994). Thus, during the course of the EI training, instructors need to provide participants feedback regarding what they are doing both right and wrong emotionally or socially and how to improve their behavior. Advancements in technology, such as building virtual worlds for instruction may be especially valuable for evaluating social-emotional competency and providing feedback on the student’s handling of emotive scenarios.

One way to make feedback more informative is to hold periodic meetings where gifted students and their teachers discuss interpersonal social dynamics, and participants are provided with specific and concrete suggestion for improving their emotional competencies or social behaviors. Interpersonal interactions or group exercises can be videotaped and participants can review and discuss their performance with the EI trainer or qualified teacher as observer.

*Assure professional development of program personnel.* The professional development of teaching and program staff, via training workshops and on-site consultation, is essential for successful program implementation. Very little in teacher training or in the standard curriculum actually prepares teachers for effectively tackling emotional or social topics—that seem rather foreign to their training. Thus, prior to implementing EI intervention programs, it is essential to provide teachers with sufficient knowledge, skills, and expertise to run the program. Especially, for gifted students, it may be essential to identify appropriate, dedicated, and talented teachers, so that they can fulfill their professional role in implementing EI interventions.

In addition, curricular activities and workshops should provide skills training to all relevant stakeholders involved in educating gifted students—school leaders teachers, staff, parents, and of course, the children themselves, to promote their emotional skills and create a positive learning and working environment. This preparation lays the

groundwork for achieving successful implementation and enduring sustainability for the program and achieving program objectives.

*Assure ongoing monitoring of progress.* Process evaluations can be used to determine whether the EI training program is being implemented as planned and to determine to what degree the program is achieving its intended goals. Indeed, a systematic monitoring of the program and its impact in a school is an integral part of the implementation process. Outcome metrics should be defined in advance of implementation.

Systematic monitoring involves careful observation of program implementation by trained observers to obtain empirical evidence that the program is being implemented and eventually will have the intended impact. A multi-method approach is probably best, including surveys, observer ratings, academic records, attendance records, and assessment of emotional skills. Program administrators need to meet regularly with teachers and staff to monitor program implementation and to discuss how the programs are being implemented and to problem solve any unexpected occurrences during instruction.

Measuring the accurate delivery of program activities and measuring program intervention are crucial for program evaluation. Several years back, the first author reviewed an evaluation of a life skills educational training program for elementary school children in Israel that was found to be ineffective in reaching one of its goals (i.e. reducing student aggressive behavior in the schools). When carefully examining the process, the author found, to his astonishment, that the program was never accurately implemented in a large number of the classrooms being evaluated. No wonder it was reported to have little effect! Thus, details of the EI training programs need to be carefully monitored and program implementation recorded.

*Interventions should be accompanied by systematic impact evaluation.* Past experience indicates that SEL program is most effective when they are field tested and evidence based through systematic impact evaluation (Zins et al., 2004). Evaluation seeks to link the goals and activities of the program to empirical evidence that programs are being carried out as planned and they have the desired effects. Thus, EI intervention programs for the gifted should be backed by rigorous impact assessment, employing the principles and criteria used by evidence-based intervention programs. A comprehensive multi-method assessment should be in place, with a variety of impacts assessed, for example, teacher or student satisfaction with the program, students' keener awareness of emotions in self and others, perceived more effective emotion regulation, and so on.

Evaluation programs should preferably use robust experimental designs for assessing program effectiveness. The general hallmarks of experimental design are random assignment of students to the EI program versus control group, the ability to manipulate the intervention, and control over possible intervening variables. However, when use of random assignment and true experimental design is not feasible, many of the controls required to rule out alternative explanation for evaluation findings can be incorporated into nonrandomized designs by use of matched comparison groups or time-series designs. In addition, EI programs need to employ valid and reliable assessments and identify relevant criterion measures to assess program impact. It would appear essential

to statistically control for ability and personality to differentiate changes that can be uniquely attributed to EI development.

## Conclusions and future directions for research

The gifted field is increasingly recognizing the importance of understanding how to better promote states of excellence among talented youth (Lubinski and Benbow, 2000). Further work is needed to achieve an in-depth understanding of the socioemotional characteristics of gifted students and to find ways of tailoring curricular activities and academic demands of gifted students to match their level of emotional maturity and social competence.

There is a solid theoretical basis to suggest that cognitive ability and EI, conceptualized and assessed as an ability, are moderately correlated. Our review of the empirical literature broadly supported the theoretical predictions. By contrast, the empirical data point to very low and inconsistent associations between trait EI and cognitive ability. Studies comparing EI in gifted and non-identified students are rather ambiguous and in need of replication and further research on larger samples.

Although many gifted children may not, in general, have a particular need for EI training, it is reasonable to expect that the judicious application of empirically supported psychoeducational strategies to promote EI would help gifted children develop emotional skills and may yield benefits that accrue over time. EI training may help students improve their emotional and social functioning, learn new or improved emotional competencies, and help them understand and manage their emotions better. Also, EI training may help support the optimal development of talent and student well-being in its various forms and expressions and have important implications for gifted education.

A number of challenges and constraints involved in the training of emotional skills and competencies in gifted students have implications for the design and implementation of EI training programs. First, given the relative stability of personal traits and deeply entrenched coping styles, we should not expect EI training to yield rapid change in gifted student participants. Developing emotional skills takes time, requiring deliberate effort, systematic feedback, and repeated practice, in order to change deeply engrained traits. Whereas certain personal dispositions may be difficult to change (emotional stability, sociability, etc.), it is possible to change “surface” emotional skills, competencies, and behaviors. Also, EI training can do much to raise awareness about the importance of emotional skills and motivate student to learn from their everyday emotional experiences. Schools may also reap short-term benefits if training programs instill in participants a sense of personal growth and motivation contributing to a positive classroom atmosphere.

Second, there are numerous ways people can manage their emotions and handle interpersonal challenges. What works for some people may not work for others, such as the gifted. Likewise, what works in some situations (classroom) may not work in other circumstances (on the soccer field or at a party). This suggests that in training emotional skills, we should respect individual differences, be sensitive to the social or environmental context, avoid simplistic recommendations, and strive to broaden people’s coping resources and self-insight rather than drill a narrow set of skills.

Third, interventions designed to enhance EI are now a major focus for education, but they have tended to neglect the needs of the gifted child. Future training programs might target selected vulnerabilities attributed to gifted students, such as feeling alienated from typical children, maladaptive coping with stress, and threats to academic self-concept associated with big-fish-little-pond effect (suggesting that the academic self-concept of gifted children is depressed when they are enrolled in homogeneous classes for the gifted compared to heterogeneous classes).

Fourth, although many of the currently employed EI programs are promising, few have been systematically modeled upon theories of EI or designed in a way that is likely to lead to long-term change. One-day seminars or workshops can be valuable in educating people about emotions and raising emotional awareness, but they may not by themselves lead to the kind of “reprogramming” that is required for significant improvement. Thus, it is critical for psychoeducational researchers to continue to establish evidence-based strategies that educators can effectively implement, particularly for the gifted.

### *Directions for future research*

In order to inform planning of EI programs for the gifted, future research is needed on the emotional and social strengths and vulnerabilities of gifted children and youth at various grade levels. Relatedly, the EI and competencies of varying degrees of gifted children need to be assessed. Thus, comparisons of the socioemotional profiles of marginally, moderately, and profoundly gifted children are needed. Also, due to the scant data available to date, further research is warranted on the latent mean structure of EI in gifted versus non-identified students. Studies should be preferably based on larger and more representative samples of gifted and non-identified children, employing both ability-based and trait measures, with statistical controls for measures of both cognitive ability and personality. In addition, separate assessments of EI with respect to self (intra-personal) and with respect to others (interpersonal) are warranted in future research. At present, we know little about the magnitude of the relationship between their inter- and intra-emotional competencies in gifted students.

Also, very little is presently known about the relative ipsative or normative ranking of different emotional competencies (emotion awareness, emotion expression emotion management, etc.) in gifted versus non-identified students. Research is also needed on the invariance of the factor structure and dimensionality of EI assessed both as ability and trait, in gifted versus non-identified children and youth. Furthermore, it is important to examine to what degree the positive correlates of EI with respect to achievement, well-being, health, and social relations holds for both gifted and non-identified individuals alike.

Given the label “EI,” one might reasonably assume that EI is related to the processing and knowledge of emotional information. However, few studies have explored relations between EI and a number of cardinal intelligence constructs (e.g. visualization, broad auditory function, and clerical–perceptual speed). Clearly though, such empirical research is needed. Also, since most of the research examining emotional and cognitive intelligence has looked mainly at linear relationships, future research would benefit from examining curvilinear models as well. It is not implausible that the EI will show an



inverted U curve in relation to ability, with low levels of EI found on both ends of the IQ continuum and optimal levels of EI found in the middle of the ability continuum.

In the future, it is crucial to develop EI programs on the basis of a solid theoretical framework of EI, coupled with a mapping out of the specific emotional needs of the gifted. A priority for future research is to develop stronger process-based models of emotional competency to better inform understanding of the strengths and weaknesses of gifted children, at both the group and individual level. These training programs need to be carefully monitored and systematically assessed in order to determine the effectiveness of EI programs designed to train EI in gifted students. There is also a need for developing standards for program implementation as well as employing cost–benefit analysis for assessing the return for costs associated with delivering EI programs. Many teachers may be hesitant to focus time and energy on EI interventions, fearing it may be at the expense of fostering the academic talents of the gifted. Therefore, the implementation of these programs should be followed by rigorous evaluation in order to document the gains and benefits of such programs for the gifted.

Furthermore, it remains uncertain which of the components of EI are most malleable and responsive to training; what the threshold level of EI is for training; or what age level EI components are most responsive to instruction and training. Equally, little is known of the following key facets of training: specific goals, specific EI components most responsive to training, most effective interventions to use for low versus average EI clients, and the minimal level of EI that a client needs to benefit from therapy.

While gifted children are not, in general, emotionally vulnerable or dysfunctional, some gifted children may face social–emotional challenges and hardships. Future research on EI may help to elucidate the specific nature of the emotional functioning in gifted individuals and suggest avenues for remedial interventions, where appropriate. Programs that are specifically geared toward the aptitudes and needs of gifted children are warranted (e.g. Gubbels et al., 2014), although such efforts are in their infancy. At present, it remains unclear whether EI itself can be directly trained, as opposed to specific social–emotional skills. Also, the effectiveness of these programs in developing the noncognitive skills of the gifted remains to be seen.

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