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Students' Emotional Intelligence Characteristics as Correlate of Academic Performance in Basic English Language and Mathematics in Osun State Public Secondary Schools, Nigeria

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Abstract:

The study correlated students' emotional intelligence characteristics with academic performance in Basic English language and Mathematics in public senior secondary schools in Osun State. It determined if any of the identified emotional intelligence characteristics is a predictor of students' academic performance in the subjects. It finally determined if there is relationship between students' emotional intelligence and academic performance in the schools. The population of the study comprised all senior secondary school students in public schools in the state. Five hundred senior secondary school students were selected across 10 senior secondary schools from two local government areas using convenient sampling technique. The local government areas were purposively selected based on perceived high drop-out rate among the students. Emotional Intelligence Characteristics Questionnaire (EICQ) and Basic English Language and Mathematics Achievement Test (BEMAT) were the two instruments used for data gathering for the study. The reliability of EICQ using split – half method and Cronbach – alpha statistical analysis was 0.79 while the reliability of BEMAT using test retest and Pearson product moment correlation coefficient analysis was 0.82. Analysis of the results gather from the respondents revealed that self assessment is the major predictor of students' academic performance ($R^2 = 0.65$; $p < 0.05$) and also that students' emotional intelligence is positively correlated with academic performance ($r = 0.863$ at 0.01 level of significant). Findings from the results also showed that both the students' emotional intelligence and the students' academic performance were generally low. The study concluded that emotional intelligence has direct relationship with students' academic performance in Osun State public senior secondary schools.

Keywords: Emotional intelligence, academic performance, public secondary schools

1. Introduction

Education is one of the fundamental human rights. Every citizen of a community is expected to have access to qualitative and quantitative education. Nigeria and other 163 countries, pledged to achieve Education for All by 2015 at a World Education Forum in Dakar Senegal in 2000. It was expected that by 2015, all school-age children would have access to education while adult illiteracy would be a thing of the past. This agreement implies that by 2015 all school age children irrespective of race, family background and gender would have accessed qualitative education. The reason for emphasis on educating citizen of a nation is not farfetched. One of the fundamental reasons is because education is a veritable tool in solving the challenges of world peace and food production. It is expected that an educated community will be characterized with less crime and poverty. It is in the light of this that the National Planning Commission, NPC (2013) stated that education is the instrument for empowering young people with knowledge and skills which provide them access to productive employment. The Nigerian National Policy on Education (2004) stated that education is that process concerned with the transmission of worthwhile values; skills, and knowledge suitable for developing learners' potentials for national development. Education is therefore germane to National development.

It is in the pursuant of this that Osun state government organized a world – class education summit to chart a new course for improving upon the quality of education delivered in the Public schools within the state. It could be observed that majority of school age children in the state attend public schools because of their affordability and also because of availability of competent and experienced qualify teachers. Although private schools are also available to provide qualitative education, they are often patronized by children from “well to do family” because of the cost implications.

Students who are not from the well to do parents often end up in the so called “mushroom” private schools. The quality of education in these mushroom schools as observed is worst than what is obtainable in the public schools.

The summit as captured by Owolabi (2017) was chaired by the Nobel Laureate, Professor Wole Soyinka. The summit submitted far-reaching recommendations that could re-engineer and turn the education sector around. The recommendations as stated in Owolabi (2017) was followed and implemented both in letter and spirit. The scheme began with school feeding programme called O’ Meal (which has tremendously increased the enrolment of pupils in the public schools), followed by the school re-classification, provision of digital text books to the public secondary schools tagged tablet of knowledge (Opon Imo); payment of external examination fees for all public senior secondary schools; renovation of some school buildings and building of modern schools across the state. All these were done with the sole purpose of improving upon learning outcomes of secondary school students both in internal and external examinations.

Despite the reformation that was considered worthwhile and the huge amount expended in the production of infrastructures and facilities in the Public schools across the state, secondary school students as observed still performed poorly academically particularly in English language and Mathematics. The dropout rate is very high although this is not only peculiar to Osun State. In fact it is higher in the Northern part of Nigeria. The government of the day in Osun State is pertinent about education and that is why all hands are on deck to ensure provision of qualitative education particularly to students in the public secondary schools.

The steps taken by the state government cannot be less define as steps in the right direction but despite all these students performance in the West Africa School Certificate Examinations (WASSCE) within the state has not been encouraging. Mass failure is still been recorded in English language and Mathematics across all the public secondary schools. The West African Examination Council (WAEC) always based the success of candidates in the WASSCE on the number of credit pass which must include English language and Mathematics. This is eventually used in ranking the various states as they performed in the examination. For example, Osun state ranked 29th among the 36 states in Nigeria that presented students for West Africa Secondary School Certificate examination (WASSCE) in 2017, in 2016 and also in 2015 and ranked 22nd in 2014. The consistent poor performance of Osun state secondary school students in external examinations despite the commitment of the state government to education and the huge amount expended in building infrastructures and facilities should not be acceptable and therefore there is the need to look inward so as to identify possible factors other than what has been done that may be militating excellent academic performance among the public secondary school students. There should be justification for all the efforts of the government to reengineer education for social emancipation within the state.

A lot of factors could have accounted for the poor academic performance. Such factors as opined include methodology of instruction, appropriate use of technology, teachers’ attitude to work, teachers’ welfare package, students’ emotional intelligence, students’ family background, students’ attitude towards learning among others. While there are various literatures on the effects of demographic characteristics like family background, teachers’ qualification, gender, teachers’ attitude on students’ learning outcomes, research on the relationship between students’ emotional intelligence and learning outcomes among secondary school students had been scarce.

Since emotional intelligence might affects students’ attitude to learning which consequently is expected to affects academic performance, there is the need to investigate the relationship between emotional intelligence of the students and the students’ academic performance. This will help in identifying the possible factors responsible for poor academic performance in WASSCE and thus helped in proffering solutions to the problem.

Emotional intelligence was described by Mayer and Solwey (1990) as the capacity to reason about emotions and emotional information, and of emotions to enhance thought. Cohen (1999) defined emotional intelligence as the ability to monitor one’s own and other peoples’ emotion, to discriminate between different emotions and label them appropriately. Emotional intelligence is defined through three others which are conceptually related to mental processes involving emotional information, including appraising and expressing emotions in the self and others, regulating emotion in the self and others and using emotions in adaptive ways. Emotional intelligence is the ability to be aware of and to handle one’s emotions in varying situations. It includes traits as self-awareness, self-regulation, motivation, empathy and social skill (Goleman, 1998).

Goleman (1995) claimed that emotional intelligence can be powerful and at times more powerful than intelligent quotient. Salovey and Mayer (1990) also argued that high emotional intelligence people can accurately perceives emotions in face. Such individuals also knew how to use emotional episodes in their lives to promote specific types of thinking. Since learning according to cognitivist is mental, students with high emotional intelligence may perform better academically than those with low emotional intelligence. Since students’ attitude affect academic performance more than academic performance affects attitude, students with high emotional intelligence are likely to have better positive attitude to learning than those with low emotional intelligence.

Asfani, Suswanto and Wibawa (2016) identified factors that affect students’ learning outcomes to include students’ factors, teachers’ factors and the environment within which the learning is situated. The students’ factors are considered to be intrinsic within the students. Such factors include self regulated learning, communication and achievement motivation. Both self regulated learning and achievement motivation are offshoot of emotional intelligence of the students. Pendidikan (2017) on the other hand opined that the factors that affect learning outcomes are internal factors, external factors and factors learning approach. He conceptualized internal factor as factor within the learner. These are argued as factors that affect the physiological and psychological well being of the individual learner. Emotional intelligence plays prominent roles in both physiological and psychological state of man. It is therefore expected to contribute considerably to learners’ learning outcome. It could be deduced from these statements that intrinsic factors and

the internal factors been referred were the same construct using different terminologies. It is therefore necessary to study the relationship between students' emotional intelligence and academic performance in secondary schools.

Goleman (1995) proposed four broad domains of emotional intelligence as self – awareness, self management, social awareness and relationship management while Goleman (1998) proposed five broad domain of emotional intelligence as self – awareness, self – regulation, motivation, empathy and social skills. Bar-On (2006) on the other hand stated that emotional intelligence was developed to measure five main elements. These are intrapersonal (self – regard, self – awareness, assertiveness, independence and self – actualization), interpersonal (empathy, social responsibility and inter – personal relationship), adaptability (real testing, flexibility and problem solving), stress management (stress tolerance and impulse) and general mood (optimism and Happiness). All these characteristics or elements are expected to affect the physiological as well as the psychological composition of a student.

Singh, Graville and Dika (2002) argued that student that is motivated to learn will definitely yield a good learning outcome while Adeyemo and Oluwole (2001) posited that the way and manner of the child perception of himself (self – awareness) would affect learning outcomes. It is therefore expedient to provide the basis for justification or otherwise for the inclusion of emotional intelligence in the school curriculum. Cohen (1999) posited that the inclusion of classes on emotional intelligence in schools' curriculum is efficacious in raising emotional intelligence and reducing emotional and behavioural problems which can interfere with the learning process among students. There is the need to investigate and find out why Osun state secondary school students performed very poorly in external examinations despite the huge investments in the production of infrastructures and basic facilities across the state.

Zhou (2010) concluded that high emotional intelligence does contribute to academic achievement. Zhou (2010) find out that student with high GPRs scored better than those with low GPRs in the EI test indicated that components of EI facilitate the process of knowledge cognition and team cooperation, especially within the engineering field, where communication is emphasized. Along with the finding of the promotional role played by EI in academic performance, it is also found that the degree to which one is familiar with emotional intelligence will eventually affect the score of EI test. In other words, the more one is acquainted with emotional intelligence, the more likely it is that he or she has higher emotionally intelligent competence. Self-awareness, as well as the recognition of emotionally intelligent behaviors, is the basis on which emotional intelligence is developed. It is therefore expected that students with high emotional intelligence will perform academically better than students with low emotional intelligence.

1.1. Statement of the Problem

The high failure rate particularly in English language and Mathematics as observed in external examinations among Osun state secondary school students is one of the reasons for increase in the out of school students among the low income earners in the state. This vulnerable group is prevented from securing admission into higher institutions of learning in Nigeria because of poor academic performance in English language and Mathematics in the two recognized external examinations (WASSCE and NECO). This drop outs is perceived constitutes the highest percentage of underage prostitutes, internet fraudsters, hoodlums and night peddlers in the state. Incessant arrest of these miscreants had not been able to reduce their nefarious activities. Despite the huge amount expended by the state government in order to ensure provision of qualitative education to low income earners in the state, the academic performance of the students in the external examinations is also not yet improved upon. Several factors had been identified accounted for this but literature on the relationship between emotional intelligence and academic performance are few. There is therefore the need for an investigation into the relationship between emotional intelligence and academic performance of the students so as to suggest empirical solutions that can help in reducing the menace of high failure rate among the students in Osun State public secondary schools hence the study.

1.2. Objectives of the Study

The specific objectives of the study are to:

- Determine the emotional intelligence characteristics of the senior secondary school students in Osun state.
- Determine if the students' emotional intelligence characteristics serve as predictors of student's academic performance in basic English language and Mathematics in the schools.
- Determine the relationship between the students' emotional intelligence characteristics and students' academic performance

1.3. Research Questions

- What are the emotional intelligence characteristics of Osun state public secondary school students?
- Which of the emotional intelligence characteristics is / are predictor(s) of students' academic performance in Basic English Language and Mathematics in the secondary schools?

1.3.1. Hypotheses

There is no significance relationship in the students' emotional intelligence and their academic achievement scores

2. Methodology

The study employed survey research design. The population of the study comprised all the senior secondary school students that enrolled in public schools in Osun state, Nigeria. Five hundred senior secondary school students were

selected from 10 selected public secondary schools in the state using convenient sampling technique. The 10 selected schools were selected from two purposively selected local governments within the state. The two local governments were selected based on proximity and because there is perceive high dropout rate among the students within the local government areas. These dropout students as observed also have high rate of those that engages in prostitutions and internet fraud. Multistage sampling technique was adopted in sample selection. Two research instruments were used for data gathering: (i) Emotional Intelligence Characteristics Questionnaire (EICQ) was adapted from Consortium for Research on Emotional Intelligence which was adapted into questionnaire by Davies (n.d). The questionnaire was divided into two sections. Section A was demographic while section B elicited information on the emotional intelligence characteristics of the respondents.(ii)Basic English Language and Mathematics Achievement Test (BEMAT). BEMAT was developed using Wechsler Individual Achievement Test (WIAT). Four different areas of intelligence were tested by the instrument. These were Mathematics, Reading, Written language and Oral language. The BEMAT consisted 20 multiple choice questions extracted from past WASSCE question papers. Five questions were drawn from each of the areas identified by WIAT. BEMAT measured academic performance of the respondents. The face and content validity of EICQ and BEMAT were carried out by lecturers in the Department of Educational Foundations and Counseling of the Obafemi Awolowo University, Ile – Ife. The reliability of EICQ was determined using split – half method. The Cronbach - alpha analysis of the result to determine the reliability produced $r = 0.79$. The instrument was therefore considered reliable. The BEMAT was extracted from past WAEC questions. The instrument was administered on 20 senior secondary school students who are not within the scope of the students within an interval of two weeks. Pearson product moment correlation analysis of the data collected produced $r = 0.82$ and thus the instrument was considered reliable. Two research assistants helped in administering the questionnaires. The return rate of the instruments was 99.2%. The achievement test was marked using the already prepared marking guide.

3. Results

3.1. Research Question 1

What are the emotional intelligence characteristics of Osun state public secondary school students?

	N	Minimum	Maximum	Mean	Std. Deviation	Cumulative Mean
Self Assessment	495	4.00	16.00	9.40	3.65	2.35
Self-Consciousness	495	3.00	12.00	7.40	2.67	2.47
Constructiveness	495	2.00	12.00	7.00	2.91	2.33
Innovativeness	495	4.00	16.00	9.54	3.63	2.38
Achievement Drive	495	4.00	16.00	9.40	3.80	2.35
Emotional Intelligence	495	15.00	60.00	35.34	13.11	1.77
Valid N (listwise)	495					

Table 1: Cumulative Mean, Mean and Standard Deviation of Public Secondary School Students' Emotional Intelligence characteristics in Osun State

Table 1 shows the emotional intelligence characteristics of the students. Items 1 – 4 on the EICQ measure the students' self assessment, 5 – 7 measured the students' self consciousness, 8 – 10 measured constructiveness, 11 – 14 measured innovativeness, 15 – 18 measured achievement drive while the whole items 1 – 20 measured the emotional intelligence of the students on a four-point Likert – type scale. Strongly agree was scored 4 points on the scale, agree was score 3, disagree was 2 and strongly disagree was score 1. Any of the item not ticked was considered as no response and scored 0. Cumulative average of 3 for the emotional characteristics was considered appropriate and good for the students, otherwise is considered inappropriate and low. As shown in table 1, the mean and standard deviation score of the students on self assessment was 9.40 and 3.65 respectively. The cumulative mean was 2.35. The mean and standard deviation for self consciousness was 7.40 and 2.67 respectively. The cumulative mean was 2.47. Constructiveness had a mean 7.00 and standard deviation 2.91. The cumulative mean was 2.33. The mean for innovativeness was 9.54 while the standard deviation was 3.63. The cumulative mean was 2.38. Achievement drive had a mean 9.40 and standard deviation 3.80. The cumulative mean was 2.35. The overall mean of the students' emotional intelligence was 35.34 and the standard deviation was 13.11. The cumulative average of the overall emotional intelligence of the students was 1.77. Analysis of the result showed that the students had low self assessment, low self consciousness, low constructiveness, low innovativeness, low achievement drive and very low emotional intelligence. These characteristics could have accounted for high rate of truancy and hooliganism been witnessed among the students in public secondary schools within the state. This is also expected to contribute in no small measure to the poor academic performance been witnessed among the students. Poor self assessment prevents the students from having correct perception of his / herself. Over assumption which can lead to either inferiority or superiority complex is possibly a challenge among the students. The students may assumed mastery of a concept he / she is not really aware of. Lack of constructiveness will prevent the students from having the courage to reconstruct perceived wasted opportunities. The very low emotional intelligence of the students could account for high rate of social ills among the secondary school dropouts.

3.2. Research Question 2

Which of the emotional intelligence characteristics is / are predictor(s) of students' academic performance in basic English language and Mathematics?

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Change Statistics				
					R ² Change	F Change	Df 1	Df 2	Sig. F Change
1	.807 ^a	.651	.651	1.37805	.651	921.019	1	493	.000
2	.816 ^b	.665	.664	1.35169	.014	20.420	1	492	.000
3	.838 ^c	.702	.700	1.27760	.036	59.716	1	491	.000
4	.855 ^d	.732	.729	1.21276	.030	54.906	1	490	.000
5	.864 ^e	.746	.743	1.18116	.014	27.565	1	489	.000

Table 2: Emotional Intelligence Characteristics as Predictor(S) of Students' Academic Performance in Basic English Language and Mathematics

Table 2 presents the relationship between the emotional intelligence characteristics and students' academic performance in Basic English language and Mathematics. 65.1% of the students' academic performance can be predicted by self assessment, self consciousness introduced 1.4% change in the students' academic performance while constructiveness added 3.6%. Innovativeness introduced 3.0% change and achievement drive produced 1.4% change. All the emotional intelligence characteristics are predictors of students' academic performance in Basic English language and Mathematics at the secondary schools. This agreed with Adeyemo and Oluwole (2001) position that the child self awareness would affect the child learning outcomes. Self awareness is a product of self assessment. A student with low self assessment is likely to be a deviant in the school system. From the findings students' self awareness has strong effect on the students' academic performance. Raising students' emotional intelligence will help in reducing students' emotional problems (Cohen, 1999).

3.2.1. Hypotheses 1

There is no significant relationship between the students' emotional intelligence and the students' achievement test scores in Basic English Language and Mathematics,

	Mean	Std. Deviation	N
Emotional Intelligence	35.3374	13.11014	495
Achievement test	3.9131	2.33147	495

Table 3: The Mean and Standard Deviation of the Students' Emotional Intelligence and the Achievement Test Scores

		Emotional Intelligence	Achievement test
Emotional Intelligence	Pearson Correlation	1	.863**
	Sig. (2-tailed)		.000
	N	495	495
Achievement test	Pearson Correlation	.863**	1
	Sig. (2-tailed)	.000	
	N	495	495

Table 4: Pearson Product Moment Correlation of Students' Emotional Intelligence and the Achievement Test Scores

** Correlation Is Significant at the 0.01 Level (2-Tailed)

The mean and standard deviation of the students' emotional intelligence were 35.34 and 13.11 respectively while the mean and standard deviation of the achievement test was 3.91 and 2.33 respectively. The Pearson moment correlation as shown in table 4 shows no significant relationship between emotional intelligence and achievement test scores ($r = 0.86$; $p < 0.05$). This finding agrees with Zhou (2010) who posited that students with high emotional intelligence performed academically better than students with low emotional intelligence. The findings from the study revealed that the emotional intelligence of the students is generally very low. The students' academic performance is likewise very low as shown in Table 3. The analysis of the results showed that students with low self assessment, low self consciousness, low constructiveness, low innovativeness and low achievement drive could not perform excellently well academically. When the motivation that is expected from emotional intelligence is lacking then the academic performance of such students suffered (Cohen, 1999). Since $p < 0.05$, the hypotheses which states that there is no significant relationship between the students' emotional intelligence and the students' achievement test scores is therefore rejected

4. Conclusion

The research concludes that students in the public secondary schools in Osun State, Nigeria had low self assessment, low self consciousness, low constructiveness, low innovativeness and low achievement drive. Each of the

emotional intelligence characteristics is a predictor of the students' academic performance. Also there is significant relationship between students' emotional intelligence and academic performance in Osun State public secondary schools. The low emotional intelligence of the students' is concluded to be one of the reasons the public secondary schools students in Osun State perform very poorly in English language and Mathematics during external examinations.

5. Recommendations

- Teachers should be encouraged to investigate the emotional intelligence characteristics of the students as part of the learners' characteristics so as to identify the most appropriate pedagogical approach to be employed in providing individualized instructions to the students
- The possibility of introducing emotional intelligence into the secondary school curriculum by way of policy formulation, infrastructural and manpower provisions by all the stake holders should be employed since emotional intelligence can be learnt.
- Further researches on investigating the relationships between students' emotional intelligence characteristics and their attitude towards Basic English Language and Mathematics should be carried out.
- Workshops and seminars should be conducted so as to sensitize school administrators, teachers and other stake holders on the effects of emotional intelligence on students' learning outcomes.

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