



## Massification and Quality Assurance in Tertiary Education: the Nigerian Experience

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**Abstract.** The study sets out to examine massification and its impact on quality assurance in tertiary education and the extent to which lecturer–student ratio, adequacy of infrastructure and pedagogical resources affect quality in tertiary institutions. Two research questions and one hypothesis were posed to guide the investigation. The study, which adopted a survey design approach, has as its population lecturers in tertiary institutions. Through stratified and random sampling techniques, 432 lecturers and students were selected and the instrument for data collection was questionnaire. The study found that lecturer–student ratio, adequacy of infrastructure and pedagogical resources affect quality in tertiary institutions.

**Keywords:** Lecturer-student ratio; Pedagogical resources; Quality assurance

### 1 Introduction

Tertiary education according to the provisions of the National Policy on Education is that education given after- secondary education, in universities, colleges of education and polytechnics in Nigeria. These institutions are owned by either the Federal or State Governments, corporate bodies or individuals. Some federal bodies have been appointed to approve, supervise and accredit courses in these institutions, irrespective of the proprietorship of the institutions. For universities, the National Universities commission (NUC) is in charge while in the Polytechnics and Colleges of Education, the National Board for Technical Education (NBTE) and National Commission for colleges of Education (NCCE) are in charge of moderating academic programmes respectively. While the first tertiary institution in Nigeria, the Yaba Higher College was founded some eighty years ago, the university college, Ibadan was opened in 1948 and the first Advanced Teachers College commenced training

of teachers in 1962. So the youngest of the three main types of tertiary education is fifty years old.

The phenomenon of globalization, which has changed various sectors of world economy, has also had some remarkable impact on education as students' options for tertiary education have increased and are no longer limited by national boundaries. In Nigeria, there is an increased recognition of the economic potential of higher education. On the importance of tertiary education, the New World Bank Report (2002) observed that tertiary education is necessary for the creation, dissemination and application of knowledge as well as for building technical and professional capacity. Tertiary education indeed has been identified to be central to the creation of the intellectual capacity on which knowledge production and utilization depend and to the promotion of lifelong learning practices. It, therefore, becomes important for stakeholders to be actively involved in the management of a system that will focus on quality assurance in spite of increasing number of students.

Globalization and the growth of education at primary and secondary levels have implications for tertiary education. Nigeria's being a signatory to world conventions on education for all gave birth to the National Policy on the Universal Basic Education. With these, all school age children are expected to be in schools and the progressive pupils' population in both the primary and secondary levels have increased.

The trend is not peculiar to Nigeria. Africa has experienced a dramatic escalation in the demand for tertiary education and this started in the 1960s and has continued to the present day. The rapid expansion in the last decades is partly in response to the relative success of the education for all programmes implemented by many African countries, Nigeria inclusive. This led to very considerable expansion in primary and secondary enrolment. For instance Ethiopia is moving rapidly towards a mass public sector higher education system. The considerable challenges raised by 'massification' include teaching, quality, funding, and the need for a more professionalised leadership, inadequacy of staff and institutional structure and mission. The country's higher education sector has grown from two public universities over a decade ago to twenty-two today with another ten due to open soon (Ashcroft, 2010).

Many higher education systems worldwide expanded extensively in the last decades and have undergone wide and deep structural changes. Qiang, (2011) reported that Chinese higher education has expanded rapidly over the past decade with gross enrolment rates increasing from 3.4 percent in 1990 to 7.2 percent in 1995 and 11 percent in 2000. In particular, 1999 saw an abrupt jump in new enrolments, with an increase of 47.2 percent. The fast expansion continued until 2004, when higher education enrolment at all levels reached 20 million, double that of 1998 and by 2008 the increase went up to 121.4 percent.

In OECD countries, the proportion of adult with tertiary education almost doubled between 1975 and 2000 from 22 percent to 41 percent.

The irresistible pressure of rising demand which is astronomical in the face of inadequate resources, has posed major problem in Nigeria and other countries. The crucial challenge is to ensure the quality and relevance of programmes and its delivery and at the same time making tertiary education more widely accessible. Ocho (2006) observed that most universities and polytechnics, especially those owned by the federal and state governments, enrol far more students than the available qualified lecturers, facilities such as lecture halls, laboratories, desks reading materials and equipment. Carrying capacity, which is defined as the maximum number of students that an institution can sustain for qualitative education, based on available human and materials resources have been over shot severally. Of the 25 federal owned universities, 18 were found to have over enrolled and Obe (2007) reported that 13 out of the 19 state universities over enrolled while only one of the 7 private universities over enrolled. It was also reported that of the top 10 over crowded universities, federal has 5 and state has 5. With particular reference to the University of Lagos, the student population increased over the years as indicated below.

**Table 1: University of Lagos undergraduate students' enrolment**

Year	Male	Female	Total
1965	126	5	131
1966	226	6	232
1970	1,561	307	1868
1980/81	8,388	1,997	10385
1990/91	8,029	5,000	13029
2000/01	14, 131	8,217	8217
2001/02	12,052	9,360	21412
2002/03	13,484	10,510	23994
2003/04	13,852	10,203	24055
2004/05	0	0	0
2005/06	12,472	9,529	22001
2006/07	11,885	8,528	20413
2007/08	13,895	10,852	24747
2008/09	12,743	9,513	22256
2009/10	14,195	10,429	24624
2010/11	15,032	11,504	26536

*Source:* Academic Planning Unit, University of Lagos

A state owned university was found to have had excess enrolment of 24,628. The trend of massification is no different in polytechnics and colleges of education.

## **1.1 Problem**

Tertiary institutions are currently enduring a thunder storm of changes so fundamental that some argue that the very idea of tertiary education is being challenged. Higher education in Nigeria is in crisis and characterized by decline in the quality of teaching, research, decay in library, infrastructural facilities, equipment in the arts and science laboratories and frustrated academic, administrative and support workers.

Most importantly, is the problem of democratization – massification of higher education and the ever escalating cost of education. The provisions of the Universal Basic Education (Education for All) which was launched in September, 1999, make for all school aged children to be in the Nigerian classroom for nine years duration. It is however unfortunate that not much corresponding preparation and provision of resources is made for tertiary level as it is being done for the primary and secondary levels. There is a rapidly increasing number of students in Nigeria's higher institutions and the trend is now approaching what is common in mass education system elsewhere. As a result of large student number, the space requirements of classroom, lecture theatres; laboratories and workshops are hardly met in over 70% of the tertiary institutions (Okebukola, 2000). Facilities are overstretched thus presenting a problem of rapid dilapidation in the face of dwindling funds for maintenance. A preliminary report on the state of equipment in workshops and laboratories of tertiary institutions documents a sorry state of affairs in terms of number and operational status. The more worrisome aspect is that the method of delivering courses and the assumptions underpinning these methods reminded the same. Many people are worried that this increase in student numbers without a corresponding increase in funding and physical facilities may result in a decline in quality.

In these days of increased costs and large classes, institutions of higher learning have found it increasingly difficult to cope with large classes and at the same time maintain quality. The big problem is how to create a system of higher education that balances the twin demands of excellence and mass access. Hence the need for this study to examine massification and its impact on quality in tertiary education in the country. Specific attention was put on three aspects of notable concern, namely, lecturer- student ratios; lecturers' workload; and adequacy of pedagogical resources.

## **1.2 Objective of the Study**

The objective of the study was to examine the Nigerian experience in massification and quality assurance in tertiary education. An adjunct to this is to determine if lecturer: student ratio is an indicator of quality assurance in

tertiary education and the extent to which lecturers' workload, adequacy of infrastructure and pedagogical resources affect quality in Nigeria tertiary institutions.

## 2 Method

### 2.1 Design

The study adopted a descriptive survey design. The design was implored because the study was interested in obtaining information concerning the current issue which has to do with the extent to which massification affects quality assurance in tertiary institutions in Nigeria. It involved the generation of information and collection of data from selected participants.

### 2.2 Population, Sample and Sampling Technique

The population of the study are the thirteen (13) tertiary institutions in Lagos State of Nigeria.

**Table 2: Population and Sample**

Institution	Faculty	Lecturers	Students	Total
University of Lagos	Arts	4	20	24
	Science	4	20	24
Lagos State University	Education	4	20	24
Federal College of Education (Akoka)	Arts	4	20	24
	Science	4	20	24
Adeniran Ogunsanya College of Education	Education	4	20	24
Yaba College of Education	Arts	12	20	32
Lagos State Polytechnic	Education	12	20	32
Total		48	160	208

Stratified sampling technique was employed to select 6 out of the 13 tertiary institutions in Lagos State. The sample size comprised of 20 students and 4 lecturers from each of the 3 faculties selected. Simple random sampling was used to select 120 students and 24 lecturers from each of the institutions bringing the total sample to 432 participants. Questionnaire was the main instrument used to generate data which reflected the questions raised in the study. Interview was also used to corroborate information got from the questionnaire.

### 2.3 Validity and Reliability

To ensure face content validity of the instrument, lecturers in University of Lagos, Lagos State University, Lagos State Polytechnic and experts in related areas were consulted. Based on their suggestions, some items in the questionnaire were expunged and some new ones were added. The reliability of the instrument was ascertained using the Split-half technique. This returned a reliability coefficient of .75, which is high enough for a study of this nature (Amin, 2005).

### 2.4 Data Analysis

Simple mean and percentages were used for analysis of the research questions while Pearson product moment correlation statistical tool was used to test the hypothesis. The statistical tool was implored because it describes the degree of correlation between the two variables that is infrastructure and quality of teaching.

## 3 Findings

Lecturer-student ratio ranged from 1:10 to 1:163, with Federal College of (Technical) Education being the lowest and the College of Education, the highest (Table 3).

**Table 3: Lecturer: student ratio**

	Arts			Science			Education			Total		
	L	S	R	L	S	R	L	S	R	L	S	R
University of Lagos	28	2,224	1:79	31	2,160	1:69	80	4,500	1:56	139	8884	1:63
Lagos State University	22	3,108	1:141	28	2,001	1:71	38	3,800	1:100	88	8909	1:101
Yaba College of Education										1,000	20,000	1:20
Federal College of Education										300	3,115	1:10
Adeniran Ogunsanya										49	8,000	1:163
Lagos State Polytechnic										1,022	24,000	1:23

Key: S = Students; L = Lecturers; R = Lecturer-Students Ratio

On the average, only the technical tertiary institutions have quite manageable lecturer: student ratio and this ranges between 1:10 to 1:23. There is however, clear evidence of massification in Universities where, in a State University, the ratio came up to a lecturer to 141 students. Table 3 also shows that, of the three faculties sampled, the faculty of Art seems to have had the highest ratio (1:79 – 1:141). The lecturers/ instructors were asked to assess their workload and their responses are shown in Table 4.

**Table 4: Lecturers’ assessment on class size and workload**

	Frequency				Percentage			
	Low	Moderate	High	Very high	Low	Moderate	High	Very high
The number of students per contact lecture is	7	6	17	42	10	8	24	58
The number of contact hours per week is	31	28	10	13	43	39	14	18
Frequency of take home assignments is	27	26	5	4	57	36	10	7
The use of borrowed/ rented facilities is a common feature at my institution	66	1	3	2	92	1	4	3

From table 4 more than a half of the lecturers (58%) sampled observed that the number of students per contact lecture is very high while 92% of them reported that in spite of the large numbers involved, the use of borrowed/ rented facilities is not a common feature in their institutions.

**Table 5: Relationship between infrastructure and quality of teaching**

Quality	Infrastructure and quality of teaching	Df	r-cal	r-tab
.04	1260	409	85,890	6 5 .77

Probability level is 0.05

Table 5, shows the result of the tested hypothesis which posited that there is no significant relationship between infrastructure and quality of teaching in Nigerian tertiary institutions. Pearson product moment correlation was carried out to examine the degree of correlation between the two variables. The result shows that there is a significant relationship between the two variables.

#### 4 Discussion, Conclusion and Recommendation

Tertiary education has been sought after by the large numbers of secondary schools leavers. At the tertiary level, massification has been identified in this study since in the universities, lecturer to student ratio is relatively high (79-1:141). This falls below the National Universities Commission's prescription of one lecturer to 25 students. Equally important is the number of contact hours of lecturers as observed by sampled lecturers, majority of them claimed that they do not have enough contact for lecturers, which affect the quality of teaching and learning.

Ocho (2006) reported that some of the effects of over enrolment or overshooting carrying capacity by tertiary institutions include, reduction in the effectiveness of teaching and increase in problem of class control, continuous assessment, difficulty in marking of written work and the conduct of examinations.

On the issue of infrastructure and quality teaching, it is not surprising that there is a significant relationship between both variables. For proper teaching and learning to take place, there must be adequate infrastructure but in almost all the tertiary institutions in the country, the lecture halls are overcrowded and many of the students stay outside because the lecture halls cannot accommodate all of them. The lecturers themselves face the same ordeal, which affects their ability to teach well. Laboratories are small and the equipment is obsolete. However, this situation is not peculiar to Nigeria. In Senegal and Ethiopia, students are usually cramped together in dormitory rooms. For students to secure seats, they have to be in the lecture hall two hours before the class. Those who sit too far may not hear the lecture at all and those who arrive late for lectures perch on the cinderblock in the aisles, or strain to hear from the gallery. Generally a large percentage of the students fail their first and second year examinations at the university as a result of inadequate infrastructure. (Polgreen, 2007). In East Africa, Mamdani (2007) reports similar problem at Makerere University.

It has been found in this research that, on the average, lecturer: student ratio in tertiary institution is generally high but lowest in the technical- based tertiary institutions and highest in the Arts faculties of Universities. The study established a significant relationship between the adequacy of infrastructure and quality of teaching in tertiary institutions.

In view of the above, the paper recommends that the management of tertiary education, in line with major reforms presently embarked upon, should provide the basic enabling environment for effective teaching and learning in tertiary institutions. There is need to draw the attention of the government to the issue of adequate funding without which the institutions can not achieved the set

objectives and goals. In every financial year tertiary institutions should identify priority projects when preparing annual budget for the provision of infrastructure and facilities. The study also recommends the sharing of facilities between institutions. This is necessary in order to spread out the overheads.

The study proposed that the development of education in Nigeria be a balanced venture. In addition, government should restore the necessary balance between the massification of tertiary education and pursuit of academic excellence.

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