

# EMOTIONAL INTELLIGENCE AS PREDICTOR OF ACADEMIC ACHIEVEMENT AMONG GIFTED AND TALENTED LEARNERS IN MALAYSIA

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## ABSTRACT

A number of researchers have shown that intellectual Intelligence (IQ) and Emotional Intelligence (EQ) are important predictors to students' achievement performance. The purpose of this study is to examine the relationship between EQ and academic achievement among gifted and talented students in Malaysia. 112 students from PERMATApintar National Gifted Centre, National University of Malaysia (UKM) participated in this study. Data was analysed using inferential statistic (Pearson Correlation, Multiple Regression Analysis). Results from the finding showed that there was a significant positive correlation between EQ and academic achievement ( $r=.720$ ,  $p=0.00$ ,  $p<0.05$ ). The findings indicate the importance of EQ in students' academic achievement. It provided a fundamental basis on the importance of teachers' role in applying EQs' elements in the teaching and learning process, especially among gifted and talented students. This paper proposes that EQ components to be embedded across the curriculum.

**Key Words:** emotional intelligence, academic performance, gifted learners, high school, motivation

## 1.0 INTRODUCTION

Emotion is an important element in the education process. Its role in stimulating attention may affect the processes of learning and memory (Greenberg and Snell, 1997). According to Greenberg (2004) various emotions which start from high-energy feeling, passion, and attractions towards peace, silence and withdrawal, and negative or mal-adaptive emotions which refer to emotions that are negative such as anxiety, anger, guilt, and grief. The ability to understand and use a range of emotional dynamics can motivate individuals in jobs or tasks performed. Meanwhile, inability to practice emotional competence may lead to stress and demotivation. Inability to adjust emotions in the learning environment will affect the ability of students to focus and remember, thus producing poor quality work (Sharp, 1975). This situation will lead to anxiety and frustration which then makes students emotionally disturbed (Maria et al., 2004). Lewkowicz (1999) stated it is difficult for teens that are always anxious, unhappy,

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and irritated to be ideal or excellent students. They usually cannot take any information efficiently and accurately, or feel difficult to manage information well (Goleman, 1995). Apparently, anything that affects students' emotional state may also affect their learning performance. Therefore, students need to have emotional intelligence (EQ) competencies to help them manage their emotions when facing challenges throughout the learning endeavour. Many studies have shown EQ as a good predictor of self-efficacy (self-confidence) and students' assessment of educational programme (Bellamy, Gore, Sturgis, 2005). The importance of EQ in managing and controlling students' emotions is undeniable. Consequently, most studies suggested that EQ competencies to be applied in educational programmes across the curriculum including programmes for gifted and talented. (Ghasem 2013; Maria et al. 2004; Mohammad, Saber and Kayhan, 2013; Ogundokun and Adeyemo 2010; Yahaya; Yahaya and Nor, 2013).

### 1.1 Statement of Problem

Educational studies on gifted and talented students (GTS) often focused on cognitive abilities until sometimes ignore the affective needs of social and emotion. Fogarty (1998) suggested that the studies on GTS should also look at their social and emotional management skills because GTS was seen as a risky group in the aspect of socio-emotional development (Manaster and Powell, 1983; Bellamy et al., 2005). Previous studies had tried to assess the ability of GTS to solve self-adjustment problems related to socio-emotional issues. Versteynen (2013) found GTS' socio-emotional adjustment is closely related to the type of intelligence, coordination of education and personal characteristics, particularly the elements of affective or mood. In fact, students with high level of intelligence are found to be vulnerable towards socio-emotional adjustment problems and are prone to isolation psychosocial risks (Roedell, 1986; Clark, 1992; Brown, 2009; Silverman, 1994).

The combination of all psychosocial and emotional issues showed GTS to have complexity issue or high emotional complexity, which is known as '*overexcitabilities*' (OEs) (Dabrowski, 1977; Silverman, 2002). There was evidence-proving GTS to have higher OEs than their normal or average friends (Nelson, 1989; Silverman, 1994). Whitmore (1980) explained the lack of psychosocial and psychoemotional skills among GTS. The results of these pathological issues would undermine the IQ, which was claimed to circumvent the students' success in life. Researches on EQ were carried out on secondary school students. The results revealed EQ competency can affect students' academic performance and achievements (Noordin et al., 2013; Maria et al., 2004; Khaledian, Amjadian, and Pardegi, 2013; Hoy, Tarter and Woolfolk, 2006). EQ competencies are found to be contributing to a decrease in anxiety and stress, improving adaptability, interpersonal relationships and attitudes of self-direction or *self-directed*. Thus, GTS must be guided with knowledge and emotional management skills to enable them to remain exceptional and to maximize their intelligence potential in education and life.

### 1.2 Research Objectives

- 1.2.1 To identify the relationship between EQ and the academic achievements of gifted and talented students
- 1.2.2 To identify the contributions of EQ components towards the academic achievements of gifted and talented students.

### 1.3 Research Hypotheses

- Ho.1 There is no significant relationship between EQ and academic achievement among gifted and talented students.
- Ho.2 EQ components do not contribute to gifted and talented students' academic achievements.

## 2.0 LITERATURE REVIEW

### 2.1 Emotional Intelligence (EQ)

EQ is a skill that allows individual to identify and manage their own emotions as well as to identify other people's emotions and have good relationship with them (Goleman, 1996). Mayer, Salovey and Caruso (2000) stated that EQ allows individuals to think more creatively by using emotions to solve problems. Sternberg (1997) perceived EQ as skills that help individuals to achieve personal satisfaction and academic achievement, career, marriage, and physical health. Furthermore, Cooper and Sawaf (1998) stated individuals with high EQ are those who are delicate, fine and careful in observations to understand feelings, are willing to acknowledge and appreciate own feelings and others' as well as are able to give accurate response by applying emotional energy effectively. Individuals with high EQ are claimed to be able to identify, use, understand and control emotions. Literature review shows EQ having a significant relationship with a number of variables such as empathy, verbal intelligence, openness to feelings, self-esteem, interpersonal skills, self-knowledge, self-achievement, academic performance or achievements, creativity, leadership, stress and mental health (Boyatzis, Goleman and Rhee, 2002; Ciarrochi et al., 2000; Davies, 2005; Hamachek, 2000; Lam, 2002; Mauldin, 2002; Mayer, Salovey and Caruso, 2000; Williams and Shiaw, 1999). Individuals' ability to use emotions effectively in decision-making, problem solving, planning and managing are consistent with the behaviour associated with a good academic achievement (Akbar et al., 2011; Maria et al., 2004; Ghasem, 2013; Parker et al., 2004; Noordin et al., 2013; Mahsome, 2013).

### 2.2 Gifted and Talented Students (GTS)

GTS is individual with high cognitive abilities, high creativity and deep commitments with performing tasks (Renzulli, 2014). Gagne (1995) suggested, GTS whose giftedness has been identified need to go through the process of development through education, training and attempts via intrapersonal and environmental awareness that serve as catalysts towards making these individuals talented. Renzulli (2005) sees gifted children through the *Model of Three Rings* that puts three main features, namely exceptional cognitive abilities, high commitment in performing tasks and high creativity level. He explains that gifted and talented quality is not fixed or permanent. Instead, this quality is constantly changing depending on the situation and environment that contribute to the development of intelligence that would make such an individual talented. Gardner (1993) in *Theory of Multiple Intelligences* sees intelligence in its nine qualities; mathematical logics, verbal linguistic, spatial space, body kinaesthetic, music, intrapersonal, interpersonal, naturalism and existentialism. In addition, Sousa (2003) sees gifted children qualities from psychological aspect, which focuses on cognitive and metacognitive aspects, namely those involving the use of higher-order thinking in learning process.

Malaysian researchers' concept of GTS focused on the aspects of attitude and personal traits that enrich and support the development of personal ability. Gifted and talented individuals must have: (i) natural internal ability in cognitive skills including; reasoning ability, problem solving, and planning. Good cognitive abilities are demonstrated by learning speed and efficiency in organising learned information: (ii) opportunity to be in gifted situation, where individuals do not only have high cognitive abilities, but can also use those skills well, via a suitable and supportive environment. A supportive environment involving various teaching and learning approaches that are capable to provoke learning enrichment, acceleration, and curriculum compression; and (iii) attitude and satisfactory personal qualities are important in enriching and supporting the development of natural self-ability, which exists in such individual to achieve the stage of talentedness. Such features include friendliness in community, meticulousness and conscientiousness. In addition, this individual is able to

influence others because it has competent leadership, proficient speech and the power to persuade, all of which contribute to him or her becoming gifted and talented (Rosadah, Noriah, Melor 2009).

### **2.3 EQ and Academic Achievements (AA)**

Past research has shown a significant relationship between EQ and AA (Azizi and Nordiana 2006; Maria et al., 2004; Khaleidian et al., 2013; Mahsome, 2013; Maizatul, Norhaslinda, & Norhafizah, 2013). Research by Noordin et al. (2013) showed EQ had a significant relationship with Form 4 students' academic achievements. Other factors like peer influence, religious knowledge, family and financial problems, as well as counselling sessions did not show any relationship to academic achievements. Inline to that, research on EQ and academic achievements among secondary school students in Malaysia by Maria et al. (2004) found out that there is a positive correlation between these two variables. Likewise, a research on 100 accounting students by Khaleidian, Sabe and Kayhan (2013) proves a positive correlation between EQ and academic achievements, and there is no EQ difference between male and female students. Research by Parker et al. (2004) has also found out the existence of significant EQ relationship with the academic achievements of 667 high school students in America and has proven a strong connection between academic success and EQ components. Nwadiigwe and Obieke (2012) have also found out that EQ has a positive relationship with academic achievements of students in Lagos. Next, Hoy, Tarter and Woolfork (2006), through a study on relationship between academic achievements and optimism of students in Mid-West areas in America found out that optimism, which was one of self-motivation components, has significantly contributed to students' achievements. A further research on EQ by Rode (2007) predicted EQ has connection with academic achievements for two reasons. Firstly, academic achievements involved much ambiguity and secondly, most parts of academic work were self-related, which required a high level of self-management. Therefore, individuals with higher EQ would do better in academic. Research by Muhammad Akbar et al. (2015) on students in Pakistan, has proven a significant relationship between EQ and academic achievements. Students from urban areas had better EQ score than students coming from rural areas. Finally, through the same research, it showed students with better socio-economic background scored higher EQ than students with lower socio-economic background. Mahsome (2013) proved the importance of EQ among students that there would be no future success for students having academic achievements without EQ. The study has also revealed that students with higher, average and lower academic motivation showed different EQ, which finally affected their academic achievements. Thus, all these studies have recommended EQ skill to be included in school curriculum due to its positive effects in improving students' achievements.

### **3.0 RESEARCH METHODOLOGY**

Quantitative research methods are used for this study. The survey was administered to 112 samples from PERMATApintar National Gifted Centre, Universiti Kebangsaan Malaysia. The centre was established in 2009, offering activities inclusive of identifying and selecting gifted students through an online system developed by the university, a three-week holiday camp operated in cooperation between UKM and Johns Hopkins University-Centre for Talented Youth (JHU-CTY), and a college of secondary and tertiary education for GTS aged between 12-17 years old. The centre provides a residential education programme using a comprehensive academic curriculum (equivalent to the 'O' Level and 'A' Level in the UK), research mentoring programme, extra-curricular activities that involve community and volunteering services. On top of that, it also offers pre-university programmes as a way for gifted and talented students to continue to higher education level at the university.

### 3.1 Measures, Data Collection, and Data Analysis

Research participants were given Malaysia Emotional Intelligence Inventory (IKEM) by Noriah (2003). IKEM has seven domains with 180 items that measure (a) Self Awareness, (b) Self-regulation, (c) Self-Motivation, (d) Empathy, (e) Social Skills, (f) Spirituality, and (g) Maturity. Data on academic achievement were taken from the first semester examination results. The gathered data were descriptively and inferentially analysed using Statistical Package for Social Sciences (SPSS) version 18.0.

## 4.0 RESEARCH FINDINGS

### 4.1 The relationship between EQ and AA among GTS

The results of correlation analysis showed a presence of significant positive relationship between EQ and AA among Gifted and Talented Students (GTS), which can be clearly seen from Table 1.0 with a correlation value  $r[112] = 0.72$ ,  $p = 0.000$  ( $p < 0.01$ ) for both variables. This value proved the existence of strong positive correlation between EQ and AA. This means that the higher the EQ level, the higher the increase of AA among GTS. Thus, the Ho. 1 null hypothesis is found to be not true and is rejected.

In addition, research findings also presented all EQ components to have positive correlation with the academic achievements of gifted and talented students. Pearson's analysis  $r$  showed a relationship between achievements and self-awareness,  $r[112] = 0.492$ ,  $p = 0.000$  ( $p < 0.01$ ), self-regulation  $r = 0.626$ ,  $p = 0.000$  ( $p < 0.01$ ), self-motivation  $r = 0.700$ ,  $p = 0.000$  ( $p < 0.01$ ), empathy  $r = 0.585$ ,  $p = 0.000$  ( $p < 0.01$ ), social skills  $r = 0.512$ ,  $p = 0.000$  ( $p < 0.01$ ), spirituality  $r = 0.512$ ,  $p = 0.000$  ( $p < 0.01$ ), and maturity  $r = 0.546$ ,  $p = 0.000$  ( $p < 0.01$ ). This means the higher the level of self-awareness, self-regulation, self-motivation, empathy, social skills, spirituality and maturity, the higher the increase of AA among GTS. Thus, the Ho. 2 null hypothesis is found to be not true and is rejected.

**Table 1.0 Pearson r Correlation between EQ and AA among GTS in PERMATApintar National Gifted Centre, UKM**

Variables	EQ (whole)	SC	SR	SM	Empathy	SS	Sp	Mt
Academic Achievement	0.720	0.492	0.626	0.700	0.585	0.616	0.512	0.546
Significance	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
n	112	112	112	112	112	112	112	112

$P < 0.01$ : SA Self-Awareness, SR Self-Regulation, SM Self-Motivation, SS Social Skills, Sp Spirituality, MT Maturity

### 4.2 The contributions of EQ components towards the AA among GTS

The table below displayed the results of stepwise multiple regression analysis which involve the contributions of seven EQ components towards dependent variable; academic achievements. The results showed that out of the seven EQ components which acted as predictor, (self-awareness, self-regulation, self-motivation, empathy, social skills, spirituality and maturity), self-motivation was the strongest predictor that influenced students' academic achievements, of  $r^2 = 52.1\%$  ( $p < 0.05$ ). The obtained value for regression analysis is ( $F(7,112) = 18.273$ ,  $p = 0.000$  ( $p < 0.05$ ,  $\beta = 0.414$ ,  $t = 3.315$ ,  $p = 0.001$ ). Meanwhile, the variables of other

EQ components were found to be less appeared as strong predictor towards the academic achievements of gifted and talented students. Spirituality ( $\beta = 0.004$ ,  $t = 0.155$ ,  $p=0.967$  ( $p>0.05$ ), and self-consciousness ( $\beta = 0.014$ ,  $t = 0.155$ ,  $p= 0.877$  ( $p>0.05$ ) were found to contribute least towards academic achievements.

Table 2.0 Variant Analysis

Variables	Beta $\beta$	t	p
Self-consciousness	.014	.155	.877
Self-regulation	.150	1.444	.152
<b>Self-motivation</b>	<b>.414</b>	<b>3.315</b>	<b>.001</b>
Empathy	-.117	-.745	.458
Social skills	.263	1.640	.104
Spirituality	-.004	-.042	.967
Maturity	.128	1.469	.145

Significant Level  $p<0.05$

## 5.0 DISCUSSION

This study shows that there is a significant positive correlation between EQ and AA among GTS. The findings explain the higher level of self-awareness, self-regulation, self-motivation, empathy, social skills, spirituality, and maturity, the higher the academic achievement of gifted and talented students. This finding is consistent with the studies by Ghasem (2013), Hogan et. al (2010) and Mayer, Salovey and Caruso (2008). In addition, out of the seven components of EQ, only self-motivation has a significant predictive power towards GTS' academic achievements. The self-motivation efficiency contributed 52.1% to the achievements of GTS. This finding illustrated that GTS possess high achievement motivation, commitment, initiative, optimism and interest towards given tasks. The results supported Hoy, Tarter and Woolfork (2006) which found that optimism, one of self-motivation component had contributed significantly to students' achievement. Goleman (1996) stated self-motivation act as the driving force in correcting one's perception and actions. He added the most valuable reward for individuals who have high self-motivation is the challenge and creative stimulus to complete any job or task and the opportunity to continue learning. Driving factor like achievement will result in inner satisfaction caused by high commitment that would later generate self-recognition within motivated individuals (McClelland, 1989)

Goleman (1996) and McClelland (1989) views on self-motivation's role is in line with the characteristics of GTS which are said to have high cognitive ability, creativity and deep commitment in tasks. Goleman's view was supported by Chamorrow-Premuzic and Furnham (2006) which found that, although the relationship between intelligence and characteristics in EQ is weak, the EQ found is acting as moderator factor between intelligence and academic performance. A more in-depth research by Zeidner (2005) believed that students' strength of intrinsic motivation may contribute to the increasing level of EQ which will eventually affect problem-solving like GTS academic achievements. Thus, even though self-motivation is the only component that contributes to GTS academic achievement, the strong influence of internal factors is capable of promoting awareness to increase academic achievement. Therefore, teachers have to undertake and streamline the strategies to generate intrinsic motivation so that they can achieve excellent performance in any work especially academic achievement. Theroux (1994) has suggested a number of strategies that can be used by teachers to establish and maintain GTS motivation, such as; encouraging intellectual challenging activities, providing opportunities for students to use their talents in achieving success, offering a choice of activities to build ownership, providing a safe environment for students who have failed,

where they are guided to learn from failure, teaching them how to administrate assignments, using rewards and punishments carefully, helping students to build internal locus control, avoiding power struggles, giving students strategies to deal with frustration and uncertainty, and offering open activities that encourage creativity.

In conclusion, this study showed that EQ has a strong positive correlation with the academic achievement of GTS. Therefore, instillation of EQ component in teaching and learning process, as well as in GTS characteristic is recommended.

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