CONTENTS

Practice and Challenges of Higher Education Research in Universities in South West, Nigeria
Comfort Oluwafunke Akomolafe 143-151

School-based Assessment in Universal Basic Education: Identifying The Concerns of Teachers
HO. Owolabi, Sola Aletan & Ogunjimi, Mayowa O. 153-159

Transition from Chalkboard to Digital Whiteboard: Keeping Pace with Challenges of 21st Century Learning Technologies in a Developing Economy
Joel B. Babalola 161-172

A Survey of Availability and Adequacy of Teaching Facilities in South Western Nigerian Universities
T.V. Bakare 173-179

Information and Communication Technology (ICT) Option for Quality Assurance (QA) in Tertiary Institution for Sustainable Development
S. A. Bella, J. A. Adetoro & N. E. Uzoka 181-186

Counsellors’ Perspective on Future University Education in Nigeria in the Context of Vision 20-2020
Daisy Inyingi Dimkpaa 187-194

Women Emancipation and Social Development: Implications for Higher Education Research in Nigeria
Erwin Eseza Akiror, Isah Emmanuel Aitenokhuoya, Ileuma Senimewu & Martins Fabunni 195-205

Proliferation of Religious Groups on Nigerian Campuses: Keeping Religious and Educational
Kayode O. Foyokun 207-219

School as a Place of Education for Free Time
Jadwiga Daszynkowska 221-224

Hatred or Discomfort: Nigerian adolescent students’ Attitude to Condom Use as an HIV Related Behavior
Jimoh, M. A. 225-230

Private Universities in Uganda: Growth and Role(s) in the Provision of Higher Education
Henry Mugabi 231-240

Higher Education Research and Economic Growth in Nigeria
Nkang, Iniobong Ekong 241-249

Research Dissemination, Utilization and Commercialization by Lecturers: Case Study of University of Ilorin
R.O. Oduwaiye, H.O. Owolabi, S.A. Onasanya & R. A. Shehu 251-256

Higher Education Research in Uganda: Problems and Prospects
J. S. Owuoye & S. A. Oyebade 257-266

Total Quality Management: A Tool for Effective Budget Planning and Implementation Strategies in Nigerian Universities
Oyetola, Idowu Oluwafunke, Adesola, Asiw Kabinde & Yahya, Latefat Oluwade (Mrs.) 267-274
Word and Image in the Media: Educational Aspects

Higher Education and Rural Development in Bayelsa State of Nigeria

A Survey on the Personalization and Adaptive Techniques in Intelligent Tutoring Systems

Piotr T. Nowakowski & Miroslaw Kowalski

Zuoja, C.C.

C. Beulah Christalin Latha, E. Kirubakaran & Sujni Paul
INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) OPTION FOR QUALITY ASSURANCE (QA) IN TERTIARY INSTITUTION FOR SUSTAINABLE DEVELOPMENT

S. A. BELLO, J. A. ADETORO & N. E. UZOKA
Department of Educational Administration, Faculty of Education, University of Lagos, Nigeria

This paper examined the Information and Communication Technology (ICT) options for Quality Assurance in tertiary institutions in Lagos State. The commitment to quality in tertiary institutions must be a continuous process, overall and total. ICT has become a mechanism that could be used to achieve this continuous expansion and improvement of knowledge, skills, and abilities in the technological environment. The paper highlights the various areas where ICT could be used to assure quality in higher education as well as sustainable development. Challenges facing the use of ICT in higher education in Lagos State are reviewed. ICT benchmark for quality assurance was also reviewed. Five research questions answered and three hypotheses were tested using statistical tools such as mean, standard deviation, and t-test analysis (to test the research hypotheses). Result from the data analyzed showed a positive relationship between the dependent variable and independent variable. This indicates that the null hypotheses tested were accepted. In essence, the ICT options have a great impact on Quality Assurance (QA) in tertiary institutions in Lagos State. In conclusion, the importance of ICT frameworks (options) for quality assurance has become imperative that educational and institutional authorities provide requisite emerging technologies for effective Institutional Management of Educational Administration and Planning in order to achieve sustainable development in Nigeria.

Keywords: Information, Communication, Technology, Quality, Assurance, Sustainable, Development.

INTRODUCTION

The development of any nation depends on the quality of its education and so conscious efforts are made to assure its quality at every level. One of the greatest concerns of Nigerians has been the issue of standard and quality of our educational system. This explains why the uniform educational standards was established in the National Policy on Education (FGN, 2004) and various policy measures put in place by the Federal Government to assure quality in our educational system.

The establishment of specific bodies to control quality in various levels of education is a clear indication of the commitment of the federal government to assure quality. Some of these bodies are: The National Primary Education Commission (NPEC), The National Board for Technical Education (NBTE), The National Commission for Colleges of Education (NCCOE), and the National University Commission (NUC). The National Universities Commission (NUC) as a coordinating body for the Universities is charged with the responsibility of assuring quality in the Universities, through accreditation which is a quality assurance programme. (Babalola, 2007)

Highlighting the issue of poor management, Osuji (2003) noted that poor planning and management in the universities is as a result of non-availability of reliable, timely and up-to-date data which is attributed to the use of manual method of data collection, storage and retrieval. It is in the light of these problems and in the bid to assure quality in the management of the tertiary institutions that NUC initially, in conjunction
with the British Council recommended the introduction of the Information and Communication Technology (ICT) in the challenge of designing and implementing the use of ICT in the Federal diversities with each having Management Information System (MIS) unit.

Therefore, Information and Communication Technology (ICT) have opened the gate for international “classroom”, just as we have the instructional television in Nigeria. The use of ICT produces positive results in terms of improved performance in professional training and higher quality assurance in general education.

The range covered by the ICT may include computer-managed instruction, computer-aided instruction, drill and practice, tutorials, problem solving and simulation. ICT-based teaching and telecommunication can be used to provide specialist educational support in the area of basic skills in reading handwriting and even numeracy to students of itinerant families living in isolated areas, and some tertiary institutions located in remote areas. With adequate ICT programme, quality could be assured at all levels of educational institutions (cite). This will also enhance education for sustainable development. (Babalola 2006)

STATEMENT OF THE PROBLEM

A number of factors have combined to plummet the quality of education at the tertiary level. Most of these factors include poor governance, poor learning environment, weak internal capacity and poor preparation of entering students. These administrative problems have affected ICT options for Quality Assurance and therefore called for redress. This study attempts to address this question; would there be any difference in quality assurance in the management of federal and state owned tertiary institutions in Lagos state of Nigeria?

The pursuit of quality assurance for tertiary institution should not only be the concern of teachers, and educational institutions, but also of the parents, the students, the employers of labour, the government and the international community. Since each of these parties has its own view about what constitute good education; it has, consequently, been a difficult task to agree on what should be a good practice in our tertiary institutions. This problem is further compounded by the heterogeneous nature of Nigeria as a multi-ethnic country. What is considered a minimum entry qualification into the University varies across the country. It may be as a result of the prevailing conditions with the communities in which the tertiary institutions are situated (Ojo 2006).

This study aimed at determining ways to assure quality capacity management to reduce inefficiency derives from its claims; to reduce the estimated one-third of tertiary institutions’ effort spent in dealing with errors, wastages, and poor quality graduates. This study therefore, focuses on the information and communication technology options for assuring quality instructions in tertiary instructions. It is also meant to realise a credible quality assurance framework, and build on a preventive management theory that works on its own towards the realization of productivity and excellence in the system for effective sustainable development.

RESEARCH QUESTIONS

The following research questions were posed for the study:

1. What are the perceptions of the experts on National University Commission (NUC) as a quality assurance agency?
2. What ICT developmental Strategies could be adopted in tertiary institutions in Lagos State for quality assurance education?
3. To what extent has the ICT helped to promote quality assurance in tertiary institutions in Lagos State?
4. Are the ICT quality assurance benchmarks identified in literature valid in tertiary institutions in Lagos State?
5. To what extent do staff welfare strategies through ICT enhance quality assurance in tertiary institutions in Lagos State.

RESEARCH HYPOTHESES

The following hypotheses were tested during the study:

(i) There is no significant difference between the perceptions of the experts on NUC as quality
assurance agency and ICT developmental strategies adopted for quality assurance by the tertiary institutions in Lagos State.

(ii) There is no significant difference between the Information and Communication Technology (ICT) options for quality assurance and quality assurance benchmarks adopted in tertiary institutions in Lagos State.

(iii) There is no significant difference between the quality assurance developmental strategies and staff welfare strategies through ICT options for quality assurance education in Lagos State.

RESEARCH DESIGN
Sample survey design was adopted for the study since it was concerned with collecting data from a given population in order to explore their opinion. The process involved in the application of this design involves the analysis not the opinion of the respondents on relation to how ICT options help in Quality Assurance (QA) education.

POPULATION OF THE STUDY
The population for this study was made up of all academic staff and students from Examination Board, Distance Learning Study centres, Lagos State University (Anthony Campus), Lagos State Polytechnics, Grace Polytechnic (Ogba Campus), Lagos State College of Education (Ogba Campus) and University of Lagos (UNILAG), Akoka, Lagos?

SAMPLE AND SAMPLING TECHNIQUE
100 teachers, 120 students, 20 representatives of West African Examination Council (WAEC) and Joint Admission and Matriculation Board (JAMB) (Examination Boards) and 10 employers of labour constituted the sample for this study.

RESEARCH INSTRUMENT
Relevant data for this study were collected using questionnaire. The instrument was titled “Questionnaire on ICT options for Quality Assurance (QA) in tertiary institutions in Lagos State.”

VALIDITY OF INSTRUMENT
To ascertain the validity of the instrument, copies of the questionnaire were given to experts in measurement and Evaluation, Educational Administration and Research Methodology. They were asked to examine the instrument and ascertain whether they were capable of answering the research questions and be appropriate to test the hypotheses. Comments and suggestions from the experts were used to revise the instrument prior to its administration.

RELIABILITY OF THE INSTRUMENT
Reliability and internal consistency of the instrument were established through a pilot study. The reliability coefficient of the instrument was determined by using the split-half method for purpose of establishing the internal consistency of the instrument. The reliability co-efficient of the instrument was found to be reliable.

DATA ANALYSIS
To analyse the data descriptive statistics were used to obtain them mean \( \bar{x} \) and the standard deviation (SD) while the t-test statistical tool was adopted to test the null hypotheses at 0.05 level of significance.

DATA ANALYSIS AND INTERPRETATION OF RESULTS

Hypothesis One

Null hypothesis \( (H_1): \) There is no significant difference between the ICT options and Quality assurance benchmarks in tertiary institutions in Lagos State.

The table below shows the performance functions between ICT options and quality assurance benchmarks in tertiary institutions in Lagos State.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>DF</th>
<th>P</th>
<th>t-cal</th>
<th>t-critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT options in tertiary institutions</td>
<td>10</td>
<td>3.17</td>
<td>0.37</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Assurance Benchmarks</td>
<td>14</td>
<td>3.36</td>
<td>0.163</td>
<td>22</td>
<td>0.05</td>
<td>1.25</td>
<td>1.72</td>
</tr>
</tbody>
</table>

Table 1

ICT Options and Quality Assurance Benchmarks in Tertiary Institutions in Lagos State
Table 1 above shows that the calculated t-value is 1.52 while the t-critical value is 1.72 at 0.05 level of significance and 22 degrees of freedom. Since the calculated t-value is less than (<) the critical t-value, the null hypothesis (H0) is accepted. This means that there is no significant difference between the ICT options and Quality Assurance benchmarks in tertiary institutions in Lagos State, Nigeria.

Hypothesis Two

(H1): There is no significant difference between the perceptions of experts on NUC as Quality Assurance Agency and ICT developmental strategies adopted by tertiary institutions in Lagos State.

The table below shows the performance functions between the perceptions of experts on NUC as Quality Assurance Agency and ICT developmental strategies adopted by tertiary institutions in Lagos State. Assessment Agency and ICT developmental strategies adopted by tertiary institutions in Lagos State.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>DF</th>
<th>t_cal</th>
<th>t_critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception of experts on NUC</td>
<td>10</td>
<td>2.85</td>
<td>0.546</td>
<td>0.516</td>
<td>1H</td>
<td></td>
</tr>
<tr>
<td>Quality Assurance</td>
<td>10</td>
<td>3.07</td>
<td>0.611</td>
<td>0.6496</td>
<td>1.734</td>
<td></td>
</tr>
<tr>
<td>ICT Developmental strategies</td>
<td>14</td>
<td>3.36</td>
<td>0.218</td>
<td>26</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 shows that the calculated t-value of 0.6496 is less than the t-critical value of 1.734. Therefore, the null hypothesis is accepted. This means that there is no significant difference between the perceptions of the experts and the ICT developmental strategies to enhance Quality Assurance (QA) in tertiary institutions in Lagos State.

Hypothesis Three

(H3): There is no significant difference between the Quality Assurance (QA) strategies and staff welfare strategies through ICT towards Quality Assurance in tertiary institutions in Lagos State.

The table below presents the performance functions between the Quality Assurance (AQ) strategies and staff welfare strategies through ICT towards Quality Assurance in tertiary institutions in Lagos State.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>DF</th>
<th>t_cal</th>
<th>t_critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff welfare strategies</td>
<td>14</td>
<td>3.36</td>
<td>0.184</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Assurance strategies</td>
<td>14</td>
<td>2.99</td>
<td>0.529</td>
<td>0.05</td>
<td>1.64</td>
<td>1.706</td>
</tr>
</tbody>
</table>

Table 3 above shows that the t-calculated value of 1.64 obtained is less than t-critical value of 1.706 at 0.05 level of significance. The null hypothesis (H0) is therefore accepted. This implies that the quality assurance strategies is not a function of staff welfare services, since the human capital is the most crucial element (factor) to determine the quality of any instrument be it education or business enterprises.

DISCUSSION OF FINDINGS

As part of measures to save Nigerian tertiary institutions from crisis of quality assurance, this study was carried out to identify the measures to be taken into account to revive the lost glory of tertiary institutions' quality assurance through information and communication technological (ICT) options (ICT).

The information and communication technology (ICT) is a major technological break-through that is reshaping not only our society but also our tertiary institutions world wide. In view of this, academic institutions have to make use of ICT for teaching and learning in order to make progressive development through the use of ICT based learning within the distance education environment.

The study revealed that majority of the benchmarks were crucial when considering ICT options for quality assurance in tertiary institutions, and in general the participated institutions strove to incorporate them into their policies, practices and
procedures. However, there were few benchmarks that did not enjoy consensus among the academic staff and they were not considered mandatory to ensure quality through ICT-based learning. In this sense, the quality assurance benchmarks identified can be considered valid in the higher education sector in Nigeria in general. Since there were no responses or feedback for the open-ended questions of this survey, it could be concluded that there would not be any additional benchmarks that need to be included into the model.

Moreover, the results of this study could assist policy makers such as University administrators and accrediting bodies in making reasonable and informed judgments with regard to improving the system so that the distance learning students can also be beneficiaries. Each quality assurance strategy of higher institutions needs to be considered, as unintended consequences in one area can originate from a bad choice in another. There is need therefore for the educational administrators in tertiary institutions in the state to give ICT its pride of place in their education programme.

From the foregoing, it is important to say that the quality assurance Nigerian tertiary institutions can be improved upon by adopting ICT options. It was also verified that the most important factor is the human resources, i.e. the lecturers, hence the adage holders, “No organization can rise beyond the quality of her human resources”.

**CONCLUSION**

Information and communication Technology (ICT) is a powerful tool for enhancing quality assurance in tertiary institutions. The quest for quality by all stakeholders in education has led to the radical change in school practices and a unique way of managing the challenges of the technological environment. The management of tasks, removal of wastages, and quality cannot be achieved without the application of ICT in all areas of tertiary institutions operations.

In cognizance of the self-evident indispensability of ICT in teaching and learning processes, the relevant authorities have made the acquisition of basic ICT skills and capabilities part of the National Minimum Standard for teacher education and their inclusion in the school curriculum. Maximizing the advantages of ICT to quality assurance education will involve adequate funding, proper implementation, monitoring, provision of technological infrastructure, training and re-training of teachers, development of software packages and maintenance of electricity reducing station. In addition, an increased awareness of the impact of the New ICTs on quality of education is needed. In a firm belief that the development of ICT in Nigeria must be informed by the acknowledged principle that unless Nigeria’s ICT initiative is packaged, networked, and marketed on the world stage, the objective of bridging the digital divide and effectively responding to the emerging global competitiveness may not be fully realized.

**RECOMMENDATIONS**

To effectively implement ICT options for quality assurance in tertiary institutions in Nigeria, it requires the combined efforts of the stake-holders in education to avert becoming a victim of the digital divide. It is therefore recommended that:

- E-learning cannot be actualized unless and until the existing computer facilities in our tertiary institutions are massively upgraded;
- epileptic power supply in Nigeria has to be worked upon view the power holding company of Nigeria is doing needs great improvement;
- a pool of trained IT personnel, course developer and technicians as well as relevant skills in various aspects of IT developed in the citizenry will be of tremendous help;
- government should subsidize the cost of e-tools for the common masses to benefit; enhancing level of literacy in ICT and computer education should be built into the general studies’ courses in various tertiary institutions;
- improving ICT policy implementation process and apart from the efforts being made so far in implementing, national ICT policy, government should hasten the pace of this implementation by inter-connecting Niger/an information and communication technology.
professionals at home with those in the Diaspora;
Increasing financial allocation to education those arms of government and educational sectors, should equip tertiary institutions under their care with basic ICT facilities such as computer, and internet facilities.

References
Osuji, F. (2003), Keynote Address by Honourable Ministry of Education at 5th Meeting of NUC, Yenogoa, bayelsa. Tuesday 19-25th, October.