

RELATIONSHIP BETWEEN UNIVERSITY ENTRY REQUIREMENTS AND ACADEMIC PERFORMANCE OF ACCOUNTING STUDENTS IN NIGERIA

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Abstract

Prior studies have associated academic performance of accounting students to learning facilities and structure, learning method and entry qualification. Although it is expected that these entry qualifications would have an impact on the students' performance, studies have given contradictory findings. This study was therefore conducted to examine the relationship between university entry requirements and the performance of accounting students. Data were collected from the official records of 317 accounting students who graduated from three universities in Nigeria in the 2018/2019 academic session. The data were analyzed using correlation and multiple regression statistics with the aid of SPSS. The findings of this study show a positive and strong correlation but statistically insignificant relationship between Senior Secondary Certificate Examination (SSCE) grade in English language, Mathematics, Economics and Accounting and the final Cumulative Grade Point Average (CGPA). The implication of the findings and recommendations are provided.

Keywords: - academic performance, accounting students, CGPA, entry requirements, SSCE.

Introduction

Joint Admission and Matriculation Board (JAMB) is an institution in Nigeria that is responsible for setting the criteria for admissions into the Nigerian tertiary institutions. These include specifying the minimum entry requirements for which a candidate will be eligible for admission into any program of the universities, polytechnics and colleges of education. The entry requirements include the Unified Tertiary Matriculation Examination (UTME) cut-off point, Advanced Level (A'Level) and Ordinary Level (O'level) grades. These entry requirements are classified in accordance with the degree programs of the universities. The use of O'level grade has been the dominant entry requirement for admission into degree programs of the Nigerian universities.

One of the degree programs is the Bachelor of Science (B.Sc.) in Accounting. Admission into the accounting program of the Nigerian universities requires the candidate to have a minimum of five credits in O'level – Senior Secondary Certificate Examination (SSCE) results. The SSCE requirement for admission into any degree program in Nigeria are English and Mathematics. In addition, Economics is required for Bachelor Degree in Accounting. Similarly, the UTME subject combination requires candidates to write and pass English language, Mathematics, Economics and one other relevant subject. It is, therefore, a common practice or policy in Nigerian universities to admit candidate into Bachelor of Accounting without earning a credit grade in accounting at SSCE level. Thus, emphasizing English language, Mathematics and Economics rather than Accounting.

Although it is expected that these entry requirements would have an impact on the students' performance, studies have given contradictory findings (Beatson, Berg, & Smith, 2020; Bosua & Nest, 2015; Keef, 1988; Koh & Koh, 1999). Notwithstanding these findings, concerned institutions have continued to use the existing criteria for admission into the accounting programs of the Nigerian universities. The objective of study is to examine the relationship between SSCE results, as the entry requirements and the academic performance of accounting at Bachelor Degree level. In achieving this objective, the current paper uses SSCE grade points obtained in English, Mathematics, Economics and Accounting as the entry requirements. In addition, we use the final result of the student measured by the overall Cumulative Grade Point Average earned by the student at the end of the program. In addition, previous studies were conducted in Cambodia (Sothan, 2019), New Zealand (Keef, 1988), Singapore (Koh & Koh, 1999) and Malaysia (Khadijah et al., 2004) with very few studies in Africa. Thereby pushing for further studies in Nigeria. This is a major contribution of this study and therefore makes the study unique. This study is structured into four parts to cover the review of related literature after the background and introduction. Section three will be devoted to the description of the methodology adopted in achieving the study's objective. Results and conclusion will be the last two parts of the study.

Review of related literature

Substantial research efforts were devoted in understanding the success of students in their academic programs. Several factors were linked to students' academic performance. For instance the association between gender, prior knowledge, motives and expectation were associated to academic performance of accounting students (Byrne & Flood, 2008). Beatson et al. (2020) on the other hand predicted academic performance based on self-efficacy believe of the students. Similarly, Keef (1988) examined the influence of previous study of English, Accounting, Mathematics and Economics on performance of accounting students.

The findings from previous studies have indicated that academic performance is dependent on prior knowledge, entry requirements, school and socio-demographic characteristics, gender and age (Beatson et al., 2020). Although the results are not consistent, a majority of the studies reported the influence of entry requirements on the performance of accounting students. This section is devoted to the review of the related literature on the relationship between English and mathematics background; prior economics and accounting knowledge; and academic performance.

English background and academic performance

English language is a second language and the medium of learning in the Nigerian universities. It is therefore not surprising to see it as one of the entry requirements for admission into the Nigerian universities. Proficiency in English language is considered essential because it determines the literacy level of the students and may subsequently affect their academic performance (Morris & Maxey, 2014). Therefore, the importance of English language to students' academic life can never be over emphasized. This is associated with the fact that the ability to read and write provides the opportunity to learn and hence improve academic performance of accounting students (Khadijah, Mahfudzah, Syed, & AlHabshi, 2004; Sothan, 2019).

The relationship between English language and the performance of accounting has been previously investigated (Gul & Fong, 1993; Keef, 1988; Sothan, 2019). The findings from these studies are not consistent. A number of them have reported positive association between English and academic performance. For example, Sothan (2019) and Gul and Fong (1993) presented a positive and significant relationship between English and academic performance of accounting students. Similarly, Morris and Maxey (2014) reported a positive relationship. In addition, English was reported by Keef (1988) to have a negligible effect on academic performance of accounting students. In contrast, Baldwin and Howe (1982) reported that English language has no effect on academic performance. Furthermore, Aidoo-buameh (2013) found no significant relationship between English and academic performance of accounting students. These inconsistencies in research findings call for further investigation into the relationship between English language and academic performance of accounting students.

Mathematical background and academic performance

The mathematical background is one of the key requirements for admission into Nigerian Universities irrespective of course of study. There is a common belief that numeric ability provides advantage to students in quantitative program such as engineering, finance and accounting (Guney, 2011). Previous research efforts have examined the effect of Mathematics on academic performance (Barlette, Peel, & Pendlebury, 1993; Eskew & Faley, 1988; Gul & Fong, 1993; Keef, 1988). Despite this, there is no clear evidence to indicate that having mathematics background leads to better academic performance of accounting students. For example, Gul and Fong (1993) reported positive and significant effects on student performance while Barlette et al. (1993) found no significant impact on performance. Additionally, Keef (1988) reported that mathematics background did not have important effect on academic performance of accounting students. Thus, creating contradictory finding. These findings need to be supported by other studies in different context such as Nigeria.

Economics knowledge and academic performance

In Nigeria, it is a requirement to have prior knowledge of economics and must have passed with a grade not below 'credit' level to gain admission into the accounting degree program. However, the effect of economic background has not received adequate attention by previous studies. Many studies have considered English and Mathematical background, prior accounting knowledge and age as determinants of academic performance of accounting students. Despite the lack of adequate attention, Keef, (1988) reported a positive relationship between Economics and academic performance of accounting students in New Zealand. This is similar to the finding of the study conducted by Barlette et al. (1993). According to Barlette et al. (1993) students with background in Economics were found to outperform those without background in Economic. They further argued that Economics is significant determinants for academic success of accounting students. This scarcity of previous studies calls for additional research effort to affirmed or contradict the existing findings.

Accounting knowledge and academic performance

Studies on the relationship between prior knowledge and academic performance have assumed that having background or prior knowledge leads to better academic performance.

This presumption may be applied to the relationship between prior knowledge of accounting and academic performance of accounting students. A number of previous studies have tested the relationship between prior knowledge of accounting and academic performance of accounting student at Bachelor Degree level (Barlette et al., 1993; Bosua & Nest, 2015; Eskew & Faley, 1988; Gul & Fong, 1993). Eskew and Faley (1988) found and reported a significant relationship between prior knowledge of accounting and the academic performance of accounting students. Similarly, Bosua and Nest (2015) reported a strong relationship between accounting knowledge and academic performance of accounting students. This relationship was also reported by Beatson et al., (2020) and Gul and Fong (1993). In addition, Cassidy (2012) reported a positive relationship between accounting knowledge and academic performance.

However, Barlette et al. (1993), Keef, (1988) and Baldwin and Howe (1982) examined and reported that prior accounting knowledge does not have a significant influence on academic performance of accounting students. In addition, Koh and Koh (1999) in a Singaporean study found and reported that prior accounting knowledge does not give difference in academic performance of accounting students at Bachelor level. This condition has called for future research on the relationship between previous accounting background and academic performance of accounting students at Bachelor level.

Academic performance

Previous studies on the determinants of performance of accounting students measured academic performance differently. Most of the studies are concerned with either first-year academic performance or a combination of two or more approaches (Byrne & Flood, 2008; Keef, 1988; Koh & Koh, 1999). In addition, grade point earned per course or subject was used as a measure of performance (Beatson et al., 2020; Gracia & Jenkins, 2003). Hence the need to extend the frontier of knowledge and to adopt a measure that takes overall performance. This study adopts the use of Cumulative Grade Point Average (CGPA) as a measure of academic performance at Bachelor level.

In establishing the relation between entry requirements and academic performance of accounting students, the current study employs the use of Ludwig Von Bertalanffy's (1956) system theory as the underpinning theory. This is because the quality of students admitted will have effect on their final year graduating grade (Aidoo-buameh, 2013). This is explained in the Input-Output model of system theory. Systems theory has also become a convenient model used in supporting studies in cognitive development and human perception and it comes handy for our study.

Methodology

This is a quantitative study aimed to examine the relationship between University entry requirements and academic performance of accounting students in Nigerian universities. The study investigated the relationship between Senior Secondary Certificate Examination (SSCE) grades as mandatory entry requirements and the overall Cumulative Grade Point Average (CGPA) as measure of performance of accounting students. The current study was conducted with the graduates of Bachelor of Science in Accounting of three Universities in Northeast Nigeria. The Bachelor's degree is a four program and a total of 317 students' records were collected for the 2018 and 2019 academic sessions.

The four variables used for the study are SSCE results in English, Mathematics, Economics and Accounting/Book-keeping as the independent variables. Previous studies have used these variables separately, or in a combination of two or three subjects. This study combined all four variables to examine their relationship with students' academic performance. The dependent variable for the study is the academic performance of the students at Bachelor level. Specifically, we used the overall performance of the students. Nigerian Universities use CGPA system to assess the performance of the students. We used the final year CGPA to measure students' academic performance.

The final CGPA classifies students into six classes. They are First Class, Second Class Upper, Second Class Lower, Third Class, Pass and Failed degrees. This classification indicates students' performance in descending order. A first Class graduate scores a final CGPA of 4.5 and above on a five (5) point grading system being the best performance. The least performance is a final year CGPA of less than one (1). This grading system is depicted in the table 1 below.

Table 1: Grade point and Degree classification

<i>Grade</i>	<i>Grade point</i>	<i>CGPA</i>	<i>Class of degree</i>
<i>A</i>	<i>5</i>	<i>4.50-5.00</i>	<i>First Class</i>
<i>B</i>	<i>4</i>	<i>3.50-4.49</i>	<i>Second class upper</i>
<i>C</i>	<i>3</i>	<i>2.50-3.49</i>	<i>Second class lower</i>
<i>D</i>	<i>2</i>	<i>1.50-2.49</i>	<i>Third Class</i>
<i>E</i>	<i>1</i>	<i>1.00-1.49</i>	<i>Pass</i>
<i>F</i>	<i>0</i>	<i>0.99-0.00</i>	<i>Fail</i>

Source: NUC 2007

The entry requirement is measured by the grade point a student gets in the SSCE. The SSCE result has nine (9) grades with 'Grade 1' as 'excellent' and 'Grade 9' as 'Fail'. For the purpose of this study, only grades 1 – 6 were used. These are the acceptable grades for admission into the Nigerian Universities. The grade classification is given in table 2.

Table 2: SSCE Grade Classification

<i>SSCE Grade</i>	<i>Classification</i>
<i>A1</i>	<i>Excellent</i>
<i>B2</i>	<i>Very Good</i>
<i>B3</i>	<i>Good</i>
<i>C4</i>	<i>Credit</i>
<i>C5</i>	<i>Credit</i>
<i>C6</i>	<i>Credit</i>
<i>P7</i>	<i>Pass</i>
<i>P8</i>	<i>Pass</i>
<i>F9</i>	<i>Fail</i>

Source: WAEC, 2019

However, we observed that, numeric values assigned in the SSCE grade were the reverse of what is obtainable in the universities. Lower values were assigned for better grades in SSCE while higher values to better grades in University system. To overcome the reverse challenge, we categorized the CGPA and assigned values of 6 – 1 with 6 as best performance and 1 the least performance. The SSCE was reversed coded to reflect that of the CGPA. These were made possible using Microsoft Excel and is presented in table 3. This gave us the variable measurement for the required analysis. The data were then analyzed using regression and correlation statistics with the support of SPSS version 23.

Table 3: Variable measurement

<i>Academic performance</i>		<i>Entry requirement</i>	
<i>Degree classification</i>	<i>Weigh assigned</i>	<i>SSCE grade</i>	<i>Weight Assigned</i>
<i>First Class</i>	6	<i>Excellent</i>	6
<i>Second class upper</i>	5	<i>Very Good</i>	5
<i>Second class lower</i>	4	<i>Good</i>	4
<i>Third Class</i>	3	<i>Credit</i>	3
<i>Pass</i>	2	<i>Credit</i>	2
<i>Failed</i>	1	<i>Credit</i>	1

Source: Author’s compilation

Results and discussion

This section is dedicated to the presentation of the results of the analysis conducted on the data collected. The aim of the analysis is to examine the relationship between SSCE grades of English, Mathematics, Economics and Accounting/Bookkeeping as the entry requirements and students final CGPA as academic performance. A total of 317 students’ records were analyzed which forms the total population for the study.

We first all assess the performance of the students in terms of their CGPA. The result is presented in table 4 where a majority of graduates, over 40%, fall under Second Class Lower division. This is followed by Second Class Upper classification which represent 34.7% of the sampled population. First Class degree has a total of 15, representing 4.7%, out of the 317 graduates from the three universities. The results shows that there are no third class nor failed degree. As can be seen from table 4, the majority (74.8%) of the students graduated with Second Class degree.

Table 4 Frequencies distribution of CGPA performance

<i>Class of Degree</i>	<i>Frequency</i>	<i>Percent</i>
<i>Third Class</i>	65	20.5
<i>Second class Lower</i>	127	40.1
<i>Second Class Upper</i>	110	34.7
<i>First Class</i>	15	4.7
<i>Total</i>	317	100.0

We further conducted descriptive analysis of the SSCE grades for English, Mathematics, Economics and Accounting/Bookkeeping. The content of table 5 shows that the SSCE performance of the students were on average grade.

In other words, a majority of the students scored grade C5 which is the 5th grade in the ranking of students' performance in SSCE. Going by this analysis there is an apparent relationship in the performance of students in SSCE and CGPA. Further interpretation of table 5 shows that 52.7%, 49.5%, 48.9% and 29% scored SSCE grade C5 in English, Mathematics, Economics and Accounting. This is followed by grade C4 with 24.6%, 31.2%, 22.7% and 18.3% in English, Mathematics, Economics and Accounting.

Table 5 *Frequencies distribution of SSCE grade*

SSCE Grades	English		Mathematics		Economics		Accounting	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Credit 6	10	3.2	5	1.6	23	7.3	107	33.8
Credit 5	167	52.7	157	49.5	155	48.9	92	29.0
Credit 4	78	24.6	99	31.2	72	22.7	58	18.3
Good	50	15.8	28	8.8	39	12.3	35	11.0
Very good	11	3.5	28	8.8	27	8.5	23	7.3
Excellent	1	0.3	0	0	1	0.3	2	0.3

In addition, we conducted a descriptive analysis of the variables. The mean score for SSCE grade in English (2.65), Mathematics (2.74), Economics (2.67) and Accounting (2.31). The corresponding standard deviation are .925, .967, 1.079 and 1.275 for English, Mathematics, Economics and Accounting respectively. This shows that accounting students that graduated from three Universities had low or poor performance in the SSCE grade as their entry requirements. However, the overall academic performance had a mean score of 4.24 with a standard deviation of .829 which shows a high performance indicating that there is little or no relationship between the entry requirements (SSCE grade) and academic performance (CGPA).

Table 6 *Descriptive statistics*

Variables	N	Mean	Std. Deviation
Academic performance	317	4.24	.829
Grade in English	317	2.65	.925
Grade in Mathematics	317	2.74	.967
Grade in Economics	317	2.67	1.079
Grade in Accounting	317	2.31	1.275

In examining the relationship between the SSCE grades in English, Mathematics, Economics and Accounting as entry requirements and CGPA as academic performance we ran correlation analysis. Table 7 presents the correlation matrix. Our correlation coefficients indicate positive and weak relationship between entry requirement (SSCE grade) and academic performance of accounting graduates.

Table 7 Correlation matrix

	Performance	English	Mathematics	Economics	Accounting
Performance	1.000				
English	.052	1.000			
Mathematics	.038	.126	1.000		
Economics	.067	.111	.096	1.000	
Accounting	.086	.071	.238	.052	1.000

In order to test the relationships simultaneously, we further conducted regression analysis to regress academic performance on the four variables – SSCE grades in English, Mathematics, Economics and Accounting. The regression coefficient, t-statistics, p-value, as well as the model summary (R², F-value) and variance inflation factors (VIF) are presented in Table 8.

Table 8 Regression analysis

	Coefficient	t-Statistics	p-Value	VIF
Constant	3.889	18.508	0.000	-
English	.034	.674	.500	1.028
Mathematics	.008	.155	.877	1.080
Economics	.044	1.011	.313	1.020
Accounting	.051	1.352	.177	1.063

Model F=1.021. (p-value 0.397), R² = 0.21

As can be observed in table 8, the regression model is insignificant because it has a *p*-value of 0.397. This indicate a very weak fit. However, the model’s R² is 0.021 which indicate that at least 20% of the variation in the final year academic performance can be explained by the variation of performance in English, Mathematics, Economic and Accounting at SSCE level. Although the R² may not be considered high, Koh and Koh (1999) posit that it is adequate in evaluating the determinants of performance rather than predicting performance.

Our regression result shows SSCE grade in English has a positive and insignificant relationship with final CGPA of accounting student at the three universities. This can be seen in Table 8 where it has a *p*-value of .500. This agrees with the finding of Aidoo-buameh (2013) who reported that pre-university English performance did not reflect statistical significance on performance of accounting students. This is also in agreement with previous finding that English has no effect on academic performance of accounting students (Baldwin & Howe, 1982).

Furthermore, our results indicate SSCE grade in Mathematics as entry requirement has positive but insignificant relationship with CGPA as academic performance. This can be seen in Table 8 where the *p*-value for mathematics is 0.877. Hence, mathematics has insignificant effects on academic performance of accounting students at the sampled universities. Our findings correspond to the findings of Barlette et al. (1993) and Keef (1988) who reported insignificant relationship between mathematics and academic performance.

Our analysis of the data shows that prior knowledge of economics, as an entry requirement, measured by the SSCE grade, has a positive but very weak correlation, as depicted in table 7, as well as an insignificant effect on students’ performance as measured by the final year

CGPA. The regression analysis in table 8 shows a p -value of .313. This result do not agree with previous studies (Barlette et al., 1993; Keef, 1988).

Similarly, our results as seen in Table 7 and 8 show that SSCE grade in accounting/bookkeeping has positive but insignificant relationship with CGPA of accounting students. This is explained by a p -value of .177. Therefore, prior knowledge of accounting is not significantly related to academic performance of accounting students. Our result agrees with previous finding that accounting background has no significant relationship with academic performance (Baldwin & Howe, 1982; Barlette et al., 1993; Keef, 1988) and contradict some previous finding that found significant relationship between prior accounting knowledge and academic performance of accounting students (Beatson et al., 2020; Bosua & Nest, 2015; Cassidy, 2012; Eskew & Faley, 1988; Gul & Fong, 1993). This contradiction may be associated with the measurement of variables and context.

Conclusion

The current study was undertaken to examine the relationship between university entry requirements and academic performance of accounting students. Results presented here suggests that English background, Mathematical performance, prior knowledge of economics and accounting are all having positive and strong relationship but statistically insignificant in determining academic performance of accounting students. Despite the fact that our finding agrees and contradict previous studies, our study is unique because it used SSCE grade as determinants of entry into universities and the final CGPA of the students. No study has ever, to the best of our knowledge, adopted these measures. Similarly, our study considers CGPA as a measure of performance rather than students' score in a particular course. We therefore conclude that SSCE results as entry requirements may not be the most appropriate factor that influence academic performance of accounting students. The uniqueness of this study also reveals that SSCE results may not represent the students' performance as previous studies have questioned the SSCE performance. For instance the conduct of the entry level examination by West African Examination Council (WAEC), National Examination Council (NECO) and JAMB have all been trailed with complaints of examination misconduct (Anzene, 2014). This has led to irreversible loss of credibility of the results of such examination (Onyibe, Uma, & Ibina, 2015). Consequently, the observed insignificant relationship between the SCCE and CGPA of accounting students may be attributed to effect examination malpractice at the secondary school level, better learning environment at university, and maturity level of the students. Other factors may include attitude to learning and self-efficacy belief.

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ACCOUNTING STUDENTS IN NIGERIA
IBRAHIM UMAR**

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