INFLUENCE OF EMOTIONAL INTELLIGENCE ON STUDENTS' ACHIEVEMENT AND ATTITUDE IN BUSINESS STATISTICS IN COLLEGES OF EDUCATION, NORTH-CENTRAL NIGERIA

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Abstract

The study investigated the influence of emotional intelligence on achievement and attitude of business statistics students in Colleges of Education students in North-Central Nigeria. The study had two specific objectives. Research questions and hypotheses were raised in line with the specific objectives. The study adopted survey research design with population of 6,312 final year business education students in 14 Colleges of Education in the study area. The sample for the study was 500 students. Validated 4-point scale structured questionnaire was used for the data collection. The instrument was subjected to pilot study and a reliability coefficient of 0.87 was obtained. The researchers with the help of 5 research assistants administered the instrument using direct approach method. The data collected were analyzed using mean scores to answer the research questions while the research hypotheses were tested using Logistic Regression Analysis at 0.05 level of significance. The outcome of the study indicated that emotional intelligence significantly influenced the academic achievement and attitude of students in business statistics in Colleges of Education in North-central Nigeria. It was concluded that enhancing the emotional intelligence of students will help to improve their performance and attitude in business statistics in Colleges of Education in North-central Nigeria. It was recommended among others that Business Statistics lecturers should take into cognizant the co-occurrence of emotional intelligent of students and develop interventions programme that will address problem associated with emotional profile of the students.
*Keywords: **Emotional intelligence, Achievement, Attitude, Statistics***

Introduction

Business statistics can be defined as numerically expression of values according to standard of accuracy, collected in a systematic manner for a predetermined purpose and placed in relation to each other. The National Commission of Colleges of Education (NCCE) benchmark stipulated that statistics is one of the core courses to business education students in Colleges of Education

students in Nigeria. The philosophy of the subject as stipulated by the NCCE (2014) is to equip students with numerical knowledge and skills needed to: translate data for decision-making; assess performance progress; understand and produce reliable results for forecasting and evaluating the work in progress with confidence. The curriculum contents of business statistics are structured in line with that of mathematics, accounting, and element of finance, taxation and business mathematics. By implication, a solid foundation in the course will help students in related areas.

Despite the importance of Business Statistics to business students, studies have shown that the performance of students in the subject is not encouraging. For example, the study conducted by Carmona (2005) in Lebanon reported that students enrolled in statistics courses often encounter difficulties, found themselves in trouble and depression when it comes to test and examinations statistics. The author stressed that most of business statistics students often attain low levels of performance on examinations which delay completion of their programme. Similarly, in Spain study conducted by Tomasetto, Matteucci, Carugati, and Selleri (2009) reported that negative affective responses to statistics are common among undergraduate students. In Nigeria, research conducted by Adamu and Sani (2012) has shown that attitude and performance of business education students in numerical courses is discouraging. The authors stressed further that most business education students were found to be depressed when it comes to numerical subjects. Similarly, study conducted by Adamu, Jibrin and Bashir (2013) reported that the performance of students in calculations was also not encouraging. The authors added that most students consider statistics courses as the major obstacle toward achieving a high-Grade Point Average (GPA). A survey in colleges in the study area also revealed that the situation is the same with business statistics. What could be the problem?

Empirical studies from scholars such as Osenweugwor (2018), Adeyemi et al (2019) have shown that one of the factors affecting the attitude and academic achievement of students is emotional intelligence. Emotional intelligence is the composite set of educational capabilities that enable students to manage and monitor their feelings and behaviours that guide his thinking and actions. The study conducted by Fallahzadeh (2011) reported that emotional intelligence is a strong predictor of academic performance of students. Similarly, Nwadinigwe and Azuka-Obieke (2012) also reported that emotional intelligence has a significant positive relationship of academic achievement of students. In the same lane, the study of Adeyemi et al (2019) reported that emotional intelligence promotes individual understanding of concept and attitude towards learning. Likewise, Osenweugwor (2018) opined that emotional intelligence is non-cognitive abilities that affect knowledge, skills and attitude of students in school. The assertions indicated that emotional intelligence has strong influence on attitude and academic achievement of students in mathematics, sciences, social sciences and arts subjects.

Statement of the Problem
The problem of low academic achievement and attitude among business statistics students is alarming. The study conducted by Adamu and Sani (2012); Adamu, Bashir and Haruna (2015) reported that the attitude and achievement of students in business statistics is not encouraging. A survey of schools under study shows that the academic achievement of Colleges of Education students in business statistics is not encouraging. The poor achievement in the course is worrisome as report from examination offices in some Colleges of Education in the study area showed dwindled achievement trends of students. The persistent poor achievement over the

years affects the overall academic achievement of the students as it pulls the Cumulative Grade Point Average (CGPA) down and prolongs their graduating period. This leads to additional expenditure to parents and hampered the academic plans of the students and discourages students from opting for accounting options.

Researchers have been measuring cognitive and pedagogical approach on achievements and depression. For instance, Adamu, Jibrin and Bashir (2015), Adamu, Bashir and Jirbrin (2013), Adamu and Kusa (2018) have conducted studies that focused on entry points, entry grades, teaching approach but none of the study assess the non-cognitive factors, hence the present study assess the influence on Emotional Intelligence on academic achievement and attitudes of students in Business Statistics which the present study covered the existing gap.

Objectives of the Study
The major purpose of the study was to determine the influence of emotional intelligence on students' achievement and attitude in business statistics in colleges of education, north-central Nigeria. Specifically, the study sought to:
1.   Determined the extent to which emotional intelligence influence the academic achievement of Colleges of Education students in Business Statistics in North-Central Nigeria
2.   Determine the extent to which emotional intelligence influence the attitude of Colleges of Education students in Business Statistics in North-Central Nigeria.

Research Questions
The following research questions guided the study:
1.   To what extent does emotional intelligence influence the academic achievement of Colleges of Education students in Business Statistics in North-Central Nigeria?
2.   To what extent does emotional intelligence influence the attitude of Colleges of Education students in Business Statistics in North-Central Nigeria?

Research Hypotheses
The following null hypotheses were formulated and tested at 0.05 level of significance.
1.   Emotional intelligence has no significant influence on academic achievement of Colleges of Education students in Business Statistics in North-Central Nigeria.
2.   Emotional intelligence has no significant influence on attitude of Colleges of Education students in Business Statistics in North-Central Nigeria.

Methodology
The survey research design was adopted for the study. Survey research design is a design which attempts to provide an accurate description of a particular situation at one or more points in time. Emaikwu (2015) opined that, descriptive design should be employed when researcher(s) is interested in assessing the present state of affairs with regard to some variables that change over time through questionnaire. Based on this argument, the design was considered appropriate for the study. The population of the study was 6,312 final year Colleges of Education students that offered business statistics in 2021/2021 academic session in North-Central Nigeria. The researchers randomly sampled 500 students for the study. Due to obvious imbalance in the number of students enrolment in the institutions used for the study, the researchers used stratified proportionate sampling technique of 0.0794 for each institution. Structured questionnaire titled Emotional Intelligence, Achievement, Attitude of students" (EIAAS) was used for data collection. The researchers adopt the instrument based on the suggestion of Kabir and Adamu (2019) who opined that a researcher can adopt or adapt instrument when his study and previous

studies were found to be similar or closely similar. Based on the argument, the instrument developed by Schutte, Malouff, Hall, Haggerty, Golden and Dunheim (1998) was used to elicit data on student's emotional intelligence. The instruments developed by National Research Council. (2003) were used to elicit data on attitude and students' academic performance. The instrument had 17 and 15 questionnaire items respectively structured in 4-point scale of Strongly Agree (SA), 4 points; Agree (A), 3 points; Disagree (D), 2 points and Strongly Disagree (SD), 1 point. The instrument was subjected to validation by 3 experts, their inputs were integrated into the final copy of the questionnaire. A pilot study was further conducted outside the study area. Data collected from the pilot study was subjected to Cronbach's alpha reliability test.

A reliability coefficient of 0.87 was obtained. The reliability coefficient obtained was judged to be adequate as suggested by Madiha and Walid (2016) who opined that if a coefficient is greater than or equal to 0.70 it should be consider reliable for survey study. The researchers assisted by five research assists administered the instrument using direct contact approach. The approach was considered suitable because it enabled the researchers to thoroughly explain the purpose, importance and confidentiality of all information to the respondents. In addition, it led to retrieval of significant numbers of completed questionnaire. The exercise lasted for 8 weeks. The data collected from the study were analyzed using descriptive and inferential statistics of mean and standard deviations to answer the research questions. A benchmark score of ≥2.5 was used for agreed. In the test of research hypotheses, Simple Logistic Regression analysis was employed at 0.05 level of significance.

Results
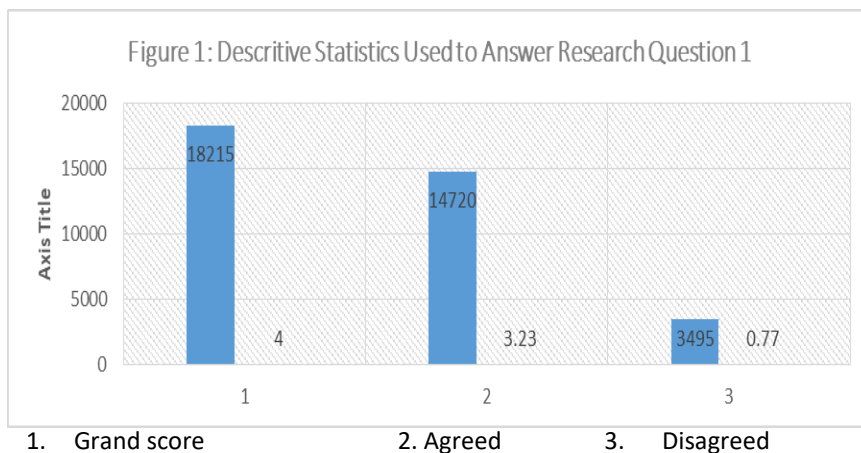### Research Question One
To what extent does emotional intelligence influence the academic achievement of Colleges of Education students in Business Statistics in North-central Nigeria?

Table 5: Descriptive Statistics on Emotional Intelligence on Academic Achievement of Colleges of Education Students in Business Statistics

	N	Mean Range	Sum	Agreed	Disagreed	Grand mean	Std. Dev	Remark
Emotional & Achie	419	2.90-3.55	18215	14720	3495	3.23	.9903	Agreed

Source: Fieldwork, 2021

Figure 1: Descritive Statistics Used to Answer Research Question 1

1. Grand score   2. Agreed   3. Disagreed

The finding of research question one documented in Table 1 disclosed the mean ranged from 2.90 to 3.55. The sum of scores of the items stood at 18215. Students that opined that emotional

intelligence influenced their academic achievement in Business Statistics scored 14720 with grand mean of 3.23. Those that had divergent views scored 3495.

This also seen in Figure 1 which disclosed the grand score of 18215 at 4-point scale. The score of 11720 with mean of 3.23 was obtained for students who agreed emotional intelligent influenced their academic achievement. Those that had contrary view scored 3495 with mean of 0.77. The mean score of 3.23 obtained was found to be within the index score for agree. The result therefore indicated that students were of the opinion that emotional intelligence influenced their academic achievement in Business Statistics in Colleges of Education in North-central Nigeria.
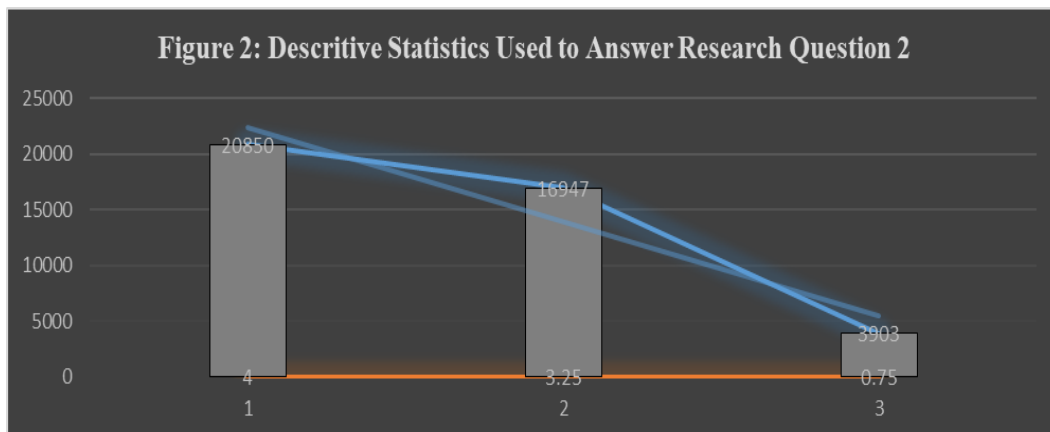
Research Question Two

To what extent does emotional intelligence influence the attitude of Colleges of Education students in Business Statistics in North-central Nigeria?

Table 6: Descriptive Statistics on Emotional Intelligence on Attitude of Colleges of Education Students in Business Statistics

	N	Mean Range	Sum	Agreed	Disagreed	Grand mean	Std. Dev	Remark
Emotional & Att.	419	3.03-3.43	20850	16947	3903	3.25	.8542	Agreed

Source: Fieldwork, 2021

Figure 2: Descritive Statistics Used to Answer Research Question 2

1.   Grand Score 2.   Agreed   3. Disagreed

The descriptive statistics used to answer research question two documented in Table 2 disclosed the mean ranged from 3.03-3.43 with the sum of scores of 20850. The score of 16947 was obtained from students who opined that emotional intelligence influenced their attitude in Business Statistics while students that had contrary views scored 3903 with the standard deviation of .854.

The result obtained in figure 2 also indicated the grand score of 20850 at 4-point scale questionnaire. The students that opined that emotional intelligence influenced their attitude scored 16947 (3.25). Those that had divergent view scored 3903 (0.75). The mean score of 3.25 suggested that Colleges of Education students were of the opinion that emotional intelligence has influence on their attitude in Business Statistics in North-central Nigeria.

Research Hypothesis One

Emotional intelligence has no significant influence on academic achievement of Colleges of Education students in Business Statistics in North-Central Nigeria.

Table 3: Logistic Regression Result used to determine the influence of Emotional Intelligent on academic Achievement of Colleges of Education Students in Business Statistics

Model	Standardized Coefficients Beta	T	R	R^2	Adjusted R^2	P-value	Remark
1	.936	54.391	.936ᵃ	.876	.876	.000	HO₃ Rejected

a.   Predictors: (Constant), Emotional Intelligent   Source: Fieldwork, 2021
b.   Dependent Variable: Performance

The regression analysis on the test research hypothesis one presented in Table 3 disclosed the Standardized Coefficients Beta value of .936 with t=54.391. The R-value obtained stood at .936 with R^2 of .876. The obtained R^2 value indicated emotional intelligent has 87.6% influence on academic achievement of Colleges of Education students in Business Statistic North-central Nigeria. The *p=0.000* obtained further indicated that the influence of emotional intelligent on the Colleges of Education students' academic achievement in Business Statistics was significant. The hypothesis was therefore rejected.

Research Hypothesis Two

Emotional intelligence has no significant influence on attitude of Colleges of Education students in Business Statistics in North-Central Nigeria.

Table 4: Logistic Regression Result on the Influence of Emotional Intelligent on Attitude of Colleges of Education Students in Business Statistics

Model	Standardized Coefficients Beta	T	R	R^2	Adjusted R^2	P-value	Remark
1	.469	10.841	.469ᵃ	.220	.218	.000	HO₄ Rejected

a.   Predictors: (Constant), Emotional Intelligent   Source: Fieldwork, 2021
b.   Dependent Variable: Attitude

The test of research hypothesis two documented in Table 4 disclosed the Standardized Coefficients Beta of .469 with t=10.841. The R-value obtained stood at .449 and the R-square was .220. The obtained R-square value obtained suggested that emotional intelligence of students has 22% influence on their attitude on Business Statistics. This can also be seen in the *p-value* of .0000<0.05 obtained which suggested that emotional intelligence of Colleges of Education students has significant influence on their attitude in Business Statistics in North-central Nigeria. The hypothesis was therefore rejected.

Discussion of the Findings

The result of research question one shows that emotional intelligent influenced the academic achievement of Colleges of Education students in Business Statistics in North-central Nigeria. This was also affirmed by the test of corresponding null hypothesis three which suggested that the influence was significant. Likewise, the study conducted by Zirak and Ahmadian (2015) reported that emotional intelligence has impact on students' academic performance of

information technology and business management. Suleiman, Aqueeh and Adibah (2019) indicated that emotional intelligence and academic achievement motivation among College students in West Bengal State University revealed that there is significant relationship between emotional intelligence and academic achievement motivation among college students. This also agreed with the report of Suleman, Hussain, Syed, Parveen, Lodhi and Mahmood (2019) which indicated that there was a strong positive relationship between emotional intelligence and academic success among undergraduate.

Contrary to this finding, the study conducted by Adil Adnan et al., (2012) reported that there was no significant relationship between emotional intelligence with academic achievement. The study of Nwabuebo (2013) also revealed that there was no relationship between the trait emotional intelligence and GPA. In the same lane, the study of Ngu, Zahyah, Muhajir and Arumugam (2016) also reported that there was no strong relationship between emotional intelligent and students' academic achievement. The contradiction in the result may be attributed to time and place where the study was conducted as earlier reported by Adamu and Sani (2012) who argued that time, location and situation may led to difference in the outcome of research work.

The result of research questions two and test of corresponding null hypothesis disclosed that emotional intelligent has significant influence on attitude of Colleges of Education students in Business Statistics in North-central Nigeria. The finding was found to be in line with the submission of Certel et al., (2011) which indicated that emotions have a significant role on human life and attitude. The authors maintained that idea that individuals who are aware of their emotions, able to control them, and can understand emotions of others can be happier and more successful has increased the significance of emotional intelligence concept. The study of Salami (2010) also disclosed that self-efficacy and emotional intelligence significantly predicted students' behaviours and attitudes. Emotional Intelligence according to Adeyemi et al (2019) promotes individual understanding of concept, feelings and attitude.

Conclusion
The outcome of the study indicated that emotional intelligent is a strong predictor of academic achievement and attitude of Business Statistics students in Colleges of Education in North-central Nigeria. This therefore indicated that students with high emotional intelligent has the potentials of performing better in business statistics. Which in turn make students to develop positive attitude in the subject. It was therefore concluded that, helping students to develop their emotional intelligence will help in address the low academic performance and attitude of students Business Statistics.

Recommendations
Based on the outcome, it was recommended that:
i. Business Statistics lecturers should take into cognizant the co-occurrence of emotional intelligent of students and develop interventions programme that will address problem associated with emotional profile of students
ii. Business statistics lecturers should develop coping and problem-solving strategies that will enable students to face controllable and uncontrollable problems and reduce the risk of emotional intelligent that will affect the academic achievement of students.

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