Emotional Intelligence as Predictor of Academic Achievement among Gifted Students

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ABSTRACT: Emotional intelligence is a very important concept in the academic and non-academic community. The purpose of the present cross-sectional study was to investigate the influence of emotional intelligence on academic achievement in gifted students. This research is descriptive and of predictive type. The sample consisted of 61 (Female = 29, Male = 32) participants recruited from high school gifted students of Khoj City in Iran. To measured the emotional intelligence we using Emotional Quotient Inventory (EQ-I) (Bar-On, 1997), and to measured students’ academic performance was using Grade Point Average (GPA). The study results showed that there was significant and positive correlation between emotional intelligence and gifted students’ academic achievement (r = .365, P≤ 0.004) and regression analysis showed that among of components of emotional intelligence, emotional self-awareness component had a significantly predicted power academic achievement of gifted students and other components had not a predicted power. Regarding the above results, relationship between emotional intelligence on academic achievement in gifted students has been discussed.

Key words: Academic achievement, Emotional intelligence, Gifted students, Intelligence, Trait EI

INTRODUCTION

Emotions play an important role in our life. Intelligence and mental skills contribute to learning and adaptation. According to Zeidner & Matthews (2000) intelligence is modestly related to positive attributes such as self-efficacy and ego resiliency, as well as reduced vulnerability to delinquency and some forms of mental illness. Emotional intelligence refers to competencies in identifying, understanding, expressing, and managing emotion, in both self and others (Mayer, Salovey, Caruso, & Sitarenios, 2001). Emotional intelligence is defined by Salovey and Mayer (1990) as the process of one's assessment of his own and others' emotions accurately, to express feelings appropriately and process of emotional information including the regulation of emotion to make the life better. Emotional intelligence has recently attracted a lot of interest in the academic literature (Mayer, Salovey, & Caruso, 2000; Roberts, Zeidner, & Matthews, 2001). Ability EI theory provides a framework within which to study the role of emotions in predicting academic performance (Mayer, Salovey, & Caruso, 2008). EI has also been found to be positively correlated with adaptive and negatively correlated with maladaptive coping (e.g. Austin et al., 2010). Studies investigating the relationship between trait EI and academic performance indicate that despite the weak correlation between intelligence and trait EI, it could act as a moderator factor between intelligence and academic performance (Chamorro-Premuzic & Furnham, 2006). Some studies have shown that a positive relationship between EI and academic success in school pupils (Hogan et al., 2010; Mayer, J., Salovey, P., & Caruso, D. 2008). Several studies reported no significant association between trait EI and academic performance (Mavroveli, Petrides, Sangareau, & Furnham, 2009).

Petrides, Frederickson, and Furnham (2004) found that trait EI induce higher academic performance only within a group of low-IQ pupils, and Proponents of EI have had rather little to say about relations between EI and academic giftedness. But Zeidner et al.( 2005 ) believe that social–emotional strengths of the gifted child might be attributed to elevated levels of emotional intelligence so emotional intelligence will affect in problem solving such as academic achievement in gifted students and In the context of education would developed the cognitive and emotional factors related to academic achievement. Emotional and cognitive abilities may be linked developmentally, during childhood. In particular, verbal ability may constrain the acquisition emotional and social competence(Zeidner& etc, 2005).
In this study we investigate the relationship between emotional intelligence and academic achievement between gifted students, and predicted their academic achievement through components of emotional intelligence.

Methodology
This research is descriptive and predictive type. Considering that the aim of the present study to investigate the relationship between emotional intelligence and academic achievement among gifted students correlation method has been used.

Sample and data collection method
The samples included gifted boys' and girls' students enrolled second grade mathematics and science courses from two high schools in Iran. The emotional intelligence questionnaire using 5-point Likert scale was used in assessing the students' emotional intelligence in middle of the academic year, then to collect students GPA were used list of students GPA final the academic year. After prior coordination with the school administrator the questionnaire in a group administered setting in the classroom.

Instrumentation
The following Table 1 indicates the measures of the study variables used in the study. The instrument items were adopted from previous studies by Emotional Quotient Inventory (EQ-I, Bar-On, 1997).

<table>
<thead>
<tr>
<th>study variables</th>
<th>No. of items</th>
<th>source of scale</th>
<th>type of scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional intelligence</td>
<td>90</td>
<td>Bar-On(1997)</td>
<td>5-points likert scale</td>
</tr>
</tbody>
</table>

Finding & Discussion
As in Table 2 are noticeable relationship between emotional intelligence and academic achievement is positive and significant \( r = 0.365, p < 0.004 \). Findings are consistent with the findings of Hogan et al., (2010); Mayer, Salovey & Caruso (2008) and also, there is a positive and significant relationship between academic achievement and components of Emotional Self-Awareness \( r = 0.375, p < 0.003 \) and Assertiveness \( r = 0.276, p < 0.031 \) and Self-Actualization \( r = 0.335, p < 0.008 \) and Independence \( r = 0.319, p < 0.012 \) and Optimism \( r = 0.279, p < 0.020 \).

Table 2. Pearson correlation coefficient between emotional intelligence and its components and academic achievement among gifted students.

<table>
<thead>
<tr>
<th>GPA</th>
<th>ES</th>
<th>AS</th>
<th>SR</th>
<th>SA</th>
<th>IN</th>
<th>EM</th>
<th>IR</th>
<th>RE</th>
<th>PS</th>
<th>RT</th>
<th>FL</th>
<th>ST</th>
<th>IC</th>
<th>HA</th>
<th>OP</th>
<th>EQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation/0.375</td>
<td>/0276</td>
<td>/0222</td>
<td>/0335</td>
<td>/0319</td>
<td>/072</td>
<td>/045</td>
<td>/048</td>
<td>/059</td>
<td>/168</td>
<td>/159</td>
<td>/148</td>
<td>/113</td>
<td>/025</td>
<td>/297</td>
<td>/365</td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>/003</td>
<td>/031</td>
<td>/086</td>
<td>/008</td>
<td>/012</td>
<td>/581</td>
<td>/733</td>
<td>/714</td>
<td>/654</td>
<td>/197</td>
<td>/222</td>
<td>/254</td>
<td>/388</td>
<td>/106</td>
<td>/020</td>
<td>/004</td>
</tr>
</tbody>
</table>


Table 3 shows that \( F (9/668) \) is a significant at the 0.003 level. This indicates that regression is the significant in first and second, Emotional intelligence explains about 14% achievement variance of gifted students, at least one of the independent variables in predicting the dependent variable was effective. To understanding this we use partial regression coefficients and t-dependent test, and results show in table 4.

Table 3. Calculation results of one-way analysis of variance between the predictive variables.

<table>
<thead>
<tr>
<th>RR</th>
<th>RegressionResidual</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.375</td>
<td>0.141</td>
<td>3/54</td>
<td>21/601</td>
<td>1</td>
<td>3/540</td>
</tr>
<tr>
<td>a. predictors: (constant), Emotional Self-Awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. dependent variable: academic achievement
In table4 regression analysis shows that among components of emotional intelligence only Emotional Self-Awareness has a significant positive effect on academic achievement.
Table 4. Results of regression coefficients and T-test concerning the predictive variables

<table>
<thead>
<tr>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>17.948</td>
<td>/442</td>
<td>40.620</td>
<td>0.000</td>
</tr>
<tr>
<td>Emotional Self-Awareness</td>
<td>0/064</td>
<td>0/020</td>
<td>0/375</td>
<td>3/109</td>
</tr>
</tbody>
</table>

Dependent variable: academic achievement

### Reliability analysis

The internal consistency was evaluated by examining Cronbach alpha’s for each scale. The coefficients least range from average a .72 (Stress Tolerance) to high a .87 (Independence) and consistency of other components are; a .82 (Emotional Self–Awareness) a .79 (Assertiveness) a .85 (Self-Regard) a .82 (Self-Actualization) a .81 (Empathy) a .79 (Interpersonal Relationship) a .77 (Social Responsibility) a .73 (Problem Solving) a .81 (Reality Testing) a .78 (Flexibility) a .82 (Impulse Control) a .80 (Happiness) a .81 (Optimism), and it’s similar with Bar-On (1997) found coefficients range in US-study Overall our results showed a very good reliability.

### Descriptive statistics & analysis

The findings showed that the distribution of gender was higher for males with a total of 32 male respondents (52.46%). On the other hand, there were 29 female respondents or (47.54%) percent out of the total respondents. The age of the respondents showed that, 29.5% were 15 years old and the rest (70.5%) were 16 years old.

Table 5. The mean and standard deviation of research variables: emotional intelligence and its components, Grade Point Average

<table>
<thead>
<tr>
<th>ES</th>
<th>ASSR</th>
<th>SA</th>
<th>IN</th>
<th>EM</th>
<th>IR</th>
<th>RE</th>
<th>PS</th>
<th>RT</th>
<th>FL</th>
<th>ST</th>
<th>IC</th>
<th>HA</th>
<th>OP</th>
<th>EQ</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main</td>
<td>21.2</td>
<td>19.1</td>
<td>22.4</td>
<td>21.8</td>
<td>21.0</td>
<td>24.0</td>
<td>24.0</td>
<td>26.5</td>
<td>22.3</td>
<td>18.0</td>
<td>18.6</td>
<td>18.8</td>
<td>17.5</td>
<td>23.0</td>
<td>22.3</td>
</tr>
<tr>
<td>S.D</td>
<td>3.8</td>
<td>.64</td>
<td>4.0</td>
<td>4.2</td>
<td>4.3</td>
<td>3.4</td>
<td>3.0</td>
<td>2.2</td>
<td>3.3</td>
<td>4.4</td>
<td>3.6</td>
<td>4.5</td>
<td>5.2</td>
<td>4.7</td>
<td>3.6</td>
</tr>
</tbody>
</table>

### CONCLUSION AND FUTURE RECOMMENDATION

The study showed that there is a significant and positive relationship between emotional intelligence and academic achievement among gifted students. This finding corresponds with the findings of Hogan et al. (2010) and Mayer, Salovey & Caruso (2008) and its not corresponded with the findings of Mavroveli, Petridis, Sangareau, & Furnham (2009). In the present study Emotional intelligence explains about 14% achievement variance of gifted students. Also the results showed that among components of emotional intelligence only emotional Self-Awareness had significant predictive power in gifted students’ academic achievement, it can be said that Some of the components of emotional intelligence direct or indirect impact on academic achievement among students. Never the less Petridis, Frederickson, and Furnham (2004) found that trait EI induce higher academic performance only within a group a low-IQ students, but this research shows emotional intelligence have a significant relationship with academic achievement in gifted students.

**It is recommended**

- to investigate the relationship between emotional intelligence and other variables related to academic achievement
- to investigate relation between each component of emotional intelligence and other variables related to academic achievement
- to trying developed emotional intelligence as the goal of education.

### REFERENCES
