

# Emotional Intelligence and Academic Achievement of Primary School Students in Malaysia

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**Abstract:** - Many researchers believe that high emotional intelligence (EQ) is a driving force for excellence in academic achievement. Thus, this study is conducted to identify the extent of contribution of eight EQ domains to academic achievement of primary school students. A total of 918 students in Grades 3 and 4 were involved. The results showed that the level of EQ among primary school students was 73.74%. The ranking of EQ domain according to the highest performance was spirituality (88.60%), and followed by self-awareness and empathy (77.69%), self-motivation (77.22%), maturity (72.58%), social skills (69.50%), self-confidence (67.68%) and self-regulation (63.42%). Thus, six from the eight domains (self-motivation, self-regulation, spirituality, self-awareness, empathy and self-confidence) were found to significantly contribute to student's academic achievement. The findings can be used by teachers, counselors, psychologists, academics and those involved in child development to develop EQ-related programs to ensure students' excellence in academic field.

**Keywords:** emotional intelligence, academic achievement, primary school students.

## Introduction

Over the last few centuries, philosophers and psychologists have made 'emotion' as an important issue to debate due to its high impact on academic and career excellence. Among the aspects that are often discussed are the needs of a student to manage well his/her emotion in order to achieve outstanding academic achievements. However, it is easy for an individual to show emotions, but it is usually difficult to control such emotions to be appropriate in specific times, places, situations and individuals. In other words, appropriate emotions are difficult for an individual to practice and tackle without skill. Hence, a few psychologists have developed emotional management models to address Emotional Intelligence or Emotional Quotient (EQ) (Bar-On, 2000; Goleman, 1996; Mayer, Salovey & Caruso, 2004).

The above description explains that the concept of EQ is associated with one's ability to manage a variety of emotions in a proper manner so that each

emotion can be handled well. Management is not merely about self-emotion, but it also involves the emotions of others particularly those who are significant to them. Thus, EQ is defined as the ability of oneself to recognize, understand, analyze and control his/her emotions as well as others while living a daily life, such as self-relationships and surrounding community (Goleman, 1996). Goleman (1996) further elaborates the advantages of EQ domain such as self-motivation, stress relief, effective communication, empathy towards others, overcoming challenges and solving conflicts. Hence, individuals with high EQ are usually associated with those who always have success in life.

A study reported by Chong, Zamri and Hamidah (2013) found that there is no significant difference in level of students' EQ according to gender, suggesting that EQ-related programs in schools should not differentiate male or female students. On

the other hand, if viewed from a different perspective, the program should take into account their capabilities in certain subjects such as Malay Language (Chong et al., 2013), English (Elhaj, 2015) and Mathematics (Ramirez et al., 2016) to enhance their achievement in those subjects. In fact, Minaabad and Rad (2016) emphasized the ability of students to master two languages depends largely on their EQ level. Therefore, Minaabad and Rad (2016) recommended that EQ should be taught or exposed to primary school teachers. In fact, Elhaj (2015) suggested that English curriculum could be better taught when EQ domains are applied in the teaching process.

In the meantime, many EQ-related studies using a special model which had been introduced by western researchers, but did not contain a spiritual domain. This model will not provide comprehensive insights if studies are conducted on primary school students in Malaysia as their parents are so concerned about religious matters. Besides, there are also a handful of students who do not care about spiritual elements while in schools. They often violate religious laws such as 'khalwat', molest attempts, sexual promiscuity and many more (Salleh et al., 2016). Therefore, using the EQ model from the western researchers, the spiritual aspect should be included in the model to suit the culture of schoolchildren in this country. Therefore, this study uses the Goleman Model (1996) adapted from Noriah et al., (2004) to identify the relationship between EQ and students' academic achievement with several program proposals for improving the specific EQ domain; in particular the spiritual aspect.

In conclusion, majority of the previous studies have shown that EQ is significantly related to academic achievement. High EQ level leads to high academic achievement for a student. In addition, EQ is an important predictor for academic achievement (Mega, Ronconi, & Beni, 2014), but the linkages between these two variables continue to be questioned. For example, there is a weak relationship between EQ and achievement of Malay Language subjects among students as reported by

Chong et al. (2013), and thus EQ is not directly linked to academic achievement, but it can be suggested in improving their performance (Garg, Levin, & Tremblay, 2016). At the same time, intrinsic motivation (Bouffard et al., 2003) and social awareness (Minaabad & Rad, 2016) have not contributed substantially to academic achievement. Based on the above arguments, EQ-related studies need to be continuously carried out to obtain stronger and more reliable findings.

### **Research Objectives**

Generally, this study aims to examine the extend of EQ domains that contribute to academic achievement of primary school students. Therefore, it is important to look at EQ domains consisting of self-awareness, self-confidence, self-regulation, self-motivation, empathy, social skills, spirituality and maturity, which may influence student's academic performance. Hence, the objectives of this study are as follows:

To identify EQ levels among primary school students.

To identify the level of students' EQ domains, i.e. self-awareness, self-confidence, self-regulation, self-motivation, empathy, social skills, spirituality and maturity.

To identify the EQ domain that contributes to students' academic achievement.

### **Research Methodology**

#### **Population and Research Samples**

A total of 918 primary school students of Grade 3 and 4 in Malacca, Malaysia were randomly selected for this study. The ratio between male and female students in this study was almost the same (N = 434 male students; N = 484 female students). Data for students' academic achievement were taken from their final exam conducted by their respective school.

#### **Methodology and Research Analysis**

The design of this study was a survey using questionnaire as a means of data collection. Data analysis procedures involved descriptive and

inferential analysis. Descriptive statistics, such as frequency, percentage, mean and standard deviation, were used to analyze EQ level and academic achievement of students. Furthermore, inferential statistics, i.e. multiple regression analysis was used to predict the contribution of EQ domain factors such as self-awareness, self-regulation, self-

motivation, self-esteem, empathy, social skills, spirituality and maturity on students' academic achievement. Interpretation of Emotional Intelligence Index Values was used to interpret the EQ level. The interpretation is described as shown in Table 1.

**TABLE 1**

Interpretation of EQ Index Values

Percentage value of EQ Index	Interpretation
81 until 100	The emotional intelligence traits inherent within an individual can become his strength and should be fully utilized.
61 until 80	The trait of emotional intelligence within an individual can be his strength, but it should be sought in that individual.
41 until 60	The emotional intelligence traits needed by an individual are weak and need to be developed.
Less than 40	The emotional intelligence traits that should be within an individual are at a very weak level and need to be built as soon as possible.

(Noriah & Siti Rahayah, 2005)

**Measurement Tools**

This study used the Malaysian Emotional Quotient Inventory-Children (MEQI-C) as a measuring tool for children version which was adapted from Siti Aishah (2006) from the adult version of Malaysian Emotional Quotient Inventory-Adult (MEQI-A) developed by Noriah et al. (2004). MEQI-C contained 30 items with 'Yes' and 'No' as the measurement scales. There were two main sections in MEQI-C: (i) respondent's profile such as name, school name, age, class, gender, number of siblings and birth position in the family; and (ii) statements that measured eight domains and some subdomains of emotional intelligence. Fifteen items represented the intrapersonal competence; three items for self-conscious domain, three items for self-confidence domain, six items for self-regulatory domain, and three items for self-motivated domain. Meanwhile, seven items represented interpersonal competencies; four items for empathy domain and three items for social skills domain. Moreover, four items represented spirituality domain and four items represent maturity domain.

MEQI-C has undergone validity and reliability testing. Based on the CFA test of the items in MEQI-A, the loading items received for MEQI-C are as follows: (i) Intrapersonal competence of the self-awareness domain (EQ1 = 0.48, EQ2 = 0.58 and EQ3 = 0.72), self-confidence (EQ4 = 0.28, EQ7 = 0.69 and EQ8 = 0.65) and self-motivation (EQ9 = 0.70, EQ10 = 0.62 and EQ11 = 0.37); (ii) Interpersonal competencies for empathy domain (EQ13 = 0.46, EQ16 = 0.61, EQ15 = 0.73 and EQ14 = 0.46) and social skills (EQ18 = 0.56., EQ17 = 0.46 and EQ19 =.66) ; (iii) Spiritual domain (EQ20 = 0.37, EQ21 = 0.35, EQ22 = 0.80 and EQ23 = 0.48); and (iv) maturity domain (EQ26 = 0.56, EQ27 = 0.71, EQ30 = 0.52 and EQ28 = 0.60) (Siti Aishah, 2006). Subsequent to the construct validity process, this measuring tool was analyzed to obtain credibility. The overall reliability value of this measuring instrument was 0.71. Therefore, it can be concluded that this measurement tool is reliable because it is at a good level (Sherri, 2003), and thus MEQI-C can be used in this study.

**Research Findings**

**Analysis of Students' EQ Level**

Table 2 shows that the students' EQ index was at moderate level, the overall EQ mean percentage was 73.74% (n = 918, SP = 1.25). Detailed analysis based on each domain showed that the spirituality domain (M = 88.60, SP = 1.82) was at high level, where the mean score was greater than other EQ

domains. The mean scores for other EQ domains were at moderate level, such as self-awareness (M = 77.69, SP = 2.42), empathy (M = 77.69, SP = 2.28), self-motivation (M = 77.22, SP = 2.68), maturity (M = 72.58, SP = 2.51), social skills (M = 69.50, SP = 2.88) and self-confidence (M = 67.68, SP = 2.31). Similarly, self-regulatory domain (M = 63.42, SP = 1.94) was also at moderate level with the lowest mean score compared to other domains.

**TABLE 2**

Level of Primary School Students' EQ

EQ Domains	Mean (%)	SP	Interpretation
Self-awareness	77.69	2.42	Moderate
Self-confidence	67.68	2.31	Moderate
Self-regulation	63.42	1.94	Moderate
Self-motivation	77.22	2.68	Moderate
Empathy	77.69	2.28	Moderate
Social skills	69.50	2.88	Moderate
Maturity	72.58	2.51	Moderate
Spirituality	88.60	1.82	High

Overall Mean of EQ = 73.74%

SP = 1.25

**Contribution of EQ Domains to Students**

**Academic Achievement**

Based on Table 3, results from the study shows significant six variants of the predictor, i.e. self-motivation ( $\beta = .14, p < .05$ ), self-regulation ( $\beta = .14, p < .05$ ), spirituality ( $\beta = .13, p < .05$ ), self-awareness ( $\beta = .15, p < .05$ ), empathy ( $\beta = .11, p < .05$ ) and self-confidence ( $\beta = .06, p < .05$ ) as the contributing factors towards academic achievement of students. The findings for a combination of six EQ domains contributions were indicated by the R<sup>2</sup> value. In this case, self-motivation ( $\beta = .27, p < .05$ ) contributed 7.2 percent ( $r = .27$ ) variant changes in academic achievement performance [F (1,917) = 70.812,  $p < .05$ ]. The combination between two self-motivated variables ( $\beta = .23, p < .05$ ) and self-regulation ( $\beta = .22, p < .05$ ) accounted for 11.9 percent ( $r = .35$ ) variant changes to academic achievement [F (2,916) = 62.027,  $p < .05$ ].

In addition, when the predictor of spiritual variables ( $\beta = .17, p < .05$ ) was taken into account, the three predictor variables were accounted for 14.5 percent

( $r = .38$ ) of variant changes in academic achievement [F (3,915) = 51.612,  $p < .05$ ]. The combination of the independent predictor variables ( $\beta = .15, p < .05$ ) in four predictor variables contributed 16.6 percent ( $r = .41$ ) variant changes in academic achievement [F (4,914) = 45.560,  $p < .05$ ]. Meanwhile, when the empirical predictor variables ( $\beta = 0.11, p < .05$ ) were taken into account, the five predictor variables contributed 17.8 percent ( $r = .42$ ) variant changes in academic achievement [F (5,913) = 39.430,  $p < .05$ ]. Finally, the combination between the variables of self-confidence predictor ( $\beta = .06, p < .05$ ) in the six predictor variables contributed 18.1 percent ( $r = 0.43$ ) variant changes in academic achievement [F (6,912) = 33.632,  $p < .05$ ].

**Discussion**

High EQ levels are important for primary school students in daily learning process. However, the findings from this study showed that the overall students' EQ was at moderate level where self-regulatory domain has the lowest mean. In other words, there are things that need to be learned, repaired and enhanced by students; for example

teachers can give assignments to specific students in order to become more responsible and thus able to develop their own regulatory domain. This finding is in line with a study reported by Moreno (2017) who believed that students with moderate EQ levels

cannot control their emotions completely. Therefore, they need to learn how to identify and understand the emotions of others and to express their particular emotions accordingly for developing more rational thinking (Moreno, 2017).

**TABLE 3**

Contribution of EQ Domains on Variations of Students Academic Achievement

Model	B	Beta (β)	T	Sig.	R <sup>2</sup>	Contribution (%)
Self-motivation	.092	.141	4.347	.000	.072	7.2
Self-regulation	.130	.143	4.490	.000	.119	11.9
Spirituality	.126	.130	4.054	.000	.145	14.5
Self-awareness	.111	.153	4.889	.000	.166	16.6
Empathy	.086	.111	3.457	.000	.178	17.8
Self-confidence	.048	.063	1.999	.000	.181	18.1

Based on the recommendation by Moreno (2017), the moderate level of students’ EQ in this study was more likely because they could not fully exhibit and express emotion. Students were not only unable to show their emotion freely, but more than that they were reluctant to do so because of certain constraints. Students often hide their feelings particularly at the age of nine and 10 years in which they are forced to abide the rules and regulations set by adults. This situation is closely related to the rank of heteronomous morality which is the first stage in Kohlberg’s moral development theory (Zakri, 2014). It is therefore unfortunate that the rules that are normally associated with moral and cultural will also affect the level of openness in expressing emotions. Nevertheless, there is still room for the students to grow well as according to Goleman (1996), the level of EQ can increase through age and life experiences, and in fact EQ can also be learned.

Furthermore, the findings of this study are contrary to a study reported by Kranzler et al. (2016) which was conducted on 204 children aged between seven and 16 years old. According to Kranzler et al. (2016), the level of emotional awareness of children is low and this is a contributing factor to depression and anxiety among them. Findings by Kranzler et al. (2016) are quite alarming when linked to this study because the level of students’ EQ at medium level can be lowered if it is not well managed. Hence, some programs need to be provided to a

certain number of students to improve their EQ level. For example, students’ EQ can be improved through group guidance using a particular module which can be performed by applying therapeutic play techniques in the module. The use of therapeutic play to children is very appropriate as the desire to play is their natural trait.

Although the overall EQ level of the students in this study was moderate, however, high spiritual awareness was the strength factor that can help the students to participate. A high spiritual domain explained that the students in this study were capable of addressing issues in their daily lives as appropriate, for example they can think positively when facing problems. Therefore, students are encouraged to use all the advantages in this domain to maximize their potential. They deserve to be viewed as highly prudent individuals, avoid behavior that can harm themselves and others, and always surrender to God in order to gain peace as a student. In other words, high spiritual domain that exists within the student is the natural strength for themselves and should be used optimally (Norah & Siti Rahayah, 2005).

Spirituality is a part of religion which means that not all spiritual values can be attributed to religion. On the contrary, when discussing religion, indirectly the spiritual aspect is involved because all religious values have spiritual nature and both terms can be used alternately. Based on this assumption, it is not surprising that students in this study have a

high spiritual domain because Malaysian parents are concerned about religious aspects in their lives. This justification has also encouraged Noriah et al. (2004) to conduct a study on EQ by improving the Goleman Emotional Intelligence Model (1996). They have added two very important new domains, i.e. spiritual and maturity domain into the EQ model.

Hence, multiple regression analysis in this study has shown more detailed findings. From the eight EQ domains analyzed, it was found that only six domains, namely self-motivation, self-regulation, spirituality, self-awareness, empathy and self-confidence were the contributing factors to students' academic achievement. On the other hand, two other domains of social skills and maturity were not the determining factors which could be due to lack of social skills at a very young age in a learning environment; for example, they may feel awkward in practicing group learning methods. From the maturity perspective, it is difficult for the students to exhibit maturity of emotions in that age especially during the learning process at school.

In the meantime, the six domains described above can be used as predictors of academic achievement levels. In that regard, the EQ variable predicted 18.1 percent of variance change in academic achievement. This finding is different from academic achievement in the EQ domain of UAE (Understanding and Analysing Emotions) which only associated to 11 percent variance change in both reading and counting performance (Billings et al., 2014). It can therefore be concluded that the contribution of the EQ factor to the academic achievement in this study can be considered substantial compared to the study conducted by Billings et al. (2014). Finally, from the 18.1 percent variance, it is understandable that apart from the EQ, there are several other factors that could also contribute to student academic achievement such as learning style, IQ, socio-economic status, classroom environment and teaching method.

Furthermore, findings from this study showed that the self-motivation domain was a major factor in

contributing to academic achievement. Self-motivation variable contributed 7.2 percent of variance in student's academic achievement. This finding is contrary to Bouffard et al. (2003), but similar to that reported by Supardi et al. (2016). Supardi et al. (2016) found that high self-motivation is an important factor in improving student academic achievement. High self-motivation means a strong will or spirit of the student which is the key driver for them to work diligently to achieve success and excellence. When students have high level of diligence in learning and performing tasks, it can help to improve their EQ and thus they tend to achieve high academic achievement.

### Implications and Recommendations

This study provides theoretical and practical implications for education, counseling and psychotherapy. From the theoretical point of view, this study corresponds to the formula by Billings et al. (2014) which states that EQ and academic achievement can be assessed among early adolescent children. As a result, this study involved children as early as nine and 10 years old, so the data obtained were so valuable to examine the level of their EQ development. Therefore, EQ-related studies should not only be concentrated in adults, but study on primary school students should be conducted continuously to find the best ways to increase their EQ level. The findings can be used by teachers, counselors, psychologists, academics and those involved in child development to develop appropriate programs.

Based on the Goleman EQ Model (1996) adapted by Noriah et al., (2004), the dimensions of self-awareness, self-regulation, self-motivation, empathy, social skills, spirituality and maturity are factors that have contributed to academic achievement. However, findings from this study have given a new perspective to the model developed by Goleman. In this study, the domain of social skills and maturity could not be regarded as factors that can contribute to academic achievement of students. In addition, the study also shows that self-confidence domain as introduced by Siti Aishah (2006) also contributed to academic

achievement. Hence, the relevant EQ model for children to be used in future research is to include the domain of self-awareness, self-regulation, self-motivation, empathy, spirituality and self-confidence. It can therefore be concluded that these six domains can form an EQ model for children.

### Conclusion

Overall, this study has succeeded in achieving the objectives outlined. The students involved in this study have moderate EQ levels because they could not express emotion due to cultural constraints and moral rules set by adults. However, this moderate EQ level was offset by their high spiritual domain due to parenting styles of parents in Malaysia. In addition, this study has reinforced the Goleman EQ Model which was culturally improved by Noriah (Noriah et al., 2004) which assumed that there was an association between EQ and academic achievement. Finally, in the EQ domains which were studied, self-motivation domain was the crucial factor for the students to achieve excellent academic achievement. Therefore, teachers, parents and community members are expected to play pivotal role in enhancing student's motivation through various methods and expertise.

Finally, this study has pointed out that the existing EQ model was not entirely applicable to very young children. For example, this study has proven that the domains of social skills and maturity did not affect their academic achievement. Therefore, modifications and improvements should be made to the domains in the EQ model to explain the differences of EQ in children compared to adults. Students should be aware of the importance of EQ, particularly through domains of self-awareness, self-regulation, self-motivation, empathy, spirituality and self-confidence in improving their academic achievement. With high EQ, students are able to control emotions, show positive attitudes related to academic achievement and learn to adapt to the problems faced in their learning process.

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