



# Emotional Intelligence as Predictor of Academic Performance among Secondary School Students in Makurdi Metropolis of Benue State

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## Abstract

The study examined emotional intelligence as a predictor of academic performance among secondary school students in Makurdi Metropolis of Benue State. Descriptive survey design was used. Three hypotheses guided the study. 375 out of 3,754 SS II students were used for the study. Data was collected using Emotional Intelligence Scale and Achievement Test in Mathematics with reliability coefficient of 0.72 and 0.74 respectively. Descriptive statistics and Multiple Regression Analysis were used for data analysis. Result showed that there is positive relationship between emotional intelligence and academic performance. It also showed that emotional intelligence components (self-awareness managing emotion, motivating oneself, empathy and social skills) had significant combined impact on academic performance. Based on the findings, it was recommended among others that emotional quotient should be incorporated into the existing educational programme in order to promote students' achievement in the present and secure their success for the future.

**Keywords:** Emotional intelligence, Academic Performance, Empathy, Self-motivation, Self-regulation.

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## INTRODUCTION

Students' outings in the various examinations (both external and internal) are replete with poor performances. For instance, the Joint Admission and Matriculation Board (JAMB) and the West African Examination Council (WAEC) continue to register high increases and incidents of students' poor performances in the various subjects registered, internally the situation is virtually the same. Teachers complain of and high causes of poor performances in their various subjects. Nigeria as a country has set out a number of laudable programmes for its vision 20:20 in all spheres of its endeavour especially in education. For instance, new curricular are being mapped out, more inclusive education is being proposed and a more serious march toward scientific and technological advancement is being charted. Yet students' performances in their various subjects are not meeting the expected demand. Many causes have been identified as being responsible for these poor performances prominent among these are shortage of qualified teachers, poor facilities, inadequate equipment and instructional materials, method of teaching large classroom size, poor self-concept, poor achievement motivation, some government policy (Salman, Mohammed, Ogunlade and Ayinla, 2012).

Emotional Intelligence (EI) which is a psychological construct is the capability of an individual to motivate, control impulse and delay gratification, to adjust one's mood and remove distress from swamping the ability to think, to empathize and to hope (Duygulu, Hicdurmaz and Akar 2011; Mahmood AbdEl-'Dayem and Mousa 2013; Corina, 2011). It is the people's self-perception of their emotional abilities and skills, personality characteristics and behavioural disposition that influence their ability to cope successfully with environmental demands and pressures. Mestre and Barchard (2014) stated that individuals who have developed high level of EI are able to recognize and regulate their own and others emotions. According to Mayer and Salovey (1997) EI consists of five basic social and emotional competencies such as self-awareness, managing emotions (self-regulation) motivating oneself (self-motivation), empathy and social skills. Self-awareness is the ability to monitor one's emotional state and to currently identify and names one's emotion. Managing emotion refers to the ability to control or re-direct disruptive impulses and mood and the propensity to suspend judgement, to think before acting. Self-motivation is the passion to work for internal reasons that go beyond money and status. Empathy has to do with the ability to understand the emotional make-up of the people, a skill in treating people according to their emotional reaction while social skill is the proficiency in managing relationship and building networks and an ability to find common ground and build rapport.

Academic achievement according to Deepa and Lawrence (2013) is the level of actual accomplishment or proficiency one has achieved in an academic area as opposed to one's potential in the educational goals measured by examination. Preeti (2013) refer to it as the outcome of education- extent to which a student, teacher and institution has achieved their educational goal. Academic achievement prepares students or future career and also allow them enter competitive field. It can also affect students' opportunities for further education and future occupation. Test scores have been shown to be a powerful predictor of future success as measured by education, occupation and income (Jonsdottir, 2012).

Researchers have clearly shown that there has been a clear link between emotional intelligence and work performance. Ogundokun and Adeyemo (2010) conducted a study on emotional intelligence and academic achievement: The moderating influence of age, intrinsic and extrinsic motivation in Oyo State using 1563 (Males 826, female 737) students. The finding showed that emotional intelligence, age and academic achievement were potent predictors mildly associated to academic achievement. In their study to investigate EI and academic performance in first and final year students: A Cross Sectional Study: Chew, Zain

and Hassan (2013) used 163 (84 year one and 79 year five medical students). The result revealed EI has impact of EI and academic achievement of college students: A review by Ramesh, Thavaraj and Ramkumar (2016) revealed a positive relationship between EI and academic achievement of student. A similar work by Kolachina (2014) to examine the relationship between EI and academic achievement of expatriates concluded that there is a positive relationship between EI and academic achievement.

Prabha (2015), Oomenen (2015), Bakhshi, Gupta and Singh (2016), Maraichelvi and Rajan, 2013; Chamundessari (2013), found in their separate studies that EI has positive relationship with academic achievement. A research study conducted by Fernandez, Salamons and Griffiths (2012), found that acquiring EI skills were key factors in the achievement and test performance of high school and college students. In a similar study Roy, Sinha and Sumon (2013) reported EI as a significant predictor of academic success. No significant relationship was found between emotional intelligence and academic achievement of high school students as reported by Azimifar (2013) and Lawrence and Deepa (2013).

From the reviewed literature it can be seen that emotional intelligence is an important psychological factor that has a profound effect on abilities and performances. Previous researches on emotional intelligence have identified that emotional intelligence results in certain work related outcomes, however, there has been limited research which proves that emotional intelligence is linked to positive work related outcome particularly in educational sector.

### **Purpose of the Study**

Specifically, this study is aimed at addressing the under listed purposes:

- Examine the nature of the relationship that exist between emotional intelligence variables (self-awareness, managing emotion, motivating oneself, empathy and social skills) and academic performance in Mathematics among secondary school students in Makurdi Metropolis.
- Determine the combined predictive impact of self-awareness, managing emotion, motivating oneself, empathy and social skills on academic performance in Mathematics among secondary school students in Makurdi Metropolis.
- Estimate the relative predictive impact of self-awareness, managing emotion, motivating oneself, empathy and social skills on academic performance in Mathematics among secondary school students in Markurdi Metropolis

### **Hypotheses**

The following hypotheses were stated to guide the study:

- There is no significant relationship between emotional intelligence variables (self-awareness, managing emotion, motivating oneself, empathy and social skills) and academic performance in Mathematics among secondary school students in Markurdi Metropolis.
- Self-awareness, managing emotion, motivating oneself, empathy and social skills combined do not collectively predict academic performance in Mathematics among secondary school students in Makurdi Metropolis.
- Self-awareness, managing emotion, motivating oneself, empathy and social skills combined do not relatively predict academic performance in Mathematics among secondary school students in Makurdi Metropolis.

## METHODOLOGY

The participants for this study comprised 375 (181 males and 194 females) out of 3,754 SS II students drawn from 20 secondary school in Makurdi Metropolis of Benue State. One hypothesis was stated to guide the study. Adapted and modified EI scale developed by Mayer and Salovey (1997) and Achievement Test in Mathematics were used for data collection. The EI scale had two sections A and B. Section A comprised respondents' personal data such as sex, age and school while section B had 4 response categories as Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) that were assigned 4,3,2,1 respectively. The instrument was pilot tested on 35 students who were not part of the study, the internal consistency of the instrument using Cronbach Alpha method yield a reliability coefficient index 0.72.

The 40 item objective test in Mathematics drawn from the past SSCE paper constitute the achievement test. The tests were found to have high validity and reliability of 0.74 using Cronbach Alpha method. The copies of the instruments were administered to the respondent by the research and three research assistant with the approval of school heads in various schools. All the copies were retrieved. Data was analyzed with the use of Regression Statistical Analysis.

## RESULTS

The null hypotheses were tested at 0.05 level of significance.

### Hypothesis One

There is no significant relationship between emotional intelligence variables (self-awareness, managing emotion, motivating oneself, empathy and social skills) and academic performance in Mathematics among secondary school students in Makurdi Metropolis. The result is presented in Table 1.

Table 1: Descriptive statistics and inter-correlations among the variables

SN	Variable	Mean	SD	1	2	3	4	5	6
1.	Self-awareness	12.744	3.258	1.000					
2.	Managing emotion	15.257	3.531	.502*	1.000				
3.	Motivating oneself	13.464	3.114	.567*	.616*	1.000			
4.	Empathy	12.677	2.938	.570*	.575*	.644*	1.000		
5.	Social skills	14.019	3.169	.625*	.611*	.610*	.658*	1.000	
6.	Performance	13.456	4.953	.442*	.434*	.457*	.424*	.460*	1.000

\*Correlation Significant at .05 level.

Table 2 above showed that there is significant positive relationship between the independent variables as well as the dependent variable with self-awareness ( $r=.442$ ,  $p<.05$ ); managing emotion ( $r=.434$ ,  $p<.05$ ); motivating oneself ( $r=.457$ ,  $p<.05$ ); empathy ( $r=.424$ ,  $p<.05$ ); and social skills ( $r=.460$ ,  $p<.05$ ).

## Hypothesis Two

Self-awareness, managing emotion, motivating oneself, empathy and social skills combined do not collectively predict academic performance in Mathematics among secondary school students in Makurdi Metropolis. The result is presented in Table 2.

Table 2: Multiple Regression Analysis showing the combined predictive impact of self-awareness, managing emotion, motivating oneself, empathy and social skills on academic performance in Mathematics among secondary school students in Makurdi Metropolis.

Multiple R	=	.541
Multiple R <sup>2</sup>	=	.292
Multiple R <sup>2</sup> (Adjusted)	=	.283
Standard Error of Estimation	=	4.195

Source of variance	Sum of square	df	Mean square	F-ratio	Sig. of F
Regression	2682.675	5	536.535	30.495*	.000
Residual	6492.349	369	17.594		
Total	9175.024	374			

\*Significant at .05 level

Table 2 showed that the independent variables (self-awareness, managing emotion, motivating oneself, empathy and social skills) had significant joint impact on the dependent variable (academic performance in Mathematics among secondary school students in Makurdi Metropolis) produced R<sup>2</sup> of .292. The combination of the independent variables account for 28.3% of the total variance on academic performance in Mathematics among the students (adjusted R<sup>2</sup> = .283). The analysis of variance of the multiple regression data yielded an F-ratio value which was found to be statistically significant at .05 alpha level;  $F_{(5, 369)} = 30.495$ , ( $p < .05$ ).

## Hypothesis Three

Self-awareness, managing emotion, motivating oneself, empathy and social skills combined do not relatively predict academic performance in Mathematics among secondary school students in Makurdi Metropolis. The result is presented in Table 3.

Table 3: The relative contribution of self-awareness, managing emotion, motivating oneself, empathy and social skills on academic performance in Mathematics among secondary school students in Makurdi Metropolis

Variables	B	Std. Error	Beta wts.	t-value	Sig
(Constant)	-.208	1.136		-.183	.855
Self-awareness	.247	.091	.163	2.723*	.007
Managing emotion	.190	.085	.135	2.225*	.027
Motivating oneself	.249	.103	.157	2.419*	.016
Empathy	.102	.110	.060	.923	.357
Social skills	.219	.105	.140	2.083*	.038

Dependent variable: Academic performance in Mathematics among secondary school students in Makurdi Metropolis.

Table 3 indicates the individual contributions of each of the independent variables to the prediction of academic performance in Mathematics among secondary school students in Makurdi Metropolis. In terms of magnitude of the contributions, self-awareness contributed most in predicting academic performance in Mathematics among secondary school students in Makurdi Metropolis followed by motivating themselves, managing emotion and social skills respectively with empathy having the least prediction which was not statistically significant.

## **DISCUSSION**

The result finding indicated that significant positive relationships exist between emotional intelligence variables and academic performance. EI is related to academic and professional success and contributes to an extent to an individual's cognitive-based performance over and above the level attributable to general intelligence. Students with higher EI show more positive social functioning in interpersonal relationships and are regarded by peers as prosocial, less antagonistic and conflictual and this improved social competence and quality relationship could facilitate cognitive and intellectual development leading to a better academic performance. This agrees with the research findings of (Prabha, 2015; Oomenen, 2015; Bakhshi, Gupta & Singh, 2016) that there is a positive relationship between EI and academic performance of students.

The finding also revealed a significant combined impact of EI on academic performance. The result is not surprising because high intelligent students are masters at managing their emotions, they do not get angry in stressful situations instead they have the ability to look at a problem and calmly find a solution. They are excellent decision makers and they know when to trust their intuition. Regardless of their strength however, they make criticism well and they know when to use it to improve their performance. It then means that all the aspects of the student need to be properly developed for him to be able to cope with the social and emotional demands of a student and for excellent performance in mathematics. This is in consonance with Goleman's (2011) report that it is essential for students to learn how to use the emotional part of the brain because it does not only expand their range of choices when it comes to responding to a new event but also helps factor emotional memory into their learning activities.

The finding went further to show that empathy does significantly predict academic performance. This contradicts the earlier finding that empathy is the second important component of EI is the key factor to academic and career (Kolko, 2014; Fernandez, Salomonson and Griffiths(2012)). This is because EI higher capacity in empathy is directed towards achieving good grades. Students who have empathy are sensitive to the environment (happy, sad) and can adapt to the environment. They are better liked by friends and this creates a conducive environment to face learning which indirectly increases academic performance.

## **Recommendations**

Based on the findings, the following recommendations were made:

- Students should be involved in setting social and educational expectations and targets for individual and group activities in order to develop their social skills for learning;
- Students should be helped to develop empathy and negotiating skills to resolve conflicts and promote their own and others learning; and
- Emotional quotient should be incorporated into the existing educational programme in order to promote students' achievement in the present and secure their success for

the future. Also EI training programme should be introduced at every level of educational sector for better understanding of emotion by the students and teachers so as to achieve greater height in their academic sector.

## CONCLUSION

The present study has contributed positively to the past research by reaffirming the ways in which emotional intelligence affects academic performance of students and gives confidence in the ability of EI to predict academic performance in educational settings. Therefore, an awareness of EI theory and an understanding of its application should be promoted among the sectors concerned with improving the performance of secondary school students in all subjects.

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