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"Student Enrolment And Academic Staff Productivity In Public Universities In LagosState, Nigeria"

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KEY WORDS

Student Enrolment, Academic Staff Productivity, Public Universities in Lagos State

ABSTRACT

The aim of this study was to establish the influence of student enrolment on academic staff productivity in public universities in Lagos State, Nigeria. Correlational and descriptive research designs were employed, and the study population was 2459 academic staff in the two public universities in Lagos State. The sample size of 240 was purposively chosen after disproportionately stratifying into faculties and thereafter selecting through the simple random sampling technique. Two instruments were used to collect data after ensuring their validity and establishing the reliability of only one of them. The Academic Staff Productivity Questionnaire (ASPQ) was found reliable with 0.760 coefficient using Cronbach's Alpha test. Data collected were analysed using inferential statistics of regression model to test the formulated hypothesis at 0.05 probability level. The finding was that there is a positive and significant influence of student enrolment on academic staff productivity in public universities in Lagos State, Nigeria ($R = 0.551$, $p < 0.05$) with $R^2 = 0.304$ that explained 30.4% of the variations in academic staff productivity as a result of student enrolment. Based on this finding, the study concluded that student enrolment in public universities in Lagos State, Nigeria, have moderately and positively influenced academic staff productivity. Hence, the study recommended that as enrolment rises, the federal and state governments must continue to increase the number of academic staff on various programmes and increase educational facilities to improve lecturers' productivity. Moreover, the management of public universities must adopt policies to control enrolment ratios on both academic staff and material resources so that lecturers' productivity in public universities is not negatively influenced by increased enrolment.

Introduction

The influence of student enrolment in educational institutions, particularly in Nigerian educational institutions, has been studied. However, these studies do not appear to have examined the relationship between student enrolment and academic staff productivity in Nigerian public universities, particularly in Lagos State. For example, Mwirigi and Muthaa (2015) looked into the "impact of enrolment on the quality of learning in primary schools in Imenti Central District, Kenya". "Students' enrolment into tertiary institutions in Nigeria: The influence of the founder's reputation – A case study" was investigated by Ademola, Ogundipe, and Babatunde (2014) and Adeyemi (2008) examined "the influence of class size on the quality of output in secondary schools in Ekiti State, Nigeria". The quality of output in any educational institution, according the author is a measure of the effectiveness and efficiency of the teaching staff.

Effectiveness and efficiency are related and both are important in teaching and learning processes. The need for lecturers' efficiency in Nigerian universities cannot be over-emphasized as this ensures the delivery of quality education. Lecturers seemed to exhibit efficiency in the manner they get things done, and how they manage their instructional space regardless of output or result they produced in the teaching-learning process. Productivity is the relationship between the input and the output generated by a production or service system and the input provided to create the output. Lecturers' productivity or ineffectiveness could be ascribed to many factors according to Epri (2016), as these include "lack of motivation, insufficient funding, poor leadership, class size, inadequate facilities, low staff morale, inadequate supervision and so forth" (Oyibo & Obro, 2020). Meanwhile, in Nigeria, the public discussions which frequently focus on educational standards, by virtue of interest and concern for the annual turnout of Nigerian university graduates, are based on the notion that student outcomes do not seem to match the government and parental investment. This observed situation looks worsened by the notion that student enrolment increases without commensurate expansion of schools or provision of adequate facilities in schools (Asiyai, 2012).

As enrolment in schools increase globally on a daily basis, the available resources like chairs, tables, white/black board, floor tiles, air conditioners, and so on become over-stretched. The nature, sources, availability and utilisation of both the human and physical resources determine the efficiency of the school system (Nwankwo, in Ayodele & Abiodun-Oyebanji, 2007). According to Abdulkareem, cited in Akinyemi (2020), lecturers in required quantity and quality, as well as facilities for lecturers and students in adequate number, must be made available for use to ensure school success and lecturers' productivity.

Enrolment patterns remain the most convenient indicator of educational growth. Globally, there is a significant increase in student enrolment mirrored by the trends in educational systems (Ademola, Ogundipe, & Babatunde, 2014). This is observed in Nigeria, that after the civil war in 1970, schools at every level in the education sector have experienced an upward trend in enrolment. However, according to Daniel (2003), Nigeria is among the countries that fall within the serious risk of not reaching the goals of Education for All (EFA) with a net enrolment ratio of less than 80%. Meanwhile, the adoption and implementation of the United Nations' Education For All (EFA) policy by Nigeria like other developed and developing countries all over the world yielded rise in

student population at all levels of education in the country (Akinyemi & Gbenu, 2020). The upsurge in enrolment number has, however, resulted in other institutional challenges and vexed the educational planners' anger, particularly when this increased number is juxtaposed with teachers' productivity (Ikolo, 2011).

More so, students per class vary on the basis of country, region, locality, school type and so on, due to the rise in enrolment figure. For instance, United States of America (USA), Canada, Australia, Romania, Czech Republic and Slovenia, each of these countries has less than 30 students in a standard class size; Netherlands, Norway and Turkey each has 20 or less students in a standard class size; Singapore and Japan have more than 30 students each in a standard class size (Mokobia & Okoye, 2011). The class size of these countries is in line with the recommendation of United Nations Educational Scientific and Cultural Organisation (UNESCO) that 25 students should be in a class except for Singapore and Japan. According to the Federal Republic of Nigeria (2013), the recommended class size is 40 students in a standard classroom. Mokobia and Okoye (2011) highlight "that educators universally identify class size as a desirable attribute of the educational system and this has become a subject of interest, debate, discussion and concern among stakeholders in education like academic staff members, guardians/parents and policy makers albeit on the effects of class sizes in schooling".

Meanwhile, according to Tella and Daniel (2013), for this nation (Nigeria) to ensure that quality graduates that are of international standard are produced in Nigerian Universities, the institutional agency in charge of university education came up with the following guidelines on lecturer-student ratio and percentage of academic staff cadre mix as contained in its Bench Mark for Academic Staff (BMAS) (2007).

Table 1: National Universities Commission Bench Mark for Academic Staff on Lecturer-Student ratio and Percentage of Academic Staff Cadre Mix

S/N	Faculty	Lecturer-Student ratio	% of Professors/Associate Professors	% of Senior Lecturers	% of Lecturer I and below
1	Arts	1:30	20	35	45
2	Agricultural Science	1:15	25	35	40
3	Administration	1:30	20	35	45
4	Education	1:30	20	35	45
5	Engineering	1:15	20	35	45
6	Environmental Science	1:10	20	35	45
7	Law	1:30	20	35	45
8	Management Sciences	1:30	20	30	45
9	Medicine	1:10	20	35	45
10	Science	1:20	20	35	45
11	Social Sciences	1:30	20	35	45
12	Pharmacy	1:10	25	30	45
13	Veterinary Medicine	1:10	20	35	45

Source: Bench Mark for Academic Staff (2007) and Abiodun-Oyebanji (2012) cited in Tella and Daniel (2013),

Table 1 suggests that the average class size in the universities should be 20 students per lecturer. It is important to note that the lecturer-student ratio and academic staff cadre mix in each faculty applies to all the degree programmes under it.

Furthermore, the problem of large class sizes and the related consequences cannot be overemphasized as it looks to be germane. In many developing nations, Nigeria in particular, the relatively great classes appear to become the style of public tertiary institutions as the annual increment in enrolment of students is characterized with huge class sizes. Ikolo's (2011) study observed that a gigantic increase in students' enrolment and an average size of classrooms in both secondary schools and tertiary institutions in Lagos State. Yet, the pitfall of the commendable unimpeded enrolment practices in the education system seems to be in the inadequate availability of sufficient

infrastructure such as, lecture rooms, academic staff offices, and befitting structures. However, the basic classroom requirements like chairs and tables are inadequate in some institutions while students are still sitting on damaged furniture and some even stand at the back of the class to receive lectures (Oyeniran, 2014). The unmanageable increase in class size has impinged the lecturers to the extent that they find it difficult to pay attention to the needs of individual students and Akinyemi (2020) discovers that the rising class size has a negative effect on students' academic performance, that is, it reduces students' academic performance at a diminishing rate. Lecturers can no longer maintain eye contact with their students and those that are not interested in the class discussion form another group discussion at the rear end of the class engaging in unrelated issues, whereas the lecturer is busy teaching in the class. Conduct of tests could, therefore, also be anticipated with fear by lecturers when they look at the overwhelming number of scripts to be graded and recorded.

This study is hinged on the theory of Education Production Function (EPF) adopted from Dreeben and Thomas (1980). According to the theory, education is a production process using scarce human, financial and physical resources in the production of educated persons. Since those resources have alternative uses, economic concepts of production theory can be applied to education operations and planning. Thus, in resource allocation at macro and micro levels, efficiency should be deliberately pursued to enable the maximization of the consumption and the investment objectives of education (Jagero, 2013). The EPF theory espouses that education outcomes are a function of inputs to the education process that are provided primarily by student families, students, community and schools. A variation of schools inputs is most likely to have an influence on the outputs.

The theory is found appropriate because academic staff productivity is a function of various students enrolled for the teaching-learning process. Student enrolment in this case is measured by the total number of students registered for each programme being proxyed by class size. Academic staff productivity is a function of student enrolment as represented by the following relationship:

$ASP = f(X)$

Where ASP = Academic Staff Productivity

X = Students enrolment proxy by class size (CS)

The regression/econometric equation based on the hypothesis formulated is given as follows:

$$ASP = \alpha_0 + ß_1X + e_i \quad \text{.....(i)}$$

Where also, α_0 and $ß_1$ are the regression coefficients or the constants

e_i is the error term

Statement of the Problem

In spite of government and university management efforts to enhance efficiency and effectiveness among academic staff members, there is still a challenge of overcrowded lecture room as a result of increase in students' enrolment which may affect the capacity of the lecturers to perform their tasks adequately. However, a keen observation by the researchers shows that public universities, particularly in Lagos State, are fast becoming institutions of preference and seem to remain largely populated. This implies that enrolment may continue to rise geometrically in public universities in the State leading to excess workload on academic staff. This situation could have a lot of implications for the lecturers on their productivity

level, and also on students' academic performance, a matter that readily and regularly requires the attention of educational planners and researchers.

It is worthy to note that a lot of work had been done on Nigeria's educational system particularly relating to student enrolment. Many literature reviewed, which centred on educational institutions in Nigeria have indicated, on average, high enrolment being inversely proportional to lecturers' productivity. Yet, it needs to be mentioned, that some of the studies carried out showed mixed results. It is against this background that this study investigates the influence of student enrolment on academic staff productivity in public universities in Lagos State, Nigeria.

Hypothesis

This hypothesis was formulated and tested in the study.

H_{o1}: There is no significant influence of student enrolment on academic staff productivity in public universities in Lagos State, Nigeria.

Methodology

The correlational and descriptive research designs were employed for the study. This is because the study examined the nature of relationship between student enrolment and academic staff productivity in public universities in Lagos State. The study also made a description of the existing situation regarding the state of students' enrolment to engender academic staff productivity in public universities in Lagos State. The study is also an *ex-post facto* research because the study made use of already existing data to determine the after-the-effect of the predictor variable on the criterion variable.

The population of the study consisted of the two public universities and their 2459 academic staff in Lagos State, Nigeria. The universities are: University of Lagos, Akoka-Yaba and Lagos State University, Ojo, Lagos, Nigeria. The sample of the study consisted of the two universities that formed the population of study in Lagos State using the purposive sampling technique. A multistage sampling procedure was used to select Departments from each sampled public university and this enabled every Faculty and Department to have the chance of being selected. First, a disproportionate stratified sampling technique was used to select four Faculties from each sampled university and, in each selected Faculty, three Departments were selected using simple random sampling technique giving a total of 12 Departments per sampled university. In addition, a sample of 10 academic staff was randomly selected from each of the sampled Department. In total, the sample of this study was 240 academic staff from the public universities in Lagos State, Nigeria.

A self-developed questionnaire and a record observation format were used to collect data for the study. The self-designed questionnaire was titled "Academic Staff Productivity Questionnaire and tagged ASPQ". The questionnaire consists of two sections: A and B. Section A contains items on personal information of the respondents, while Section B solicit information from the respondents on academic staff productivity at their various universities. A Four-point Likert-scale response mode type was used. The following corresponding scores were adopted as rating scale for the responses: Very True (VT) – 4; True (T) – 3; Untrue (U) – 2 and Very Untrue (VU) -1. Record observation format was used to collect number of registered students for the stipulated academic years which represented student enrolment proxy by class size.

After ensuring both the content and face validity of the instruments, the ASPQ was further subjected to a reliability test using Cronbach's Alpha test. The questionnaire

was administered on 24 academic staff in other Departments who were part of the population of the study but not part of the sample. The coefficient obtained was 0.76. Thus, the questionnaire was found substantially reliable. However, the data collected through the record observation format already existed in the universities and cannot be manipulated, the format was, therefore, adjudged consistent and reliable in the data collection.

Data collected were analysed using inferential statistics of Regression model. Regression model was used to test the hypothesis since it is meant to predict the effect of the predictor variable on criterion variable. The hypothesis formulated was tested at 0.05 probability level using Statistical Package for Social Sciences (SPSS) 20.0 version.

Results

Hypothesis

There is no significant influence of student enrolment on academic staff productivity in public universities in Lagos State, Nigeria.

Table 2: Regression analysis of the influence of student enrolment on academic staff productivity in public universities in Lagos State

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.551[a]	0.304	0.265	2.34561	1.813

a. Predictors: (Constant), Students enrolment

b. Dependent Variable: Academic staff productivity

NOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	43.166	1	43.166	7.846	0.012[b]
	Residual	99.034	18	5.502		
	Total	142.200	19			

a. Dependent Variable: Academic staff productivity

b. Predictors: (Constant), Students enrolment

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.540	0.933		17.736	0.000
	Students enrolment	0.006	0.002	0.551	2.801	0.012

a. Dependent Variable: Academic staff productivity

Table 2 presents the statistical model summary on the influence of student enrolment on academic staff productivity in public universities in Lagos State, Nigeria. The results showed that there is a positive influence of student enrolment on academic staff productivity in public universities. Correlation coefficient (R) is 0.551. The relationship between student enrolment and academic staff productivity is moderate. This implies that student enrolment does influence significantly the academic staff productivity ($p < 0.05$). The results further indicated that there is variations in academic staff productivity by student enrolment. The coefficient of determination, $R^2 = 0.304$ explained that 30.4% of the variations in academic staff productivity have been explained by student enrolment while 69.6% of the variations are explained by other factors which are not part of the study. Furthermore, the results of F statistics is 7.846 and $p = 0.012$ which is less than 0.05 level of significance suggesting that, over all, the regression model significantly predicted the outcome variable - academic staff productivity. Moreover, the analysis revealed that student enrolment (ß = 0.006, $p < 0.05$) was found to have significant influence on academic staff productivity in public universities in Lagos State.

Therefore, there was a significant influence of student enrolment on academic staff productivity in public universities. Based on the findings, the null hypothesis which stated that there is no significant influence of student enrolment on academic staff productivity in public universities in Lagos State, Nigeria was rejected. The findings of the study show that as student enrolment

rises, academic staff productivity rises as well, which is in contrast to the result of Mwirigi and Muthaa (2015), who found that increased student enrolment had a negative impact on learning quality because classes were overcrowded, contributing to noisemaking, poor class control, teachers being overworked, and students sharing textbooks.

Discussion

Student enrolment is an indicator of their initial motivation and dedication (Aliyu & Bichi, 2019), and it was discovered in this study that student enrolment has a favourable and significant influence on academic staff productivity in public universities in Lagos State. This suggests that an increase in enrolment has a positive influence on academic staff productivity in public universities since the number of lecturers was able to keep up with the increasing number of students enrolled, allowing them to successfully carry out their jobs. Student enrolment is a predictor of academic staff productivity and has an impact on it. This finding is corroborated by Akinyemi (2020) who posited that lecturers in required quantity and quality as well as educational facilities for both lecturers and students in adequate number must be made available for use to ensure school success and lecturers' productivity. Meanwhile, students' enrolment was found increasing in public universities in Lagos State, Nigeria and has a direct influence on academic staff productivity in this study. But the results of the study was not surprising because students could be self-motivated to participate in learning activities that directly and positively affect the productivity of their lecturers, not forgetting the fact learning motivation is a critical component for active learning and a determinant of students' attainment and performance, according to Law and Breznik (2017), Law and Geng (2018), Ngan and Law (2015), and Law, Geng, and Li (2019) which could contribute to the lecturers' productivity. Student enrolment, unlike other student learning traits like student inventiveness, which indicate unique student variances within the learning process (Law & Geng, 2018), reflects a student's preparedness, willingness, and commitment to offer any course. As a result, its ability to estimate academic staff productivity can provide required implications for lecturers to change accordingly. This study's finding is consistent with those of Oyibo and Obro (2020), who discovered a statistically significant relationship between class size and teacher productivity. This could be linked to students' enrolment being proxyed by class size, which lecturers must deal with in the course of their duties. However, according to the findings of a study conducted by Ayeni and Olowe (2016), large class size has detrimental effects on efficient teaching of Business Education in Nigerian tertiary institutions. It leads to bad classroom management, inefficient student control, poor planning and assessment, and increased strain on lecturers, according to the study. Large class sizes increase disruptive behaviour, irritate the lecturers' efforts, and have a negative impact on the health of lecturers. Although, the findings of the study revealed that there was a very weak relationship between large class size and effective Business Education instruction.

Conclusion

The study concludes that student enrolment in public universities in Lagos State, Nigeria, have moderately and positively influenced academic staff productivity.

Recommendations

Based on the findings of the study, the following recommendations are hereby made.

i. As enrolment rises, the federal and state governments must continue to increase the number of academic staff on various program and educational facilities to improve lecturers' productivity.

ii. Management of public universities must adopt policies to control enrolment ratios on both academic staff and material resources to ensure that lecturers' productivity in public universities is not negatively influenced by increased enrolment.

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