Abstract

This paper reports on the findings of a survey that delved into the impact of expanding student enrollment on quality assurance in Nigeria. Starting with a brief on the historical development and management of the Nigerian higher education system, the paper addresses questions pertaining to student-lecturer ratios; lecturers’ assessment of their workload; and the relationship between the availability of resources and quality of teaching in higher education. Data were collected from 432 respondents drawn from six higher education institutions and the findings were that: student-lecturer ratios are too large for quality assurance, especially in the Arts; and that the lecturers do not have sufficient contact with their students.

Introduction and Background

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 their proprietorship. For the 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 seventy five 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 forty-five years old.

The phenomenon of globalization, which has changed various sectors of world economy has also had some remarkable impact on education as students option for tertiary education has increased and it is 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 inspite of numbers.

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.

Rui Yang (2002) 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. Jiangsu one of China’s provinces, is expected to be the first to start the transiting from elite to mass tertiary education. In OECD countries, the proportion of adult with tertiary education almost double between 1975 and 2000 from 22% to 41%.

Ocho (2006) observed that most universities and polytechnics especially the Federal and States enroll far more students than the available qualified lecturers, facilities such as classrooms,
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 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>
<thead>
<tr>
<th>Year</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1962</td>
<td>130</td>
</tr>
<tr>
<td>1970</td>
<td>2528</td>
</tr>
<tr>
<td>1980</td>
<td>12,365</td>
</tr>
<tr>
<td>1990</td>
<td>12,647</td>
</tr>
<tr>
<td>2000</td>
<td>37,683</td>
</tr>
<tr>
<td>2006</td>
<td>37,840</td>
</tr>
</tbody>
</table>

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.

**Statement of Problem**

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

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 classrooms 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 numbers, the space requirements of classrooms, lecture theatres; laboratories and workshops are hardly met in over 70% of the tertiary institutions (Okebukola, 2000). Facilities are overstretched thus presenting a recipe for rapid decay 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 remained the same. Many people are entertaining the fear that this increase in student numbers without a corresponding increase in fund 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 teething 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 quality in tertiary education in Nigeria.

Research questions and hypotheses

The following research questions and hypothesis were formulated to guide the investigation.

1. What is the ratio of lecturers to students in tertiary institutions in Nigeria?
2. How do lecturers assess their workload?
3. Is there a significant relationship between the availability of facilities infrastructures and quality of teaching in tertiary institution?

Purpose of the Study

The study is on massification and the quality of tertiary education in Nigeria. Specifically the study sets out to find out if class size is an indicator of quality of tertiary education in Nigeria. Ascertain whether quality of teaching is dependent on the adequacy and quality of facilities and infrastructure. It also tries to determine lecturer-student ratio and find out how lecturers access their workload.
Methodology

Design and Population
The study adopted a descriptive survey design and the population for the study are all the tertiary institutions Lagos State of Nigeria.

Sample and Sampling Technique
Stratified sampling technique was employed to select six tertiary institutions. Selection was on the basis of geographical locations and type. Simple random sampling technique was adopted to select twenty (20) students and four (4) lecturers each from the faculties of Arts, Science and Education from Universities and Colleges of Education sampled for the study. Also twelve (12) instructors and twenty (20) students from each of the two polytechnics were sampled. In all 432 respondents took part in the study.

Instrument for Data Collection
Questionnaire and interview were used to generate data. The instrument reflected the questions raised for or in the study.

Validity and Reliability of the Instrument
To ensure face content validity of the instrument, lecturers in University of Lagos, Lagos State University, Lagos State Polytechnics and experts in related areas were consulted. Based on their suggestions, some questions were expunged and some new questions were added.

In determining the reliability of the instrument, the split-half method of reliability was used. This method of estimating reliability involves the administration of a single test instrument to a single group of individuals who did not form part of the main study and then scoring the test to obtain two scores for the same person. The items were made up of odd-even basis. The coefficient was 0.75 which is high enough for a study of this nature.
Method of Data Analysis
Simple descriptive statistics e.g. means, percentages, Spearman Correlational analysis were employed in the analysis of data.

Table 1: Lecturer – Student Ratio per Faculty in Sampled Institution

<table>
<thead>
<tr>
<th>Institution</th>
<th>Faculties/Schools</th>
<th>Arts</th>
<th>Science</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No. of Lecturer</td>
<td>No. of Students</td>
<td>Lecturer/Student Ratio</td>
</tr>
<tr>
<td>University of Lagos</td>
<td></td>
<td>28</td>
<td>2224</td>
<td>1:79</td>
</tr>
<tr>
<td>Lagos State University</td>
<td></td>
<td>22</td>
<td>3,108</td>
<td>1:141</td>
</tr>
</tbody>
</table>

From Table 1 above, lecturer: student ratio ranged from 1:10 to 1:163, with the Federal College of Technical Education being the lowest and the College of Education, the highest. 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 the
Universities where, in a State University, the ratio came up to a lecturer to 141 students. The table also revealed that of the three faculties sampled, the faculty of Arts seem to have had the highest ratio (1:79 – 1:141).

Lecturers/Instructors were asked to assess their workload and their response is as follows:

**Table II: Lecturers Assessment on Class Size and Workload**

<table>
<thead>
<tr>
<th>Statements</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>Very High</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The number of students per contact lecture is</td>
<td>07 (9.7)</td>
<td>06 (8.3)</td>
<td>17 (23.6)</td>
<td>42 (58.3)</td>
</tr>
<tr>
<td>2. The number of contact hours per week is</td>
<td>31 (43.0)</td>
<td>28 (38.8)</td>
<td>10 (13.8)</td>
<td>13 (18.0)</td>
</tr>
<tr>
<td>3. Frequency of take home assignment is</td>
<td>27 (57.3)</td>
<td>26 (36.1)</td>
<td>05 (6.9)</td>
<td>04 (5.6)</td>
</tr>
<tr>
<td>4. The use of borrowed/rented facilities is a common feature in my institution.</td>
<td>66 (91.7)</td>
<td>01 (1.4)</td>
<td>03 (4.2)</td>
<td>02 (2.8)</td>
</tr>
</tbody>
</table>

From table II more than a half of the lecturers (58.3%) sampled observed that the number of students per contact lecture is very high while 91.7% of them reported that inspite of the large numbers involved, the use of borrowed/rented facilities is not a common feature in their institutions.

**Table III: Relationship Between Quality of Teaching and Infrastructure**

<table>
<thead>
<tr>
<th>Quality of Product of Teaching and Infrastructure</th>
<th>Df.</th>
<th>r-cal</th>
<th>t-tabl</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1260 409</td>
<td>85,890</td>
<td>6</td>
<td>5</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Probability level is 0.05

The table III above shows the result of the tested hypothesis which posited that there is no significant relationship between quality of teaching and infrastructure 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.

**Discussion**

Tertiary education has been sought after by the large numbers of product of secondary schools since the implementation of the policy on education that allows access of all school age children to education. At the tertiary level, massification has been identified in this study since in the universities, lecturer: 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 and the resultant effect is expected: poor quality.

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

On the issue of quality teaching and infrastructure, 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. Even those who are seated inside are not comfortable because there are no air-conditioners, no fans and the halls are poorly ventilated, and not well lit, the lecturers themselves face the same ordeal and so one begins to wonder the level of teaching and learning that would take place under such harsh condition. Laboratories are small and the equipment are obsolete.

This situation however is not alien to Nigeria as Polgreen (2007) asserts that in Dakar, Senegal, students 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 cinderblocks in the aisles, or strain to hear from the gallery. In her words “By the time class starts, 2000 young bodies crowd the room in a muffled din of shuffling paper, throat clearing and jostling”. Generally a large percent of the students fail their first- and second year examinations at the university as a result of inadequate infrastructure.

**Conclusion and Recommendation**

It has been found in this research that, on the average, lecturer: student ratio in tertiary institutions are generally high but lowest in the technical- based tertiary institutions and highest in the Arts faculties of Universities. The sampled lecturers and instructors reported low contact hours with students. The study established a significant relationship between quality of teacher and the adequacy of infrastructure in tertiary institutions.

In view of the above, it is recommended that the management of tertiary education, in line with major reforms presently embarked upon, provides the basic enabling environment in the area of welfare, provision of and renovation of classrooms and the establishment of a network for sharing of facilities between institutions. This is necessary in order to keep down cost. Ayo-banjo (2007) reported that government emphasis has, before now, been on primary education on which enormous sums of money were being spent. It is hereby 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 the pursuit of academic excellence.
REFERENCES

2. Ayo, Banjo, Pro-chancellor, University of Ilorin, “University Education has to be revamped” Saturday Vanguard, Tuesday, May 29, 2007.