

Emotional Intelligence and Gifted Children

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Abstract

Two issues regarding academic and intellectually gifted children are debated to this day. The first concerns the social-emotional competency of gifted children and the second focuses on the question of what is the most appropriate educational setting to support the academic and personal development of these children. Self, teacher and parent ratings of emotional intelligence (EI) were obtained from samples of gifted children in both special and regular class programs and a group of matched average ability and average achieving students in grades 4-8. While a number of small but statistically significant differences were obtained between the groups on the various EI subscales, gifted children tended to show well developed EI competencies, whether in regular or segregated classes, and compared with average ability students.

Keywords: Emotional intelligence, gifted children, intellectual giftedness, emotional competency, Bar-On EI scales

Students who are identified as “gifted” are a diverse group coming from every socioeconomic and ethnic background. Historically, academically gifted students have been identified by either or both their exceptional performance in school and by measures of general intellectual ability such as the Wechsler or Binet scales and typically fall within the top two per cent of the population. However, this band covers a wide spectrum of giftedness with students on one end displaying moderately advanced skills to those whose abilities are extremely advanced. Following from the earlier studies

of Hollingworth (1926, 1937) and Terman (1925, 1930, 1947) and others, a number of intellectual characteristics have been identified that are seen to be common to gifted learners include the ability to: meaningfully manipulate a symbol system; learn at a rapid rate; think logically, given appropriate data; use stored knowledge to solve problems; reason by analogy, as in comparing an unknown and complex process or scenario to a familiar one; and extend or extrapolate knowledge to new situations or applications (Alberta Education, 2000). Extending this description to include both cognitive and non-cognitive factors, Renzulli (1978) offers the following characteristics which may be evidenced in gifted learners: an unusually good vocabulary; quick mastery and recall of factual information; lots of information on a variety of topics; alert and observant; reads a great deal on his/her own; reasons things out, recognises relationships, comprehends meanings and makes logical associations; works persistently on things that interest him/her; is easily bored with routine tasks; prefers to work independently; requires little direction from teachers; strives for perfection, is self-critical; often is self-assertive, may be stubborn in his/her beliefs; is curious about many things, asks questions about anything and everything; reveals originality in written, oral, artistic expression; offers unusual, unique and clever answers; is uninhibited in giving opinions; is often concerned with different ways of doing things – will modify, improve, or adapt; displays a keen sense of humour; and is nonconforming; accepts disorder, and does not fear being different. From this list, it would appear that

the intellectually gifted also manifest a wide range of individual differences characteristics that include both personality and conation.

Gross (2002) reported that the majority of studies on the psychosocial well-being of intellectually gifted and academically talented students have found that these individuals display positive adjustment. These studies have generally involved those individuals who fall into the moderately gifted range of intelligence. Dauber and Benbow (1990) reported that "moderately gifted students were viewed both by themselves and by their age peers as being more popular, more socially active, and more socially valued than were the extremely gifted" (p. 21). However, research (Dauber & Benbow, 1990; Freeman, 1979; Gross, 1993; Gross, 2001; Janos, Marwood & Robinson, 1985; Janos & Robinson, 1985; Schneider, 1987) has shown that children who are exceptionally or profoundly gifted do not appear to display similar adjustment patterns as those students who fall within the moderately gifted range. For example, students with extreme verbal abilities rated themselves as being lowest in social standing (Dauber & Benbow, 1990). A number of studies have suggested that highly gifted children and adolescents prefer to develop friendships with either similarly gifted peers or older children (Freeman, 1979; Gross, 2001; Janos, Marwood and Robinson, 1985).

It would appear that at least some children who are gifted intellectually frequently face both social and emotional challenges caused by a discrepancy between their advanced cognitive abilities and their vulnerability toward psychosocial problems (Fiedler, 1993; Morelock, 1992; Silverman, 1993). This asynchronous development is believed to occur when the child's cognitive, emotional and physical development is uneven. Fiedler (1993) suggests that a significant number of gifted students may develop psychosocial problems as a result of this asynchrony and may be "seriously at risk in the typical school environment" for psychosocial difficulties (p. 402). Additionally, Fiedler indicated that several studies have found that the psychosocial problems experienced by gifted children persist into adulthood, and do not change over time. These difficulties include self-esteem, perfectionism, over achievement, difficulties in peer relationships, career development problems, socially inadequate behaviours, behaviour problems, and school maladjustment.

Colangelo and Davis (2003) contend that the education of students within this intellectual ability range must meet the distinctive needs of the individuals involved. In fact, Terman (1925, 1930, 1947) was a strong proponent of special education provisions and argued that gifted children should be identified as early as possible in childhood, should be accelerated through school, have a differentiated curriculum and instruction,

and should have specially trained teachers. Programming for gifted children has historically been concerned with offering enriched learning opportunities in various academic areas with little emphasis on the social and emotional needs of these children. Moon (2002) found that although gifted students benefit from a curriculum that is challenging, they also require assistance with peer relationships, emotional and social adjustment, and stress management. The impact of these characteristics must be understood in order to meet their emotional and social needs. Neihart, Reis, Robinson and Moon (2002) state that the problems of social isolation, peer rejection, loneliness, and alienation experienced by the more extremely gifted children are a result of society's response to them rather than their intellectual exceptionality. They argue that children should be grouped in school by abilities, interests and values rather than by age. "Ability grouping is an essential intervention response for the highly gifted, and the earlier this occurs, the more effective it is likely to be in preventing social isolation"(p. 25).

Thus the provisions that the school and community make for gifted children would appear to be a significant issue. The debate regarding how to best serve the educational, emotional and social needs of these students has continued for a number of years with various stakeholders imposing pressure in an attempt to gain support for their concept of the ideal service delivery model. Confusion arises as to the best educational model to follow when research results are mixed regarding the benefits of the differing grouping models along with the emphasis that society has currently placed on inclusion programs rather than segregated and specialised education.

Many of the social and emotional characteristics of gifted children described in the above studies would appear to closely parallel current definitions of emotional intelligence, particularly viewed from the trait or mixed methods model put forward by Bar-On (1997, 2000). Of course the relationship of intelligence to the input, processing and output of emotion is also central to the emotional intelligence construct. Emotional intelligence involves both emotion and intelligence, but also includes other characteristics such as motivation, social functioning, self regulation, and well-being (Mayer, 2001). While there are two key competing models of emotional intelligence stemming from the work of Bar-On (1997, 2000) and Mayer, Salovey and Caruso (2000), the mixed methods perspective defines emotional intelligence as an array of emotional, intrapersonal, and interpersonal abilities that influence one's overall ability to adapt to and cope with everyday external demands and pressures (Bar-On & Parker, 2000).

The present study employed the factors described in Bar-On's (1997) emotional intelligence model to further examine the social-emotional competencies of gifted children and explore the relationship between school environments and the psychological well-being of these children. Of interest also was the congruence between ratings of emotional intelligence by self, parents and teachers.

Method

Participants

The participants comprising the gifted sample were drawn from an urban centre in Saskatchewan. The initial identification of giftedness required that the students met several criteria including teacher nomination, exceptional academic achievement, specified scores based on the Renzulli (1978) model, and ability test scores of approximately two standard deviations above the mean (i.e., $IQ = 130$ on standardised intelligence tests such as the Wechsler scales). Presentations were made to the teachers of the students within special programs and through written correspondence to the teachers and parents of students within the regular school programs. The parents and children who participated signed a participant consent form describing the study. The questionnaires were completed by the students under the supervision of the study's researchers. The parent and teacher questionnaires were completed individually and sent to the researcher.

The final sample of gifted students included 169 children and adolescents (84 males and 85 females) in grades 4 through 8. Their mean age was 11.45 ($SD = 1.10$) years. Of the gifted participants, 123 (56 males and 67 females) were enrolled in an academic program specifically designed for gifted children and adolescents. The remaining 46 gifted participants (28 males and 18 females) were not involved in any special educational program but rather elected to continue their education in the regular classroom setting.

The second sample consisted of a subset of cases from a larger community-based sample of children and adolescents ($N = 1200$) collected in central Ontario. These average ability and average achieving students, according to school records, were randomly matched with the gifted sample on the basis of age and gender. The participants of this non gifted sample were also recruited via presentations to schools and parent groups. A participant consent form that described the study was signed by both the parents and children who participated. These questionnaires were completed under the supervision of a teacher or parent.

Measures

All of the child and adolescent participants completed the Emotional Quotient Inventory: Youth Version (EQ-i:YV; Bar-On & Parker, 2000). The EQ-i:YV is a 60 item self report measure of emotional intelligence (EI) designed for children and adolescents between the ages of 7 and 18 years. Responses are rated by the participants on a four-point Likert scale ranging from 1 = "very seldom or not true of me" to 4 = "very often true or true of me". The instrument has four moderately correlated EI scales (intrapersonal, interpersonal, adaptability, and stress management), as well as a total EI scale. The intrapersonal scale includes six items, both the interpersonal and stress management scale contain twelve items, and the adaptability scale is comprised of ten items. The total EI score is determined by summing the scores of the four scales. A high EI score indicates high social and emotional competency. The scale also includes a fourteen item general mood scale and a six item positive impression validity scale.

Bar-On and Parker (2000) report that the EQ-i:YV, which was developed with a normative sample of 9172 children and adolescents, has a replicable factor structure. They also report that the scales of the EQ-i:YV are highly correlated with the comparable scales of the adult version (Emotional Quotient Inventory; Bar-On, 1997). The scales have been found to have adequate internal reliability. Three week test-retest reliability ranges from .84 for the intrapersonal scale to .89 for the total EI score.

All of the participants' parents and the teachers of the gifted sample completed the Bar-On Emotional Quotient Inventory: Youth Version- Observer Form (EQ-i:YV-O; Bar-On & Parker, in press). The EQ-i:YV-O is a 38 item measure that asks a parent or teacher to rate the child or adolescent's level of emotional and social competency. It includes the same dimensions as the EQ-i:YV (intrapersonal, interpersonal, adaptability, and stress management). A high score indicated a high level of emotional intelligence. Responses are rated on a four point Likert scale ranging from 1 = "very seldom or not true of the child" to 4 = "very often true or true of the child".

Results

Program vs. Non Program Gifted Students

A series of independent groups t-tests were conducted to compare the EI levels (based on parent, teacher, and self-report ratings) of gifted students in the special program and gifted students not in the program. The dependent variables were the intrapersonal, interpersonal, adaptability, stress management, and total EI scores. Table 1 presents the means and standard deviations of the EI scales for the gifted students in the

program and the gifted students not in the program (i.e. who chose to remain in the regular school program).

Table 1: Means (*M*) and standard deviations (*SD*) of EI scale scores for gifted students in the program and not in the program.

	In Program <i>M</i> (<i>SD</i>) <i>N</i> = 123	Not In Program <i>M</i> (<i>SD</i>) <i>N</i> = 46
<i>Self Report</i>		
Intrapersonal	2.59 (.65)	2.60 (.49)
Interpersonal	3.22 (.35)	3.25 (.36)
Adaptability	3.03 (.50)	3.24 (.45)
Stress Management	2.83 (.47)	2.79 (.41)
Total	2.92 (.32)	2.97 (.30)
<i>Parent Rating</i>		
Intrapersonal	2.64 (.62)	2.94 (.40)
Interpersonal	3.34 (.46)	3.48 (.36)
Adaptability	3.28 (.56)	3.49 (.43)
Stress Management	3.05 (.70)	3.21 (.64)
Total	3.08 (.39)	3.28 (.28)
<i>Teacher Rating</i>		
Intrapersonal	2.73 (.67)	2.86 (.58)
Interpersonal	3.19 (.57)	3.26 (.44)
Adaptability	3.32 (.60)	3.62 (.39)
Stress Management	3.53 (.59)	3.57 (.58)
Total	3.19 (.41)	3.33 (.37)

For the self-report scores, a significant difference was found between the two groups of gifted students on the adaptability ($t(167) = -2.39, p < .05$) scale. The gifted students not in a special program scored significantly higher than those in the special program.

For the parent reports, a significant difference between the gifted students in the program and not in the program was found for the intrapersonal ($t(167) = -3.11, p < .05$), adaptability ($t(167) = -2.32, p < .05$), and total EI ($t(167) = -3.23, p < .05$) scales. The gifted students in the regular class programs were rated higher by their parents than those in the special program.

For the teacher reports a significant difference was found between gifted students in the special program and those not in the special program on the adaptability ($t(167) = 3.16, p < .05$) scale. Gifted students not in the special program were rated higher by their teachers than those in the special program.

Gifted vs. Average Ability Students

Several 2x2 ANOVAs were conducted to examine the effects of giftedness and gender on self-reported EI scores. The mean EI scores and their standard deviations for the gifted and average ability samples are presented in Table 2. A main effect for group was found for the interpersonal scale ($F(1, 334) = 4.10, p < .05$), intrapersonal scale ($F(1, 334) = 3.91, p < .05$) and the adaptation scale ($F(1, 334) = 6.80, p < .05$). Non-gifted, average achieving students were found to rate their interpersonal abilities significantly higher than gifted students, however, gifted students rated their intrapersonal and adaptability abilities significantly higher than non-gifted students.

Table 2: Means (*M*) and standard deviations (*SD*) of EI scores for gifted and non gifted students.

	Gifted			Non Gifted		
	Male <i>M</i> (<i>SD</i>) <i>N</i> = 84	Female <i>M</i> (<i>SD</i>) <i>N</i> = 85	Total <i>M</i> (<i>SD</i>) <i>N</i> = 169	Male <i>M</i> (<i>SD</i>) <i>N</i> = 84	Female <i>M</i> (<i>SD</i>) <i>N</i> = 85	Total <i>M</i> (<i>SD</i>) <i>N</i> = 169
<i>Self Report</i>						
Intrapersonal	2.58 (.65)	2.60 (.58)	2.59 (.61)	2.31 (.59)	2.60 (.61)	2.46 (.62)
Interpersonal	3.14 (.38)	3.32 (.31)	3.23 (.35)	3.17 (.44)	3.45 (.34)	3.31 (.42)
Adaptability	3.16 (.54)	3.03 (.43)	3.09 (.49)	2.90 (.55)	2.99 (.48)	2.95 (.52)
Stress Management	2.84 (.47)	2.80 (.43)	2.82 (.45)	2.74 (.49)	2.75 (.49)	2.75 (.49)
Total	2.93 (.34)	2.94 (.30)	2.93 (.32)	2.78 (.35)	2.95 (.35)	2.87 (.36)
<i>Parent Rating</i>						
Intrapersonal	2.74 (.61)	2.71 (.56)	2.72 (.59)	2.64 (.56)	2.75 (.60)	2.70 (.58)
Interpersonal	3.28 (.44)	3.47 (.43)	3.37 (.44)	3.31 (.44)	3.48 (.42)	3.40 (.44)
Adaptability	3.36 (.49)	3.31 (.58)	3.34 (.54)	2.97 (.63)	2.96 (.56)	2.97 (.60)
Stress Management	3.02 (.72)	3.16 (.64)	3.09 (.68)	2.86 (.63)	2.90 (.60)	2.88 (.62)
Total	3.10 (.36)	3.16 (.38)	3.13 (.37)	2.95 (.33)	3.02 (.35)	2.99 (.34)

A main effect for gender was found for the intrapersonal ($F(1, 334) = 5.60, p < .05$), interpersonal ($F(1, 334) = 32.95, p < .05$), and total EI ($F(1, 334) = 5.84, p < .05$) scores. Females scored significantly higher than males on all three of these scales. An interaction was found for gender and group (gifted vs non-gifted) on the intrapersonal ($F(1, 334) = 4.10, p < .05$), adaptation ($F(1, 334) = 4.10, p < .05$), and total EI ($F(1, 334) = 4.89, p < .05$) scales. Post hoc comparisons revealed that on the intrapersonal scale and total EI scale, non-gifted males scored significantly lower than gifted males, gifted females, and non-gifted females. On the adaptability scale, it was found that gifted males scored significantly higher than the non-gifted males, but not higher than the gifted and non-gifted females.

Several 2x2 ANOVAs were also conducted to evaluate the differences in parents' reports of their child's EI based on gifted group and gender. A main effect for group was found for the adaptability ($F(1, 334) = 11.63, p < .05$), stress management ($F(1, 334) = 9.35, p < .05$), and total EI ($F(1, 328) = 14.63, p < .05$) scales. It was found that the parents of gifted students rated their child's abilities significantly higher than parents of non-gifted, average ability students on each of these three scales. A main effect for gender was found for the interpersonal ($F(1, 334) = 13.66, p < .05$) scale, where parents of gifted female students reported their child's abilities significantly higher than did the parents of gifted male students.

Relationships Between Raters for Gifted Students

Several 2x3 ANOVAs were conducted on the EI scores of the gifted students to examine the influence of gender and rater (self-report, parent, or teacher). The means and standard deviations of these EI scores are presented in Table 3. A main effect for gender was found for the interpersonal ($F(1, 501) = 27.39, p < .05$) and total EI ($F(1, 501) = 6.10, p < .05$) scale. Females were rated by all three groups as having significantly higher interpersonal abilities than males on both of these scales.

A main effect for rater was found for each of the EI scales: intrapersonal ($F(2, 501) = 3.62, p < .05$), interpersonal ($F(2, 501) = 7.36, p < .05$), adaptability ($F(2, 501) = 16.28, p < .05$), stress management ($F(2, 501) = 66.91, p < .05$), and total EI ($F(2, 501) = 28.71, p < .05$). On the intrapersonal scale, teachers' ratings were significantly higher than the self-report children ratings. On the interpersonal scale, parent ratings were significantly higher than both the teachers' reports and the children's self-reports. On the adaptability, stress management and total EI scales, parents and teachers rated the students' skills significantly higher than the children rated themselves. In addition, for stress

Table 3: Means (M) and standard deviations (SD) of gifted students for EI scales.

	Male M (SD) $N = 84$	Female M (SD) $N = 85$	Total M (SD) $N = 169$
<i>Self Report</i>			
Intrapersonal	2.58 (.65)	2.60 (.58)	2.59 (.61)
Interpersonal	3.14 (.38)	3.32 (.31)	3.23 (.35)
Adaptability	3.16 (.54)	3.03 (.43)	3.09 (.49)
Stress Management	2.84 (.47)	2.80 (.43)	2.82 (.45)
Total	2.93 (.34)	2.94 (.30)	2.93 (.32)
<i>Parent Report</i>			
Intrapersonal	2.74 (.61)	2.71 (.56)	2.72 (.59)
Interpersonal	3.28 (.44)	3.47 (.43)	3.37 (.44)
Adaptability	3.36 (.49)	3.31 (.58)	3.34 (.54)
Stress Management	3.02 (.72)	3.16 (.64)	3.09 (.68)
Total	3.10 (.36)	3.16 (.38)	3.13 (.37)
<i>Teacher Report</i>			
Intrapersonal	2.67 (.73)	2.86 (.55)	2.77 (.65)
Interpersonal	3.08 (.59)	3.33 (.45)	3.20 (.54)
Adaptability	3.38 (.63)	3.43 (.51)	3.41 (.57)
Stress Management	3.44 (.65)	3.64 (.50)	3.54 (.59)
Total	3.14 (.46)	3.32 (.33)	3.23 (.41)

management and total EI scores, teachers rated the students' skills significantly higher than the parents.

Table 4 presents the correlations between the raters for the gifted students. The correlations between the self-report, parent, and teacher ratings of the gifted students for the intrapersonal, interpersonal, adaptability, stress management, and total scales were all significant. The correlations between the child and parent ratings ranged from .29 for the adaptability scale to .35 for the total scale. The correlations between the child and teacher ratings ranged from .16 for the interpersonal, adaptation and total scale, to .29 for the stress scale. The correlations between the parent and teacher ratings ranged from .21 on the intrapersonal scale to .42 for the total scale. While the correlations between raters on each of the EI scales are not especially large, the pattern of correlations suggests that raters tend to view the same EI variable more similarly in comparison to other scale comparisons.

Table 4: Correlations between child, parent, and teacher ratings for each of the EI scales (gifted students only).

	Intra	Inter	Adapt	Stress	Total
Child Ratings					
Intra	.32*	.18*	.15*	-.03	.22*
Inter	.11	.30*	.14	.17*	.26*
Adapt	.19*	.13	.29*	.03	.23*
Stress	-.03	.13	.08	.39*	.23*
Total	.25*	.27*	.25*	.18*	.35*
Parent Ratings					
Intra	.16*	-.03	-.06	-.03	.02
Inter	.16*	.18*	.08	.16*	.21*
Adapt	.12	-.12	.16*	-.08	.04
Stress	.04	.17*	.07	.29*	.20*
Total	.18*	.05*	.08*	.11*	.16*
Teacher Ratings					
Intra	.21*	.07	.15*	.09	.19*
Inter	.17*	.36*	.21*	.28*	.36*
Adapt	.18*	.04	.25*	.11	.21*
Stress	.14	.35*	.13	.39*	.35*
Total	.26*	.31*	.27*	.34*	.42*

Note. * $p < .05$

Discussion

The debate surrounding the psychological health and well-being of gifted children has been the subject of empirical study for some time (e.g., Terman & Oden, 1959). Terman contended that intellectually gifted persons were more likely to turn out socially, emotionally, and physically well in later life than to the contrary. Despite the robustness of these findings at a group level, it would appear that not all gifted children show the resilience and psychological health that might be expected and hoped for (Fiedler, 1993). As well it has been suggested (Colangelo & Davis, 2003) that these children are also intellectually and psychologically impacted by their environment and especially that of the school.

The present study further examined these questions employing the more recent construct of EI. Although there is much controversy regarding the theoretical integrity and clinical significance of EI (e.g., see Matthews, Zeidner, & Roberts, 2002; Schulze & Roberts, 2005; Stough, Saklofske, & Hansen, 2006), there has also been considerable support for this construct in more recent psychology publications such as the journal, *Personality and Individual Differences*. The model and corresponding measure used in this study is based on the work of Bar-On (1997) and included the factors of interpersonal and intrapersonal

intelligence, adaptability, and stress management that would appear to capture key aspects of psychological health and well-being.

Likely one of the most important findings is that the EI total and factor scores of gifted children in general were not dissimilar to the normative data presented in the manuals and particularly in comparison to the matched sample of average achieving students. While some significant differences between the gifted and non-gifted, average ability and average achieving students on both self-reported (higher intrapersonal and adaptability and lower interpersonal scores for gifted children) and parent report (higher adaptability, stress management and total scores for gifted children) were found, these differences in terms of effect size were not large. Similarly the observed gender differences on both self and parent report measures suggested some small differences. Of interest was the finding that females self-reported higher intrapersonal, interpersonal and total EI scores in contrast to males, regardless of their classification as gifted or average ability students. The trends observed here would suggest that intellectually gifted children are seen both by themselves and their parents to be psychologically healthy, at least as operationalised by the EI measures used in this study. These findings are in line with research studies reported earlier in this paper and continue to contradict the myth that intellectually gifted

children are somehow more psychologically vulnerable or are emotional 'outliers'.

The question of the best educational program for gifted children is one that is often driven by belief in the absence of evidence, with advocates on both sides of the argument. The inclusion perspective rests in large part on the argument that intellectually gifted children need to experience the full range of social and psychological opportunities in contrast to what might be construed as the more 'emotionally' limited environment of the segregated and highly specialised program, with its primary focus on academic matters. The school system participating in this study encouraged those children identified as gifted and their families to determine their program choice. It is apparent that more children in this particular sample entered the special education program although about 30% elected to remain in the regular class programs. The current findings showed that gifted students who remained in the regular class setting scored slightly but significantly higher only on self-reported adaptability. Parent and teacher ratings also supported the higher adaptability scores for regular class, gifted children. Again these score differences were not large but do suggest that gifted children not in special programs may manifest a slightly greater ability to adapt and adjust to external demands. It is not possible to conclude if these children are somewhat more adaptable in the first instance and that is why they decided to stay in the regular class setting or if this setting supports the acquisition of a more flexible and adaptive set of skills. In general, both groups of students whether self or other rated, had average to above average scores on the EI subscales and total EI.

A final observation is related to the measurement of EI. This study included ratings of EI from three sources. Although actual score differences were not large, the correlation results suggest that there is not as high an agreement between self, parent and teacher ratings as might be expected. In part this may be due to the very nature of the emotional intelligence construct and the questionnaire items which are, at times, less specific than would be found on, for example, a symptom checklist defined by clearly observable behaviours. As well, EI scores were somewhat restricted in range and this would certainly attenuate the correlations reported in Table 4. However, it is noteworthy that the self-ratings by the gifted students in this study tended to be slightly lower than those given by both parents and teachers. This should be further examined in future research but also considered when multi-responder emotional intelligence questionnaires are used to describe individuals.

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