Search | Search

IMPACT FACTOR
RJIF 5.22

MAIN MENU

Home

Editorial Board

Archives

Instructions

Indexing

Contact Us

Peer Review and Publication Policy

Publication Ethics

CERTIFICATE
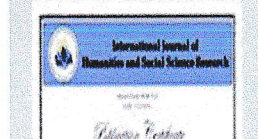
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Influence of Emotional Intelligence on Students' Academic Achievements

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Abstract

Emotional aspects are very important in influencing the excellence of a student. Many past studies have proven that emotional intelligence affect academic achievement. Therefore, this study is aimed to identify students' emotional intelligence level and to what extent emotional intelligence influences students' academic achievement. A total of 406 people form 5 students from nine schools in Limbang District, Sarawak were involved in this study. Malaysia Intelligence Emotional Inventory – Teens (IKEM-R) was used to assess the level of students' emotional intelligence. A total of 49 items from this instrument was used to measure emotional intelligence of the respondents. Exploratory factor analysis and KMO value for pilot study is. 607. The result of the study show that all the emotional intelligence dimensions are at high level. Further, the results revealed that there is no significant influence of all the dimensions on academic achievement. Five research hypotheses were supported. All the emotional intelligence dimensions namely emotional awareness, emotional regulation, self-motivation, empathy and social skills do not affect students' academic achievement.

Keywords: Emotional Intelligence, Academic Achievement, Exploratory Factor Analysis, Emotional Awareness, Emotional Regulation.

1. Introduction

The Malaysian Education System is not only aims to produce outstanding students but also spiritual growth and emotionally healthy so that they are able to contribute to the well-being and progress of the nation. Emotional aspects is prioritized in the development of student. Many past studies found that emotional factors are very important in influencing students' excellence in academic achievement and success in life

According to Goleman (1995) [6], an individual's emotional intelligence is more important factor in determining their success compared to intellectual intelligence. He found that only 20% of a person's success is attributed to intellectual intelligence whereas emotional intelligence is comprised of 80%.

Student's Emotional intelligence factors play an important role in influencing their academic achievement. Students who have high emotional intelligence found to obtain good academic achievements (Nwadinigwe & Azuka-Obieke, 2012; Noriah *et al.*, 2008; Nelson, 2009; Downey, Mountstephen, Lloyd, Hansen & Stough, 2008; Holt, 2007) [16, 14, 18, 13, 4, 10]. Students with high emotional intelligence obtained good academic achievement, help to think creative and critically and also able to solve problems intelligently (Salovey & Mayer, 1990) [19].

Emotional Intelligence Mixed Model

An emotional intelligence model in this study is based on Mixed Model of Emotional Intelligence by Daniel Goleman (1995) [6]. Model featured by Goleman originated from Emotional Intelligence Model pioneered by Mayer and Salovey. More specifically, Goleman (1998) [5] in his book "Working with Emotional Intelligence" has been divided Emotional intelligence into five dimensions such as self-awareness, self-regulation, self-motivation, empathy and social skills.

Self-Awareness

Self-awareness is the ability to realize and know your own feelings in a situation and be able to choose a priority while taking actions or making decisions. This kind of person can make an accurate assessment of capabilities and high confidence (Goleman, 1998) [5]. Self-awareness has four sub dimensions, i.e. emotional awareness, an accurate self-assessment, self-confidence and intent.

Self-regulation

Self-regulation refers to the ability to manage emotions in carrying out work to make it easier and without interrupting the job (Goleman, 1998) [5]. This ability gives strength to pursue goals and quickly recover from emotional stress (Goleman, 1998) [5]. There are five sub dimensions namely self-control, trustworthiness, responsibility, adaptability and innovation.

Self-motivation

Self-motivation refers to the ability of a person striving to improve or meet a standard of excellence. Self-motivation also helps someone obtain initiative and perseverance to improve capabilities to address challenges and obstacles in life (Goleman, 1998) [5]. This process also involves someone using emotions to stimulate in order to achieve a goal or solve a particular task or project. Self-motivation has five subdomains i.e. encouragement of achievement, commitment, initiative, optimism and enthusiasm.

Empathy

Empathy is the ability to recognize and identify a person's feelings, understand a thing according to the perception of others that can raise and nurture the warmth as well as adapt to other individuals (Goleman, 1998) [5]. Empathy has seven subdomains that are to understand others, help others, expand others, service oriented, discover diversity, political awareness and taking care of.

Social skills

According to Goleman (1998) [5], individuals with social skills is able to interpret accurately the condition of social and its' network thus can manage multiple emotions effectively in a given interaction (Goleman, 1998) [5]. This individual able to persuade, lead, negotiate and resolve conflicts in order to create understanding and team spirit. Social skills has eight subdomains namely influence, communication, conflict management, leadership, change catalyst, builder of relationships, collaboration and cooperation as well as the ability to involve in an Association.

2. Literature review

At first the researchers review the role of emotional intelligence on academic achievement and emotional adjustment of students in school (Humphrey, Curran, Morris, Farrell and Woods, 2007) [9]. Lately there are also studies reports emotional intelligence has a significant positive relationship on student's academic achievement (Nwadinigwe & Azuka-Obieke, 2012; Noriah et al., 2008; Nelson, 2009; Downey, Mountstephen, Lloyd, Hansen & Stough, 2008; Holt, 2007) [16, 14, 18, 13, 4, 10]. According to their study the emotional intelligence positively correlated with students' academic achievement. Students with high emotional intelligence have consciousness against the state of their emotions and the emotions of others and also able to control emotions that would help him to achieve the triumph of academic.

Study in Malaysia showed that student's emotional intelligence is an indicator to their academic achievement. For example, Azizi Hj. Hashim Yahya Besar Shahrin and Nordiana binti Mohd Nor (2009) [3, 15] has reported that there is a significant positive relationship between emotional intelligence with academic achievement among 399 form four students in 10 secondary schools in the vicinity of three States namely Johor, Kelantan and Terengganu. Researchers from abroad also reported the same (Hogan, Parker, Wiener, Watter, Woos and Oke, 2010; Qualter, Gardner, Pope, Hutchinson & Whitely, 2012; Adeoyo & Emeko, 2010) [8, 17]. All the findings supported that emotional intelligence is essential in influencing student academic achievement.

In addition to the above studies, there is also a study using quasi-experimental design i.e. pretest and posttest and control group. Nwadinigwe and Azuka-Obieke (2012) [16] strengthen the statement that emotional intelligence has a significant positive relationship of academic achievement. They proved that students participated in 'emotional intelligence skills workshop' improve their academic achievement. Students who followed the emotional learning system has a higher level of emotional intelligence compared to peer mentoring while the control group is the lowest level of emotional intelligence. Therefore, the emotional learning system is a comprehensive intervention program that could affect a person's emotional intelligence skills of students and subsequent positive impact on his academic achievements. According to Nwadignigwe et al., (2012), this happened because when a person has become more emotional, then the behavior shown is positive. Such a situation could balance the feelings and thoughts of a person to form motive behaviors which have high emotional intelligence. Thus, his academic achievement rises.

Holt (2007) [10] showed that academic achievement has positive significant relationships with dimensions of managerial emotions, and emotional reasoning. Meanwhile, Nelson (2009) [13] found that students from low socio-economic status showed high significant relationship between highest emotional understanding and academic achievement. Students who have emotional understanding dimension were reported able to assess understanding of emotional information and identify how emotions combine and grow through the communication transition (Holt, 2009). This significant relationship indicates that students who appreciate the emotional meaning acquired higher academic achievement.

According to Adeoyo and Emeke (2010) [1], emotional intelligence courses bring the most significant effect on the achievement of English language. Students who have exposed to emotional intelligence courses obtain better achievements in English tests than those do not following the course. This finding is supported by Najib Ahmad Marzuki et al., (2006) [12], which found that a student with high emotional intelligence is more competent in English.

Najib Ahmad Marzuki et al., (2006) [12] has shown there is relationship between emotional intelligence with English speaking competence in terms of listening, speaking, reading, and writing. In terms of listening, materials in the English language have a significant relationship with frequency hearing, interest in listening, and understand what is heard in English. The higher the emotional intelligent the higher frequency of listening, interest to listen and understand what is heard in relation to materials in English. On the other hands, low levels of emotional intelligent will cost the low level frequency of students listening, interest to listen and understand what is heard in relation to materials in English.

Correlation between emotional intelligence and English-speaking competency showed there was no significant relationship between emotional intelligence with frequency of speaking, reading, and writing; confidence in speaking and fluency in speaking; reading and writing; understand what is read and writing skills. These findings proved that the higher the level of emotional intelligence, the higher the frequency of speaking, reading, and writing; confidence in speaking and fluency in speaking; reading and writing; understand what is read and writing skills (Najib Ahmad Marzuki et al., 2006) [12].

According to Downey at al., (2008) [4], students who had high dimensions of management and high emotion control earn high achievement in mathematics and science. This is due to a student who has the advantage in the management and control of emotions can solve mathematics and science problems which requires high cognitive load. It means a student who has a high emotional control can obtain high achievement in mathematics and science.

Similarly, studies of Norila Binti Md Salleh (2009) [3, 15] found that students who follow the lessons by integrating emotional intelligence will show significantly higher increase in Math scores. They have been integrated the ten aspects of emotional intelligence in teaching Math namely emotional awareness, self-esteem, self-confidence, self-control, motivation, communication, cooperation, empathy, problem solving and joy. Integration of emotional intelligence significantly increases the student's attitudes toward Mathematics as a whole. Students who accept the integration of emotional intelligence significantly increase confidence, enjoyment and motivation towards math.

In conclusion, a student's emotional intelligence factors prove to have significantly positive relationship towards academic achievement. The higher level of emotional intelligence with higher academic achievement. This is clearly proved in the past research that emotional intelligence dimensions such as the management and control of emotions affecting the achievement of Math and Science. For English language achievement studies proved in general that the level of students' emotional intelligence can affect the achievement of the English language achivement in terms of listening, reading, speaking and writing (Najid Ahmad Marzuki et al., 2006) [12]. However, their study only carried out among students at institutions of higher learning, there is no such study carried out among secondary school students.

Research questions
1. What is the level of the student's emotional intelligence?
2. To what extent emotional intelligence influences academic achievements?

Objective of the Study
The objective of this study is to identify the level of emotional intelligence and test the influence of emotional intelligent on academic achievement.

3. Methodology
Sample
This study was conducted in nine National secondary schools in Limbang, Sarawak. The sample consists of 406 form 5 students.

Instrument
Malaysia Emotional Intelligence Inventory – Teens (IKEM-R) adapted by Saemah Rahman, Noriah Mohd. Ishak, Zuria Mahmud and Sq. Amir (2008) [18] were used to measure the level of emotional intelligence. This instrument is structured taking into account the views of Goleman's (1995) [6] five dimensions of emotional intelligence namely self-awareness, self-regulation, motivation, empathy and social skills. The items of this instrument have been modified so that easily understood by secondary school students in the Malaysian context. This instrument distributed with 104 items is as follows:

a. Self-awareness (20 Items)
b. Self-regulation (31 Items)
c. Self-Motivation (17 Items)
d. Empathy (36 Items)
e. Social skills (36 Items)

Based on previous research, researcher only select a total of 49 items from this instrument to be used which categorized respondents into five sub dimensions of emotional intelligence as in Table 1. These items are measured using the 5 points Likert scale, 1 = very untrue, 2 = not true, 3 = less sure, 4 = true and 5 = very true. Distributions of items are as follows:

Table 1: Distribution of items for each of the dimensions of emotional intelligence

Emotional Intelligence Dimensions	Sub dimensions	Items	Total
Self-awareness	Emotional awareness	1-2	2
	Self-assessment	3-8	5
	Self confidence	9-14	6
Self-regulation	Self-control	15-22	8
Self-motivation	Achievement motivation	23-27	5
	Initiative	28-31	4
	Optimist	32-33	2
Empathy	Understanding other	34-38	6
Social Skills	Cooperation	39-43	5
	Communication	44-49	6

Table 2: Distribution of items for the variables of emotional intelligence

Emotional Intelligence dimensions	Mean	SD
Self- awareness	3.44	.45
Self-regulation	3.20	.57
Self-motivation	3.63	.58
Empathy	3.59	.61
Social Skills	3.62	.50
Overall	3.49	.38

Items in this instrument to be tested in terms of reliability and validity since the original instruments are based on Peninsular Malaysia context and it may be vary in the context of students of Sarawak due to background of the students such as race, religion, culture and socio-economic status.

4. Data analysis
The data collected was analyzed by using SPSS version 20 to measure reliability value per item, and emotional intelligence dimensions. Exploratory factor analysis used to test reliability (factor loadings) and validity (KMO).

Items Reliability
All Cronbach alpha values exceed .900 and this is sufficient for reliability required (Smith & Glass, 1987).

Table 3: Cronbach Alpha values for emotional intelligence items

Emotional Intelligence Items	Cronbach's Alpha
EQ1	.913
EQ2	.916
EQ3	.914
EQ4	.914
EQ5	.913
EQ6	.914
EQ7	.914
EQ8	.914
EQ9	.913
EQ10	.914
EQ11	.913
EQ12	.913
EQ13	.913
EQ14	.918
EQ15	.914
EQ16	.914
EQ17	.914
EQ18	.914
EQ19	.913
EQ20	.915
EQ21	.915
EQ22	.913
EQ23	.912
EQ24	.913
EQ25	.913
EQ26	.913
EQ27	.912
EQ28	.913
EQ29	.913
EQ30	.913
EQ31	.913
EQ32	.913
EQ33	.914
EQ34	.913
EQ35	.914
EQ36	.913
EQ37	.912
EQ38	.915
EQ39	.913
EQ40	.913
EQ41	.913
EQ42	.914
EQ43	.914
EQ44	.913
EQ45	.914
EQ46	.913
EQ47	.913
EQ48	.915
EQ49	.914

The overall Alpha Coefficient value for emotional intelligence is .802. However for each dimension such as self-awareness is .813, self-regulation is .830, and self-motivation is. 890., empathy is .819 and social skills is .820 is in table 4 below.

Table 4: Alpha Cronbach values for emotional intelligence dimensions

Emotional Intelligence Dimensions	Mean	SD	Alpha Carobach Value
Self-awareness	3.49	.39	.813
Self-regulation	3.25	.51	.830
Self-motivation	3.65	.51	.809
Empathy	3.61	.47	.819
Social Skills	3.69	.45	.820

Further, exploratory factor analysis was conducted to test reliability and validity of the constructs of emotional intelligence.

Exploratory factor analysis

A total of 31 items retained in the 5 dimensions of emotional intelligence after a total of 18 items of emotional intelligence was dropped. Items 1, 3, 4, 6, 7, 9, 13, 14, 20, 22, 23, 27, 31, 33, 34, 35, 43, and 46 were dropped. Items with factor loadings more than .60 retained that is reliable for this study.

Table 5: Loadings value of exploratory factor analysis for emotional intelligence

Item	Factor loading				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
EQ2	.713				
EQ5	.756				
EQ8	.838				
EQ10	.585				
EQ11	.596				
EQ12	.731				
EQ15		.750			
EQ16		.841			
EQ17		.838			
EQ18		.608			
EQ19		.664			
EQ21		.879			
EQ24			.664		
EQ25			.840		
EQ26			.755		
EQ28			.508		
EQ29			.694		
EQ30			.659		
EQ32			.572		
EQ36				.832	
EQ37				.732	
EQ38				.778	
EQ39					.745
EQ40					.642
EQ41					.759
EQ42					.709
EQ44					.722
EQ45					.647
EQ47					.681
EQ48					.742
EQ49					.756

Items were re-arranged after exploratory factor analysis and as shown in the following table 5.

Table 6: Distribution of emotional intelligence items after exploratory factor analysis

Emotional Intelligence Dimensions	Items	Total items	Re-arranged items
Self- awareness	2, 5, 8, 10, 11, 12	6	1-6
Self-regulation	15, 16, 17,18,19,21	6	6-12
Self-motivation	24,25,26,28,29,30,32	7	13-19
Empathy	36, 37, 38	3	20 – 22
Social Skills	39, 40, 41,42,44, 45, 47, 48, 49	9	23 – 31
	Total	31	31

Item Validity Analysis

Validity is a measure that indicates the degree validity of the instrument measuring what is needed (Hair *et al.* 2010) [7]. It aims to ensure this aspect of the content of the test items used is really valid. Validity was tested using with the Bartlett's test. All the Kaiser-Meyer-Okin (KMO) variables values should be more than 0.50. KMO values for this research is .607 therefore items met the criteria and valid to be used as shown in table 7.

Table 7: KMO and Ujian Bartlett's for emotional intelligence

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.607
Bartlett's Test of Sphericity	Approx. Chi-Square	2473.691
	df	1176
	Sig.	.000

5. Results

Research question 1: What is the level of student's emotional intelligence?

**Table 7:** Mean and Standard Deviation of each emotional intelligence

Emotional Intelligence dimensions	Mean	SD
Self- awareness	3.44	.45
Self-regulation	3.20	.57
Self-motivation	3.63	.58
Empathy	3.59	.61
Social Skills	3.62	.50
Overall	3.49	.38

Based on table 7, the results of the findings showed that all dimensions are at high level. The findings of this study are consistent with the findings Azizi Hj Besar Shahrin Hashim Yahya, and Nordiana binti Mohd Nor (2009) [3, 15].

Research question 2: To what extent the influence of emotional intelligence on academic achievement

Table 8: Influence of emotional intelligence on academic achievement

Influence	t-value	Result
There is no significant influence of self-awareness on academic achievement	1.803	supported
There is no significant influence of self-regulation on academic achievement	0.695	supported
There is no significant influence of self-motivation on academic achievement	0.828	supported
There is no significant influence of empathy on academic achievement	0.006	supported
There is no significant influence of social skills on academic achievement	1.092	supported
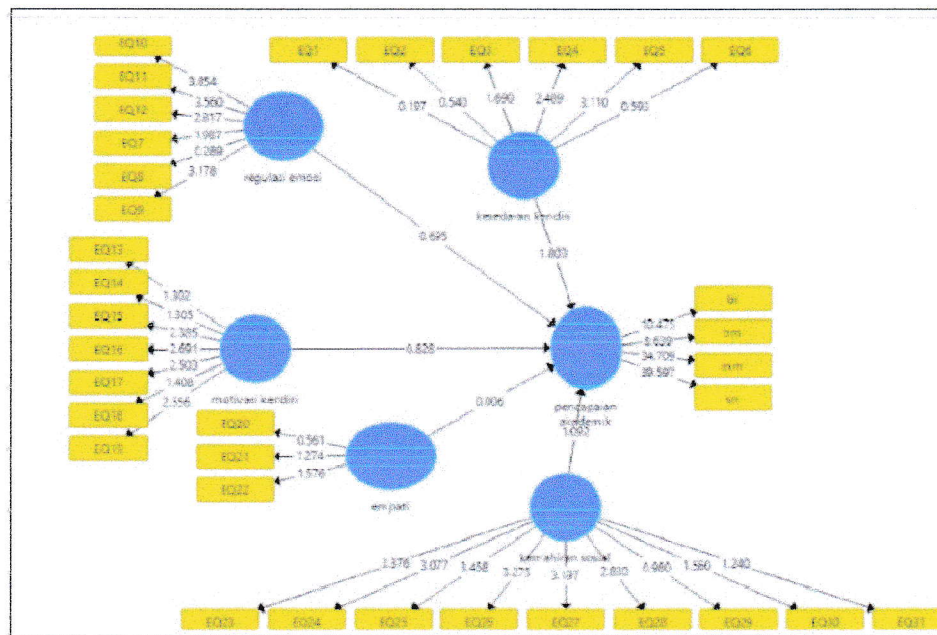
Fig1: Structural model of emotional intelligence and academic achivement

Results of the study show that there is no significant influence of all the dimensions of emotional intelligence on academic achievement. All five research hypothesis was supported. All the dimensions of emotional intelligence namely self-

awareness, self-regulation, self-motivation, empathy and social skills not affect students' academic achievement.

6. Discussion and conclusion

Overall, the level of students' emotional intelligence is high. The results show that students have a high level of self-motivation and followed by dimensions such as self-awareness, empathy, and social skills. The lowest level dimension is self-regulation at moderate level.

This finding is in contrast to the findings of Azizi et al., (2009) claimed that the level of emotional intelligence is only at medium level. This difference is likely due to the place of study and culture as well as religion or belief of the respondent varies with other studies. Cultural factors of minorities greatly influenced the level of emotional intelligence.

In addition, this study shows that there is no significant influence between the emotional intelligence on academic achievements. It means emotional intelligence does not affect academic achievement.

The findings of this study support the findings of Adil Adnan et al., (2012), which shows there is no significant relationship between emotional intelligence with academic achievement. However, this finding contradicts with the findings Najib Ahmad Marzuki et al., (2006) [12], which found that a student with high emotional intelligence is more competent in English. The findings also contradict with Hogan et al., (2010), Qualter et al., (2012), and Adeoyo et al., (2010). This finding is also in conflict with the findings using quasi-experimental method of Nwadinigwe et al., (2012) [16]. They found that when a person becomes more emotional and think rationally, then the positive behavior performed.

The findings also contrast with the findings of Downey et al., (2008) [4] suggest that students with high emotional intelligence achieve high score in mathematics and science. Similarly, in contrast to the findings Norila Binti Md Salleh (2009) [3, 15] who found that teaching integrates the emotional intelligence indicating an increase in mathematics score.

The above discussion is clearly proving that findings of this study contradict many findings of the previous study. Therefore, it can be concluded that emotional intelligence factors is not the main factor influences students' academic achievements. A high level of emotional intelligence is not necessarily needed fully in helping to increase the academic achievement. The level of emotional intelligence is indeed needed to live successfully.

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