Academic Achievement and Admission Policy as Correlate of Student Retention in Nigerian Federal Universities

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Abstract

The research focused on Nigerian federal universities to determine the relationship between academic performance of students admitted through criteria policy and their retention. A Sample of 42,288 first-year undergraduate students from five federal universities in South-West, Nigeria was surveyed. Variables being examined vis-a-vis retention rate were admission policy and academic achievement. Data collected were analysed with descriptive and inferential statistics. The findings revealed that significant relationship existed between academic performances of students admitted through criteria policy and retention. The study suggested that admission policy should be better align with institutional strategies that can improve student academic performance and subsequently impact on the retention of students.

Key words: admission criteria, merit, locality, educationally less developed, quality.

Introduction

University education is the apex level of education system. It is a very crucial level of the education because it is a stage which prepares students for high-level skilled works in various fields. In realization of the critical role the university education has to play in the all round development of the country, the Federal Republic of Nigeria in its National Policy on Education stipulated that some of the goals of university education among others shall be to make optimum contribution to national development by:

a) intensifying and diversifying its programmes for the development of high level manpower within the context of the needs of the nation; and
b) making professional course contents to reflect our national requirements…(FRN: 2004 p. 38)

It is expected that university education should inspire and equip students with the desire for self improvement and achievement of excellence and relevant skills that will help them make maximum contribution to all facets of economy of the nation. Although, the goals and objectives set to achieve through university education were stated in clear terms, the worry is on the disparity between policy and the realization of the stated objectives. The evidence in recent times have shown a mis-match in the education received and the quality of the students produced as being clearly demonstrated in their performances. Furthermore, emphasis seems to be on quantitative expansion of education as against qualitative improvement in the country. More concern has been on the number educated and number graduating rather than the quality of the graduates.

The education policy represents definite course of action proposed by the government in power or executive authority and adopted as expedient to the issues and problems of education (Jaiyeola & Atanda, 2005). However, policies on education generally and admission particularly in Nigeria appears to change with successive government in power.

The inconsistencies in educational policies have been argued to be responsible for poor service delivery in the school system. Furthermore, policies that do not take into cognizance students' academic ability as well as adequacy and quality of resources available in the institutions can be discouraging and frustrating to the administrators.

The persistence rate and quality of the students produced are some of the major parameters of measuring the achievement of the university education goal. Consequently, academia and other stakeholders in university education have expressed their concern on the contending issues of poor academic performance, wastage, quality of graduates faced by administrators of institutions. In all forums lately, quality of students is a burning issue; this is because of the mounting unemployment, under-employment and mis-employment among the few educated ones and low level of visible development of all the sectors of the nation's economy. The nation is saddled with graduates with general skills and there is a perennial shortage of people with critical skills (Aghenta, 2006). Researchers have come-up with various reasons that could be adduced for the nose-diving trend in the quality of students. The consensus among scholars is that the first-two academic sessions are crucial to predict student's retention in the university system and subsequently their quality. Consequently, the question arising is whether the admission policy is generating high quality student pool which could serves as measure of determining the students' academic achievement and their subsequent retention over the years?

Literature Review

The study adopted Agboola's (2011) admission and retention interaction model based on Tinto's (1975) Student Integration Theory and adapted it to the criteria of admission into college by Ryan (2010). The model emphasizes the interrelationship that exist between academic survival, school experience, student attribute and sustainability, which helps to avoid making critical admission error and relating it to system theory of input – process – output. There is need to ensure that the quality of students are ascertained at the entry point as this will give rise to students who are widely diversified and talented in more than simply test-taking and essay writing.

Admission process into universities is critical. Like any other nation, admissions information has historically been used as a predictor of academic success by most institutions and when evaluated, it may likely help identify students that may be at risk of low academic performance, as well as revolve the factors that may likely predict quality but may not be factors that predict low performance. Student quality on its part is a measure of the forces that shape student's attributes such as: their performance in academic works, study and coping skills satisfaction with course of study and ability to persist in the educational system. It is one of the major indicators of institutional efficiency.

In recent times, research studies have revealed that for most students' poor academic performance; institutional factors such as provision of enabling school environment, adequate and quality academic staff, infrastructures and facilities for quality teaching and learning, government policy on admission and selection process among others are some of the reasons adduced for students graduating from school without acquiring the relevant knowledge and skills that are pre-requisite for assessing student quality (Curtis, Samuel, Octavia & Finzen 2007 and Ali, 2008). Allen & Sherry (2008) found that an area that has been largely overlooked in most previous research is discipline specific admission criteria at the undergraduate level and its relationship to student retention. Furthermore, it has been revealed that retention at the first-to-second year stage is very crucial since students often dropped out at this stage (Rivas, Sauer, Glynn & Miller, 2007 and Ochuba 2000).

The quality of students before and after their admission is a critical issue and the challenge that has been facing the university administrators as well as other stakeholders. Lack of congruence between student and institution attributes which often lead to the non-social integration of students that decrease their institutional commitment has been attributed to low quality of student and their non-persistence in most institutions. It is through admission process that students who are at risk of failure and those that are most likely to drop-out can be identified early, while the institution provides support services that can foster students' academic and social commitment and integration (Tinto,1975). It has been affirmed that student quality in terms of their academic performance, retention and graduation rate could be predicted by examining the criteria by which students were admitted (Adeyemi, 2001; Allen & Sherry, 2008 and Agboola, 2011). Other research findings have revealed that academic factors considered in the admission criteria has been found to be critically related to students' academic performance than the non academic factors and could also influence student quality and their persistence in school (Ali, 2008). Leppel (2005) affirmed that excellent performance and performance advantage correlate with high persistence and student's academic performance at the selection and qualifying examination.

Many other related studies have revealed that recruitment/admission processes and academic performance had influence on the student quality and subsequent retention (Swail, 2004; Boyd, 2004; Curtis, Samuel et al., 2007 and Bruce, 2009). However, Garton, Ball & Dyer (2002) found that pre-admissions criteria traditionally used to evaluate applicants and for college admissions were weak predictors for first-year students' graduation.

Statement of the Problem

The poor academic performance of students in most of Nigerian universities has been attributed to poor secondary school background and lack of goal and institutional commitment on the part of students, while the institution's negligent attitude in providing and fostering an academically healthy environment for its students, lack of quality teaching and learning activities that will motivate students in their study programme. Also, the inconsistent admission policy of the government that fails to comprehensively assess student attributes in order to identify early students quality at inception among others have been adduced for the seemingly low quality of students. Furthermore, many inquiries have been made to determine whether new students are adequately prepared for post secondary education. Most recent studies also revealed that retention at the first-to-second year stage is very crucial since increasing attrition rates were observed among the freshmen at this stage at all levels of education. However, little attention has been focused on the process through which the students (major input) came into the university.

The Joint Admissions and Matriculation Board (JAMB) in 1978 was established by the government as a central admission body to execute the policies that are concerned with admissions into Nigeria's higher institutions. It is empowered to carry out its functions, which among others include using government approved admission guidelines to conduct matriculation examinations for entry into all degree-awarding institutions in Nigeria; to place suitably qualified candidates in the available places in the tertiary institutions. To achieve this mandate, the board stipulated that the first 45% of admissions to any university should be based on merit irrespective of the candidates' state of origin, while the other 55% is to be distributed according to catchment area or locality and educationally less developed states (ELDS) in the proportion of 35% and 20% respectively. The board however, has come under the allegations that the examination is always characterized by malpractices and admission processes in most institutions are marred by irregularities such as giving admission to a low performer ahead of high performer students thus making it difficult to ascertain the quality of candidates.

Furthermore, the institution authority which is entrusted with the management of resources (human and material) seems to be less concerned with the quality of teaching and learning process, provision of enabling school environment and monitoring the rate at which students' progress in the system. The administrators in most institutions are faced with not only the challenge of quality of students admitted but also with inadequacy/lack of other resources to meet the admission demand. Students on their part face difficult conditions of study; such as overcrowded classes, poor in-and-out interaction with staff, etc (Nwadiani, 1993).

The questions thus arising are: Do academic performance of students relate to the criteria of admission? Do academic performances of students admitted through admission policy influence their retention rate? The study investigated the academic performance of first year undergraduate students admitted through admission policy of merit, catchment area or locality and educationally less developed states in order to determine their relationship with student retention rate. Four research questions were raised to guide the study of which three are answered and one was hypothesized.

Research Questions

1. What were the number of students admitted through admission policy of merit, catchment area and educationally less developed states in the sampled universities between 2003/2004 and 2007/2008?
2. What was the retention rate of students in the sampled federal universities between 2003/2004 and 2007/2008?
3. How were the students' academic performance by criteria of admission between 2003/2004 and 2007/2008 academic Session?
4. Does significant relationship exist between the academic performance of students admitted by criteria policy and their retention rates?

Hypothesis

Ho$_1$: There is no significant relationship between the academic performance of students admitted by criteria policy and their retention rates?

Methodology

A descriptive survey research with population of 66,441 first-year undergraduate students enrolled in all the five federal universities in South-West, Nigeria. The 42,288 students admitted between 2003/2004 and 2007/2008 academic sessions, constituted the sample. Samples were selected through multi-stage stratified sampling techniques on the basis of type of institution and academic discipline.

Data on 100-level students' admission and retention status as well as the academic performance of students admitted by various criteria in the sampled faculties were gathered through validated checklist from the universities' relevant authorities. The study covered five academic sessions, 2003/2004 to 2007/2008. The obtained data were converted to rates and analyzed using Mean and Regression statistics.

Results and Discussion of Findings

Research Question One: *What were the number of students admitted through merit, catchment area and educationally less developed states in the sampled universities between 2003/2004 and 2007/2008?*

The number of students admitted through the three admission criteria was determined by obtaining the list of students admitted under each criterion as cohort at the beginning of each academic session. The result of the analysis is presented in Table 1.

Table 1: Students Admitted through Admission Criteria in the Sampled Federal Institutions

Institutions	2003/04			2004/05			2005/06			2006/07			2007/088		
	Merit	CA	ELDS	Merit	CA	ELDS	Merit	CA	ELDS	Merit	CA	ELDS	Merit	CA	ELDS
UI	569 (31.3)	1217 (66.9)	32 (1.8)	862 (54.2)	683 (42.9)	46 (2.9)	626 (43.4)	775 (53.8)	40 (2.8)	NS	NS	NS	1142 (94.1)	48 (4.0)	23 (1.9)
OAU	1860 (60.7)	1178 (38.4)	27 (0.9)	NS	NS	NS	1516 (51.7)	1330 (45.4)	84 (2.9)	2319 (80.7)	535 (18.6)	20 (0.7)	1307 (54.2)	1069 (44.3)	37 (1.5)
UNILAG	534 (25.3)	1500 (71.1)	75 (3.6)	NS	NS	NS	769 (36.9)	1105 (53.0)	209 (10.0)	1847 (76.5)	507 (21.0)	60 (2.5)	2275 (93.2)	151 (6.2)	15 (.6)
FUTA	265 (18.2)	988 (67.7)	206 (14.1)	1046 (66.0)	475 (30.0)	63 (4.0)	611 (37.4)	724 (44.4)	297 (18.2)	1687 (93.2)	101 (5.6)	22 (1.2)	1992 (94.0)	105 (5.0)	22 (1.0)
UNAAB	438 (30.9)	901 (63.6)	77 (5.4)	439 (32.3)	902 (66.5)	16 (1.2)	687 (47.4)	699 (48.3)	62 (4.3)	1596 (96.6)	47 (2.8)	10 (0.6)	643 (45.3)	737 (52.0)	38 (2.7)
Total	3666 (37.2)	5784 (58.6)	417 (4.2)	2347 (51.8	2060 (45.4)	125 (2.8)	4209 (44.1)	4633 (48.6)	692 (7.3)	7449 (85.1)	1190 (13.6)	112 (1.3)	7359 (83.2)	2110 (15.6)	135 (1.2)
Mean %	33.28	61.5	5.2	50.8	46.7	2.5	43.4	49	7.6	86.7	12	1.3	76.2	22.3	1.5

Sources: Universities. Key: Admission rate in parenthesis (), NS: No Academic Session

The results in Table 1 shows the admission of students by criteria between 2003/2004 and 20072008 academic sessions. The mean admission rates by merit factor, catchment area and educationally less developed states ranged from 86.7% to 1.5 %. This reveals that admissions by criteria were either above or below the stipulated rates of 45%, 35% and 20%. This could be an indication that institutions studied did not comply strictly with the admission policy and may likely contribute to the low quality of students and subsequently their persistence.
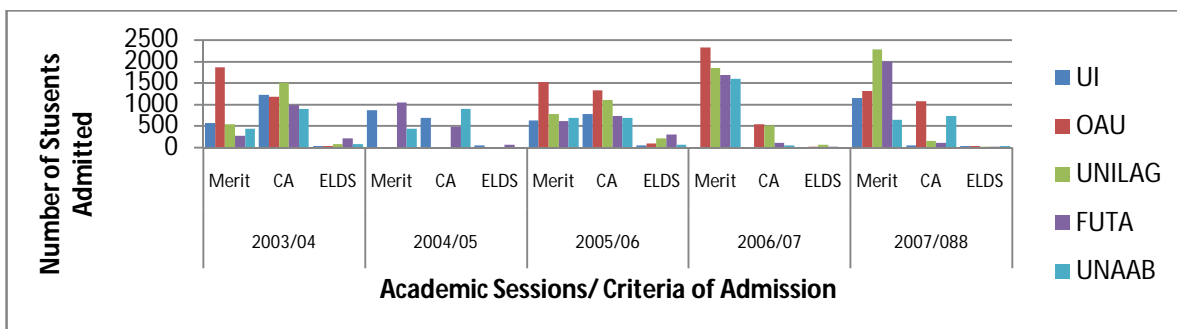

Figure 1: Student admission rates by criteria between 2003/04 and 2007/08

Research Question Two: *What was the retention rate of students in the sampled federal universities from 2003/2004 to 2007/2008?*

Table 2: Student Admission and Retention in the Sampled Universities

Institution	2003/2004 Admitted	2003/2004 Retained	2004/2005 Admitted	2004/2005 Retained	2005/2006 Admitted	2005/2006 Retained	2006/2007 Admitted	2006/2007 Retained	2007/2008 Admitted	2007/2008 Retained	Mean %
UI	1818	1710 (94)	1591	1515 (95.11)	1441	1397 (97.15)	NS	NS	1213	1175 (97.18)	95.86
OAU	3065	2723 (89.49)	NS	NS	2930	2639 (91.69)	2874	2634 (89.03)	2413	2188 (91.53)	90.44
UNILAG	2109	1837 (87.06)	NS	NS	2083	1771 (81.54)	2414	2229 (90.3)	2441	2127 (87.09)	86.50
FUTA	1459	1304 (89.38)	1584	1403 (85.93)	1632	1471 (90.12)	1810	1636 (89.75)	2119	1931 (90.04)	89.04
UNAAB	1416	1250 (88.28)	1357	1248 (91.92)	1448	1343 (92.93)	1653	1563 (94.48)	1418	1356 (95.68)	92.73
Total	9867	8824 (89.71)	4532	4166 (91.77)	9534	8621 (89.94)	8751	8062 (90.28)	9604	8777 91.32	

Sources: Faculties, Admission and Academic Planning Offices of the Universities

Key: "NS" **-** No academic session. Retention Rate – ( )

The results show that the mean-percent student retention rates between 2004 and 2008 in the five universities as 95.86%; 90.44%, 86.50%, 88.96% and 92.73% respectively. University of Ibadan had the highest mean retention rate of 95.87%, while University of Lagos recorded the lowest mean rate of 86.50%.
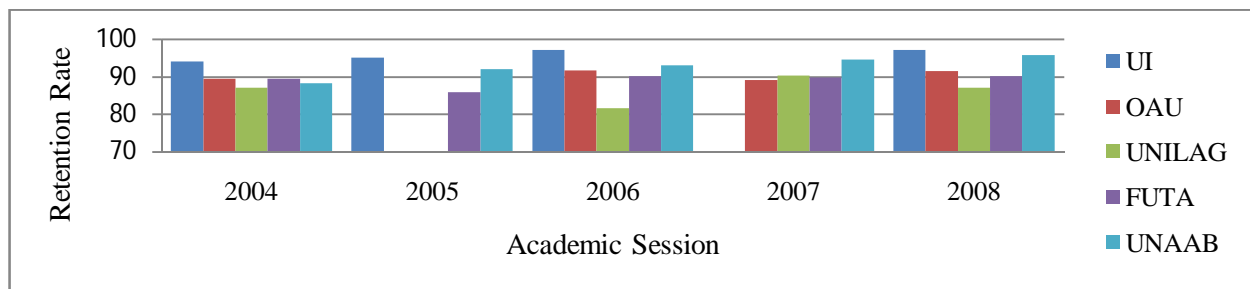

Figure 2: Student Retention Rates in the Sampled Federal Institutions

Research Question Three: *How were the academic performances of students admitted through criteria policy between 2003/2004 and 2007/2008 academic Sessions?*

Data on the academic performances were analysed using the National Universities Commission approved method of calculating the grade point average (GPA). The result is presented below.

Table 3: Student Performance by Discipline and Criteria of Admission

Institutions	Criteria of Admission	Classes of Honour by Grade 1st Class	2nd Upper	2nd Lower	3rd Class	Pass	GPA
UI	MERIT	197(7.1)	580 (20.8)	1277 (45.8)	589 (21.1)	147 (5.2)	2.75
	CA	112(6.2)	302 (16.6)	830 (45.7)	448 (24.6)	125 (6.9)	2.04
	ELDS	17 (12.0)	34 (24.0)	56 (39.4)	26 (18.3)	9 (6.3)	3.6
OAU	MERIT	429 (7.0)	1337(21.9)	2632(43.2)	1325(21.7)	377 (6.2)	2.89
	CA	252 (6.8)	810 (22.0)	1601 (43.5)	783 (21.2)	239 (6.5)	3.02
	ELDS	11 (8.3)	29 (22.0)	58 (43.9)	26 (19.7)	8 (6.1)	3.09
UNILAG	MERIT	350 (7.3)	1461 (30.3)	2164 (44.8)	600 (12.4)	251 (5.2)	3.21
	CA	176 (6.2)	747 (26.4)	1283 (45.5)	472 (16.7)	147 (5.2)	3.13
	ELDS	20 (6.5)	82 (26.4)	141 (45.5)	50 (16.1)	17 (5.5)	3.1
FUTA	MERIT	256 (4.9)	1179 (22.8)	2239 (43.3)	1121 (21.7)	377 (7.3)	2.99
	CA	109 (4.7)	503 (21.4)	915 (38.9)	606 (25.8)	217 (9.2)	3.25
	ELDS	24 (4.0)	130 (21.7)	242 (40.3)	152 (25.3)	52 (8.7)	3.15
UNAAB	MERIT	120 (3.4)	872 (24.5)	1697 (47.7)	685 (19.3)	183 (5.1)	3.00
	CA	83 (2.7)	748 (24.3)	1427 (46.5)	641 (20.9)	172 (5.6)	3.04
	ELDS	2 (1.1)	41 (23.4)	81 (46.3)	40 (22.9)	11 (6.3)	2.99

Sources: Faculties and Examination & Record Offices of the Sampled Institutions

Key: GPA - Grade Point Average.

In Table 2, the mean GPA of academic performance of students admitted through the three criteria revealed that students admitted by criterion of merit had GPA of 2.97; GPA of those students admitted by locality criterion was 2.89; while students admitted from ELDS had GPA of 3.19. The performance by grade is further illustrated in Figure 2.
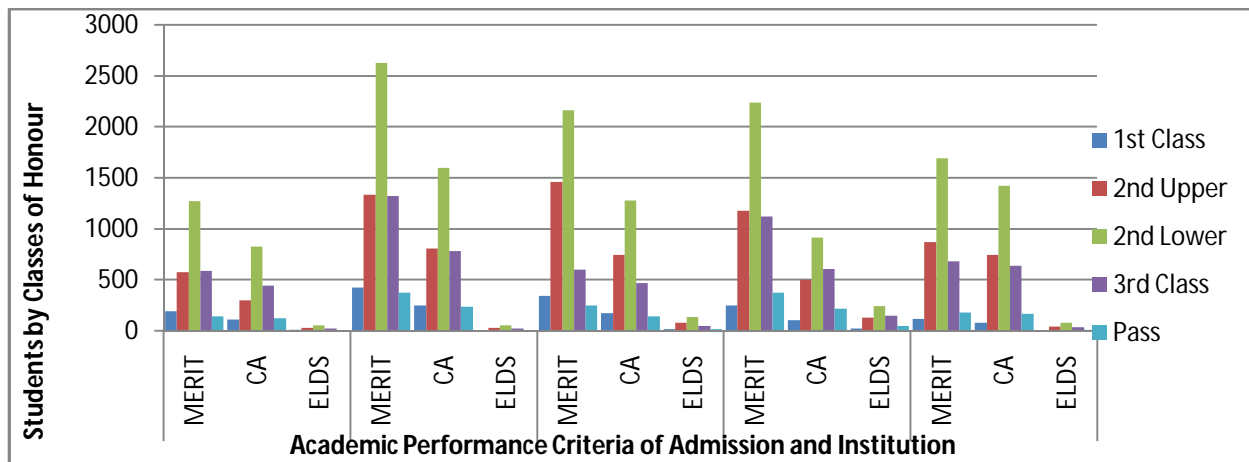

Figure 2: Students' Academic performance by Criteria of Admission and Institution

Hypothesis

There is no significant relationship between the academic performance of students admitted through criteria policy and their retention rates?

The hypothesis was tested using the data obtained on 100 level results GPA of randomly selected students admitted through the various criteria at the end of the session across the sampled faculties. These were transformed into grade points scores and were analyzed. Regression Analysis statistics was used to determine the relationship between academic performance of students admitted by criteria and student retention. The results obtained are presented in Table 4.

Table 4: Result of Regression Analysis (Admission Criteria and Students' Academic Achievement)

Model	Un-standardized Coefficients		Standardized Coefficients		Sig.
	B	Standard Error	Beta	t	
(Constant) Admission Criteria	-.517 1.017	.249 .006	1.002	-2.080 164.013	.058 .000

P> .05

R = 1.000   R Square = 1.000   Adjusted R Square = 0.999   Std Error = 0.531

Analysis of Variance	SS	DF	MS	F	SIG
Regression	7763.245	1	7763.245	26900.127	.000
Residual	3.752	13	.289		
Total	7766.996	14			

The hypothesis was addressed by analyzing academic achievement of students admitted through various criteria, identified as the predictor variable with criterion variable being student retention. The result of the analysis is displayed in Table 4. It indicates that the correlation R is 1.000, R Square is 1.000 and adjusted R Square is .999. The F value 26900.127, P> .05. Based on the above statistics, academic performance of students admitted on various criteria accounted for 99% of variance in student retention while other factors accounted for 1%.

The null hypothesis (B=0) was tested with a view to determining the significance academic achievement based on admission criteria in the model. The result was quite significant with a t-value of, the re 164.013 at 0.05 level of probability. Consequently, the null hypothesis that there is no significant relationship between academic achievement of students admitted by criteria and student retention was therefore rejected and the alternative upheld that, there is a statistically significant relationship between academic achievement of students admitted through criteria and student retention.

Discussion of Findings

Admission Policy and Academic Performance

The result of the data analysis revealed that the student academic performance varied by policy of admission criteria of merit, catchment area and educationally less developed states in the sampled institutions. However, the relationship between criteria of admission and academic performance is not statistically significant. Therefore it could be inferred that, student performance is not only a function of the admission policy through which they were admitted, but could be influenced by other variables. This supported the earlier finding by Garton, Ball & Dyer (2002) which found that pre-admissions criteria traditionally used to evaluate applicants and for college admissions were weak predictors for first-year students' retention. It is however contradicted by Allen & Sherry (2008) and Agboola (2011) who found that student quality in terms of their academic performance, retention and graduation rate could be predicted by examining the criteria by which students were admitted.

Academic Performance and Student Retention

There was a statistically significant relationship between academic performance of students admitted through admission policy and their retention. A possible explanation for this finding is that student attributes like; intelligent quotient, coping skills, institutional learning environment and teacher's input after being admitted are perhaps the basis for a student academic achievement and his/her persistence. According to Ali (2008), the variables of entry qualification, previous academic performance and school type were significantly related to the academic performance of the students and their retention than the policy that admitted them into the college. On the contrary, Leppel (2005) and Swail (2004) affirmed that excellent performance and performance advantage correlate with high persistence and student's academic performance at the selection and qualifying examination and recruitment/admission processes.

Conclusions and Recommendations

On the basis of research findings of the study, it can be concluded that the admission criteria policy is not a predictor of student academic achievement in the university, however, after their admission, the student academic performance in combination with the criteria of admission may likely predict student retention. Based on the findings, it was recommended that stakeholders in admission processes and selection procedure should assess the effectiveness of admission policies with a view of making decision on either to abolish or review the admission policy. Government should provide adequate human and material resources for quality teaching and learning, while institutions' administrators should adopt strategies that provide enabling learning environment as well as take the initiative to reach out to students and design activities that promote active learning and interpersonal growth among students, faculty, and staff. This will assist students in their academic activities and engender student academic performance once admitted and also promote their retention.

Suggestions for Further Research

In view of the results and the delimitation of this study to only federal universities in South-West, Nigeria, suggestions for further research are hereby offered:

1) A replication of this study with a large sample to cover federal universities in other states in Nigeria as well as other tertiary institutions would ascertain the applicability of the findings and conclusion
2) Other key factors that could promote academic achievement, retention and graduation rate should be research into in all tertiary levels of education. Factors such as academic discipline, institution type, socio economic status and student attributes.

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