EXTENT OF THE IMPLEMENTATION OF ICT IN LIBRARY SCHOOLS' CURRICULUM IN NORTHERN NIGERIA

By
KATAMBA ABUBAKAR SAKA
Department of Library and Information Technology
Federal University of Technology, Minna,
Nigeria.

ABSTRACT

This study was to determine the extent of the implementation of ICT at undergraduate level in Library Schools in Northern Nigeria. Survey research was adopted to study the ICT courses of undergraduate programme in four Library Schools in Northern Nigeria, namely: Ahmadu Bello University, Zaria; Bayero University, Kano; University of Maiduguri and Federal University of Technology, Minna. The study involves the use of data collection instruments/techniques such as documentary sources (Departmental Handbook, List of Undergraduate Courses, Approved Minimum Academic Standards for all Nigerian Universities 1999); questionnaire; interview and observation. The target population includes ICT Course lecturers, system analysts as well as Heads of computer laboratories. Descriptive statistics was used to analyze data. Responses shows that out of the four Library Schools studied, three have gone beyond NUC (1999) Minimum Academic Standards, although all the four Library Schools run divergent curriculum as individual library School design, review, modify and incorporate ICT courses in the entire undergraduate curriculum. There exist inadequate system analysts and computers in computer laboratories. Only one Library School's Computer Laboratory has system analysts. The same Library School also borrowed ICT courses from the Department of Mathematics/Computer Science in such a way that undergraduate students are made to offer ICT courses in that department. It was concluded that Library Schools in Northern Nigeria to a large extent do not operate uniform curriculum and that ICT has not been fully implemented in the sense that computers and system analysts are inadequate. Recommendations were proffered, including that the ICT Courses should be offered and taught in Library Schools while system analysts/technicians be employed to Mann computer laboratories. Adequate computers should be procured to cater for the teaming student population.

INTRODUCTION

Information and communication technology (ICT) is the convergence between computing, broadcasting, audio visual and telecommunication technologies to produce information. The concept of curriculum has been

defined by different people in different ways based on individual perception. Abubakar (2005) assesses the concept of curriculum as "an important part in any training programme which provides not only list of courses or modules offered but also provides information on content, purpose, method, duration, training etc, of a programme which are geared towards the successful dispensation of manpower training and education". Sadiq, Okoro, and Adetumbi (2006) perceive curriculum as "an outline of courses to be taken or plan of work". From the two definitions, curriculum is an outline plan course of instruction to be covered within a stated period of time.

The NUC (1999) "Approved Minimum Academic Standards for Library and Information Science" is a document that contains the philosophy of education for library and information science, which is based on national objectives. It spelt out the traditional roles of the universities, which includes those of teaching, research, and dissemination of existing and new information as well as pursuit of service to the community. The Minimum Academic Standards contains among other things list of undergraduate courses in Librarianship in Nigerian Universities as including the ICT courses as outlined below:

COMP 101:   Introduction to Computers
LIS 207:   The Information User
LIS 208:   Media Resources
LIS 210:   Computers and Data Processing
LIS 305:   Introduction to Information Science
LIS 310:   Information Technologies
LIS 404:   Automation in Libraries and Information Centers

For effective teaching of the above undergraduate ICT courses and for each of the Library schools to be fully accredited, it was stated in the document that there should be computer laboratory with space requirement of $50m^2$ and at least five (5) computers. There should be one (1) technician.

The use of ICT has permeated every facets of life including the provision of library services (acquisition, cataloging, references etc). The curriculum of Nigerian Library Schools should therefore be in line with the employers' demand. Thus Aina (2007) proposed that 25% of the Library and Information Science Programme should be devoted to ICT. It is worthy to note that library schools are now established in universities of technology e.g. Yola, ESUTECH Enugu etc. It was asserted that for any programme to be approved in universities of technology, it is part of Federal Government Policy that such programme should have at least 40% technological content (Bello, 2005).

However, the use of ICT has posed a lot of challenges especially to developing countries e.g. Nigerian library schools run divergent curriculum

(Chukwuma-Nwosu, 2007), expensive nature of ICT, lack of skilled manpower in the field of ICT, erratic power supply as well as socio-cultural belief of Africans which affects the use of ICT (Madu and Adeniran, 2005).

Statement of the problem

ICT has permeated every facet of life including the provision of library and information services. The curriculum of Nigerian library schools should therefore prepare graduates for current realities. Nigerian Library Schools supposed to run uniform curriculum based on the Approved Minimum Academic Standards which should be supported by human and material resources thereby ensuring acquisition of adequate IT skills by undergraduate students. Unfortunately, it has been observed that Nigerian library schools run divergent curriculum with inadequate human and material resources. Computer laboratory facilities are inadequate, while some library schools lack even computer laboratories. Students cannot acquire adequate IT skills. The observed problems were highlighted by Gwarzo (2003), Opara (2006) and Chukwuma Nwosu (2007). This study is aimed at determining whether library schools in Northern Nigerian have incorporated and implemented ICT courses in the undergraduate curriculum or have gone beyond the NUC (1999) Minimum Academic Standards.

Objectives of the Study

This study was designed to determine the:-

1. Undergraduate ICT courses in library schools' curriculum;
2. Availability of ICT personnel in Library Schools;
3. Computer laboratories and undergraduate students in library schools under study;
4. Problems militating against effective implementation of ICT in library schools' curriculum.

Methodology

Survey research design was adopted for the study. The population for this study consists of functional university-based library schools in Northern Nigeria, as of May/June 2008 namely:

Ahmadu Bello University, Zaria
Bayero University, Kano
University of Maiduguri, Maiduguri
Abubakar Tafawa Balewa University, Bauchi
Federal University of Technology, Minna
Katsina State University, Katsina
Benue State University, Makurdi
University of Abuja, Gwagwalada

Purposive sampling technique was used to select four (4) Library

Schools. The justification for this sampling technique was that ABU Zaria, Bayero University Kano and university of Maiduguri library schools have been in existence for not less than three decades now and Federal University of Technology, Minna library school was accredited in 2007 by the NUC, Abuja.

The study population comprised 27 ICT course lecturers and heads of computer laboratories on the assumption that each library school's computer laboratory is headed by a system analyst. Out of 27 personnel, 20 were selected for the purpose of administering questionnaire and conducting interview; while the use of documentary sources and observation were used to support the responses from questionnaire. The documentary sources involved the consultation of departmental handbooks, list of undergraduate courses, and the list and number of academic staff/system analysts in library schools under study.

The procedure for administering questionnaire involved attaching a letter of introduction to each of the 20 copies of self-designed questionnaire, administered each to head of computer laboratory and selected ICT course lecturers. Each copy of the questionnaire comprised sections A and B. Section A was to be answered by each of the heads of computer laboratories on the number of computers available. Section B was to be answered by selected ICT course lecturers in order to elicit responses on problems encountered in teaching ICT courses. Out of 20 copies of questionnaires administered, 18 were returned and found usable. This represents 90% success. Data were analyzed using tabulation, simple descriptive statistics such as frequency counts and percentages.

Data Analysis and Discussion

Simple descriptive statistics was used which involves frequency counts tables and percentages.

Table 1: Undergraduate ICT Courses in Library Schools Curriculum

ICT courses/Components	ABU Zaria	BUK	UNIMAID	FUTM
Introduction to computers/ICT	☐	☐	☐	☐
Library automation			☐	☐
Resource Sharing & Networking		☐	☐	☐
Information Management	☐	☐		
Media Resources	☐			☐
Mathematics/Computer Sc.			☐	☐
Dept (ICT) courses				☐

ABU Ahmadu Bello University, Zaria

BUK Bayero University, Kano
UNIMAID University of Maiduguri
FUTM Federal University of Technology, Minna.

Sources: Dept. of LIT Handbook (FUT, Minna) 2001-2006,
15 - 36 Abubakar T. (2005) Zaria Journal of Librarianship 8
(1 & 2), Bello, N. (2005), Zaria Journal of Librarianship
8 (1& 2) 16 22.
Dept. of Lib & Inf. Sc. BUK, Kano
Dept. of Lib Sc., University of Maiduguri

Documentary Sources

Information on the above ICT courses was obtained from different documentary sources from survey library schools. While the documentary sources list/outline various undergraduate ICT courses, it also reveal that out of the four Library Schools, ABU Zaria, BUK Kano, and FUT Minna have not only followed the (NUC, 1999) Minimum Academic Standards but have also gone beyond the standards by incorporating and modifying more ICT courses such as Information Management and Networking as well as borrowing ICT courses from Mathematics/Computer Science department. This may be attributed to the fact that all facets of life has been affected by the use of ICTs and so library Schools would like to move in line with the current trend of information provision and dissemination through ICT. Library services such as acquisition, cataloging and reference services now involve the use of ICT. On the other hand, the documentary sources showed that University of Maiduguri had less number of ICT courses.

In Table 1, various ICT courses were merged together to have six major ICT courses/components. For example introduction to computer/ICT comprises of Information Science, Rural Information Systems and Services, Special Information systems and services, oral tradition and other information, information systems and services as well as Digital information system and Information Technology. All the four library schools office various aspects of introduction to computers/ICT.

The second aspect of ICT components was library automation which is offered by university of Maiduguri and Federal University of Technology Minna Library schools. The "Resources sharing and Networking" aspect comprised the inter-library cooperation and Networking as well Data communication and Networking. It was discovered that three of library schools (BUK, Maiduguri and FUT Minna) offer these courses.

The fourth aspect was the Information Management and it consists of Information management in library, Information and repackaging, Information management I and II, database management etc. These ICT courses are being

run by ABU Zaria, BUK and FUT Minna library schools. Media Resources is one of the NUC (1999) approved courses and is otherwise known as Media Librarianship. The course is run by ABU Zaria, University of Maiduguri and FUT Minna library schools.

The sixth aspect was the ICT courses borrowed from Mathematics/Computer Science Department. These courses are nine in Number and they are as follows: Computer Science Orientation, Introduction to Information Technology, Computer Programming I and II, Introduction to Computer Systems, System Analysis and Design, Systems Operations Research, Software Design and Management, Computer Installation Management. They are offered by undergraduate students of FUT Minna Library School as borrowed courses from Maths/Computer Science Department.

From all the analysis, it has shown that the four library schools run divergent curriculum due to constant review and modifications of undergraduate curriculum, in such way that the name of a course found in a particular library school may be different from those found in another library school.

Table 2: ICT personnel in Library Schools Under study

Library Schools	System analysts/ Technicians	Total Number of Lecturers	Number of lecturers teaching Inf. Sc/ICT course lecturers
Ahmadu Bello University, Zaria	-	9	8
Bayero University, Kano	-	13	6
University of Maiduguri	-	12	4
Fed. Uni. of Tech., Minna	3	13	5
Total	3	47	23

SOURCE: DATA COLLECTED, 2008

Table 2 above provides the number of system analysts/technicians and teaching staff on ground at the time of data collection. Only FUT Minna Library School has three system analysts. Other Library Schools under study use academic staff (with library science background) to Man computer laboratories. There are 47 teaching staff, out of this figure, 23 teaches Information science,

ICT and ICT related courses at undergraduate level. This figure (23) represents 44% of the teaching staff on ground at the time of data collection.

Based on 23 lecturers involved in the teaching of ICT Courses, eight lecturers were from Department of Library and Information Science, ABU Zaria. It was the Library School (understudy) that has the highest number of teaching staff engaged in teaching ICT Courses. The library school has reasonable number of undergraduate ICT Courses and this creates demand for more hands to teach those courses. Next to this was Department of Library and Information Sciences, Bayero University Kano with six of the academic staff that teaches ICT Courses thus translates to mean that half of the teaching staff on ground teaches ICT Courses. Interview with one of the teaching staff in BUK library school reveals that there are 18 academic staff and that five of them were on leave of absence or on-courses abroad. Data collected and analysed revealed that five of ICT course lecturers are from Department of Library and Information Technology, FUT Minna and thus they obtained their degree of specialization in B.Sc, PGD and M.Sc Computer Science respectively.

Further analysis shows that four ICT course lecturers are from University of Maiduguri, which was attributed to the limited number of ICT Courses offered at undergraduate level. There are four courses being taught by four lecturers based on the interview conducted with one of the lecturers in the library school.

Table 3: Computer Laboratories and undergraduate Students in Library Schools under study

Library Schools	Number of Computers	No. of UG students	Ratio of computers to UG students
ABU Zaria	20	420	1:21
BUK Kano	13	350	1:26
University of Maiduguri	5	450	1:90
FUT Minna	36	520	1:14
Total	74	1,740	5:51

SOURCE: DATA COLLECTED, 2008

Data in table 3 reveals that there are 74 computers in four library schools with undergraduate student population of 1,740 and of course with the total ratio of 5:51. This indicates that 1 computer is to be used by 10 students, which is

inadequate. This equally shows that ICT has not been fully implemented in university -based Library Schools in Northern Nigerian. This further translates to mean that in a situation where students are left on their own to use computers for practical's, tug-of-war might arise as each student struggles to lay his/her hand on computer at the same time.

Interview with staff in charge of ICT laboratories in library schools under study revealed that, with the exception of FUT Minna Library School where three system analysts manage the ICT laboratory, two library schools' computer laboratories (ABU Zaria, and BUK Kano) were being headed/managed by academic staffs who at the same time teaches ICT courses. Maiduguri Library School has one BLS holder and one WASC holder in charged of the departmental library/ICT laboratory.

Table 4: Problems militating against effective Teaching/implementation of ICT Courses in Library Schools

Problems	Frequency	Percentage (%)
Inadequate ICT Course(s) lecturers	2	13
Inadequate computer	3	18
Inadequate IT practical	4	23
Inadequate computer laboratory	4	23
Erratic Power Supply	4	23
Total	18	100

Library Schools under study were served with 20 copies of questionnaire with a section for ICT course lecturers/heads of computer laboratories and 18 copies were filled and returned. It was discovered that 4(23%) of the respondents indicated inadequate IT practical, inadequate computer laboratory and erratic power supply as the serious problems, which negatively affects the use of computer laboratory as well as practical lessons respectively. It reveals that 3(18%) respondents indicated inadequate computers, which may lead to inadequate ICT practical as contained in table 3. This may consequently lead to producing graduates that cannot adequately use computers. Further analysis shows that 2(13%) respondents indicated lack of adequate ICT teachers as this problem corresponds to the list of ICT courses being offered in University of Maiduguri library school. It should be noted that

effective teaching and learning of ICT cannot take place where Library School lack adequate computer laboratory. It was discovered that 4(23%) respondents indicated lack of computer laboratory in library school as problem, in this case undergraduate students utilizes the I.T facilities of University Library as well as University Computer Centre. All these indentified problems may likely result in situation that correspond with the observation made by Gwarzo (2003) that graduates of LIS are unable to face challenges of the present information age i.e. inability to use computer effectively.

Summary of major research findings

Based on the data collected and analyzed, the followings were the findings:

(1)   Three of the surveyed library schools have gone beyond the NUC (1999) Minimum Academic Standards by incorporating more ICT courses but the run divergent curriculum. The school with highest number of ICT courses had its students to go to a related department to take computer courses.

(2)   Computers available in computer laboratories compared to the number of undergraduate students in library schools under study were inadequate. This shows that there are inadequate computers in library schools and thus ICT has not been effectively implemented;

(3)   Computer laboratories in library schools under study lack adequate system analysts/technicians in the field of ICT;

(4)   Erratic power supply, inadequate computer laboratory and inadequate practical's were the major problems militating against effective implementation and teaching of ICT courses in library schools under study. These are twin problems as erratic power supply, and ill-equip computer laboratory may affect the degree of the acquisition of IT skills.

Conclusion

The study has established that university-based library schools in Northern Nigeria operate divergent curriculum. More so, the school with the highest ICT content had to borrowed computer courses from mathematics

/computer science department. The disparity in the curriculum might lead to a knowledge gap among products of various library schools in Northern Nigeria as the ICT knowledge gained by products in a particular library school may not be the same for products in another library school.

Recommendations

Based on the findings, recommendations are hereby put forward:-

(1)   There should be uniform curriculum for undergraduate programmes in Nigerian library schools and ICT courses should be taught within library schools;

(2)   Library Schools should employ more technicians/system analysts to Mann computer laboratories;

(3)   There should be well-equipped computer laboratories in library schools in Northern Nigeria, thereby ensuring the acquisition of adequate practical IT skills;

(4)   Stand-by generating plant should be provided in all library schools to solve the problem of erratic power supply.

REFERENCES

Abubakar, T. (2005) Trends in curriculum Programme of Library and Information Science, Ahmadu Bello University Zaria: a Reflection of Nigerian Library Schools. *Zaria Journal of Librarianship* 8 (1 and 2) 2005, 28 - 36.

Aina, L.O. (2007) Appropriate Curriculum for Library and Information Science Schools in Nigeria. The Role of the Nigerian Library Association. *Compendium of papers presented at the 45th National conference and AGM of Nigerian Library Association* 1 13.

Bayero University of Kano. Course Review for BA/B.Sc Library and Information Sciences; August 2003 (unpublished), 15p.

Bello, N. (2005). The dawn of Nigerian Library Schools: The birth of Dept. of

Library and Information Technology, Federal University of Technology, Minna. *Zaria Journal of Librarianship*, 8(1 & 2), 16-22

Chukwuma Nwosu, O. (2007). Harmonization and Standardization of Library and Information Science Curricula in Nigerian University Library Schools. **Abstract of papers presented at the 13ᵗʰ Biennial Conference of NALISE held at IMOSU Owerri** on 28ᵗʰ 31ˢᵗ August 2007.

Federal University of Technology. Department of library and information Technology: **Student Handbook 2001 2006,** 1-36.

Gwarzo, S.M. (2003). Teaching practical Information Technology skills in Nigerian Library Schools: The Kano Experience, *Kano Journal of Educational Studies*, 2 (1), 34 37.

Madu, E.C. and Adeniran, T.N. (2005). Information Technology: Uses and Preservation of Resources in Library and Information Centers. Ibadan, Evi-Coleman publishers, 83 89.

National Universities Commission (1999). Approved Minimum Academic Standards in Library and Information Science for all Nigerian Universities. Abuja. 1 20.

Oparah, U. N. (2006): Integration of ICT in the Reference service curricula of Nigerian Library & Information Science Schools. *The Information Technologist,* 3(1), 33.

Sadiq, F.I. Okoro, F. M. & Adetumbi, A. O. (2006). Restructuring of Information Technology (IT), Curriculum in Nigerian Tertiary Institutions. *The Information Technologist*, 3(1),22

University of Maiduguri: (nd). Bachelor of Library Science (BLS) Degree Programme (unpublished) 30p.