

EFFECT OF CLASS-SIZE ON THE ACADEMIC PERFORMANCE OF SOME SELECTED EDUCATION STUDENTS IN THE UNIVERSITY OF BENIN, EDO STATE

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Abstract

The study examined how class-size affects undergraduate students' academic performance in the University of Benin. To provide direction for the study, two (2) research questions were posed, one of which was hypothesised. This study used a descriptive survey research approach. The study's population consisted of all eight hundred and eighty-eight (888) 100-level undergraduate students in the Faculty of Education. The sample size for this study was four hundred thirty (430) undergraduate students from four departments chosen using a simple random selection procedure. The data collecting tool was an academic proforma of EDU 111 students. As a standardised instrument, it was regarded valid and dependable. Research questions 1 and 2 were addressed with descriptive statistics like mean and standard deviation. Hypothesis 1 was evaluated using ANOVA statistics. According to the study's findings, the academic performance of education students by department was low. It was also discovered that there was a considerable disparity in academic achievement among education students by department. In the light of the results obtained, the researcher recommended that the carrying capacity in each faculty be examined before admitting new students to ensure that students have manageable class sizes, which improves their academic achievement.

Keywords: Class size, academic performance, undergraduate, students.

Introduction

Education plays a vital role in every nation of the world as it brings about enlightenment and increase in knowledge. A comprehensive look into the education system shows it is systematically structured. It is structured into primary, secondary and tertiary institution of learning. As such, it is imperative that educational policies be created and implemented to help in planning the education system in order to attain quality teaching. The Nigerian education system is structured according to the 6-3-3-4 educational system. 6 years for elementary school, three years for secondary school and 4 years for university education. However, in some cases the course of study determines year of graduation such as medicine, nursing and so on.

The National Policy on Education (FRN 2011) outlines the aims of tertiary education, encompassing university education, as follows: to make a contribution to national development by means of high-level relevant personnel development, to build and instill right values, to improve ability to think critically, and so on.. Improvement of pupils' learning outcomes is one of the primary aims of educational strategy. . Academic performance is an important criterion of educational quality. Education is not complete without academic performance, been used as a yardstick to judge the process by which education or knowledge is gained or achieved.

Academic performance is the amount of how well a student, instructor, or institution has met their both immediate and long-term objectives for learning, as assessed by ongoing evaluation or cumulative grade point average (CGPA). In the words of Bell (2017), academic performance refers to what an undergraduate has the capability of doing after being educated. University admissions have been under strain as demand for higher education has increased. For the purpose of fulfilling various

interests, the Nigerian government implemented admission regulations such as the policy of quota catchment regions, academically underprivileged, and so on. These admission procedures have helped to solve challenges related to student enrollment in higher education institutions. Regarding the institution's ability to carry students based on the degree of educational infrastructures and in pursuing excellent teaching, guidelines on education in general and admission policy in Nigeria appears to alter with each consecutive administration in power. As a result, an upsurge in acceptance rates might lead to an uptick in school enrollment.

Higher learning institutions are expected to provide quality education and work hard to improve it. However, the quality of education in Nigeria can be impacted by the growth of the student population. This makes it more difficult for educational institutions to provide effective instruction, adequate facilities and a suitable environment in highly populated faculties. Many factors can affect the academic performance of the undergraduate students, such as cognitive and learning issues, academic competency, test competency, time management and strategic studying, test anxiety, ad so on. A student may need to balance these factors in order to be a successful student.

Class size is a major factor in the effectiveness of instructional facilities, the way instructions are disseminated, student-teacher interaction, and so on. However, the provision of adequate facilities remains unchangeable, resulting in overcrowding and crowded classrooms. This puts the teaching and learning process at risk and increases the need for adequate classrooms to address the issue of increasing class size in the Faculty of education..

Scholars have conducted research to identify factors that affect academic performance. For example, Okechukwu (2017) conducted a study on the impact of overcrowded class sizes on pupil academic performance in public primary schools, Idemili south Local Government Area, Anambra state, Nigeria. On the impact of class sizes on academic performance in the majority of secondary schools in Nigeria, Obiakor (2020) discussed the teacher student ratio, and made recommendations on how policy makers should focus on funding secondary schools education in Nigeria. Similarly, Mukhtar (2019) discussed the effects of class sizes on student performance in English language, while Owwoeye and Yara (2011) looked at the effect of class size on students' academic performance in Ekiti state, Nigeria. However, limited research has been conducted on the population of undergraduates having an impact on academic performance at Faculty of Education. Therefore, this study seeks to explore the relationship between class size and undergraduate student academic performance at the Faculty of Education, University of Benin, Edo state.

Research Questions

This study will be guided by the following research questions:

1. How does class-size affects the academic performance of education students for 2020/2021 academic session in various departments?
2. What is the difference in the academic performance of education students based on class size in various departments?

Hypotheses

1. There is no significant difference in the academic performance of Education students based on class size in various department

Literature Review

Concept of Class Size

Class size is how many students are in a class or course at any given time during an academic session. A school's class size determines the type of learning facilities it will provide and also the type of instructional materials it will require to implement teaching. Classes with a high population tend to have poor access to learning materials, which will affect the students' ability to learn effectively, remember information from teachers, and their overall academic performance. Adeyemi (2018) defines class size as an educational tool can be seen as an average class number in a school.

The school population is one of the most important factors in a school system. It is a factor that has been used by various policy makers around the world to evaluate the functioning or non-functioning of schools in terms of teaching and learning ability, use of school facilities, discipline, and classroom management. Studies have shown that the school population, the large class size, and the pupil academic performance are inversely related. According to Nyiam (2012), overcrowded classrooms lead to over-extension of school facilities and allow students to engage in examination misconduct. According to Agba (2010), students' overpopulation has a negative impact on the school, which affects both the teachers and the students.

On the other hand, researchers have found that good teaching and good academic performance can be achieved only when the school is adequately equipped with infrastructures and the class size is manageable. It is worth noting that large class has a more negative impact on some students than others, as some students may need to cultivate better study habits and further research on different topics that have been taught in the over-populated class in order to retain more knowledge on the topics taught.

All stakeholders in the field of education are aware that there is a population explosion or congestion in the classroom at every level of education, especially at the tertiary level, in Nigeria. The number of students applying for admission into tertiary institutions is increasing. Therefore, proper planning is necessary to accommodate the increase in the school population. When the classroom is overcrowded, it affects the seating arrangement which encourages students to engage in examination misconduct. The school population is one of the most important factors in any school system. It is a measure used by policy makers all over the world to determine the functioning or non-functioning of a school system as regards teaching and learning, use of school facilities, discipline and classroom management.

Concept of Academic Performance

Academic performance is an integral part of any formal educational system. It is the measure of an individual or group's learning achievement at the conclusion of an academic program. Li and Chai (2018) defines academic achievement as the learner's performance of teaching assessments and learning assessments, including final examination results, achieved by the student in school. Academic performance is used to measure a student's ability to absorb, remember, and communicate what has been learned. This concept has a strong relationship with academic attainment.

Arasian (2017) described academic performance as an expression of one's success from school-based instructions. Students' academic performance is typically measured in exams or continuous assessments, tests, and can be expressed in different ways depending on the purpose for which the scores are used. The different ways of measuring academic performance are percentage, quartile, raw score, transformed score, or even as a categorical variable like 'excellent', 'very good', 'first class', 'distinction', 'A1', 'B2', 'C4', 'F9', and so on.

A student's academic performance can be a result of a variety of factors, such as school environment, home environment, social economy, culture, and law. This concept of academic performance is an essential tool in measuring students' academic performance during or after a program, and is highly relevant to any formal education institutions.

The term "academic" is commonly used to refer to a college or university or any higher education institution. It refers to the scholarly human activities carried out in a formal learning setting. Performance refers to the various areas of an individual's life, such as affective, psycho-muscular and cognitive domains. Academic performance is a way of determining a student's innate or undeveloped abilities, from which it can be inferred. One of the most common issues that students, school administrators and counselors face is the fact that students' academic performance varies from place to place in the community (Delstre,2016). School administrators are looking for ways to help students cope and improve their academic performance in spite of the restrictions in the community.

Academic performance is the measure of an individual's ability to assimilate, remember and communicate what has been learned. It refers to the knowledge acquired or skills developed in a school subject. It is usually measured by scores in a formal test or examination. Academic performance refers to the measured and observed aspect of student's mastery of a particular skill or subject content. It is measured relatively as long-term changes in a student's behavior due to experience gained. A student's academic performance is generally measured by teacher-made tests or standardized tests. In most cases, standardized tests are administered and scored on a consistent or standard basis. Some examples of standardized tests include WAEC, JAMB and others..

The number of students admitted to the faculties of education across all the universities in Nigeria has reached an all-time high. This is due to the fact that faculties are inundated with applications and are unable to admit more than 20-25% of the applicants. As a result, many candidates will end up in programs they did not initially apply for. The Faculty of education will be among those faculties to admit candidates who did not initially apply to the teaching education program; this is because the faculty has a high number of candidates admitted into educational programs that they did not apply for. The question is, will the size of the faculty influence the academic performance of those students? Based on this premise, the researcher wants to conduct a study on the impact of class size on undergraduate students' academic performance in the Faculty of education, University of Benin, Edo State.

School Population and Academic Performance

As the number of students increases, so does the size of the school. Smaller student populations tend to have more personal connections between students and staff, which can help prevent misbehavior or anti-social behavior. Another aspect of school size is how well students and teachers can connect with each other and the environment. A small school population allows for small group or personalized instruction. Students who attended a smaller learning environment scored higher than their peers at a larger school.

According to Viadero (2018), policy makers and academics have ignored the debate about school population. In Alabi (2016), the study examined the correlation between school population and academic performance. The study found that the number of students in the school and the number of facilities had a significant impact on academic performance. As a result, the study suggested that schools should provide more facilities.

Academic performance refers to the knowledge acquired or skills acquired in school subjects. It is usually determined by the scores obtained in a formal test or examination.

Academic performance means the observed and quantifiable aspect of student's mastery of a skill or subject content. It implies that academic performance differs from an individual's academic potential. It is measured relatively constant changes in a person's behavior as a result of experience gained. Students' academic performance is generally determined by teacher-made tests or by standardized tests. In Nigeria, standardized tests are commonly known as external examinations. Examples are WAEC, JAMB, NECO and others.

Academic performance refers to how well a student performs on a test or exam in specific subjects related to an academic program. There are many factors that influence academic performance, including but not limited to the number of students in the school, home teachers, cultural and political factors. Learning is an essential component and a major factor in determining academic performance. Therefore, the factors that influence an individual's learning may have direct or indirect effects on their academic performance.

The student's academic performance may be largely determined by the student's school population. This is because a well-populated school will affect the size of the class, the instructional and teaching tools, and the provision of infrastructure and basic facilities in the school setting. For example, in a crowded classroom, students may find it difficult to concentrate in the classroom and learn optimally. The school administration or the admission policies also play an important role in the student's academic performance. Ololube (2012)

School quality is a key determinant of educational attainment and success in the job market and school population is one aspect of school quality that policy makers can influence. However, there is a lot of debate on the impact of school population on school enrolment trends. Studies have shown a relationship between school overpopulation and academic performance. According to Nyiam (2012), overcrowded classrooms lead to overstretching of school facilities and allow students to engage in examination misconduct.

According to Agba (2010), students' overpopulation disrupts the atmosphere of the school, impacting teachers and students alike. On the other hand, researchers have found that effective teaching and good academic performance are only possible when schools have adequate infrastructure and a manageable class size. Large classes have a negative impact on certain students more than others, and the negative impact on grades varies across different groups of students.

According to Okechukwu (2016), Over-populated classrooms have negative impact on pupils' academic performance and quality of instruction. Inadequate classroom seats have negative impact on pupil's academic performance and teachers find it challenging to measure student's performance in overpopulated classroom. Effective use of teaching aids is negatively impacted by overpopulated classroom.

Methodology

In this study, the descriptive survey design was adopted. The population consisted of 888 undergraduate students at the University of Benin (Edo state). The sample size of the study consisted of 430 undergraduate students. A simple random sampling approach was employed. There are 8 departments in the Faculty of Education and 4 of them were selected randomly. The instrument used in the study was Academic proforma, it is an assessment score sheet that was used to collect academic performance scores of the undergraduate students in EDU111, the title for the course is Introduction to History of Education which all the 100 level undergraduate students in Faculty of Education must offer. The questions contained 100 objectives multiple items, which 1 is scored as correct answer and 0 is scored as wrong answer, the maximum score was 100 and minimum scored is 0. This was considered to be valid and reliable as it is a standardized tool. The researchers received the academic

proforma which consists of the students' performance raw score in EDU111 from 4 departments in the faculty of education for the academic session 2020 /2021. Research questions 1 was analyzed using descriptive statistics such as average and standard deviation Hypothesis 1 was tested with ANOVA statistics and was tested at a level of 0.05

Estimation of Results

Research Question One: how does class size affect the academic performance of education students for 2020/2021 academic session in various departments?

Table 1: Descriptive Statistics of Academic Performance of Education Students for 2020/2021 Academic Session relative to class size

	N	Mean	Std. dev.
Academic performance	430	43.73	10.65

Table 1 shows the academic performance of education students for 2020/2021 academic session in EDU111 with a mean 43.73 and standard deviation of 10.65. Since the derived mean is less than cluster mean of 50.00, this indicates that the academic performance of education student for 2020/2021 academic session in EDU 111 was low.

Hypothesis One

There is no significant difference in the academic performance of Education students based on class size in the various departments.

Table 2: ANOVA Statistics of Academic Performance of Education Students by Department based on class size.

Sum of Squares	df	Mean Square	F	Sig.		
Between groups	1561.855		3	520.618	4.708	.003
Within groups	47105.921		426	110.577		
Total	48667.777		429			

The F value in Table 2 is 4.708 with a significant p value of .003. When testing at a p value of .05, the p value is lower than the p value at the alpha level. Therefore, the null hypothesis that there are no significant differences in education student academic performance by department was discarded. Therefore, there are significant differences in educational student academic performance by departments.

Table 3: LSD Post Hoc Tests for Academic Performance of Education Students.

(I)DEPT	(J) DEPT	Mean difference	Sig.
DEF	DEM	3.23852*	.010
	VTE	3.59820*	.015
	ADULT	-1.15993	.429

DEM	VTE	.45968	.775
	ADULT	-4.40745*	.005
VTE	ADULT	-4.86712*	.007

The mean difference is significant at 0.05 level.

* ADULT: Department of Adult and Non-Formal Education,

* DEF: Department of Educational Foundations,

* DEM: Department of Educational Management,

* VTE: Department of Vocational and Technical Education

Table 3 shows significant difference in academic performance with DEF and DEM, VTE, ADULT with a P value of .010, 0.15 and .429. It also shows a significant difference with DEM and VTE, ADULT and VTE with ADULT respectively.

Discussion of Findings

According to the results of the research question one, the academic performance of the education students for the academic session 2020/2021 was low. This may be because students find it hard to study and assimilate in a crowded classroom. When classes are crowded, students will not be able to study well, they will find it difficult to assimilate what they are teaching them and this in turn could have negative impact on their academic performance. This means that there is an impact of class size on education student academic performance. This is in line with the findings of Okechukwu's (2017) study, which states that crowded classrooms have a negative impact on pupils' academic performance. Okechukwu believes that the student-to-teacher ratio should be appropriate based on the class size which can lead to effective classroom management for efficient teaching and learning. In the same manner, Obiakor (2020) study found that large class size leads to poor academic performance as it leads to poor teaching methods and improper use of instructional materials. This is also in line with Luka's (2018) study, which found that high numbers of students in the classroom have an impact on academic performance, and that smaller class sizes lead to better academic performance.

Hypothesis 1 revealed significant differences in education student academic performance across departments. This suggests that education student academic performance varies across departments. Students in departments with small class sizes perform better than students in departments with high class sizes. This observation is in line with the findings of the study conducted by (Cheng (2011)). However, many departments appear to be influenced by class size when analyzed individually. Educational success varies with class size in some disciplines, but success in other disciplines appears to be influenced by other factors. However, this observation confirms the view of Jehangir (2012) that most teachers prefer to teach small class sizes because they are easy to manage. Large class sizes also affected instructional process because not all students got attention from the teachers.

However, as shown in Table 3, there is a significant difference in education student academic performance across different departments. This means that as class sizes change, the impact of class size on student academic performance across the sampled department changes accordingly. This is in line with the findings of the study of Altonji (2011) which states that school quality predicts educational attainment. The study also found that school population was one of the potential measures of school quality that policy makers had some control over. However, this is in line with Agba (2010) who states that student overpopulation has a negative impact on a school. High academic performance is only achievable when schools have good infrastructure and a manageable class size.

Conclusion

Based on the results of the study on class size and academic performance of undergraduate Students in Faculty of Education, University of Benin, we can conclude that class size has an impact on students' academic performance. Students perform better in a class that is reasonably large.

Recommendations

Based on the results of the study, the following suggestions were made:

1. The carrying capacity should be considered before admitting more students into faculty in order for the students to have manageable class size, which in turn improves their academic performance.
2. Policy makers should consider as a matter of priority, the funding of universities in Nigeria for the building and purchase of facilities that will enhance teaching and learning irrespective of class size.

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