UNIJERPS
Unizik Journal of Educational Research and Policy Studies VOL.8;
https://unijerps.org
2021 Impact Factor: 5.641; 2020 Impact Factor: 5.355.
July-December, 2021
Indexing and Impact Factor URL: http://sjifactor.com/passport.php?id=21363

EFFECTS OF CLASS SIZE AND TIME MANAGEMENT ON STUDENTS' ACADEMIC PERFORMANCE IN PUBLIC TERTIARY INSTITUTIONS IN LAGOS STATE, NIGERIA

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ABSTRACT
Previous research has looked at the impact of class size and time management on students' academic performance in isolated studies, but there appears to be a scarcity of research on the impact of class size and time management on students' academic performance in public tertiary institutions in Lagos State. This study looked at the relationship between class size, time management, and academic performance in Lagos State's public tertiary institutions. The study used a survey-type descriptive research design. The study's population consisted of seven public tertiary institutions, as well as their academic staff and students, as of the 2017/2018 academic session. After stratifying into faculties/schools and selecting through the simple random technique, the sample size was 1800 respondents. Except for the Record Observation Formats I and II, other two instruments used to collect data after ensuring their validity were subjected to reliability test. Using the Cronbach Alpha test, the 'Time Management Questionnaire for Lecturers (TMQL)' and 'Time Management Questionnaire for Students (TMQS)' were found to be reliable. The findings revealed that class size has a significant negative relationship with students' academic performance in public tertiary institutions in Lagos State, although time management has no significant relationship with students' academic performance in public tertiary institutions in Lagos State. Conclusively, class size is an important determinant of students' academic success in public tertiary institutions in Lagos State, but time management is not. It is recommended that the government should ensure optimum class size in tertiary institutions through the Federal and State Ministries of Education in order to achieve high levels of efficiency, as large class sizes will be counterproductive.

Keywords: Class Size, Time Management, Students' Academic Performance, Public Tertiary Institutions.

Introduction
Academic performance is the result of education, that is, how well a student, lecturer, or organization (institution) has met their educational objectives. Examinations or continuous assessment are widely used to evaluate academic performance, although there is no consensus about how best to test it or which aspects are more relevant. According to Adu, Ojelabi, and Adeyanju (2009) cited in Akinyemi (2020), academic performance may

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simply be described as the sum of a person's academic tasks or rigors, which can be reported poorly or successfully. Academic performance cannot be encouraged in students who are discouraged, according to Ijaduola (2008). Lecturers are required to make a significant contribution to their students' academic success. Higher lecturer efficiency is often due to a student's strong academic performance. When time management skills are well-managed, academic performance appears to improve. Students' academic performance can be influenced by their ability to manage their time.

Meanwhile, due to the interest and concern for annual turnout of Nigerian graduates of tertiary institutions, public debate in Nigeria often focuses on educational standards. Student results at tertiary institutions do not seem to balance government and parental spending, according to the general public. The fact that student enrolment rises without corresponding school expansion or provision of sufficient facilities in schools seems to aggravate the situation (Asiyai, 2012). However, as higher education institutions have played a major role in acquiring and transmitting knowledge, and there is a growing concern about its quality in the country. Meanwhile, in accordance with the axiom that no education system will rise above the standard of its teachers, quality education is a function of the availability and utilization of input resources, including teachers. Furthermore, education quality can be calculated in terms of quality input, quality material, quality procedure, and quality performance (Oladipo, Adeosun & Ori, 2008). Teachers, as one of the input resources, are one of the determinants of educational quality; they are a significant driving force in the development process and the performance determination.

As a result, lecturers must organize, plan, and budget their time in order to produce more productive and efficient teaching-learning and, as a result, to increase efficiency, i.e., good students' academic performance. Thus, the time management of lecturers can have an effect on students' academic performance. Time is a resource that has an effect on every area of human endeavour. It is a resource in short supply that has an effect on all stakeholders in the education industry, including students, teachers, administrators, supervisors, and so on. There are several instances now where lecturers complain about not having enough time to do some things that they would have done if they had more time (Ekundayo, Konwea& Yusuf, 2010). A successful lecturer must make efficient use of his or her time in order to complete all of the tasks on his or her to-do list. Some lecturers, but not all, have a clear understanding of how to use time effectively for teaching. Since time cannot be stored and its availability cannot be increased or decreased beyond the allotted number of hours of teaching in a day, the structuring of time allocation and distribution among competing demands is priority-based.

Furthermore, time is the only resource that cannot be reversed or taken back after it has been used, and while no one can regulate the passage of time, everyone can determine how to use it efficiently and effectively. This statement is consistent with Argarwal's (2008) assertion that time management is typically an issue, and that if one instinctively knows what the right time is, there is no need to be concerned. Gerald also sees time management as a collection of values, habits, skills, resources, and processes that work together to help one get more value out of one's time in order to improve one's quality of life(Adebayo, 2015). Lecturers can then face issues such as inability to cope with disruptions from students in the classroom, deadline pressure for submitting questions and completing course outlines, procrastination, ambiguity of personal goals, and so on which could lead to inefficiency. According to Olaniyi (1998), the most valuable quality a teacher should have is the ability to manage his or her time. This ability would allow the teacher to focus on both interpersonal relationships and development in a balanced manner (Ekundayo*et al*, 2010).

The problem of broad class sizes and the implications that come with them is critical. Large classes seem to be the vogue in Nigerian public tertiary institutions, as well as in most

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developing countries. The increase in annual student enrolment has been blamed for the high class size syndrome. According to Ikolo (2011), there has been a significant rise in the number of students enrolled and the average size of classrooms in both secondary and tertiary institutions in Lagos State. Though open enrollment in schools is commendable, there appears to be a lack of sufficient facilities, lecture rooms, instructional personnel, and appropriate systems. Seats and tables, which are basic classroom necessities, are in short supply, and students in some schools are forced to sit on strewn-about furniture or stand at the back of the class to attend lectures (Oyeniran, 2014). As a result, class sizes have become increasingly unmanageable, leaving lecturers with the impossible task of providing personalized attention to the needs of each student. While the lecturer is busy teaching, a group of unmotivated students will form small committees at the back of the class to participate in non-school discussion while the lecturer is busy teaching. When lecturers consider the staggering number of scripts to be marked and registered, continuous assessment will be feared.

Class size, as described by Adeyemi (2008) and cited by Akinyemi (2020), is a tool that can be used to describe the average number of students per class in a school. According to Ikolo (2011), class size refers to a group of people who have a specified or measurable set of relationships between them. As a result, the term "group" can apply not only to a gang of people but also to the location where the interaction takes place. Nonetheless, according to Jacob, Olawuyi, and Jacob (2015), class size has become a phenomenon that is frequently reported in the educational literature as having an effect on students' socializing patterns and academic performance, as well as on instructional quality, administration, and school budgets. Class size is an administrative decision over which teachers or lecturers have little or no influence (Jacob *et al.*,2015). Separately, Kedney describes class size as a method that can be used to predict educational system success (Jacob *et al.*, 2015). Furthermore, Imoke (2006) states that in order to achieve a high degree of efficiency, optimal class size in a school system entails fair coordination of educational facilities, according to the available number of students. According to Ogunyemi and Hassan (2011), a large class size may be detrimental to successful teaching and learning.

In the midst of the inefficiencies, there might be what is referred to as poor time management and/or a lack of adequate classrooms. Efficient spatial distribution, affinity, and time management are critical in facility planning, since they are the fulcrums of curriculum enforcement and, as a result, good academic performance. Predisposing factors to better academic performance include a well-designed classroom space and efficient use of time. As a result, the aim of this study is to look into the relationship between class size, time management, and students' academic performance in public tertiary institutions in Lagos State.

Research Question

This research question was raised to guide the study:

i. What is the average class size in public tertiary institutions in Lagos State?

Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance.

H_{o1}: There is no significant relationship between class size and students' academic performance in public tertiary institutions in Lagos State.

H_{o2}: There is no significant relationship between time management and students' academic performance in public tertiary institutions in Lagos State.

Research Method

A descriptive survey research design was found to be appropriate for the study. This is because the study described the current state and nature of the relationship between class size, time management, and students' academic performance in public tertiary institutions in Lagos State. The study is also an *ex-post facto*

study, as it relied on previously collected data to determine the independent variables' after-effects on the dependent variable.

The study included all seven conventional public tertiary institutions in Lagos State, as well as their academic staff and students. The institutions are: University of Lagos, Akoka-Yaba, Lagos State University, Ojo, Yaba College of Technology, Akoka-Yaba, Lagos State Polytechnic, Ikorodu, Adeniran Ogunsanya College of Education, Oto-Ijanikin, Federal College of Education (Technical), Akoka-Yaba and Michael Otedola College of Primary Education, Noforija-Epe.

Six institutions were chosen from a population of public tertiary institutions in Lagos State as part of the study's sample. In each category of tertiary institutions, one Federal and one State Government tertiary institution was chosen. The simple random sampling technique was used to select one of the two State-owned Colleges of Education, ensuring that both Colleges of Education had an equal chance of being included in the study sample. Adeniran Ogunsanya College of Education, Oto-Ijanikin was chosen as a result.

Departments from each sampled public tertiary institution were chosen using a multistage sampling procedure. As a result, every Faculty, College, School, and Department had a chance to be chosen. A disproportionate stratified sampling technique was used to select four Faculties/Colleges/Schools from each sampled institution, and three Departments were selected using a simple random sampling technique in each selected Faculty/College/School, yielding a total of 12 Departments per sampled institution. Each of the sampled Departments had a random sample of 20 students and five academic staff members. The students were chosen from NCE III, HND II, and 400 level students at a College, a Polytechnic, and a University, respectively, who were in their final year of studies and had demonstrated good time management on their respective institutions' timetables. The total number of participants in this study was 1800, with 1440 students and 360 academic staff from public tertiary institutions in Lagos State.

Questionnaires and observation formats were used to collect data from primary and secondary sources. The data for the study was collected using two types of research instruments. The first was a self-designed instrument titled "Time Management Questionnaire for Lecturers and Time Management Questionnaire for Students," with the abbreviations TMQL and TMQS respectively. There are two sections to the questionnaire: A and B. Section A contains personal information about the respondents, who are academic staff and students in this case. Section B asks respondents about their time management practices at their various institutions. The response mode was a four-point Likert scale. For the responses, the following scores were used as a rating scale: Very True (VT) – 4, True (T) – 3, Untrue (U) – 2, and Very Untrue (VU) – 1.

Second, data was collected from the selected tertiary institutions using two different Records Observation Formats I and II. Records Observation Format I was used to collect the number of registered students for the specified academic years, which represented class size, and Format II was used to collect students' academic performance from 2007/2008 to 2016/2017 academic session.

The researcher constructed the questionnaires and observation formats with the help of experts in the field of measurement and evaluation as well as lecturers from the Department of Educational Management at Lagos State University (LASU). This ensured both content and face validity. The test (examination) instruments used to assess academic performance of students from the various tertiary institutions studied were valid, as they were moderated and standardized by the Universities Senate and Academic Boards of Colleges of Education and Polytechnics. The reliability of the Time Management Questionnaire for Students (TMQS) and Time Management Questionnaire for Lecturers (TMQL) was determined using Cronbach's Alpha Coefficient Analysis (TMQL). The obtained coefficients were 0.743 and 0.749, respectively.

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The data gathered were analyzed using descriptive and inferential statistics. The hypotheses were tested using Pearson's Product-Moment Correlation Analysis of inferential statistic of Statistical Package for Social Sciences (SPSS) 20.0 version at a significance level of 0.05.

Result Presentation

Research Question 1

What is the average class size in public tertiary institutions in Lagos State?

Table 1: Average class size in state and federal institutions in Lagos State

	N	Minimum	Maximum	Mean	Std. Deviation
Class size in state	30	37.60	688.67	246.2723	249.86322
Class size in federal	30	35.00	325.67	125.8670	75.38153
Valid N (listwise)	30				

Table 2: Average class size in public tertiary institutions in Lagos State

	N	Minimum	Maximum	Mean	Std. Deviation
Class Size in universities	20	39.08	688.67	353.7133	246.83967
Class Size in polytechnics	20	35.00	135.17	67.5910	31.30215
Class Size in colleges of education	20	41.09	325.67	136.9046	81.21087
Valid N (listwise)	20				

Table 1 reveals that the mean score of class size in state owned tertiary institutions was 246.2723 and standard deviation 249.86322, and was ranked first. The mean score of class size in Colleges of Education was 136.9046 and standard deviation 81.21087 and was ranked second while the mean score of class size in Polytechnics was 67.5910 and standard deviation 31.30215 and was ranked third. Therefore, based on the mean values, the universities have a higher mean value of class size than other tertiary institutions in Lagos State. This can be observed in Table 2 which reveals that the mean score of class size in universities was 353.7133 and standard deviation 246.83967, and was ranked first. The mean score of class size in federal owned tertiary institutions was 125.8670 and standard deviation 75.38153 and was ranked second. Therefore, based on the mean values, the state-owned tertiary institutions have a higher mean value of class size than federal owned tertiary institutions in Lagos State.

Hypothesis One

There is no significant relationship between class size and students' academic performance in public tertiary institutions in Lagos State.

Table 3: Pearson's Product-Moment Correlation Analysis of Class Size and Students' Academic Performance in Public Tertiary Institutions in Lagos State

		Class size	Students' academic performance
Class size	Pearson's Correlation	1	-0.302*
	Sig. (2-tailed)		0.019
	N	60	60

Students' academic performance	Pearson Correlation	-0.302*	1
	Sig. (2-tailed)	0.019	
	N	60	60

* Correlation is significant at the 0.05 level (2-tailed).

The result of the test performed indicates that there is a low, negative and significant relationship between class size and students' academic performance in public tertiary institutions in Lagos State (r = -0.302, N = 60, P< 0.05). This implies that the hypothesis which states that class size has no significant relationship with the students' academic performance in public tertiary institutions in Lagos State is rejected. The implication of this is that class size has to do with academic performance of students though inversely. Hence, class size does influence academic performance of the students albeit in a reverse order.

Hypothesis Two

There is no significant relationship between time management and students' academic performance in public tertiary institutions in Lagos State.

Table 4: Pearson's Product-Moment Correlation Analysis of Time Management and Students' Academic Performance in Public Tertiary Institutions in Lagos State

		Time Management	Students' Academic Performance
Time Management Aggregate	Pearson's Correlation	1	-0.066
	Sig. (2-tailed)		0.307
	N	1552	60
Students' Academic Performance	Pearson Correlation	-0.066	1
	Sig. (2-tailed)	0.307	
	N	60	1552

Table 4 shows that there is a negative negligible and insignificant relationship between time management and students' academic performance in public tertiary institutions in Lagos State. Therefore, the hypothesis is hereby not rejected (r = -0.066, P> 0.05). This implies that time management (lecturer and student time management) has very little or nothing to do with students' academic performance. Time management does not influence academic performance of the students.

Discussion of Findings

According to the findings, there is a significant low and negative relationship between class size and student academic performance in public tertiary institutions in Lagos State. This implies that the class size is a predictor of students' academic performance and has an impact on it. The findings are consistent with those of Keil and Partell (2009), who discovered that increasing class size has a negative impact on students' achievement, lowering their achievement at a decreasing rate. The findings back up Alebiosu's (2000) claim that students in small classes consistently outperform their peers in large classes in terms of academic achievement. The result is also in line with Fabunmi, BraiAbu, and Adeniyi's (2007) findings, which found that class size had a significant impact on students' academic performance.

The study also discovered that there is no significant link between time management and academic performance in public tertiary institutions in Lagos State. This gives the impression that both academic staff and students do not require proper time management in order to be successful in their various academic endeavours. The study's findings contradict

those of Adebayo (2015), who discovered a significant link between time management and academic performance in Ekiti State's higher education institutions. This finding supports Swart, Lomberd, and Jager's (2010) conclusion that there is no statistically significant link between time management skills and academic achievement among African engineering students. The findings show that regardless of whether a public tertiary institution in Lagos State makes efficient use of allotted time in engaging students in teaching and learning, students still engage in learning and produce good academic performance.

Conclusion

This study concludes that class size is a significant determinant of students' academic performance in public tertiary institutions in Lagos State, whereas time management is not.

Recommendations:

The following recommendations are made in light of the study's findings.

i. To help alleviate overcrowding, the government should work to build more classrooms and make more adequate infrastructure provisions, particularly in state-owned institutions.
ii. Policymakers such as the National Universities Commission (NUC), the National Board for Technical Education (NBTE), and the National Commission for Colleges of Education (NCCE) should formulate and ensure the implementation of policies in tertiary institutions regarding the number of students in classrooms and the required classroom dimension.
iii. Student orientation programs on time management practice should be organized, as this would show the way not only to academic success and performance, but also to good physical health, lower stress levels, and increased time management awareness among students.
iv. In their secondary school years, students should begin to develop time management skills on their own by reducing materials on the subject or through the use of psychological counseling and guidance studies in schools. To determine how and where they spend their time, students should adopt effective time management attitudes and techniques.

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