



## **SUSTAINING EFFECTIVE LEARNING THROUGH CLASS SIZE MANAGEMENT: A CASE OF BUSINESS EDUCATION STUDENTS IN PORT-HARCOURT**

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### **Abstract**

*Learning outcomes have become a phenomenon of interest to all. This paper looked at how effective teaching and learning can be sustained through the management of class size. Two research questions were posed. The population of the study was One thousand, five hundred and four (1504) Business Education students of 2016/2017 academic session from the Rivers State University, Nkpolu-Oroworukwo and Ignatius Ajuru University of Education, Rumuolumeni, both in Port-Harcourt. The sample size was one hundred and fifty (150) students randomly selected from the population. Survey design was adopted and self-structured questionnaire titled SETLeCLsM, using a four-point rating scale, was used to collect data. The instrument was subjected to face and content validity as well as a reliability test which gave a coefficient of stability of 0.88. The research questions were answered using mean and standard deviation. Findings revealed that large class size affects learning negatively. Amongst others, it was recommended that class sizes be reduced to normal as recommended by National Universities Commission (NUC).*

*Keywords: Learning, class size, large class size, ideal class size, sustaining effective learning, Business Education students.*

### **Introduction**

Class size can be described as the average number of students per class in a school. Class size has become an issue due to increased population, the quest for higher education and better living conditions of life. Effective teaching and learning which eventually leads to good academic achievement of learners has always attracted the attention of scholars, parents, policy makers and planners (Aremu & Sokan, 2012). In an attempt to put sound education on ground worldwide, many factors have been given as responsible for the falling standards of education. Among such factors is the issue of class size. So much argument have been put forward regarding the effect of class size on teaching and learning; some fingering over-bloated class size as the main factor responsible for the falling standards of education in Nigeria. Others see this as a mere coincidence but the fact remains that class size is very important in teaching and learning. (Nwokocha, Akpomi & Nnadi, 2008; Adeyemi, 2008).

There is a consensus among researchers and educational scholars that, students' achievement decreases as class size increases (Yusuf, Onifade & Bello, 2016; Amesi, Akpomi & Amadi, 2014; Yara, 2010). The effect of class size on cognitive achievement has been debated and researched for many years and is still inconclusive. Class size is a popular concept in educational research and is calculated by dividing the number of enrolled students by the number of classes. It is the number of students a teacher teaches during a given period of instruction (Yara, 2010).



In measuring class size, the student-teacher ratio has been used. Although student-teacher ratio does not measure class size, some important studies have used student-teacher ratio as a proxy for class size (Murphy, 1998; Hanueshek, 1997). The measurement of class size is not as straightforward as it might seem. It can vary considerably for a student at different times during a school day and school year, because of student mobility, student absences, truancy, or the presence of pull-out special education classes. Thus a class with 20 registered students will vary in its class size from day to day, and may have far fewer than 20 students at particular times. In the basic and secondary school groups, class size tends to vary by subject area, and therefore can vary for each student during a school day. Ideally, one would like to have a measure of the actual class size experienced by every student during every school day, over the school year so as to appreciate the effect on teaching and learning.

Teaching and learning is an act whereby the teacher imparts or transfers knowledge, behavior, skills, values or preferences to a learner and the learner acquires or modifies what is taught and learnt to a potential change in synthesizing information, depth of the knowledge, attitude or behavior relative to the type and range of experience. Teaching and learning work hand in hand as teaching is a complex, multifaceted activity, often requiring instructors to juggle multiple tasks and goals simultaneously and flexibly. Learning on the other hand is a process, not a product, in which the learner plays a crucial role to make learning more effective (Vipene. & Akpomi, 2009).

The learning process is based on objectively observable changes in behavior. Behaviour theorists define learning simply as the acquisition of a new behavior or change in behavior (Richard, 2012). The theory explains that learning begins when a cue or stimulus from the environment is presented and the learner reacts to the stimulus with some type of response. Consequences that reinforce the desired behavior are arranged to follow the desired behavior, for example, a student studies and get a good grade in a test. The new behavioural pattern can be repeated so it becomes automatic. The change in behavior of the learner signifies that learning has occurred.

Cognitive learning theorists believe that learning occurs through internal processing of information. Unlike behaviorism, cognitive information processing is governed by an internal process rather than by external circumstance. The cognitive approach to learning theory pays more attention to what goes on inside the learner's head and focuses on mental process rather than observable behavior (Barbetta, Norona & Bicard, 2005). Changes in behavior are observed, and used as indicators as to what is happening inside the learner's mind. Learning involves the reorganization of experiences, either by attaining new insights or changing old ones. Thus learning is a change in knowledge which is stored in memory, and not just a change in behavior. Constructive theorists believe that learning is a process where individuals construct new ideas or concepts based on prior knowledge and or experience. Each person generates own mental models, which is used to make sense out of experiences. People resolve conflicts between ideas and reflect on theoretical explanations. Learning, therefore, is simply the process of adjusting one's mental models to accommodate



new experiences. This theory is used to focus on preparing people to solve problems. To be successful, therefore, the learner needs a significant base of knowledge upon which to interpret and create ideas. In addition, with constructivism, outcomes are not always predictable because learners are constructing their own knowledge; this means that constructivism does not work when the results are always consistent.

The two main approaches to learning are surface and deep (Fleisher, Wright & Tindale, 2007). In the surface approach, the learner only wants to complete the tasks for the course and memorize the information necessary for the assessments. They often fail to distinguish between principles and tend to limit their knowledge to some basic elements. The learners often use previous examinations to predict questions and try to organize time and effort to obtain the highest possible grades. On the other hand, in the deep approach, the learners are motivated to learn and will spontaneously do exercises and interact with the content. They usually relate new ideas to previous knowledge. The learners relate concepts to everyday experience and evidence to arrive at conclusions. In the end, they have a good understanding of the logic of the arguments that are formulated in class.

The number of students in a class has the potential to affect how much is learned in a number of different ways (Krueger, 2003). For example, it could affect the level of social engagement; that is, how the students interact with each other. This may result in more or less noise and disruptive behavior, which in turn affect the kinds of activities the teacher is able to promote. Class size could affect how much time the teacher is able to focus on individual students and their specific needs rather than on the group as a whole. Since it is easier to focus on one individual in a smaller group, the smaller the class size, the more likely individual attention can be given, in theory at least.

Class size could also affect the teacher's allocation of time and hence, effectiveness (Etuk, 2004). For example, how much material can be covered while teaching and attending to students? Teachers may choose different methods of teaching and assessment when they have smaller classes, they may assign more writing or provide more feedback on students' written work, or use open ended assessments, or encourage more discussions, all activities that may be more feasible with smaller class size.

Size of classes has become increasingly unmanageable, leaving the teacher with the impossible task of giving individual attention to the learner's needs (Jacob, Olawuyi & Jacob, 2016). The teacher's eye contact with the learner in class becomes so dissipated that a number of poorly motivated learners can form small committees at the back of the class to engage in non-school discussion, while the teacher is teaching. Continuous assessments are dreaded by teachers when they consider the staggering number of scripts to be marked and recorded. Yusuf, Onifade and Bello (2016) posited that attention or concentration is the learning attitude that is most affected by class size. Students may likely lose the attention because of their far distance from the board. This makes teacher's voice less audible and writing unclear. Although there is still an ongoing argument about the effects of class size on



teaching and learning, most literatures on the subject matter suggest that larger class sizes affect teaching and learning negatively.

**Statement of the problem**

The class sizes in Business Education Departments of both the Rivers State University and the Rivers State University of Education, both in Port-Harcourt at each level is more than 100 students. Some levels have up to and more than 300 students. These large class sizes have resulted in circumstances where, in most cases, one lecturer is seen teaching over 200 students in one class. These large classes obviously make it very difficult for the lecturer to manage and teach effectively. This in turn, can negatively affect the learning process.

**Purpose of the study**

The purpose of this study is to find out how effective teaching and learning can be sustained through the management of class size of Business Education students in Port-Harcourt.

The two research questions posed for this study are:

1. What are the exact class sizes of Business Education students in Port-Harcourt?
2. To what extent does class size affect learning of Business Education students in Port-Harcourt?

**Methodology**

The survey design was used since this study determined the sustenance of learning through the management of class size. The population consisted of one thousand, five hundred and four (1504) Business Education students in the 2016/2017 academic session from the Rivers State University (1028 students) and the Rivers State University of Education (476 students), both in Port-Harcourt.

The sample size was 10 per cent of the population which gave a figure of one hundred and fifty (150) students. Using random sampling, one hundred and two (102) students were selected from the Rivers State University, while forty-eight (48) students were selected from the Rivers State University of Education.

The instrument titled Sustaining Effective Learning through Class size Management (SELeCLsM), with a 4-point rating scale of Large Extent (LE), Moderate Extent (ME), Small Extent (SE) and No Extent (NE) was used to obtain data. The instrument was subjected to face and content validity as well as a reliability test which gave a coefficient of stability of 0.88. The research questions were answered using mean and standard deviation.

**Results**

What are the exact class sizes of Business Education students in Port-Harcourt?

Table 1: Distribution of Business Education Students according to levels

S/No	Name of institution	Level 100	Level 200	Level 300	Level 400	Total
1	Rivers State University, Nkpolu-Oroworuhwo, Port-Harcourt	242	329	254	203	1028
2	Ignatius Ajuru University of Education, Rumuolumeni, Port-Harcourt	165	105	104	102	476
<b>Total</b>		<b>407</b>	<b>434</b>	<b>358</b>	<b>305</b>	<b>1054</b>



*Source: Office of the heads of Business Education Departments of both universities, 2017.*

Table 1 shows the total number of Business Education students in both universities respectively for the 2016/2017 academic session. For the Rivers State University, Nkpolu-Oroworukwo, there were 242 students in 100 level, 329 in 200 level, 254 in 300 level and 203 in 400 level respectively, giving a total of 1028. For Ignatius Ajuru University of Education, Rumuolumeni, level 100 had 165 students, 200 level 105 students, 300 level 104 students and 400 level 102 students, giving a total of 476.

To what extent does class size affect learning of Business Education students in Port-Harcourt?

To answer research question 2, the mean ratings of the responses were calculated and the results shown in table 2 below:

Table 2: Mean analysis of effect of class size on learning.

<b>Item</b>	<b>LE</b>	<b>ME</b>	<b>SE</b>	<b>NE</b>	<b>Mean</b>	<b>SD</b>	<b>Remark</b>
Large classes affect allocation of time for learning.	76	45	15	14	3.22	0.96	Accepted
Larger classes are problematic in disciplinary issues.	91	27	22	10	3.32	0.97	Accepted
Large classes are difficult to organize and manage.	97	42	9	2	3.62	0.67	Accepted
Large classes are usually noisy.	134	12	3	1	3.86	0.53	Accepted
Poor and inadequate public address system impacts negatively on teaching and learning.	79	47	20	4	3.34	0.80	Accepted
Large class size encourages more theoretical work than practical work.	67	57	20	6	3.23	0.64	Accepted
Monitoring lesson in large classes is difficult for the teacher.	63	53	32	2	3.18	0.80	Accepted
Participation of students in large classes is usually low.	60	44	28	18	2.97	1.03	Accepted
Difficulty of students hearing the lecturer and vice-versa in large classes.	102	29	13	6	3.51	0.82	Accepted
Ideal class size leads to sustainability as instructions are more individualized.	76	40	29	5	3.24	0.90	Accepted
Total mean					33.01		Accepted
Grand mean					3.30		

*Rating key: LE - Large Extent; ME-Moderate Extent; SE-Small Extent; NE-No Extent.*



Table 2 shows that large classes affect allocation of time for learning ( $X=3.22$ ), larger classes have more problems in disciplinary issues ( $X=3.32$ ), large classes are difficult to organize and manage ( $X=3.62$ ); large classes are usually noisy and affect teaching and learning ( $X=3.86$ ); poor and inadequate public address system impacts negatively on learning ( $X=3.34$ ); large class size encourage more theoretical work than practical work ( $X=3.23$ ); inability of the lecturer to effectively monitor the lesson in large classes ( $X=3.18$ ); participation of students in large classes is usually low ( $X=3.51$ ); Ideal class size leads to sustainability of effective teaching and learning as individual instruction is encouraged ( $X=3.24$ ). The grand mean score of 3.30 is accepted, proving that class size is manageable and sustains effective teaching and learning.

### **Discussion**

The exact class sizes of Business Education students in the two universities studied in Port-Harcourt is given in table 1. It shows that the classes are actually large, especially where there were 329 students in one class. The researcher, having handled that class, testifies to the fact that managing such large class is very difficult and effective teaching and learning can not be sustained.

Large class sizes obviously affect teaching and learning negatively. This is in line with Jacob, Olawuyi and Jacob (2016) who noted that the size of classes in schools have become increasingly unmanageable, leaving the teachers with the impossible task of giving individual attention to the learner's needs. Also Yusuf, Onifade and Bello (2016) and Akpomi (2005) agreed that attention and concentration are learning attitudes mostly affected by class size. Students may likely lose attention because of far distance from the board; lecturer's voice may also be less audible and writings on the board unclear. Fry, Ketteridge & Marshall (2013) also share these views. Talking from experience, large classes truly negate effective learning, making it highly unsustainable.

### **Conclusions/Recommendations**

Based on the findings of the study, the following recommendations are made:

1. The importance of class size to effective teaching and learning cannot be over-emphasized. Lecturer-to-student ratio should be given adequate consideration.
2. Class sizes in the two universities studied should be drastically reduced to ideal class sizes as recommended by the National Universities Commission (NUC). This can be done by appointing more lecturers and dividing the large classes so that one lecturer does not handle more than 50 students in a class at a time.
3. University authorities must set their priorities right. Resources should be channeled to areas that are more important, such as hiring more and qualified lecturers, the provision of lecture halls, teaching and learning equipment and other infrastructures to ensure manageability of classes and sustainability of effective teaching and learning.



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