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Carving a Market Niche for ARCIS Graduates: The First Scorecard

M. Adisa Tihamiyu and W. Olabode Aiyepoku

Africa Regional Centre for Information Science

University of Ibadan, Nigeria

mutatiamiyu@yahoo.com

waiyepoku@yahoo.co.uk

Abstract

The paper reviews the antecedents and evolving mission of the Africa Regional Centre for Information Science (ARCIS) at the University of Ibadan, Nigeria, as well as its contribution of graduates from its Master of Information Science degree programme to the information science and human resources of Nigeria and West Africa in particular, and Africa in general. The review is based on the available data on ARCIS graduates as at late 2003. Among the main findings of the study is that ARCIS graduates appear to have attained significant market penetration in both the private and public sectors of the Nigerian economy, and are holding down jobs in some of the most competitive sub-sectors of both the public and private sectors, including banks and other financial houses, the oil industries and the universities. However, the employment of ARCIS graduates in other West African countries has been minimal because of the problems of inadequate applicants and graduates of other West African countries, a challenge for existing and new stakeholders in the ARCIS project.

Introduction

The world first learned of plans to establish an Africa Regional Centre for Information Science (ARCIS) at the University of Ibadan, Nigeria, from a 23-page brochure (University of Ibadan, 1984a). The brochure carried a Foreword by the University's Vice-Chancellor in which, among other things, the long-standing interests of the University in hosting such a centre were underlined. Additional information provided in the brochure included: the objectives and phased activities of the proposed centre, its organisational structure, as well as service and academic programmes.

Two international organisations, UNESCO and Canada's International Development Research Centre (IDRC), were quick to demonstrate an interest in the proposed ARCIS

and to sponsor, with the University of Ibadan, the 'Curriculum Design Experts Group Meeting on ARCIS' which produced recommendations on the structure and content of a master's degree programme in information science (University of Ibadan, 1984b). Subsequently, UNESCO, IDRC and the African Development Bank (AfDB) jointly recommended two postgraduate programmes in information science for Anglophone Africa: ARCIS at Ibadan and the School of Information Studies for Africa (SISA) at Addis Ababa University in Ethiopia (Roberts, 1986).

It had been considered necessary to explain the objectives and programmes of ARCIS to a somewhat sceptical population of African information professionals, an overwhelming majority of whom comprised practising librarians. A paper presented at an Annual Conference of the Nigerian Library Association, which was subsequently published in the *Journal of Information Science* (Aiyepku, 1991), evidently persuaded many that no established profession was under threat as a result of the establishment of ARCIS. Similarly, a "Personality Interview" published in this journal (Aiyepku, 1994) apparently succeeded in calming the ruffled feathers of some more librarians. It may be fair to say, however, that the ghost of 'ARCIS being a threat to librarianship' was not finally laid to rest until the publication of "Education for Information in Africa: the ARCIS Perspective" (Aiyepku, 1999) in a book sponsored by the International Federation of Library Associations and Institutions (IFLA) and the Advancement of Librarianship in the Third World Programme (ALP).

So much for the recorded antecedents of ARCIS – antecedents which readers of this article need to understand as a necessary background to their appreciation of the subject discussed herein. By October 1993, the *ARCIS News Bulletin* had published its combined third and fourth editions in which readers were being invited to record their opinions on the policy issues raised in the article entitled, "On Regionalism and Bilingualism" (Aiyepku, 1993). The Centre has marched steadily on ever since and has recorded remarkable successes on several fronts, which are not the focus of this article. The focus of this paper is to survey the job market for the Centre's graduates in the ten years (1992-2002) during which it has, according to the Acting Director, "so far produced more than 350 graduates" (University of Ibadan. ARCIS Alumni, 2003).

ARCIS Alumni in Jobs

A new chapter in the annals of the fledgling ARCIS was opened on 23 August, 2003 when the first ARCIS Alumni's "homecoming" reunion activities recorded a roaring success. In a 53-page 'Alumni Brochure/Programme of Events' (University of Ibadan.

ARCIS Alumni, 2003) produced for the occasion, the President of ARCIS Students Association (ARCISSTA) observes that the "The alumni database started with just twelve names and has since grown to nearly two hundred." Actually, the brochure contains exactly 180 names, with other valuable information, and it constitutes the database for the analysis that follows.

The 180 entries were classified into five categories, according to type of job situations in which ARCIS graduates are reportedly working, as follows:

- Outside Nigeria (17 or 9.4%)
- Nigerian Public Sector Organisations and Institutions (59 or 32.8%)
- Nigerian Private Sector Organisations and Institutions (67 or 37.2%)
- International Organisations in Nigeria (4 or 2.2%)
- Self-employed in Nigeria (32 or 17.8%)
- One entry (0.6%) does not contain usable data.

Some of the 17 ARCIS graduates working outside Nigeria were found in such places as Australia, Canada, England, and the United Nations Office in Kosovo in former Yugoslavia, Syria, and the United States of America. Others are working in several African countries, such as Botswana, Bourkina Faso, Cameroon, Ghana, and Uganda – essentially the countries from which sponsored foreign students at ARCIS had been drawn in the early 1990s. It is also instructive to learn that four graduates are working in the Nigerian offices of two international organisations, the United Nations Children Emergency Fund (UNICEF) and the International Institute of Tropical Agriculture (IITA).

The picture of "self-employed" graduates (32 or 17.8%) is not very clear from the records as some recent graduates in this category (August 2003 for the 2001/2002 session) may, in reality, be seeking regular employment in the private or public sectors of African economies. This observation notwithstanding, the ARCIS leadership had expressed particular interest in this category of employees very early in the life of the Centre, as the following excerpt from an interview with the pioneer director of ARCIS suggests:

An interesting report was presented by our Student Adviser at a recent social gathering organized for our 1993 graduating class. We were fascinated to learn that several of our first set of graduates had snapped up jobs advertised specifically for computer scientists; that two or three

of them were working in banks; that one was teaching information science in a library school; and that at least two were self-employed. The remainder simply returned to the jobs they held before coming to ARCIS. We are particularly excited about reports of self-employment by our graduates and the fact that they are accepted for jobs originally meant for computer scientists. We fully expect that future graduates of our MInfSc degree programme would be employed in even more diversified sectors of African economies – and to aspire to progressively join the ranks of employers of labour themselves (Aiyepku, 1994).

Clearly, any professional master's degree programme, such as the one being offered by ARCIS, which produces graduates with a strong potential for creating, rather than seeking, jobs should be of particular interest to the economies of all societies, especially developing ones like Nigeria's. Such potential had been underlined in several of the publications on ARCIS cited at the beginning of this article. We are delighted to observe that empirical, veritable evidence is now available to confirm our earlier predictions.

Private Sector Jobs in Nigeria

As would be expected, the vast majority of ARCIS graduates (roughly 90%) are working in Nigeria, out of which a little over one third (67 or 37.2%) are working in the private sector. This broad aggregation, however, obscures a number of interesting features, as table 1 illustrates.

ARCIS graduates are reportedly working in a total of nineteen (19) discrete sub-sectors of the Nigerian private sector. The range of organisations is certainly impressive although they are necessarily concentrated in the two biggest Nigerian cities, Lagos (41 or 62%) and Ibadan (16 or 24%). Indeed, only six other Nigerian towns are represented: Port Harcourt (3), Abuja (2), and one each for Calabar, Benin City, Warri and Ilishan Remo. Evidently, information services can only follow, not lead, the availability of relevant infrastructural services. It is remarkable that many of the graduates were employed in two of Nigeria's most attractive sub-sectors, that is, banks and securities services and the oil and gas industries. More than half of those employed in the latter sub-sector were working in Shell Petroleum Development Company, and the remainder were working in Nigeria Liquefied Natural Gas company, Chevron Nigeria Ltd., and African Petroleum Plc. It is reassuring to note that the big banks – First Bank Plc, Zenith International Bank Ltd. and United Bank for Africa Plc – as well as some of the medium-sized and small

ones, were employing the specialised competences of ARCIS graduates, and would seem set to continue doing so.

Table 1: Variety of Nigerian Private Sector Organisations and Institutions Employing ARCIS Graduates, 1992- 2002

Rank	Type of Organisation/Institution
1	Banks and Securities Services (11)
2	Information and Communication Technologies (10)
2	Oil and Gas Industries (10)
4	Software Engineering Services (4)
4	Computer Vending Services (4)
4	Management and Training Institutes (4)
4	Medical and Pharmaceutical Services (4)
4	Manufacturing and Retail Services (4)
9	Management and Consultancy Services (3)
9	Religious Organisations (3)
11	Publishing Houses (2)
12	Computing Services (1)
12	Construction Industries (1)
12	Food Processing Industries (1)
12	Hotel and Catering Services (1)
12	Information Brokerage Centres (1)
12	Maritime and Shipping Services (1)
12	Secondary Schools (1)
12	Universities (1)

Of particular interest to ARCIS is the category of employees in Information and Communication Technologies (ICTs), a core area of ARCIS teaching, research, and public service activities. Several of the graduates are employing their knowledge and skills in MTN Nigeria Communication Ltd. and Globacom Ltd., two of Nigeria's private GSM (Global Systems Mobile Phone) operators. We expect more and more of our graduates to be employed in this sub-sector as Nigeria's ICTs are expected to expand rapidly in the next five to ten years. Similarly, as the national economy picks up momentum, we would expect to see a significant growth in the number of the graduates

setting up private information brokerage services, a major sub-sector of the information industry in developed economies.

Public Sector Jobs in Nigeria

The picture of ARCIS graduates working in Nigeria's public sector institutions and organisations is presented in tables 2(a) and 2(b). At the federal level, the University of Ibadan is, by far, the largest employer of ARCIS graduates (15 out of 46). As many as five of ARCIS graduates working at the University of Ibadan are employed in the discipline of their first degree, Computer Science, and are, presumably, engaged in teaching and research 'with an enhanced information science perspective.' One more graduate is employed in the University's Computing Centre. Significantly, three of ARCIS graduates were working as academic staff of ARCIS itself and have reached advanced stages in their doctoral studies – a most welcome development, indeed. One other graduate was employed at the Geographical Information System (GIS) Unit of the University's Department of Geography and another was employed working at the same University's Management Information Unit in the Vice-Chancellor's Office.

Five other universities each employed an ARCIS graduate, while the National Universities Commission and the National Open University Commission also employed a graduate each, making a total of 22 or half of ARCIS graduates employed in the Nigerian federal universities sub-sector. Far more revealing, however, is the spread of ARCIS graduates among as many as 20 other federal organisations and institutions (Table 2(a)). This is a most welcome development, suggesting that the products of the relatively new discipline of information science were making a noticeable impact among employers of labour at the federal level of Nigeria's public service.

The picture at the state level, as shown in table 2(b), is far from satisfactory. Only five of the 36 states of the Nigerian federation had, so far, employed ARCIS graduates with Oyo State employing eight out of the total of thirteen ARCIS graduates employed at this level. While the small number of ARCIS graduates working at state-level establishments may, at least in part, be a reflection of generally uncompetitive remuneration packages offered at the state level in Nigeria, this sub-sector of the Nigerian public service would seem to pose a significant job penetration challenge to the leadership of ARCIS. On the positive side, it is encouraging to note that ARCIS graduates were reportedly working in four state universities and at Ibadan Polytechnic which has the highest concentration of four ARCIS graduates at the state level of Nigeria's public sector.

**Table 2(a): Nigerian Federal Institutions and Organisations
Employing ARCIS Graduates, 1992-2002**

University of Ibadan (15)
Independent National Electoral Commission (3)
National Electric Power Authority (1)
Central Bank of Nigeria (1)
Command Secondary School, Ibadan (1)
Federal College of Education, Oyo (1)
Federal Ministry of Agriculture, Ibadan (1)
Federal Ministry of Health, Abuja (1)
Federal Polytechnic, Ilaro (1)
Federal University of Technology, Akure (1)
Ministry of Foreign Affairs, Abuja (1)
National Agency for Food, Drug Administration and Control (1)
National Centre for Economic Management and Administration (1)
National Open University Commission, Lagos (1)
National Orientation Agency, Ibadan (1)
National Productivity Centre, Ibadan (1)
National Universities Commission, Abuja (1)
Nigerian Army Headquarters, Abuja (1)
Nigerian Educational Research and Development Council, Abuja (1)
Nigerian Immigration Service, Abeokuta (1)
Nigerian Institute of Social and Economic Research, Ibadan (1)
Nigerian Railway Corporation, Lagos (1)
Nigerian Telecommunications (1)
Raw Materials Research and Development Council, Lagos (1)
University of Agriculture, Makurdi (1)
University of Jos (1)
University of Lagos, Akoka (1)
University of Lagos Teaching Hospital (1)

**Table 2(b): Nigerian State Institutions and Organisations
Employing ARCIS Graduates, 1992-2002**

The Polytechnic, Ibadan (4)
Adeyemi College of Education, Ondo (1)
Akwa Ibom State University, Uyo (1)
Delta State University, Abraka (1)
Ladoke Akintola University of Technology, Ogbomoso (1)
Ogun State University, Ago Iwoye (1)
Oyo State Agricultural Development Programme (1)
Oyo State Local Government Service Commission (1)
Oyo State Ministry of Agriculture (1)
Oyo State Ministry of Local Government & Chieftaincy Affairs (1)

Emerging Pattern of Employment for ARCIS Graduates

On the basis of limited data analysed for this pilot study, a clear pattern of employment for ARCIS graduates seems to have emerged over a ten-year period. However, we would have to provide data on the remaining 50 per cent of our graduates in order to analyse any possible trends. The emerging pattern is presented in a few simple statements as follows:

- There are reasonable grounds for suggesting that ARCIS graduates are being absorbed into national and international jobs, in the developing as well as the developed economies of the world.
- A considerable proportion of ARCIS graduates have created their own jobs, rather than seek employment in established positions in the public or private sectors.
- ARCIS graduates would seem to have attained significant market penetration in both the private and public sectors of the Nigerian economy.
- ARCIS graduates have held down jobs in some of the most competitive sub-sectors of both the public and private sectors, such as banks and financial houses, the oil industries and the universities.
- ARCIS graduates appear poised to become significant players in the fledgling Nigerian information and communication technologies (ICTs) sub-sector.

- The relevance of information science in socio-economic development may have gained greater visibility in Nigeria, as well as several other African countries, largely on account of on-the-job performance of ARCIS graduates during the 1992-2002 decade.

Evidently, these and related statements would have to be explored in greater depth during the coming years, especially as more comprehensive and disaggregated data on ARCIS graduates become available. Meanwhile, we would like to conclude by posing a number of challenges, arising from the issues raised in this article, for the Regional Centre.

The Challenges Ahead

Writing just about ten years ago, Tiarniyu and Aiyepetu (1994) harped on the tradeoffs, benefits and sustainability of investments in education for information in Africa. That article was motivated by the imperative, during the early years of ARCIS, to sensitise the different identified stakeholders in education for information in Africa. They need to be sensitised to the requirements for sustaining the training, research and public service activities of ARCIS and similar institutions on the African continent as the lever for moving the continent into the information society of the then fast approaching new millennium.

Three prominent organisations in the international development community, that is, the United Nations Educational, Scientific and Cultural Organisation (UNESCO), Canada's International Development Research Centre (IDRC), and the African Development Bank (AfDB) have been very active, since the early 1980s, in the founding and early development of ARCIS. Regrettably, the international community's interests in ARCIS appear to have waned considerably since the mid-1990s due, largely, to Nigeria's political and economic difficulties in the 1990s. Similarly, the expected contributions of many African organisations and institutions to the growth and development of ARCIS have, so far, not materialised. In particular, Nigeria, as the host of ARCIS, has always been expected to do much more than others, through the National Universities Commission and the University of Ibadan, in ensuring the fulfilment of all aspects of the programme objectives identified from the outset for the Regional Centre. Consequently, each of the three constituencies – the international community, the Federal Government of Nigeria, and the University of Ibadan – should be in an excellent position to identify with at least one of the following challenges:

- (1) The leadership of ARCIS, in active collaboration with the ARCISSTA and the

ARCIS Alumni Association must make every necessary investment to produce a robust and regularly updated *ARCIS Alumni Database* in order to institutionalise periodic tracer studies and publication on ARCIS graduates in respect of at least the following characteristics:

- (a) Types of on-the-job functions being performed;
 - (b) Relevance of specified MInfSc courses to on-the-job functions being performed;
 - (c) Record of vertical and horizontal mobility in jobs;
 - (d) Suggestions about improving the field relevance of courses being offered in the MInfSc degree programme;
 - (e) Suggested mechanism(s) for mobilising alumni contributions to ARCIS Programmes and activities;
 - (f) Additional qualifications obtained since graduation from ARCIS;
 - (g) Plans for returning to ARCIS for higher degrees, etc;
 - (i) Opportunities for ARCIS consultancies/workshops/seminars sponsored by the organisation/institution of alumnus/alumnae.
- (2) The Federal Government of Nigeria, through the University of Ibadan, has the responsibility of ensuring the revitalisation of the International Consultative Committee on ARCIS (ICCA) to ensure that:
- (a) the African organisations, institutions and officials of the Committee would become active in, and remain committed to, the ARCIS cause;
 - (b) an effective mechanism would be put in place for identifying appropriately qualified candidates from the constituencies of the membership of the ICCA for higher degree programmes offered at ARCIS; and
 - (c) the regional character of ARCIS would be strengthened by identifying new sources of regular bursary awards to enable non-Nigerians study at ARCIS.

- (3) The need for a job placement officer for ARCIS graduates was mooted in 1993 (Aiyepku, 1994), but the imperative for such a position is much stronger now. The University of Ibadan authorities now have a much stronger rationale for including the responsibilities of a job placement officer with that of the vacant position of ARCIS Librarian, as well as filling the position.
- (4) The international development community, and especially UNESCO, IDRC, and AfDB, as well as the Federal Government of Nigeria, should justifiably be proud of, and encouraged by, the pattern of job placements for ARCIS graduates as reported in this article. Members of this community, and particularly the powerful and influential African American caucus in the United States, are implored to identify strongly with the long-term challenges in the consolidation, growth and development of ARCIS in the next decade. Specifically, help is urgently needed to enable the Centre overcome severe constraints imposed by the converted temporary buildings it has occupied since its establishment in November 1990, and move into a purpose-built office block whose design has been produced as far back as 1995.

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- * M. Adisa Tiamiyu was the Acting Director of Africa Regional Centre for Information Science (ARCIS), University of Ibadan, Nigeria (1999-2004). He holds B.Sc. Msc. (Economics) M.LIS, and PhD Information Science. He attended the University of Ibadan, Nigeria and the University of Western Ontario, Canada.
- * W. Aiyepku is Professor of Information Science at the Africa Regional Centre for Information Science (ARCIS). He is the pioneer Director of ARCIS, (1990-1996). He attended Ahmadu Bello University and the University of Ibadan, both in Nigeria.

Academic Library Development in Ghana: Top Managers' Perspectives

Edwin Ellis Badu

*Department of Information Studies
University of Ghana
P.O. Box 60
Legon, Ghana*

Abstract

The views of 21 academic librarians were sought in a qualitative study to identify the main issues that would shape the development of academic libraries in Ghana in the early years of the millennium. The Grounded Theory Approach used for data collection and analysis, revealed five main categories as the main concerns namely: strategic planning, information technology, service development, library funding, human and physical resource development and organisational climate. It is concluded that academic librarianship in Ghana needs a completely new definition and redirection, and academic libraries are urged to show an intense commitment to the highest levels of service, team work and demand-led acquisition.

Introduction

With an enormous increase in student numbers without corresponding increases in funding, academic libraries have been under several pressures over the last decade to manage their libraries effectively and efficiently. They are also increasingly required to extend or supplement services by the use of electronic technology. Academic librarians have to think of their plans with a view to redefining some of the traditional concepts of academic librarianship. This study therefore sought the views of some seasoned academic librarians in Ghana on issues concerning academic libraries for the new millennium.

This paper considers the main issues that Ghanaian academic librarians believed were going to shape the development of academic libraries in Ghana in the 2000s. It attempts to give a general picture, as well as to provoke discussion at a broader and higher level than has been usual – perhaps to encourage other academic libraries to consider implementing some of the ideas of other successful librarians and to confront some of the challenges they have outlined in this report in order to move their libraries forward.

Methodology

The research strategy for this study was the Grounded Theory Approach (Strauss and Corbin, 1987). According to Burrell and Morgan (1979), a qualitative paradigm embraces a wide range of philosophical and sociological thoughts with the common characteristics of attempting to understand and explain the social world primarily from the point of view of the actors directly involved in the social process.

Consequently, the heads and deputy heads of the five public and well-established university libraries, and nineteen other senior librarians, with not less than 20 years experience spread across these five libraries, as well as one Library Director of a reputable research institute in Ghana, were selected for the interviews. However, only 21 of them took part in the study. The other nine were not available at the time of conducting the interviews between June and August 2000. All respondents had post-graduate qualifications in library studies ranging from graduate diploma to doctoral degrees in librarianship.

This methodology was deemed most appropriate because the researcher intended to present, as they were actually articulated, the knowledge of these experienced academic librarians grounded in the imaginative recreation of their long service. Hence, a causal, mechanistic and measurement-oriented model of explanation was considered inappropriate for this study.

In conformity with the tenets of the grounded theory methodology (Glaser and Strauss, 1967), the subjects were asked broad questions as can be found in the interview schedule in the Appendix. The main questions were oriented towards obtaining an understanding of the subjectively created Ghanaian academic library world 'as it is' in terms of an ongoing process. This view of research is given credence by Husserl (1929), Danrendorf

(1959) and Dilthey (1976). Other sub-questions were however asked as they emerged from our discussions. These sub-questions were not part of the original interview schedule but they were consistently repeated as the interviews unfolded.

Data were collected by face-to-face interviewing of the librarians. First, the librarians were contacted individually to seek their permission for the interview and to arrange the interview date. Interviews were recorded and notes were taken by hand by the researcher during the interview.

Coding techniques, as found in the Grounded Theory Approach, were used to analyse the data. Coding was done in three stages as recommended by Strauss (1987): open coding, axial coding and selective coding. With the selective coding, examples presented from the transcripts as illustrations are presented verbatim in this report. It must be stated, however, that only six core categories were perceived to be the major concerns of the interviewees.

Findings and Discussions

The major issues and the most common themes that emerged from the discussions include (a) strategic planning of the libraries (b) information technology (IT) (c) service development and library co-operation (d) library funding and financing (e) human and physical resource development; and (f) the changing nature of library organisational climate.

Strategic Planning of the Libraries

The respondents agreed that their strategic plans were developed to institutional requirements for university planning purposes. The planning documents were all prepared by the top management persons without the participation of the para- and non-professional staff. They discussed the awareness of the process and agreed that knowledge about the existence of strategic plans in the libraries was not universal. Answers to a question on whether those who even knew had read the document however yielded mixed responses.

Respondents from two libraries claimed that more than 80% of the library staff had not read the document and that in some of the libraries, the documents remained in files.

They agreed that it is crucial for appropriate persons in the library to have personal involvement and commitment to the strategic planning process if it is to have long-term effectiveness, and that majority participation will help to offset the anti-planning biases and counter the resistance to change. They contended that strategic planning is a human-centred process and the teamwork aspect of strategic planning is strengthened by having all staff participation.

The benefits of strategic planning were expressed in many contexts. The general observation was that the strategy process improves an organisation's efficiency and effectiveness and should be actively implemented in all academic libraries.

Information Technology (IT)

A panoply of constraints in the use of IT were cited as major concerns - the constraints include shortage of skilled personnel coupled with the lack of training culture in computer skills, lack of or inadequate IT infrastructure such as PCs and communication facilities, intermittent electric power cuts, staff attitudes towards the new technology and the lack of permanent IT investment in all the libraries concerned. A university librarian expressed the lack of recognition of IT-strategy integration in all the academic libraries. He pointed out that such integration has a potential advantage and would produce complementarity with human and other library resources. His concern was that it was necessary for all the libraries to select the technology that was consistent with, and supported, their institutional objectives. This point he expressed as follows:

The strategic plans of our university libraries do not include the IT components. If you read most of these plans you will find that we have not developed a good link between what we intend doing and what technology we have available to us. Each does not complement the other and IT is not used to meet the goals set up in the strategic plans.

The picture of the impact of IT on service development was painted rather dismally by some of the interviewees. The overall picture is that there is a minimal use of computers in the university libraries and all housekeeping routines remain unautomated while the only impact has been the use of databases on the World Wide Web for a few faculty members through a DANIDA project.

All the respondents indicated that e-mail services were available in their libraries but retorted that the services were not solely for library purposes but were available on a fee

basis to any member of the university community who wished to send a mail electronically either for academic, recreational or non-academic purposes.

Respondents advocate tight IT-strategy linkages asserting that strategies have IT implications and that libraries must somehow integrate strategic thrusts with IT capabilities. One librarian discussed this relationship:

One can relate IT to the value chain. The main strategic purpose of IT is to co-ordinate activities in the chain. IT produces sustainable competitive advantage.

IT is seen to significantly alter the ways of doing library business, particularly by changing library structures: by re-structuring and improving lateral communication and interaction between the sections of the libraries, reducing autonomy and isolation of tasks, reducing specialisation and encouraging the concept of teamwork.

One librarian commented on IT investment as follows:

IT investment is very low. Costs of automation have not been built into the constant budgets both in recurrent terms of constant renewal and upgrading of computer systems.

Service Development and Library Co-operation

The policies establishing the current services provided by the university libraries in Ghana were enacted with the acts that established the universities and the libraries. The thinking that underlie the development of services during the 1960's was to build a comprehensive collection of all kinds of recorded materials to meet the needs of teachers, students, researchers and other staff of the university community. The acquisitions policy at the beginning of the libraries' development was to purchase one or more copies of everything that was published in the disciplines taught at the universities and considered affordable by acquisitions librarians but not what the users particularly demanded. As a result, before 1979, there was a huge boost of building up the stock that gave a good base on which the current stock is developed. The libraries have had well-formulated selection and acquisition policies which have been passed on from one acquisition librarian to the next. One acquisition librarian commented on the lack of reviews:

Regardless of changes in institutional environments, there have not been any significant reviews of the acquisitions policies of our libraries which reflect the services delivered over the years. The policies themselves do not include specific standards for providing a minimum library service. Little mention is made of specific library service objectives; therefore, the essential prerequisite of defining service needs is in acquisitions policy documents. At the corporate levels, too, only the overall goals of the libraries have been expressed in university documents without any set of standards / guidelines for university library service. As a result, the performance of libraries is not measured at the corporate level. The libraries have not, therefore, had any standards to live up to.

The current services in all the university libraries still remain the traditional ones of acquisition and cataloguing of printed media, circulation, reference and periodical control. All respondents would like to see new patterns of future service development. They expressed the need for technical change. They believe technology would change current services and enhance efficiency. They craved for new products and a decrease in print media acquisition as well as a deliberate attempt to focus on access. There is the need to emphasise access instead of the current collection management as a means of saving space and economising on resources.

They expressed the need to shift from the more traditional concept of acquisition to demand-led book acquisition where book acquisitions policy is based on use by readers, but not on any academic preconception of what the make-up of a library's collections ought to be. Single general periodical funds were believed to be becoming outmoded; instead, there has to be a move to assigning funds subject area by subject area. One deputy university librarian commented on future development in services as follows:

I hope that user education and related study skills would be broadened to facilitate more autonomous self-directed patterns of learning. Information and reference services should be improved for the same reason with a much increased emphasis on technical approach with its strong IT focus. There ought to be a corresponding change of emphasis in collection management, with greatly increased provision of networked access to full text and bibliographic databases, electronic journals and datasets. The DANIDA project is a good starting point and should be encouraged. Our libraries ought to follow an increasingly

multiple media and multimedia approach in relation to issues such as the provision of resources packs and tutor-authored materials like some of the American university libraries.

Library Cooperation

Another area of general concern for improving service to users was cooperation and resource sharing among the libraries. The nature of and potential for new information services suggest that the libraries should become better linked with other institutions. A deputy university librarian remarked on past cooperative ventures that:

We have had traditional types of cooperative activities. This has included co-operative acquisition, union lists and inter-library loaning, common cataloguing and training in standard cataloguing practices.

These activities were overwhelmingly described as informal and there was general dissatisfaction about past and present cooperative activities. Among the barriers to effective cooperation were both physical and behavioural factors. Physical factors mentioned were inadequate resources, low levels of library services in general and the absence of a national library to coordinate activities. The behavioural factors were: the lack of coordination and trust, problems with interdependence, and defective communications between cooperating libraries.

In the context of the need for resource sharing and library cooperation, the major belief was that one approach of dealing with pressures on space and stock was to seek greater collaboration and resource sharing between academic libraries and other forms of libraries.

Library Funding and Financing

Having discussed service development and improved communication services in respect of library cooperation, concerns for the financial resources required for these developments were expressed in many contexts. One deputy university librarian commented on the present mode of funding universities:

Universities in Ghana are almost financed entirely by government subvention. Students pay some meagre fee towards the use of some

facilities. The government spends 40% of its national budget to the education sector. Tertiary institutes are allocated between 12% and 18% of this total and the universities are allocated 90% of the tertiary institutional budget. This mode of funding universities is changing as government is upgrading the polytechnics to university levels and the 90% is to be spread evenly to the old and the new universities.

Another university librarian commented on university fund allocation:

Funds for universities are allocated through the mechanism of budgets presented by the individual universities to the Ministry of Education. The Ministry of Education then presents its budget to the Ministry of Finance which in turn provides the funds to the university administration. Budgets for universities are cut at each stage before they are finally released. Funds that are finally approved by the Finance Ministry for university and other academic libraries are dependent on government revenue generated per quarter. The national budget is also influenced by international agencies involved in Ghana's Structural Adjustment Programme. These macro-environmental influences on national expenditure put the universities at a disadvantage. Most of our financial officers (directors) do not usually know the exact percentage of their budget estimates that would be allocated to them. Worse still, approved estimates are also subjected to cuts during the fiscal year when government revenue targets are not met.

The manner of funding universities eliminates the potential for effective resource allocation as the linkage of planning goals to resource allocation decisions by the management of the libraries is non-existent. The extent of government control of university funds is further shown in its prescription of a programme-linked budget with the aim of reducing the running costs of the universities. Most of the interviewees appreciate the idea of using national financial decision support techniques but fail to work with the programme linked-budget because the scheme is not backed by the requisite funding.

Much discussion on funding also focused on disbursement of university and library funds and income generation. A university librarian succinctly described the disbursement of university funds as follows:

The Ghanaian government requires universities to disburse university funds according to its prescribed norms. Forty-five per cent is allocated to direct academic services, 15% to general education expenditure, 10% to the library, 6% to central administration, 5% to student/staff facilities, 15% to manacles and 4% to miscellaneous. I must state further that these norms are not used to disburse these funds within the universities but the whole process of allocation of university funds. There are no specific criteria for the disbursement of government funds within the universities but the whole process of allocation of university funds is characterised by political manoeuvring by individual heads of faculties.

There was an overwhelming consensus among interviewees that academic libraries in Ghana should seek new sources of funding. The impetus for income generation comes from the insufficiency of resources. One deputy university librarian observed:

Our academic libraries should adopt new financial strategies. They ought to match a search for new sources of income with large-scale income generation. We ought to be put under pressure to generate some income. Our overall goals should now include entrepreneurial objectives. Income generated now is not substantial. Income generation should be viewed as an important aspect of a library's enterprise. Income targets must be set for each library and certain services must be managed like a business venture to help realise the target figures.

Human and Physical Resource Development

An issue related to the funding of libraries is the human and physical resource development of the academic libraries. On the issue of human resource development, the quality of people upon whom the future development of the libraries depended was considered very essential indeed. One research librarian discussed the required skills for any future development:

We need new skills for the new millennium, particularly skills to implement an IT strategy. Service training and staff development in a more technologically developed country is the way to solving the human resource limitation. Academic libraries in Ghana depend largely on the programmes of Ghana's only Department of Library Studies for the education of their professional and para-professional staff. These programmes serve a much broader set of constituencies and the quality of the programmes are also affected by the shortage of facilities and computer equipment. Overseas training is the most attractive option but prohibitive costs make funding from local resources out of the question, while donor funding has become much more difficult for employers to come by.

The physical resources needed to achieve the desired goals of academic library were identified as buildings, library equipment, furniture and telecommunications infrastructure. The lack of space was seen as a problem leading to poor access to library resources by researchers and students, and the solutions, they believed, lay in putting up more library buildings which ought to be designed to accommodate modern technology. The reliance of the university libraries on a DANIDA project which involved the provision of telecommunications structures was noted by many interviewees.

The Changing Nature of Library Organisational Climate

Certain aspects of organisational behaviour in the working environment of the libraries were commented upon as having negative impact on library development. A university librarian remarked on mismatches between work habits and management preferences:

In almost all our university libraries bad timekeeping at all levels, loitering about the libraries and lax supervision have been affecting the delivery of services and quality of work. The level of staff commitment to work is quite low and this affects performance.

One deputy university librarian linked the changing nature of the libraries organisational culture to the Ghanaian macro-environment:

Some aspects of the behaviour of some of our staff have changed over the years and this is a direct consequence of the poor reward-system of

work in the country. It is also a result of the poor economic climate and inadequate public transport.

In addition, other respondents stated that, on the whole, the changes in organisational behaviour in the libraries are uniform country-wide and these behaviours are now becoming accepted social norms. This is also traceable to the Ghanaian social structure. They remarked further that it would be difficult, if not impossible, to change behaviours, as some supervisors, middle and top managers are equally guilty. Another set of respondents also expressed the view that there were no immediate solutions to these cultural changes among the staff because they believed they had become chronic and continued to defy solution. The problem, they conceded, had deep roots in the academic libraries, corporate as well as the Ghanaian social order. A university librarian expressed her wish for an ideal working environment in the following words:

I believe that there should be a certain degree of homogeneity in values and beliefs in all academic libraries. There should not be any serious mismatches between management preferences and the manner in which staff carry out their responsibilities. We need to manage these aspects of behaviour in order to enhance our performance as the providers of information in our organisations. We ought to have a cultural change through education and motivation of our staff. As I said, there should be specific steps to manage some of the existing behavioural patterns which do not help organisational performance. Many models of corporate cultural change exist and our libraries should be able to adopt some of them.

Discussion

This exercise has revealed that Ghanaian academic librarians seem to agree on some common problems and prospects for their libraries in the millennium. Each of the 21 librarians interviewed expressed the need to draw up a strategic plan for the development of the libraries; and discussed the possible integration of strategy and IT implementation. They were also eloquent on developing physical infrastructure to aid library cooperation and resource sharing and service development. They believe also that the future development of the academic libraries depends on sound financial management.

The issues raised by the respondents corroborate some of the major concerns of other authorities on academic library management. Writing on redirection in academic library management, Thompson (1991) dismisses the general academic librarianship concept which he likened to the library set up by Ptolemy Soter at Alexandria where the collection policy was to acquire all the books in the inhabited world. Thompson (1991) expressed his view that librarians should shift from the more traditional concept of acquisition to a demand-led book acquisition policy, as advocated by the interviewees in this study. Similarly, Riggs (1987) insisted on staff participation involvement and commitment to the strategic planning process and stated further that information provision strategy deserves a lot of input from all staff.

Some of the issues raised by the respondents on information technology are not new to Ghana alone. From developing nations perspectives Sahay and Walsham (1995) identified to a large extent all the issues associated with the respondents' views on information technology.

On information technology investments, the future expectations of the Ghanaian librarians are confirmed by Benjamin et al (1984), Cash and Konsynski (1985) and Clemons (1986). These studies confirm some of the fundamental concepts of information technology innovation and urge libraries and other service organisations contemplating large-scale automation to strive for a better fit of information technology and strategy integration. They noted further that organisations should build the costs of automation into their budgets particularly in recurrent terms. Mismatches between work habits and management preferences are not new to academic libraries nor to the Ghanaian work environment. Kono (1990) writes that bad work habits correlate negatively with organisational success and emphasises that the culture of a firm must be appropriate to and supportive of that firm's goals and objectives.

Line (1990) in reporting on a British Council sponsored course on "Current Issues in Academic Libraries", outlines among other issues: strategic planning, technology, new service development, and financial management, relationships with other campus units, and new services and traditional structures, as some of the major issues that needed redefinition to be in tune with modern operational realities.

Conclusion

In an article, Veaner (1994) argues that academic librarianship needs a completely new manifesto. Issues raised by these eminent academic librarians in Ghana point to that

direction for the early years of this millennium. Rather, the new manifesto needs to evolve from an acceptance of some of the prospects described by the respondents of this study as well as an intense commitment to the highest levels of service, appropriate behaviour, team work, information technology strategy integration, and a demand-led acquisition policy.

Investment in new technology would have to involve the development, nurturing and redeployment of information technology resources. A long-term renewal and major upgrading of systems after initial installations will have to be of prime concern. This would have to be built into the budgets and annual equipment grants of the academic libraries. It has to be on an annual basis because all programmes of renewal and upgrading need to be rolling and continuous.

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*Dr. E. E. Badu is Associate Professor in the Department of Information Studies University of Ghana Legon. He holds B.Sc. (Computer Science), Diploma in Library Studies, M.Inf.Sc. and Ph.D. He attended the University of Science Technology, Kumasi, Ghana and the University of Ghana, Legon, University of Ibadan, Nigeria and the University of Sheffield.

APPENDIX INTERVIEW SCHEDULE

1. Could you identify the top ten main concerns for academic library development for the coming few years of the new millennium?
2. For issues on Technology ask the following questions.
 - a) What are the major challenges the libraries are likely to face?
 - b) Please comment on the impact of IT on service development.
3. For issues on strategy ask the following questions.
 - a) Do you have a strategic plan? If yes probe further as follows; and if no go to Question 4.
Probe: What is the purpose of the plan, and who was responsible for its development? What are the benefits of the plan? Please comment on the awareness of this plan by all staff categories.

4. *For issues on Service Development and Library Cooperation.*
 - a) What has been the relevance of your acquisition policy to your service development?
 - b) Have you considered the relevance of traditional jobs to modern academic librarianship.
 - c) What has been the nature of library co-operation among academic libraries in Ghana.
5. *For issues on Library Funding and Financing ask the following question:*

To achieve some of your development, particularly new service provision, what financial resources do you believe will be required and how will any shortfalls be met?
6. *For issues on Leadership ask the following question*

You do realise that different forms of information exist on your campus. Do you believe the library will still maintain its leadership role as the main provider of information?
7. *For issues on Human and Physical Resources ask the following question:*
 - a) Would you have the necessary human and physical resources to meet the challenges of the new millennium?
 - b) What type of resources do you think would be available to you?
8. *For issues on Copyright and Licensing ask the following question.*

Could you comment on copyright laws particularly on electronic media and licensing issues for the near future.
9. *For issues on worker behaviour inquire about: mismatches between organisational preferences and worker behaviour.*



Edwin Ellis Badu

An Assessment of the Sustainability of Information Technology at the University of Zambia Library

Francina N. Simataa Makondo

University of Zambia Library

P.O. Box 32379

Lusaka, Zambia

ngula93@yahoo.co.uk

and

Shadrack Katuu

South African History Archive

P. O. Box 31719

Braamfontein, 2017

South Africa

skattu@yahoo.com

Abstract

The paper examined the extent to which the University of Zambia (UNZA) Library was addressing the information technology (IT) sustainability challenges. This was with a view to establishing a feasible IT sustainability model approach that could be adopted by the Library. In this case study, multiple sources of data, including document review, semi-structured interviews and questionnaires, were used to collect data from students, lecturers, librarians, computer centre management and a donor representative. The findings of the study show that most of the IT facilities in the Library were not functioning. This was attributed to such factors as poor funding, lack of support from the university administration, and shortage of staff. The study recommended setting up an automation committee, with a national information policy, and a strategy to reallocate funds to support hardware and software upgrades. In conclusion, the problem of sustainability of IT is an issue that requires concerted effort by ensuring efficient and effective resource allocation, organisational responsibility and commitment, appropriately scaled technology, cooperation and genuine assistance from donor agencies.

Introduction

Information explosion has catalysed increased demand for IT related information services. Libraries and information centres have joined the rest of computer enthusiasts in introducing IT to improve their services. Libraries in African universities have not remained aloof in this regard. Faced with declining financial resources, and as a solution to the provision of better content and access, libraries have turned to IT as an alternative to providing up-to-date information to their clients. However, it has long been realised that installing IT is not an end in itself. As Montviloff (1995) states, "the application of ITs alone does not automatically provide the whole solution to the library information system problem of improving the content of and access to information." More critical is the development of long-term strategies that will positively forge a sustainable plan for the use of IT in libraries.

For most university libraries in Africa that find themselves having to survive in harsh social, economic and political conditions, access to IT and ensuring its sustainability is becoming increasingly critical. Being caught up in the vicious cycle of declining resources on the one hand and the demand to provide information services for teaching and research on the other, libraries in Africa have had no other viable option than to seek alternative avenues of funding (Katundu, 1998). Consequently, this has caused libraries to become increasingly dependent on donor funding for their IT development. A research report on university libraries in Africa by Rosenberg (1997) revealed that, with the exception of the University of Botswana, most libraries in Africa were heavily dependent on donor support for their IT projects.

Due to poor funding, lack of support from the university administration, and to some extent, the lack of local expertise and the constant reliance on foreign aid, the adoption of information technology hardware and software has been of short-term and ad hoc nature in the developing countries. As a result of the foregoing, there is a lack of an overall strategic plan or coherent legislative framework that could provide sustainability and a solid foundation for IT development (Montviloff, 1995). Many of the installed IT projects have either collapsed or not functioning efficiently due to poor maintenance caused by poor funding. Thus, there has been a growing awareness among academic libraries in Africa of a need to develop indigenous capacity for providing and sustaining IT resources. There exist very few critical evaluation studies of IT projects in Africa, and according to Rosenberg (1998), what are available are often internal documents not widely distributed. This study was undertaken bearing in mind the efforts by the management of the University of Zambia (UNZA) Library in addressing the challenges

of sustaining IT resources. Members of the Standing Conference of Eastern, Central and Southern Librarians (SCECSAL), have also called for the university libraries to devise strategies to address sustainability of large-scale library services. This work is in partial response to this call.

IT at the University of Zambia Library

The University of Zambia (UNZA) was established in 1966 by an Act of Parliament as a centre of production of trained manpower that will contribute to national development. It has a population of over 5,000 undergraduates and 200 postgraduates. Its mission is to "contribute to national development by producing trained manpower to the nation through teaching, learning and research" (University of Zambia Annual Report, 2000). The University Library is sited in three separate locations. The main library is located at the centre of the Great East Road Campus. The medical library is based within the University Teaching Hospital (UTH) complex and serves the information needs of the School of Medicine, UTH and Post Basic Nursing. The Samora Machel Veterinary Library is located in the School of Veterinary Medicine at the Great East Road Campus.

The main library building is designed to hold 300,000 volumes and seats 1,600 readers. The library as at 2000 had a collection of over 300,000 volumes, and it received about 100 current periodical titles and 29 CD-ROM database titles (University of Zambia, 2000). The Library had a staffing capacity of about 73, as at January 2000, out of which 15 were senior staff comprising of all those with Bachelor's degree and above, 27 junior staff, 2 administrative staff and 8 secretarial staff.

UNZA Library had to introduce IT in its operations not only to improve the services but also to deliver a positive image of libraries in Zambia. As Rosenberg (1997) states, "IT – in the form of PCs, CD-ROM and e-mail – is a norm rather than the exception in this information age." To date, however, the challenge facing IT adoption in libraries transcends mere acquisition challenges, to those of maintenance and sustainability. UNZA Library is caught up with the same challenge.

Although the vision to computerise the UNZA Library operations goes back to the early 1970s (Yumba, 1998), it only took off in 1990/91 with the creation of in-house databases using database management software called Dbase III. This was facilitated with computers borrowed from other departments of the University. Computerisation in the library was introduced with the objective of improving the efficiency and effectiveness of the UNZA Library operations. Through a careful articulation of the library's needs

before the Trevor Coombe Fact Finding Mission of 1990, UNZA Library became one of the first beneficiaries of the Educational Sector Support Programme (ESSP) funding, through the Finnish International Development Agency (FINNIDA) (Mwacalimba, 1999). A library automation committee was created whose terms of reference included planning for the automation of the library and listing the pre-installation procedures which included: project planning and management, definition of the new systems requirements and detailed design specifications suitable for the library. The Computer Centre of UNZA carried out the needs assessment for the automation of the library.

The ESSP project document of 1991-1994 states that PCs, CD-ROM readers, photocopiers among other items were to be funded under the programme (Mwacalimba, 1999). In 1992, FINNIDA donated five PCs through the ESSP, which gave impetus to the computerisation program. With further help from FINNIDA, the Library was able to procure 1 file server, 18 PCs and 26 terminals and other network peripheral equipment necessary for automation. By mid-June 1995, the Dynix Library Automated Library System (Release 142) was installed for the automation of the acquisitions, cataloguing, circulations, serials control, and short loan collection operations. Since then, much progress has been achieved, with the cabling of the library network and conversion of the library catalogue into MARC format in March 1996. The retrospective conversion was done and completed by Retro Link Associates, a subsidiary of the Ameritech Library Services of USA, which carried out an on-site imaging of the official shelf list cards. The library network has expanded and additional equipment has been acquired.

Apart from automating its traditional operations of cataloguing, acquisitions, serials and circulations, the Library also provides Internet and CD-ROM services. UNZA was one of the first Southern African universities, outside South Africa, to have Internet connection in 1990. The Library has its own website which includes the list of latest additions to the library, a link to the special collections, the OPAC, a link to some virtual libraries and other sites of interest to its users.

Objectives of the Study

The aim of this study was to examine the extent to which the UNZA Library was addressing the IT sustainability challenges with the objective of formulating and recommending a feasible IT sustainability model approach that could be adopted by the library.

The specific objectives of this study were:

1. To determine the present physical condition of IT resources at UNZA Library;
2. To assess the range and form of sustainability challenges faced by the library and what efforts are in place to meet the challenges;
3. To examine the role of the IT project stakeholders in the computerisation of the UNZA Library;
4. To examine the long-term capacity of UNZA Library in terms of staffing and technical support to sustain the IT resources; and
5. To propose strategies and mechanisms that could be adopted by the UNZA Library in sustaining its IT resources.

Methodology

The population of the study comprises library staff, lecturers, administration staff and students. A census of the 13 senior library staff from the main library and its two branch libraries was taken. The researcher used purposive sampling to select one member from administration, the Director of the Computer Centre and the representative of the main donor agency, FINNIDA. The students were stratified according to their different schools and programmes, out of which a sample of 200 was proportionately picked. One hundred and ninety-one lecturers were randomly sampled using the stratified sampling technique where proportionate samples of lecturers were picked from each department. Multiple sources of data, including document review, semi-structured interviews and questionnaires were used to collect data from students, lecturers, librarians, computer centre management and a donor representative. The study was carried out in 2002.

Findings

The findings are reported under six main areas. These are the state of IT facilities, assessment of user satisfaction, maintenance procedures, funding, donor support and policies, and technical and staffing capacity.

State of IT Facilities

Findings revealed that more than 50% of the equipment in the library was not functioning. Almost all the printers acquired since 1992 when FINNIDA funded the computerisation project were non-functional. Table 1 below shows the status of IT

bought by the UNZA Library since 1992. The software acquired together with the hardware was also found to be outdated. What was evident from observations was that there had been little effort, both from library management and the university administration, to put in place mechanisms that ensured that broken-down equipment were replaced. Older equipment usually fails more frequently and is, therefore, more expensive to repair (Mayo and Nelson, 1999). New or upgraded software require more processing power or memory than the current equipment the library could support. Available items of equipment were becoming expensive to maintain as they had outlived their life-span. Consequently, this study revealed that the initial computers bought through FINNIDA were found not to be Y2K compliant. As Mutula (2000) confirms, many university libraries in the region rely on donated foreign equipment, which is old; and so, many of these computers could not be converted to conform to the year 2000. This situation therefore means more cost on the part of the recipient to upgrade the donated equipment. The current software on the market, however, cannot run on the old computers available in the library due to their low processing power. Some effort, however, was made with the help of the Computer Centre in trying to update software. The Library also had no updated anti-virus software, to protect computers from viruses. This has implications on the durability of software and to some extent, hardware. The quality of services had therefore been affected by the deterioration in the condition of equipment.

From observation, the Library was grappling with the issue of managing multiple vendors and products. This has been aggravated by the fact that the Library did not have its own technical expertise to manage the system. The variations in models of IT, sometimes impart negatively on the performance capabilities of IT in terms of compatibility and maintenance. As Long (1989) states, when a problem arises, vendors of different models of IT have been known to point fingers at one another rather than cooperate to solve the problem. The incompatibility of some IT equipment can pose challenges in installations, maintenance and use, as in the case of the Fujitsu printers that could no longer be used because the ribbons were not available in Zambia.

Over the past ten years, a few additional computers had been bought through the help of other donors such as Swedish International Development Agency (SIDA) of Sweden, Directorate for International Development (DFID) of the UK and HealthNet of USA. Even though the situation at the Medical Library was slightly better due to the support the library was getting from the School of Medicine, overall, the situation in the library was very critical. The situation was compounded by the security problems faced by the library.

Table 1: Current Status of IT at UNZA Library

Make/Model	No. Acquired	Status
PCs		
No. Acquired Status		
AST Bravo LC5100	8	5 defective
Compaq Prolinea	18	8 defective 10 still working
Compaq Presario	8	All defective
DUMB TERMINALS		
Number Status		
Wyse 150	26	11 defective
DEC WT 510	8	1 defective
PRINTERS		
Epson FX 1170 dot Matrix	4	Defective
Epson LQ 2170 Dot Matrix	2	Defective
Hewlett Packard Laserjet III	1	Defective
HP Deskjet 320	1	Defective
HP Laserjet 4 Plus	2	Defective
Data Card II printer	2	Good
Fujitsu DL 1250 Dot Matrix printer	9	Not used (Ribbon not locally available)
HP Laserjet 5 MP	1	Perfect
OTHER EQUIPMENT		
Xerox 575 Typewriters	3	2 defective
Sharp Photocopiers	1	Defective
HP Deskscan Scanners	1	Defective
Compaq Proliant 4000 Server	1	Defective
Dell Poweredge 2300	1	Working
Security gate	1	Defective

Philips VCR	1	Working
Panasonic Fax machines	1	Working
KX8520 Panaboard	1	Working
Light pens	12	Working

In the past two years, the Library had experienced some break-ins in which 6 computers were stolen. The university administration had not responded promptly to requests by library management to secure the Library building through burglar proofing or some other electronic security means. The lack of security had negative implications on future donations since the donors would like to have assurance that the equipment they would donate would be secure. Therefore, efforts to replace the lost and outdated equipment, through further donor assistance, were threatened by the poor security situation in the Library.

The findings also revealed that most of the software installed in the library were under-utilised, with MS-Word being 78% utilised while the Dynix system used about 40% of the system resources. This could be attributed to the fact that some of the library staff were not competent enough to use some software or that the software was too outdated because the Library had failed to acquire updated versions. Another reason for under-utilisation could be attributed to the fact that the majority of these resources were used only by staff, mostly for word processing, as no computers were specifically available for end users. The non-availability of IT services to library users has brought about dissatisfaction, as they did not see any benefits of IT installations in the Library accruing to them.

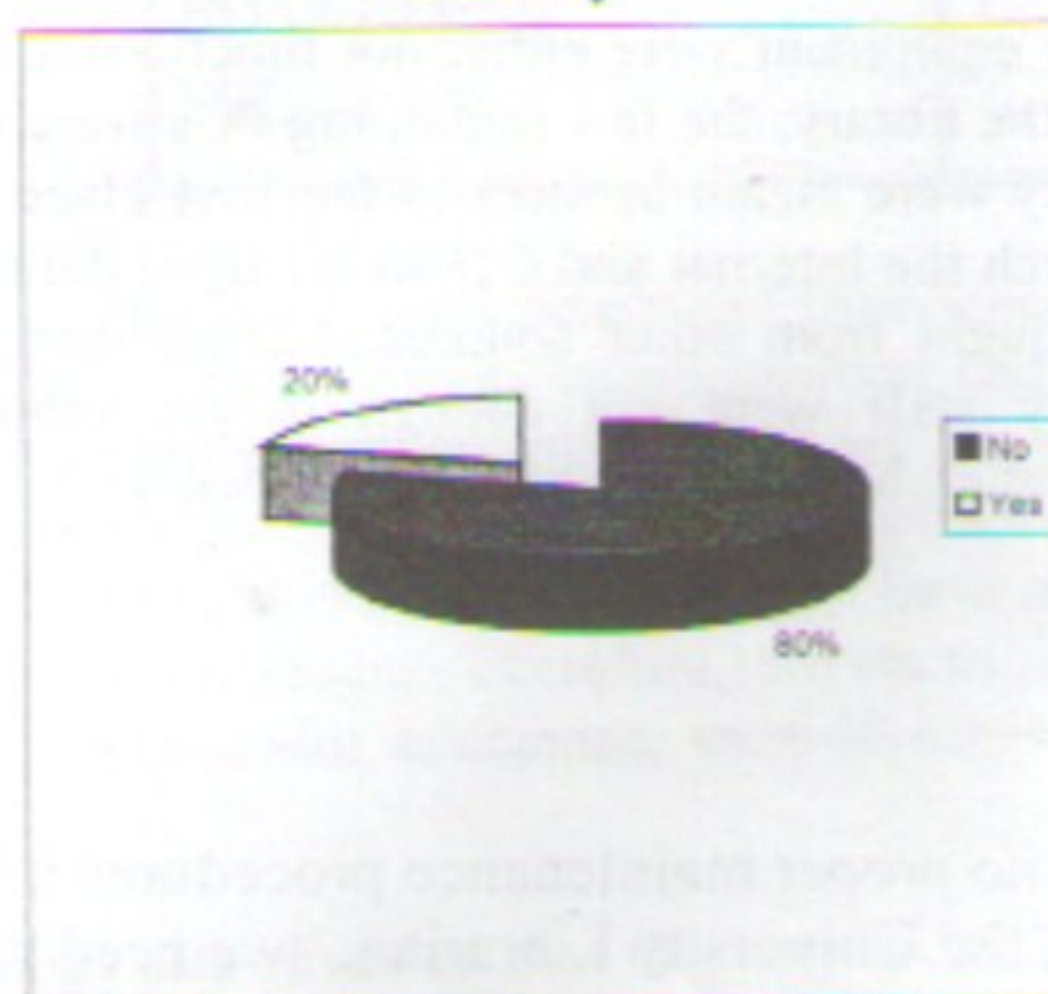
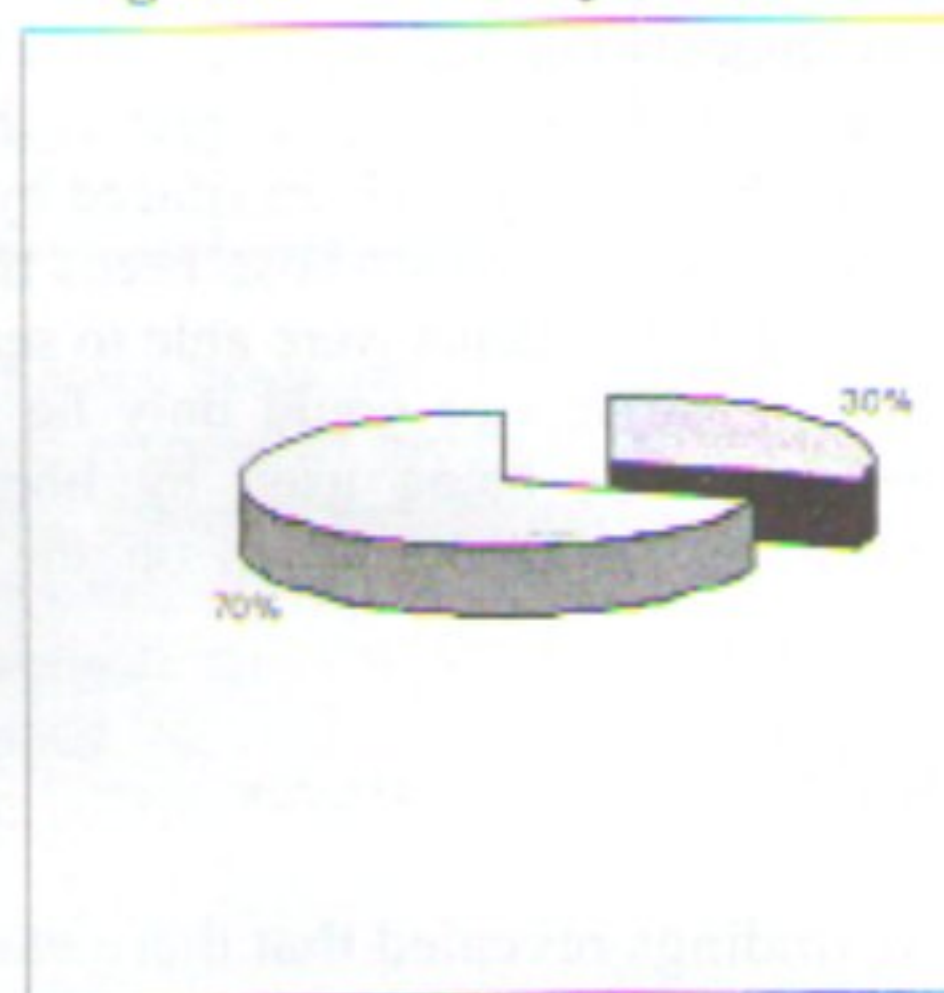
Assessment of User Satisfaction

The aim of assessing user satisfaction was for the purpose of determining the extent to which the Library had succeeded in meeting the objective set during the initial computerisation project in 1992. The levels of dissatisfaction with the services by the intended beneficiaries showed that the library failed to meet the long-term objectives because the situation at the time the study was carried out showed a different picture from what was set out to be achieved. Responses indicated a higher rate of dissatisfaction among the lecturers, where 80% did not use the IT services, as compared to 70% of the students who used the IT resources in the library, as could be seen in figures 1 and 2.

The findings in this study were that the levels of satisfaction of lecturers were quite low due to a number of factors. Firstly, there was a serious shortage of equipment to cater for both students and lecturers as could be seen in the statistics. Secondly, students had to share 22 terminals since the rest of the equipment were either not functioning or stolen. Due to the security problems faced by the library, the few remaining PCs were no longer accessible to students whose needs they were meant to meet in the first place. In 1992, however, the students were able to search the Internet and CD-ROM from the Library as at 2002, the service could only be sought from other sources. Furthermore, the few functional PCs being used by library staff were not enough to go round all the professional staff. Lecturers on the other hand, were forced to seek better services elsewhere.

Maintenance Procedures

The findings revealed that there was no proper maintenance procedures in place to ensure sustainability. In the words of the University Librarian, "we need to set up proper hardware maintenance procedures once we engage our own computer expert in the library." The absence of policy on preventive maintenance of the entire university IT equipment adversely affected the efficient functioning and life-span of computers and other accessories. Related to the above issue, the library experienced some procurement difficulties, with the donor insisting on supplying particular equipment or discouraging the use of local suppliers who could provide back-up services. In the absence of warranties, the Library found itself in a situation where it could not have service guarantees after equipment had been installed. This situation is affirmed by Nkereuwem (1996) who argues, "sometimes, when the equipment arrives, it cannot be maintained by the local vendor, or he/she or will accept to do so at exceptionally exorbitant prices." The lack of provision for equipment maintenance during the life-time of the project meant that the library was faced with a situation where more than half of the PCs and monitors procured in late 1994 had stopped functioning. Furthermore, none of the Fujitsu DL 1250 dot matrix printers were usable because there were no local suppliers for the consumables used by these printers. The lack of provision for equipment maintenance had affected the library's ability to continue delivering quality services.

Figure 1: Lecturers' use of IT in the Library**Figure 2: IT use by Students**

Funding

The findings revealed that lack of commitment both from the University central administration and the Government of Zambia threatened the sustainability of IT in the library. The budget allocations to the Library were not enough to replace equipment or for maintenance. None of the previous budgets presented to management for IT had ever been approved. From the amount allocated to the library, 98% was committed to staff remuneration, while the rest was directed towards other operations in the library, leaving no funds for maintenance or replacement of IT. This means therefore that with no stable source of funding for IT, there will be no continuity. The situation was so critical that the library had not been able to pay for the annual licence fee of \$20,000 for Dynix Library Management System, which is the backbone for most of the services provided by the Library. The Library faced a possibility of legal action from the vendors for abrogating licence agreement. The lack of inclusion of IT as a line item in subsequent library annual budgets had therefore affected sustainability. Clearly, IT is a recurrent expense; there is a need to work with the bursar's department to establish a new or expanded technology category in the operating budget if the library is to sustain IT.

This lack of financial commitment from administration could be attributed to the poor recognition given to libraries and information in general. As Mutula (2000) noted, "university libraries have tended to be relegated to the periphery when competing for funds with other departments." This lack of commitment was perhaps best demonstrated by the government's inability to meet its financial obligation of providing matching funding during the 1992 FINNIDA project, which prompted the donor to slash its funding as a penalty. The UNZA Library situation confirms the findings in the literature reviewed in this study, which state that lack of funding is the most acute obstacle to sustainability. Whatever plans the library has can only be executed with available financial resources.

In addition to poor funding from administration, the Library did not have viable mechanisms for generating funds. The income made from such ventures as photocopying and card production were not regular because the equipment used in generating funding were constantly out of order. The UNZA Library situation is confirmed by Kanamugire's (1993) argument that libraries without financial resources cannot purchase equipment such as photocopiers, computer hardware and software or ensure their sustainability. According to the UNZA Library Project Completion Report of 1999, the major obstacle to the accomplishment of some of the objectives was the inability of the institution to allocate funds to the library from the university's annual budget. In reviewing some cases from university libraries in Africa, it was obvious that libraries such as the American University in Cairo and the University of Botswana, which had policies for generating funds for IT development, were better sustained than those libraries that had nothing.

Donor Support and Policies

The findings of this study further reveal that donor support has been ad hoc. Owing to lack of information policies, support from FINNIDA, for instance, covered only the implementation phase of the project and had not continued during the operation of the project. FINNIDA support lasted for ten years during which annual assessments were made of the impact of the two phases of the project implementation. The assessments revealed that the projects were highly successful, in terms of the set targets (availability of IT, photocopying facilities and human resource development) and the participation rate (the elimination of the feeling of project being run from outside).

In addition to lack of policy, there was evidence of strings attached to the aid given to the Library by the donor. Just as a number of other studies confirm, the UNZA Library too was faced with a situation where the donor gives conditions that created negative

consequences on the recipient. So FINNIDA insisted on the Library getting its equipment from a prescribed supplier from Finland. Much as assistance is appreciated, this type of donor aid tends to promote dependency, especially when spares cannot be obtained locally. This issue was aptly expressed by the University Librarian in the following statement: "FINNIDA's reason for their decision was that because a large sum of money was involved, it would be easier and cheaper for them to use their local vendors (i.e. Finnish) suppliers. The foregoing explanation makes sense from their economic point of view. Otherwise it was one way of ensuring that a Finnish company benefited from the Finnish tax payer's money, much like the British Council used to insist on purchasing British published books from their donated funds. This therefore has made the Library to be perpetually technologically dependent on the donor country for supplies of spare parts.

Technical and Staffing Capacity

From the findings of the study it is obvious that the UNZA Library did not have the technical capacity to sustain its IT resources. This was due to the fact that the library did not have its own qualified software and hardware experts who could ensure that the equipment was constantly in working order. As the library had no technical expertise among its staff, it was difficult to manage the network integration of the various brands that the library had. Findings further show that the library faced a critical shortage of staff. For example, the Library had a staff turnover of 12 in 2000, through resignation, retirement, dismissal and death.

The library also had the problem of retaining its IT staff. The trained technical staff often left the library for other establishments with higher remunerations. The problem of staffing was confirmed by the library management which posed the greatest challenges faced by the library.

Conclusions and Recommendations

In conclusion, the problem of sustainability of IT is an issue that should be tackled holistically. This would involve good pricing, efficient and effective resource allocation, responsibility and commitment from the institution, as well as cooperation and genuine assistance from donor agencies. Policy makers must also realise that advances in IT require continued commitment to keep pace with the changing and evolving world of IT. In order to help achieve sustainability at the UNZA Library, the following recommendations are therefore given.

First and foremost, before venturing into future computerisation projects, there is need to put in place a committee that would be responsible for brain-storming on issues concerning sustainability of IT and ownership. This committee would be responsible for evolving a technology policy or plan for the library. The policy would allow technology options in the library to be evaluated in relation to the university's key objectives and human resources (Orma, 1990). In addition, there is need to come up with a comprehensive national information policy that will provide the administrative framework to help guide the consistent and sustainable implementation of information programmes in the nation.

Meanwhile, the Library needs to set up an IT department which will be headed by a librarian who has competence in computer technology whose responsibility would be to ensure that routine maintenance procedures are in place to help reduce increased maintenance cost and prevent the rapid deterioration of infrastructure in the library. This therefore entails improving the conditions of service for staff in order for the University to attract and retain qualified technical personnel.

In addition, there is need to come up with a strategy to allocate funds to support hardware and software upgrades. In addition to making IT a line item in the Library budget, amortising the placement costs of technology over a period of about five years would help to ensure sustainability. This means that a percentage of the purchase cost of the hardware and software is set aside each year for five years, in a fund that would be used to replace the equipment at the end of the amortisation period.

There is also a need to build indigenous capacity in order to make the complete withdrawal of donor funds less disruptive of the ongoing activities. This could be done through the use of local consultants to carry out projects requiring the use of IT in the Library. Innovative marketing and promotion schemes have to be undertaken to convince users of the need to continue paying for a service once donor support is reduced or withdrawn, and that project funds should be used to generate new products and services. One of the possible keys to sustainability in the use of IT is charging fees for IT services.

It is also critical to review the sustainability of donor-funded projects in order to maintain the level and duration of project benefits and ensure that the quality of services is maintained. The relevant governmental, educational and professional agencies must assess international development assistance agencies offering financial aid for IT related projects and determine the sustainability of the intervention programmes and donations. Such policies must be put in place to ensure that the correct infrastructure precedes

acquisition of equipment and that local personnel are trained and put in place to implement and maintain the donated facilities.

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- * Francina N. Simataa Makondo is a librarian at the University of Zambia Library, Lusaka. She holds BALS, MLIS. She attended the University of Zambia and the University of Botswana.
- * Shadrack Katuu is currently an information analyst with the South African History Archive. He attended Moi University, Eldoret, Kenya and School of Library, Archival and Information Studies, University of British Columbia, Canada. He was a lecturer in the Department of Library and Information Studies, University of Botswana until 2003.

Academic Library-Supplier Relationship: The Experience of Supplier Selection and Evaluation at the University of Botswana Library

Reason Baathuli Nfila

University of Botswana Library

Private Bag 00390

Gaborone, Botswana

nfilar@mopipi.ub.bw

Abstract

The partnership between an academic library and book suppliers is crucial for the timely and correct delivery of materials for use by customers. This article describes the relationship that exists between the University of Botswana Library (UBL) and its book suppliers. The process of supplier selection and evaluation used by UBL is described. The article furthermore suggests areas where there is a need for improvement to ensure effective measurement of supplier performance and evaluation as a means to enhance delivery of quality service to customers. Although the article describes library-supplier relationship or partnership, it confines itself to book supply rather than serials or periodicals supply.

Introduction

Academic library-supplier relationship has been in existence for a long time. Available literature agrees that the traditional library-supplier relationship has evolved over the years in an attempt to enhance delivery of quality service to customers. The development of the relationship between libraries and suppliers has been influenced more by developments in library automation coupled with the growth in book trade business, which emphasises timely delivery of services to library customers. According to Price (1991), the quality and timeliness of supplier's service to a library has a direct relationship to the library's ability to deliver quality and timely service to patrons. Although the suppliers' business is profit oriented, the vendor and the library need to

form solid strategic alliances or partnerships with each other for the purpose of providing efficient service. This could be done through the creation and maintenance of open communication and the best business practices. By establishing a strategic partnership based on mutual trust, open communication, and joint problem solving, both suppliers and libraries could achieve greater returns (Lange, 2001).

As already stated, the objective establishing strategic partnership or relationship between academic libraries and suppliers is to attempt to improve quality and productivity in the delivery of service to customers. Thus, the partnership can only be sustained if both parties understand each other. Academic libraries should determine their needs and supplier's services and communicate their requirements to the supplier. It is important that librarians must carefully select their strategic partners based on a range of criteria. Born (1992) identifies three main criteria that are used to select and evaluate suppliers and these are service, price and automation. The author suggests the use of formal evaluation process as a way to indicate awareness and commitment to business by both the library and the supplier. Generally, authors agree that some of the criteria used to select partners, as well as evaluate supplier services, include levels of service, collection development services, relative order entry, price and discount, automation services, accuracy of order fulfilment, supply time and ease of communication.

Ogunrombi and Adio (1998) carried out a study on the relationship between librarians and book vendors in Nigeria. They assert that factors such as limited library budgets, appearance of new vendors and fluctuating services offered necessitate an evaluation of vendor performance. Their study was aimed at 'knowing the experience of other librarians in their relationship with book vendors.' The study looked at the performance of foreign and domestic vendors, focusing on fulfilment and turnaround time in different types of academic libraries. The study found that the performance of foreign vendors is better than that of local vendors in both turnaround time and fulfilment of orders. In their discussion, the authors recognised the role automation could play in providing information and measuring tools that would go a long way in changing the relationship between libraries and vendors.

The motivation for writing this article arose from the author's experience of working in the Technical Services Department where suppliers were selected and their performance evaluated. The article, therefore, seeks to relate the experience of the University of Botswana Library in selecting and evaluating suppliers' performance as well as the evaluative criteria used under the tender system. Evaluation of supplier performance is

critical as it has direct impact on library-supplier relationship in the delivery of service to customers.

Background Information: University of Botswana Library

The University of Botswana Library (UBL) was first established in 1971 as a University College of the University of Bechuanaland, Lesotho and Swaziland. The Library has ever since gone through a number of changes in physical location and building extension coupled with growth in collection size. UBL consists of the main campus library located in Gaborone and the three branch libraries located at the Centre for Continuing Education (CCE) in Francistown, Faculty of Engineering and Technology (FET) in Gaborone, and Harry Oppenheimer Okavango Research Centre (HOORC) in Maun. The Library automated its services since 1993 using an integrated system that brings together various library operations, in both main and branch libraries, into a single bibliographic database in support of technical processing activities and customer services. As a result, customers can access online materials and services through OPAC and other electronic databases.

In 1981, UBL took the first step to change its organisational structure to enhance efficiency and effective delivery of services to customers. The Library was reorganised into three divisions, each with a specific responsibility to serve customers (Qobose, 2001). The Division of Customer and Extension Services (CES) is responsible for coordination of policies, lending and documentation delivery services, marketing and public relations services, distance and continuing education programmes, and affiliated colleges and institutes' programmes. The Division of Resource Management (RM) is responsible for the management and review of information and communication technologies (ICTs) in the provision of information, processing, storage and retrieval needs of the library. The division is also responsible for the development and management of conservation and preservation of the library resources. The Information and Research Services (IRS) Division is responsible for information resources and research services, information literacy programmes, user education and specialised collections.

These divisions are each headed by a deputy director who reports directly to the Director of Library Services. Administratively, the branch libraries report to main library divisions. Both the FET and HOORC branch libraries, because of the nature of their subjects and high inclination towards research, report to the Division of Information and Research Services. The nature of services provided at CCE is customer and extension

services focused and as a result the CCE branch library reports to the Division of Customer and Extension Services.

The Library is further organised on the basis of teams, each of which is led by a coordinator who reports directly to the deputy director. Subject/faculty teams fall under the Division of IRS. Technical Services and Automation teams fall under RM, and Customer and Extension Services team falls under CES. These teams report to their respective deputy directors through their coordinators. Within the IRS division, each individual subject librarian is responsible for a cluster of subjects and liaises with their teaching departments for purposes of collection development and marketing library services. In this regard, subject librarians work closely with the academic departments to ensure that their information needs are being met by the Library. The IRS division services six faculties, namely Business, Education, Engineering & Technology, Humanities, Science, and Social Sciences.

The Library utilises a centralised acquisitions and processing system. Materials selection is decentralised to the respective faculty teams and branch libraries. Subject librarians in both the faculty teams and branch libraries are responsible for selecting a variety of materials using publisher's catalogues, review sources, pre-selection slips, newsletters and other electronic databases provided by suppliers in accordance with the UBL collection development policy.

There is a pattern of relationship that exists amongst the subject librarians, Technical Services Section (TSS), which is responsible for acquisitions, and the suppliers. Technical Services is related to the academic departments and branch libraries through the subject librarians. The relationship is such that selected materials from subject librarians are submitted to Technical Services Section, under the Division of Resource Management, for approval and processing of the orders. Approval of orders is done by the Deputy Director for Information and Research Services or by the Coordinator of Technical Services. Librarians also get feedback about their orders from Technical Services. From the suppliers' side, subject librarians obtain individual subject profiles to enable them to select materials for the subject areas they are responsible for. This means that subject librarians rely on suppliers' knowledge of what materials are available on the market for their selection. Materials received from suppliers are processed by Technical Services before they are sent to the shelves in the main library and branch libraries.

The Library has a fast growing collection and holds one of the best collections of academic resources in the Southern African region (Yeboah, 1999). Currently, UBL

acquires an average of twenty thousand titles a year, and has now reached a collection of over 347,739 books, 16,912 pamphlets, 1,780 journals, 25 online and networked databases, and 12 stand alone CD-ROMs. In addition, the Library has a number of audiovisual materials and electronic databases.

Supplier Selection at the University of Botswana Library

There are a number of criteria used by librarians to select suppliers as working partners. Most importantly, selection of suppliers is based on speedy delivery of quality service. Lange (2001) asserts that the 'selection of a suitable partner is very important because we need to be sure that we are dealing with quality suppliers. UBL has been supplied by different suppliers for sometime now. Efforts have been made to ensure quality service to meet the information needs of both the teaching staff and students. From the beginning, UBL selected different suppliers to enable the librarians to get the best purchases from the most reliable supplier. However, some of the suppliers could not supply some of the materials ordered from them for whatever reason.

In 1999 UBL changed the system of sending orders to multiple suppliers in favour of a tender system. The first tender period ran from April 2000 to March 2002. This tender system, through the tender document, clearly specified what is to be purchased and defined the needs of the library, and the minimum acceptable standards that must be met by the supplier. This included delivery of books by air freight since most of the library materials are purchased overseas.

As a result of the change to tender system, UBL started the awarding of acquisitions contracts to suppliers by advertising a two-year tender for the supply of library materials. The awarding of tenders was based on the supplier's proven record of experience of supplying books to an academic library of the size of UBL or bigger academic libraries. Furthermore, the tender documents required Bankers' references for a supplier, as well as references from three academic libraries currently using the supplier's services, as criteria for the selection of quality service suppliers for the University of Botswana Library. In terms of supply performance, the requirement is for the suppliers to complete 100 per cent fulfilment of the orders. However, this has not been possible due to unavailability of materials. UBL has measured supply performance in terms of supply rate and speed of completeness of supply from the date of order to receipt of the items. The supplier's quality of service and performance are also measured in terms of provision of value-added services such as automated systems interface for the electronic transfer and receipt of orders, supply of bibliographic information in various formats, and the ability to

supply status reports. According to the tender requirements, suppliers are to indicate what other electronic programs, procedures and processes, as well as training they would provide with the tender that would permit the library to link its computer with the supplier's computers in real time.

By changing from the old system to new tender system, some advantages in the new system are obvious. Administratively, it is cheaper to deal with one supplier or few suppliers rather than a multiple of suppliers. Right from the beginning of the UBL tender system, the idea was to select only one supplier as this would make the acquisitions work manageable. Using one supplier would have meant that if a supplier were based in Europe, the library would send an order for a book published in Africa to Europe. The supplier would then purchase the book from Africa and send it to Europe before it is supplied to UBL. Such a process would result in an increase in book prices and would not have been customer-friendly. However, in view of the cost-effectiveness of supply of library materials and the fact that no supplier could supply all the books ordered, it became necessary to have back-up suppliers to specifically supply local and regional materials. The tender contract at UBL was therefore awarded to two suppliers, one foreign and the other, a local supplier. The local supplier is responsible for the supply of local (Botswana) materials, as well as regional (Southern African Development Community region) materials, and materials available in Africa. In addition, the local supplier supplies materials from any of its contact publishers irrespective of the region. The local supplier is based in Gaborone, Botswana. It has been in the business of book supply since 1982, but does not have branch offices in the region. It supplies books published locally in Botswana and Africa, as well as books from foreign publishers with whom the supplier has established contacts.

The foreign supplier is located in the United Kingdom (UK) and has been in business since 1948. The supplier has representation in many parts of the world including Southern Africa. However, books are supplied direct from the UK. The supplier supplies mainly books published outside Africa. The books supplied are on subjects that are offered at the University of Botswana.

Evaluating Tender Responses

The awarding of tender contracts for the supply of library materials is the responsibility of the Purchasing, Tenders and Stores Department under the University's Financial Services Division. However, the initial drafting of the tender document is the

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responsibility of UBL through its Technical Services section. At this stage, it is also important that the Deputy Director for Resource Management Division and the Technical Services Coordinator should lead the negotiations between the Purchasing Department and the library with regard to evaluating tender responses. This is because the Deputy Director and Technical Services librarians are knowledgeable in verifying whether or not a supplier would be capable of delivering quality service as stated in the tender document. At UBL, the evaluation of tender responses is the responsibility of the Coordinator of Technical Services and Deputy Director Resource Management. The Technical Services coordinator is involved in defining the minimum standards that determine the selection of a supplier. The Coordinator considers the Tender Contract responses and makes award recommendations to the Purchasing Department, which has the responsibility to award a tender. Furthermore, the Coordinator's other responsibility is to monitor and evaluate the tender contract throughout the duration of the two-year contract once the tender has been awarded.

Evaluative Criteria Used by UBL

There are a number of evaluative criteria employed by the University of Botswana Library in its evaluation of the tender contracts. Most of these evaluative criteria are stated in the tender contract document.

Automation

According to Miller (1992), the major factor in the library-vendor relationship is the existence of automation. Automation has enhanced the relationship between the libraries and suppliers especially in the delivery of services. At UBL, automation has been used to improve upon the supplier services. For acquisitions, the INNOPAC (Innovative Interfaces Online Public Access Catalog) system is the software employed to improve order and report transmission. The system has been used to transmit both the form and rush orders to suppliers. Librarians need to know the procedures of entering order information into the system. Automation has helped Technical Services Division to verify order details and send orders electronically to book suppliers. One of the criteria UBL uses to select suppliers is that suppliers should indicate the format in which they will receive orders, as well as to indicate systems and communication networks available to customers. This is important because library automated systems that interface with supplier systems have the advantage of speeding up transmission of orders by the library and receipt of orders by suppliers. This eliminates delays associated with postage of orders which may take several weeks before the orders reach the supplier (Alessi, 1992).

UBL sends orders electronically to suppliers by electronic data interchange (EDI) or e-mail.

Communication and Service

Communication is one of the major factors in developing and sustaining a library-supplier strategic partnership and delivering quality service. Shirk (1991) submits that direct, open communication on a regular basis will help maintain a strong partnership and minimise misunderstandings. At UBL, the tender document forms the basis of stating the library needs clearly to the book suppliers. The tender document also forms the basis for initiating discussions with the selected suppliers. It is important that discussions between the University of Botswana Library and the supplier(s) should continue even after the tender has been awarded. This ensures clear understanding between the partners in terms of delivery of quality services, as well as solving any problems encountered in the process of supplying materials. According to tender requirements UBL's discussions with suppliers are normally centred on a number of factors, which include delivery time and place, packaging and labelling of book boxes, formatting of invoices in terms of what information to appear on the invoice, and provision of status reports particularly about non-supply. There is constant communication with suppliers on any issue that needs clarification and quite often both parties provide feedback to each other. Communication is usually done through e-mail, telephone, fax or visits by suppliers' representatives on a regular basis. Communication is an important factor that academic libraries must use in the selection and evaluation of suppliers.

Contract Monitoring and Evaluation

Once a library-supplier strategic partnership is in place, it is necessary for both parties to monitor the performance of each other for the purpose of improving the working relationship and ensuring confirmed business. The UBL experience is that after the tender has been awarded, and throughout the duration of the tender contract, supplier performance has to be monitored or evaluated. Chapman (2001) asserts that the most important factor to consider in evaluating suppliers is the delivery of the best possible service. In the case of UBL, the service needs are clearly outlined in the tender contract. The monitoring and evaluation of supplier performance is based on factors such as delivery of materials, status reports and cancellations, invoices, payments, and wrong supplies and return.

Delivery of Materials

The supply performance is measured in terms of supply rate and speed of completeness of supply from date of order to date of receipt or online invoicing of items. The supply performance is calculated by the INNOPAC system. The library's expectations on delivery time are 60 days after receipt of order by vendor. Delivery of materials is made to the UBL receiving point. Delivery of materials may be delayed at the clearing agents while they are waiting for payment of value added tax. Although such a delay may not affect the actual payment of suppliers, as this is done separately and manually, it affects the supply performance, thus making it difficult to evaluate the supplier on the basis of this criterion. It would be ideal to evaluate supplier performance, in terms of delivery time, from the date an order was sent to the supplier to the date an item was received in INNPOAC system. However, given the delays that take place at several stages of the order, including delay at supplier, at clearing agents, and at the UBL receiving point, such an evaluation would provide incorrect information. In order to come up with a proper evaluation of supplier performance, UBL needs to measure performance at every stage of delivery. In the case of foreign suppliers, delivery time should be measured against when an order was sent and the date it was received by a clearing agent, and also against when the consignment was received by a clearing agent and the time it was delivered by the agent to library receiving point. Performance of local suppliers may be measured against the time an order was sent and the time consignment was delivered at UBL receiving point. As part of self-evaluation, UBL should measure performance against the length of time a consignment was received at the library receiving point and when the items were invoiced online. In order to ensure availability of materials on the shelf for customers, UBL may have to come up with an effective mechanism for measuring when the materials were received or invoiced online and the time they were delivered to the shelves.

Delays in the supply of materials may frustrate academic staff and discourage them from participating in the selection of materials. Academic staff may also contribute to the problem of accessibility by not selecting their materials for order in time. There is a need to educate academic staff about book selection procedure; especially about the length of time an order takes from date of order to date of delivery, to make them appreciate their participation in collection development.

Reports and Cancellations

A report of non-availability of materials ordered need to be communicated to the library within a reasonable period after the supplier has been notified by the publisher. This is important because selectors or customers need to be informed as urgently as possible to enable them to look for an alternative. However, a library must have the capacity to handle the status reports.

Once the orders have been sent, the supplier is expected to give a report on the materials which have been ordered but could not be supplied, either because they had not been published or are out of print. The experience of UBL is that suppliers should report on both availability and non-availability of materials ordered as soon as information becomes available to the supplier. Suppliers are also required to provide status reports on outstanding orders and the expected date of delivery at UBL. Provision of reports by suppliers is useful because UBL has to know what the suppliers are able to supply and what they are not able to supply. Immediately the library is notified, the reports, especially on cancellations, are recorded into the order record and the selector is notified through e-mail about the status of their order to enable them to select other titles as a replacement of the ones that have been cancelled.

It is important for the library to take action to cancel the non-available and non-supply orders in the system because the longer they stay as orders the more they affect the book budget as funds would be committed against the orders and this would eventually make it difficult for the library to do a proper evaluation of the supplier in terms of delivery of materials.

Currently, UBL receives the reports in print form. This requires staff time and energy to transfer the information to order records. The result is the delay in inputting the information into the system. Where a real time computer linkage with the suppliers is available, this would save staff time by having reports sent directly to the library's order system.

Invoicing and Payment

Miller (1992) states that payment is what business is all about. Suppliers provide service to librarians for profit while librarians provide payment to suppliers for delivery of quality service. UBL requires invoices that are customised to its payment needs. Initially, the tender agreement stated that payment would be made in Pula (Botswana

currency) and that the University would not accept tenders in foreign currency. Although suppliers invoiced the materials in Pula currency, the implementation of payment in Pula currency seemed to be difficult. The payment of foreign suppliers was made in foreign currency for all firm orders.

At UBL, the processing of invoices for payment of suppliers is done manually. The INNOPAC system does not communicate directly with the University of Botswana's financial ITS system. This has created a considerable workload in the processing of invoices, which involves calculating, balancing and recording the invoices. It has not been possible to reconcile financial records in INNOPAC with cheque payments made to suppliers. Generally, this process is cumbersome and causes a lot of delays in payment of suppliers. The possible solution to delays in payment is that where the academic library cannot integrate its system with the financial services system, the Financial Services Department should consider designating some staff members to focus on the processing of library invoices only to speed up payment of suppliers.

Academic libraries using integrated systems that link with university system have an advantage of benefiting more from this linkage. An integrated system of this nature could enhance the evaluation of payment of suppliers as it would be possible to measure the time an item was ordered, the time it was invoiced online, the time a purchase order was raised, and the time payment was made.

Shortfalls, Damaged and Duplicate Materials

Academic libraries need to use shortfalls in materials supply, as well as damaged or duplicate materials as criteria to select and evaluate suppliers. An academic library should find out whether a supplier has a policy on return of duplicate materials and what the policy contains. The UBL experience is that although faulty, damaged, or wrongly supplied materials are returned to suppliers, this has not been used to evaluate supplier performance. The quantity of books that the library has to return could very well reflect lack of satisfactory performance on the part of a supplier. Damaged materials and wrong supplies cannot be regarded as delivered until such a time that the right book has been supplied.

At UBL, all damaged, duplicated and wrongly supplied materials are invoiced online upon receipt with a request for a credit note and the materials are returned to suppliers. Shortfalls are also invoiced and a credit note requested in case the supplier does not supply the material. However, there is a need to measure the difference in the cost of

returning the materials and keeping them as this involves staff time in packaging and posting the materials.

Accuracy of Orders

The importance of the business between the academic libraries and suppliers is to have the right book delivered at the right time for the customer. This could be realised by creating correct order entries. Incorrect order entries could result in the supply of wrong titles. For example, mistakenly entering an ISBN for a paperback edition for an order for a hardback edition would result in the supply of a wrong edition. A number of wrong supplies that would have been received at UBL were linked to ISBN; either an incorrect ISBN was entered for the edition ordered or the edition ordered shared the ISBN with another edition. An incorrect bibliographic information in terms of author, title, edition, ISBN and date of publication could well result in wrong supply of materials and thus compromise the quality of service.

The number of materials that are wrongly supplied as a result of wrong order entries by the requesting library may reflect a lack of productivity from the library side. It is important that suppliers should also evaluate requesting libraries in terms of sending correct and accurate bibliographic information for orders. Sending incorrect orders may seriously affect the business of suppliers and in turn affect the mutual relationship that is supposed to exist between the partners.

Conclusion and Recommendations

The relationship that exists between an academic library and the supplier of materials is anchored upon direct and open communication between or amongst the partners. This communication enhances the common understanding of the business needs of both parties and ensures delivery of quality services. It is important that communication between an academic library and the suppliers must continue even after the selection of suppliers has been made.

This article has discussed a number of criteria that academic libraries use to select their suppliers as partners in business. These criteria are further used to evaluate suppliers in relation to service delivery. Evaluation of suppliers is important as a measure to improve upon the already existing business relations between academic libraries and suppliers.

It is recommended that UBL should carry a more detailed study to determine the speed of delivery of materials by different suppliers by specifically looking into the date orders are sent, date consignments are received by clearing agents, date consignments are delivered in the library, date materials are invoiced and processed for ownership, and the date materials are processed for delivery to the shelves. A delay at any stage in the process would affect delivery of materials to customers.

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*Benson Nfila is a subject librarian at the University of Botswana Library. He holds BA, MLIS. He attended the University of Botswana.

The Place of School Libraries in the Universal Basic Education (UBE) Programme in Nigeria

Nassir Bello

Department of Library and Information Technology

Federal University of Technology

Minna, Niger State, Nigeria

drnbello@yahoo.ca

Abstract

This paper investigated the position of school libraries in the Universal Basic Education (UBE) programme policy of the Federal Government of Nigeria. Relevant studies were reviewed and school library standards discussed. The review shows that school library system in Nigeria was abysmally poor. The paper recommends that the Nigerian Library Association and the Nigerian School Library Association should put pressure on the Government to speed up the passage into law the two per cent from the consolidated account for funding UBE programme annually as stated in the policy. It also recommends that twenty per cent of the funds allocated to UBE should be devoted to school libraries. Suggestions are made toward improving school library services.

Introduction

The contribution of education in fostering a nation's economic, social and political growth cannot be over-emphasised. Primary education has been accepted globally as the foundation upon which other educational programmes are built. Generally, a child's education is considered as an investment. It is meant to train and develop the child morally, physically, and intellectually, to be useful to self and the society at large. Omotoso (1979) expressed the opinion that a child should relate knowledge to real life and apply the skills to be able to earn a living and be useful to the society as a desirable citizen. In the same vein, Bello (1998) summarises child education as follows:

It has been widely accepted and often been repeated that the prime aim of education is to train the intellectual, moral, social and

physical characteristics of children, so that they will enjoy living as children; support themselves adequately as adults and contribute adequately to the nation's development.

The Federal Government of Nigeria has been trying since independence in 1960 to see that basic education is properly planned and that all eligible children of school age are given access to the sound basic education without any discrimination. Before the introduction of Universal Primary Education (UPE) in 1976, the management and supervision of education was the sole responsibility of the then native authorities (now local government councils). The then regional governments (now states) provided grants-in-aid to the native authorities to run their primary schools. The running of the primary education was done haphazardly during this time. In the Nigerian constitution of 1999, the running of basic education was made the responsibility of the three tiers of Government in the country, i.e. the Federal Government, State Governments and Local Government Councils. But the responsibility of primary education rests squarely on local government councils.

The Federal Government's interests in primary education are based on the following premises:

1. Nigeria is a federation in which the Federal Government has an overall responsibility for all citizens.
2. The Federal Government is a signatory to the Jomtien Conference on Basic Education (UBE) in 1990, and concerning itself on education for all (EFA) in the year 2000, now shifted to 2015.
3. The Federal Government is a signatory to the Indian Conference known as G.9 on eradication of ignorance.
4. The Federal Government is expected to play a pivotal role in the education programme of Nigeria.

Thus, the repeated review of the National Policy on Education in Nigeria by the Federal Government was seen as a follow-up to what Nigerian Constitution has enacted. The educational objectives, as stated in the Constitution Chapter II section 18 states thus:

- (1) Government shall direct its policy towards ensuring that there are equal and adequate educational opportunities at all levels
- (2) Government shall promote science and technology
- (3) Government shall strive to eradicate illiteracy and to this end Government shall as and when practicable provide:-

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- (2) Government shall promote science and technology
- (3) Government shall strive to eradicate illiteracy and to this end Government shall as and when practicable provide:-

- (a) free compulsory and universal primary education,
- (b) free secondary education,
- (c) free university education, and
- (d) free adult literacy programme.

In summary, the Federal Government policy on education is an interpretation of the educational objectives set out by the Nigerian Constitution.

Universal Primary Education (UPE)

Since independence in 1960, the development of a qualitative education has been a major challenge to successive governments in Nigeria. A bold step, however, was taken under the military government of Obasanjo in 1976 to launch the Universal Primary Education (UPE) throughout the country. The programme was very popular, but within ten years it went into disarray.

While launching the Universal Basic Education (UBE) programme in Sokoto on September 30, 1999, President Obasanjo (1999) observed that the Universal Primary Education (UPE) programme was, by the middle of the 1980s, bedevilled by a number of unforeseen and unavoidable difficulties which rendered it virtually unsustainable. In 1989, the Babangida administration mooted the idea of providing a nine-year compulsory education beginning from 1992 for all Nigerian youngsters. Unfortunately, the programme was unable to take off.

The goals of primary education as enumerated in the National Policy on Education in 1998 are as follows:

- (a) to inculcate permanent literacy and numeracy, and ability to communicate effectively;
- (b) lay a sound basis for scientific and reflective thinking;
- (c) give citizenship education as a basis for effective participation in and contribution to the life of the society;
- (d) mould the character and develop sound attitude and moral in the child; and
- (e) provide the child with basic tools for further educational advancement, including preparation for trades and crafts of the locality.

Universal Basic Education (UBE)

The Universal Primary Education (UPE) was launched by Olusegun Obasanjo in 1976, as the military Head of State. Surprisingly, the same Obasanjo, as an elected president, again relaunched the free basic education though in a different form, Universal Basic Education on 30th September, 1999 in Sokoto. At the time of launching the UBE, there was nothing to show for the existence of the UPE. This time around the aim of the basic education, which was a bit more perfected than UPE, was to equip individuals with such knowledge, skills and attitude that will enable them to:

- i. live meaningful and fulfilling lives,
- ii. contribute to the development of the society,
- iii. derive maximum social, economic and cultural benefits from the society, and
- iv. discharge their civil obligations completely.

Based on what has been said above, this paper attempts to find out the place of school libraries in the present UBE programme. This is because a library plays an important role in making educational objectives achievable.

Literature Review

Leuny and Davis (1991), commenting on school libraries in Taiwan noted that though Taiwan is a developing country, schools provide for the employment of trained teachers and trained librarians.

Dike (1988/90) gave a vivid picture of what the situation of school library was in Anambra State, Nigeria. She stated that there was no school library worthy of mention in the state. However, she quickly stated that if there were any, they were very small and insignificant in number. She commented on accommodation of school libraries in Nsukka Local Government Area of the state and expressed a number of issues, including the minimum standard accepted by the Anambra State government, the introduction of ₦3 library fee for primary schools and the introduction of library studies into the colleges of education. Staff training was also a focal point. She did not support the teacher/librarian concept, because library services would suffer if librarians are required to combine teaching and library management duties.

Daniel (2000) described the primary school libraries in Abuja (the Federal Capital Territory) as nothing to write home about. Quoting Daniel (1998), she suggested the roles

to be played by the Nigerian School Library Association and international bodies to improve the situation. She suggested standardisation of services in the school libraries.

Elaturoti (2000) while presenting a paper on strategies of school library practice in the new millennium, re-echoed the recommended core areas of school library services by IFLA. These among these are: (i) supporting and enhancing educational goals as outlined in the school mission and curriculum, and (ii) developing and sustaining in children the habit and enjoyment of reading and learning, and the usage of library throughout their lives. Other important things mentioned are: integration of library hour on school timetable, and the qualifications of school librarians, for which he suggested a minimum of diploma in librarianship.

Edegebe's (2001) dwells mostly on the preparation of school library development for the UBE programme. She elaborated on how the Government wanted to go about the library services in the UBE programme. This shows that the importance of school libraries in the programme was much realised by the Federal Government than what it was in the UPE programme of 1976.

Obajemu (2002) reported his assessment of school library service in Oshodi/Isolo Local Government Area Council in Lagos State, Nigeria, and made use of school library "Standard" prepared by the Lagos State Government. However, Obajemu failed to tell his readers how many books the "Standard" recommends for each student.

The studies reviewed can be summarised as follows: all the authors agree that school libraries throughout Nigeria should take their rightful position in the universal basic education for primary school pupils. Other observations are the need for training of librarians to acquire necessary qualifications for their jobs, creation of library hours in the school timetable, provision of relevant resources as contained in the school curricula, and the discontinuance of teacher/librarian policy. On the issue of teacher/professional librarian, the thinking now is that a professional librarian in a primary school library deserves full engagement. On revenue generation to improve school library services, this is problematic throughout the country as it all depends on the interest and commitment of school principals. In some secondary school libraries, fees are charged, the money is usually diverted to other areas at the expense of the school library services. So, library fees may not necessarily be a solution.

The paper intends to survey the position of primary school libraries in the UBE programme, and proffer suggestions, for the improvement of school libraries nation wide.

School Libraries in the Universal Basic Education (UBE) Programme

The importance of providing libraries for children is as important as education itself. There is a general consensus that a child should be provided with library at an early stage of learning to improve his/her skills in library use and numeracy and be able to digest and think independently in adulthood. Edegebe (2001) reported that library service is a prime factor in a nation's social, economic and cultural development. The provision of a good library service could help a nation to produce men and women who would be motivated to learn by enquiry and discovery of new things. To buttress what has been said of the importance of school libraries, Onifade and Olanlokun (1990) emphasised that the first objective of a school library is to implement, complement and supplement the total educational programme of the school.

The statement on the provision of school library as a supportive service is not explicit enough. There is no policy statement to back it up as to how it should be done. Because the Universal Primary Education scheme was done without any proper planning, contributed to the collapse of the scheme. The Government, however, was determined to see that the foundation of basic education is solid, hence the relaunching of the Universal Basic Education (UBE) in 1999. In the UBE programme, "Education Support Service Unit" under No 7.4.3. states thus:

- Development of career guidance and counselling for primary and secondary school pupils;
- Development of relevant books (fiction and non-fiction materials) in line with existing curricula;
- Development and provision of functional libraries at all levels of UBE target group ; and
- Procurement of supplementary materials for focus primary schools under PEP 1

The UBE Headquarters Library has a children's section; and the proposed Universal Primary Education Project (UPEP) 12 zonal office libraries are expected to have functional libraries including the children's section. Based on what has been said so far, the programme has great recognition for school libraries (Federal Government of Nigeria, 2000). Edegebe (2001) states that the recognition was based on the premise that the role of the school library is fundamental in the stimulation of learning, skills, creative and reflective thinking, and more importantly, independent self learning. In the

implementation guidelines of UBE (2000), based on the meeting of Education For All (EFA) framework, it was unanimously agreed by the participants that there is need to recognise libraries as invaluable information resources which must work in partnership with school and community workers. Libraries, therefore need to become a vital link in providing educational resources for all learners – pre-school through adulthood, in school and non-school settings. It is expected that UBE would soon produce manuals as standards for school libraries. The manual would provide guidelines on services, personnel, funding, spacing, stock and training and retraining of school librarians.

By implication, it seems that the UBE programme has a great recognition for the provision of school libraries and the stakeholders are working tirelessly to see that all that what was agreed upon is put into practice. It is expected that UBE and school libraries would be boosted by the FGN/World Bank Project on Primary Education, which is jointly financed by The World Bank and the Federal Government of Nigeria. The project is known as The World Bank under the Primary Education Project (PEP II). The Punch Newspaper (2003) reported that a total of 1,110 focus schools have been identified for class-room collection of supplementary readers. This will start with 30 primary schools per state. However, the country presently has 43,000 primary schools.

Standards

UBE proposed standards include: service, personnel, and workable strategies for quality collection, sustained funding, space, stock and training and retraining of school librarians. Daniel (2000) advises that school libraries should evolve what is called standardisation of services., while Dike (1988-90) maintained that the minimum accommodation standard for primary school should be a two-class room size. This is very vague and defective. How many number of pupils are needed to occupy this classroom? In a situation where there are over 3000 pupils do we still stick to a two class-room formula? What is lacking in these various standards is that none of the writers explained to their audience the definition of standard they are talking about and on what premise. The same oversight was exhibited by Obajemu (2002) in his study of school library service in one of the Local Government Areas in Lagos State.

The main focus area of standards may include the following: personnel/staff, collections, fund/budget, space/accommodation, service, etc.

Staff

It has been said that a competent, effective and experienced library staff is the keynote to a good library service. The staff should be knowledgeable in the school library system and the type of resources needed for both pupils and teachers. So also is knowledge in selecting materials and the ability to have the technical know-how in organising the materials to be more accessible by the clientele. Knowledge of selection of reference materials and information technology is important. It is pertinent therefore, that the qualification of the librarian is at least a diploma in library science, but preferably a bachelors degree in library science (BLS). Also, the school library librarians should acquaint themselves with the curriculum of the primary school library. This will enable them to know what sort of materials are to be purchased for the library.

Since the school librarian is fully engaged in acquisition, selection, organisation and processing of materials for easy accessibility, it is recommended that the old practice of teacher/librarian should be discouraged. There are syllabuses produced by the Abadina Media Resources Centre, Ibadan for teaching library use skills for primary to secondary schools and teachers' colleges. The teaching of these skills should be regarded as the work load of the school librarians and should therefore be relieved of teaching other school subjects (Elaturoti, 2000).

On staffing, Obajemu (2002) referred to the recommended standard:

- (a) teacher/professional librarian
 - (b) library assistant or clerk
 - (c) library attendant.
- This recommendation, though overtaken by events, is still the basic standard. But the number of staff may be increased depending on the prevailing situation. This paper recommends:
- (a) 1 professional librarian
 - (b) 2 library assistants
 - (c) 1 office attendant

Funding

Funding is the backbone of running the school library services effectively, and where funding is inadequate such a service is really in jeopardy. The school library needs

money to carry out its services effectively. The fund is required for books, journals, magazines and goods and services. Since discussions are still going on now on the UBE programme, and The World Bank is committed to providing financial assistance, the onus rests on the Nigerian School Library Association and Nigeria Library Association to put pressure on the Federal Government to provide separate funding for school libraries. The passage of the UBE bill is very important in this direction. If passed, the UBE would be getting not less than between ₦15 and ₦20 billion (USD 0.1 and 0.13 billion) annually through the allocation of two per cent of the Federal Consolidated Revenue for the UBE programme. (Punch, 2003). The stakeholders should pressurise the government for at least between 15 and 20% of the total annual money coming to UBE through the Federal Consolidated Account. Thus, 60% of the total money coming to the school libraries annually should be for books, journals, periodicals, etc, while 40% should go for personnel salaries, goods and services. Some librarians have suggested a school library levy. This is in order if it would be properly monitored and be well accounted for. It is high time a Library Development Commission Unit was established in the Federal Ministry of Education to take charge of all the above mentioned activities.

Collections

The quality of a collection reflects the image of a library. The collection must meet the needs of the pupils, teachers, etc, and must be centrally located so that it would be accessible to all. A large quantity of a collection without any use is useless because the aim of a school library is fundamental in the stimulation of learning skills, creative and reflective thinking, and more importantly, independent self learning, and reading varieties (fiction). A librarian should try to purchase both print and non-print materials. The print materials include textbooks, journals, newspapers, magazines, reports, pamphlets, and non-print materials consist of films, slides, phonographs, record, television, radio, record players, tape records, slide motion and still pictures, etc. The librarian should make selection in collaboration with other teachers in the school. There should be computers with Internet access.

Space

Space is as important as other features mentioned. The library needs a space where to house all its collections for use. It has to prepare a space for reading room with tables and chairs, and librarian's workroom. Equipment such as shelves, catalogues, cabinets, counters, computers and display or exhibition boxes. Space for library staff must equally be provided. It is recommended that provision should be made for one tenth of the

pupils to use the library areas at any one time with an allocation of 1.66sqm² (20 ft²). Sufficient space should be provided so as to allow comfort for the pupils and other readers. It is a way of encouragement for the pupils to want to come to the library. It must be centrally located where it is possible.

Service

In order to meet its objectives, the library depends on the adequate use of its collections. And in order to use the collection properly, the librarian must display to the library patrons what is available. Because the quality of services provided by the school library will not only be determined by the richness of its collection but also the usage. The library hour should be integrated on the school timetable. This is the only way the pupils would be oriented to the library materials and library use skills could be taught. The library service does not include the collection alone, it also includes provision of supportive services such as lighting, ventilation, air conditioning, toilets, etc that will attract the pupils to come to the library. In the seating arrangement, individual characteristics should be considered. Pupils prefer to read alone, in twos or in groups, etc.

Conclusion and Recommendations

This paper attempted to highlight the importance of school libraries in support of Nigeria's basic education programme. It is expected that with the library supporting the basic education programme, the objectives of the UBE would be certainly achieved. The vigorous pursuit of UBE to its logical conclusion would enable the stakeholders, that is, the federal, state governments, local government area councils and the community at large, to achieve the objective of education for all (EFA). The standards required for school library to function have been highlighted.

It is recommended that policy statements should be evolved as to what direction school library should take. This should include the librarian's employment, qualifications, funding of the school libraries and the type of collections to be expected in the library. Secondly, the Nigerian Library Association and the Nigerian School Library Association should put pressure on the Federal Government to ensure that the two per cent from the Consolidated Account for the UBE programme is signed into law, and that twenty per cent of the total money should be allocated annually to primary school libraries in the country.

It is also recommended that there should be the creation of a unit in the Federal Government Ministry of Education to oversee the conduct and development of primary school libraries through out the country. There should also be a book depot where primary school librarians could go and purchase their needed materials at subsidised rates. Lastly, full-time librarians should be employed to take charge of primary school libraries. Training and retraining of primary school librarians is highly recommended.

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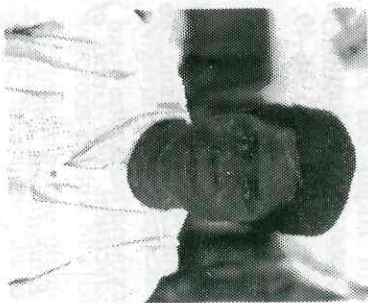
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*Dr. Nassir Bello is the Coordinator of the Department of Library and Information Technology, Federal University of Technology, Minna, Nigeria. He was the former the University Librarian.



Nassir Bello

Library Use in Distance Learning: A Survey of Undergraduates in Three Nigerian Universities

Iyabo Mabawonku

Department of Library, Archival and Information Studies
University of Ibadan, Nigeria
imabawonku@yahoo.com

Abstract

The library is an important tool for individuals' intellectual development. In particular, academic libraries often contain the core resources for research, teaching and learning. This study focused on the use of library and information resources by distant learning (part-time) students of three Nigerian universities. The randomly selected students were in 300-500 levels in the faculties running the programmes. The questionnaire and observation methods were used for data collection. The findings revealed that the arrangements for students to use libraries need to be improved upon. Less than half of the respondents used their main university libraries regularly. Some respondents indicated that they used the departmental libraries and other libraries outside the campus mainly for reading their personal books. The students hardly used reference and electronic resources. Also, majority of the students received no library use instructions. Thus, a student could graduate without having used libraries. The study recommends that universities need to make provision for students to access library and information resources and provide necessary training on information sourcing to the part-time, distance-learning students.

Introduction

Distance learning (DL) is often described as the formalised learning received while the student is on a location outside the university-campuses. Both the teacher and student are expected to have minimal physical contact, but much reliance on electronic communications. Distance learning is also variously described as external degree, part-time degree, correspondence or sandwich programmes. Distance learning usually refers to open learning applied to situations in which there is a geographical separation between the learner and the learning institution. It involves the open learning approach and little

(occasional), if any, interaction with the teacher. The focus is on the needs of the individual student and is more learner-centred. The learner chooses the place of study, time and pace of learning. Distance learning is particularly beneficial to the students as they could learn from their chosen locations which could be thousands of miles away. They can also be engaged in full-time jobs at the time of study.

Distance learning has become more popular in recent times because it is cost-saving for universities to reduce the number of residential and full-time students. However, distance learning normally should demand much use of audio-visual media and information and communications technology. These are essential for communicating with a large group of people especially in distant locations. They also make for interactive sessions with groups and individual students. On the other hand, the learners also need to read all kinds of texts and information materials when they are not in school. This is to prepare them for the course content and examinations. Thus, the students need to use library and information centres for reading and for information search. The library is the nerve centre of any educational institution. It normally houses information materials in various formats. This includes electronic information sources like CD-ROM, the Internet, etc.

Presently, many Nigerian universities are running part-time degree programmes. These are organised by their distance learning institutes or centres. But are the programmes planned and managed as it is done all over the world? Are there facilities and resources to provide for interactive sessions and holistic learning? Do the learners have access to useful information materials? Can the students compare favourably with their full-time counterparts in terms of learning inputs and attainments? Not much research has been done on distance learning in Nigeria and the use of libraries and information materials by the distance learning students. This study aims to fill this gap as the findings could be useful for improving the existing programmes.

Literature Review

Distance learning has to be all-embracing and comprehensive. According to Kavulya (2004), quoting Holomberg (1994), "an approach to distance education that ignores the role of libraries in the first place, provides a narrow experience for the learners and fails to encourage the expected research-led inquiry as well as the development and challenging of knowledge."

Besides, university education is expected to equip the students with skills in reading, inquiry and independent thinking. All of these are promoted by libraries, whether

traditional or virtual. They have resources in many subjects and the independent inquiry and study lead to the discovery of more information beyond the classroom teaching. Libraries are needed for writing term papers and research. The library is the nerve centre of any academic institution of learning. It is meant to provide resources to support teaching and learning activities. This is not only for the full-time regular students but also for the part-time students, lecturers and members of the community.

Simamora and Gunawan (2002) describe how Indonesia is answering the need for a more skilled workforce by using distance education and technology to reach more students. Their findings show how the member libraries of the Indonesia Distance Learning Network have developed an electronic library to support the students' learning. A web-based library information system was developed with the objective of providing effective, easy library services. Thus, students can access the library information web sites from their computers wherever. Besides developing the web-based library information system, a virtual library which includes data and collections in a digital format was developed.

The study of Rowland and Rubbert (2001) on the information needs and practices of DL students in the U.K. showed that university libraries considered in their sample "often did not cater for the specific needs of part-time and distance learners, which leads to an increasing use of the Internet and employer resources as a substitute for traditional information channels." They also found that students had problems with coping with the use of the web. Their study also found that students faced time and geographical constraints in using university libraries. Public libraries were found by students not to cater for the specialised information needs of students in higher education. Books and journals were found to be the information sources most frequently used. The students, according to Rowland and Rubbert, found the published information materials to be flexible, easy to scan, moved about and read with more convenience, as they do not strain the eyes like when reading on the screen.

The study also found that part-time students were making use of electronic information sources increasingly as only 12% of the respondents did not have Internet access at home. More students spent over ten hours a month online and only 3% of the students made no use of the Internet at all. Over 75% of the students were familiar with search engines. But the students still considered the library as their major source of obtaining information. The students indicated high competition for books in university libraries and that they came off worse than the regular full-time students. The two least used information sources were television/radio and e-mail discussion groups.

Bibb (2003), in his paper, describes how Southeast Missouri State University is attempting to serve its distance centre students through innovative techniques and resources. These include the library's links/access to a number of open access online indexes and databases, interlibrary loan, reference recycling, etc. He opines that the goal of any library whose parent institution offers distance programmes is to provide library services and resources equivalent to those provided on the main campus.

Kavulya (2004) opined that access to adequate library resources is essential to the attainment of superior academic skills. Distance learning students need to use reference services, book reserves, benefit from inter-library loan services and have access to electronic databases. Indeed, some of the students usually have little or no exposure to library use before the distance learning programmes. Training in library use could be part of the educational programme.

The findings of Kavulya in his study of distance education in Kenya showed that the students in the four universities studied had access to local library and Internet resources. One of the universities, the African Virtual University had advanced more than the other three universities in Kenya by providing "a digital library consisting of e-journals, e-books and online archives to facilitate access to worldwide resources for students. Kavulya also found that DL students in Kenya had access to campus library collections, CD-ROMs and other Internet-based resources. The virtual library is defined as the information centre which collects information in a digital format and never exists physically but can collect or provide services provided by a conventional library (Simamora and Gunawan, 2002).

However, some of the major problems in providing library services for DL include: lack of institutional policies to guide the provision of information to the students, inadequate funding resulting in poor facilities, equipment and reading materials like journals, books etc. Added to all these are the financial constraints that individual students suffer due to prohibitive costs of reading materials, etc. The study also found Internet use for information to be quite expensive and not very accessible to the students. The telecommunications infrastructure is also far from ideal. Hence, Kavulya recommended effective collaborative efforts of teachers, administrators and support staff to facilitate access to print and electronic information resources to distance learners in Kenya.

Dew (2001) argues that in order to have a successful library programme for off-campus students, librarians must understand who their students are and what they want. One of the ways of determining students' needs is by conducting user surveys for off-campus

students. The example of a student survey conducted by the University of Iowa Libraries from 1998 – 1999 was described in detail in his paper.

Oladokun (2002), quoting ARRL 1998, in *Guidelines for Distance Learning Library Services*, wrote that distance learning students are entitled to library services and resources equivalent to those provided for students and teachers in the normal university setting regardless of where the students and programmes are located. The students are also expected to have access to a full range of library materials and services, which include reference assistance, computer based bibliographic and information services, document delivery and interlibrary loan services, etc. The implication of this is that arrangements should be made for the students to have access to library resources from designated areas, e.g. branch or satellite libraries. They are also to enjoy virtual services, Internet searching and other electronic connectivity.

But all these are not what pertain in many African universities running DL programmes. Oladokun (2002) found that at the Open University of Tanzania, learners depended more on the existing library stocks of public and private library systems. But it was not an adequate solution as the stock of the libraries was not quite relevant. At the University of Nairobi, Kenya, students on the programme were urged to make their personal arrangement for using other university libraries apart from the University of Nairobi Library, British Council libraries, theological college libraries and learning resource centres in teacher training colleges. Students were encouraged to contribute some amount of money to augment the available stock and to also make their personal arrangements with other libraries.

The University of South Africa (UNISA), established in 1895, is one of the foremost DL universities in the world. It has the latest IT and resources in its library. These include a large book stock of over a million, many journal titles, microfilms, CD-ROMs and video and audio recordings. There are branch libraries and study centres of UNISA all over South Africa. There are also cooperative services with other academic and public libraries. There are networks of many databases and bibliographic services that the students could also access (Oladokun 2002).

In the longitudinal study of undergraduates academic library experiences, Whitmore (2001) found that during the three years of the study, undergraduate students used the online or card catalogues more than any other library activity during their first year. This was followed by using the library to read or study. In the second year of the study, the computers in the library were the most used, followed by using the card catalogue or the

OPAC, and using the library to read or study in that order. In the third year, using computers in the library was the activity students were most likely to engage in.

Whitmore's study found surprising relationships between students' level of study and library use as it increased during each successive year of the study. Using the computers in the library and reading in the reserve and reference rooms also increased.

Not much research has been done on the use of library and information resources by distance learning or part-time students in Nigerian universities. Yet, this seems to be a topical issue in Nigeria. This has been more obviated by the increase in number of universities running part-time degree programmes either as sandwich or through distance learning.

This study is timely also because the establishment of the National Open University (NOU) in 2002 by the federal government of Nigeria has shown the government's commitment to providing education to more Nigerians who do not have the opportunity of enrolling in the conventional full-time degree studies in the universities. Furthermore, there is the likelihood that the programmes of the NOU might tend to compete with the existing ones in the various universities, thus providing more choices for the learners.

Yet, with so many distance education institutions, there is the need to provide guidelines and minimum standards. All of these are best derived from assessment of the existing structures. Thus, it is envisaged that the findings of this study would be useful for future planning especially on library resources use.

Objectives of the Study

The main objective of the study was to investigate the use of libraries as sources of information by the part-time external degree students of selected Nigerian universities. Specifically, the study investigated the information environment of the learners, their use of libraries, and the library use instructions obtained. Also investigated were the sources consulted by the students, the frequency of their use of different types of libraries and their reasons for using libraries.

Methods of Research

The study focused on students in the distance learning (DL) programme of universities in Nigeria. The universities that run part-time degree programmes in Nigeria are about 25.

Indeed most universities run part-time programmes for income-generating purposes as well as service to the community.

Three universities: Lagos, Ibadan and Ilorin were selected as representatives of the universities running the DL programme. The universities were selected because Ibadan was the first to have extra-mural classes for pre-degree students while the University of Lagos was the first to have an external degree programme. The University of Ilorin was selected because it belongs to the second generation universities which is representative of the new generation universities.

In each university, students at the 300, 400 and 500 levels were selected for the study. This is because they have had at least some years to settle on the academic programmes. All the departments offering the DL programme were sampled. At Ilorin, only the Faculty of Education ran the programme. At Ibadan, the Faculties of Agriculture and Education ran the programme although a majority of the students were in the Faculty of Education. At the University of Lagos, the faculties of Education and Business Administration were mainly involved, although there were a few students who belonged to other faculties.

The random sampling technique was used in selecting the study population. In each class, one out of every two students was selected. The Faculty of Education in the three universities had the majority of students. The University of Lagos had large proportion of students in the Faculty of Business Administration.

The data collection instruments were the questionnaire and observation. A questionnaire was designed to obtain information on the profile of the respondents, sources of information they consulted, how often they used the library facilities and resources, and their assessment of the libraries.

The questionnaire was distributed in 2003. Two hundred copies each were distributed at the Universities of Ibadan and Lagos and 100 copies at the University of Ilorin. Lecturers teaching the courses facilitated the distribution of the questionnaire. Out of the 500 copies distributed, the responses were 369. The libraries were visited and their conditions and operations were observed. The data collected were analysed using the SPSS package to run frequencies and cross-tabulations.

Findings of the Study

The findings are reported under four sections. These are profile of the respondents, structure of distance learning programme, library and information environment and library use.

Profile of the Respondents

A distribution of the respondents shows that 173 (46.9%) were from Ibadan, 69 (18.7%) from Ilorin and 127 (34.4%) from Lagos. There were 165 (44.7%) males and 204 (55.3%) females. There were 82 students from the Faculty of Business Administration, constituting 22.2%; 229 (62.1%) were from the Faculty of Education, and from the faculties of Agriculture, Arts and Social Sciences, there were 58 students (15.7%). The distribution of the respondents by their levels shows that 198 (53.7%) were in 300 level, 44 (11.1%) in 400 level and 130 (35.2%) in 500 level. The entry qualifications of the respondents to the universities were: the Secondary School Certificate (22.9%); Advanced Level Certificate (3.8%); National Certificate in Education (NCE); 44.45%; and other qualifications (24.9%). The students all had in view the bachelors of arts and education degrees in view.

Structure of Distance Learning Programme

The lecturers provided four to eight weeks of lectures in a session. After the face-to-face interaction, examinations are held and the successful students proceeded to the next level. There were course materials and texts published by the DL Centres. These texts were supplied to the students at the time of registration at the beginning of the session. Audio-visuals and IT resources were hardly used by the teachers. Indeed, the study found that there was really no distance learning as pertains in other parts of the world. At the University of Lagos, it is named the Distance Learning Institute, whereas at the University of Ibadan, it is referred to as the Centre for External Studies, and Sandwich Programme of Institute of Education, at the University of Ilorin.

Library and Information Environment

The three universities studied had main university libraries, as well as branch, faculty and departmental libraries to facilitate learning. The main university libraries opened till 10 pm daily excepting Sundays. The full-time undergraduate students were expected to register to use the libraries. They could use their library cards to loan books and to use

library materials inside the library. At the University of Ibadan, the distance learning students were given library cards. This enabled them to sit in the library and use library resources inside the library. This includes books, journals, CD-ROM search, etc. But they were not allowed to borrow materials out of the library and there was no inter-library loan facility for this group of students. At the University of Lagos, the same situation prevailed, except that the University allowed book loans for students and there were arrangements for inter-library loans. At the University of Ilorin, the students were not allowed to use the library and they could not enjoy loans facilities.

Perhaps it is pertinent to mention here that the resources in the libraries of Nigerian universities are already overstretched and inadequate for the needs of the academic and research staff and the full-time students. The seating areas were also inadequate. Most of the textbooks were outdated, the journal subscriptions were irregular and there were very few functional audio-visual and ICT resources in the libraries. The library services were just being computerised in most cases and not networked with other offices on the campuses. It was therefore not surprising that DL students were not encouraged to share the inadequate resources. Although the DL Students (like the full-time students) took the required course on "The Use of Libraries" in the General Studies course, they only learnt the theoretical aspects. They did not do any practicals in the libraries. No orientation or use of library programme normally organised for freshers in universities was provided for this category of students by at least two of the universities. Yet, they earned the same degree with the full-time students.

The study further investigated students' use of other libraries especially when they were not in session. The respondents were asked in the questionnaire to indicate the types of libraries they had used before, especially since they started the degree programme. The finding is presented in table 1. One hundred and ninety-nine (53.7%) students indicated that they seldom used the main libraries while 82 (22.2%) indicated that they had never used the main libraries before. Most of the respondents (55.8%) had never used another university library, while 46.9 had never used a public library before. Most of those who indicated using departmental libraries were those who studied or had studied before in departments that had libraries. Table 1 shows that about half of the respondents indicated that they had used their departmental and faculty libraries before. In exceptional cases, like in the Department of Library, Archival and Information Studies at the University of Ibadan, which had its library as a learning laboratory, the students had access to the library and the resources. Faculty and departmental libraries existed as reading rooms for students. They could also easily obtain useful core materials from the libraries.

Table 1: Types of Libraries Used by Respondents

Type of Library	2-4 times a week		2-4 times a month		Seldom		Never	
	No	%	No	%	No	%	No	%
University's main library	47	12.7	26	7.0	199	53.7	82	22.2
Another university library	18	4.8	31	8.4	114	30.9	206	55.8
Departmental library	75	20.3	36	9.7	99	26.8	159	43.1
State/Public library	26	7.1	31	8.4	139	37.6	173	46.9
A special library	19	5.1	23	6.3	104	28.2	223	60.5
Research libraries in students' location	20	5.5	17	4.6	114	30.9	218	59.1
A school library	60	16.3	31	8.4	139	37.6	139	37.6
A Polytechnic library	12	3.2	9	2.5	78	21.2	270	73.2
College of Education library	23	6.2	10	2.7	118	32.0	218	59.1
Personal library	200	54.2	20	5.4	42	11.4	107	29.0

N = 369

Table 2 reveals the type of activities that students went to perform in the libraries. The reasons for using libraries frequently included "to read my books" (57.5%), to borrow library materials (27.1%), and to wait in-between lecture hours(10.8%). Most of them (87%) of them indicated that they went with their personal books and read their books in the libraries. They did not borrow books and journals. Only 100 (27.1) respondents indicated that they ever borrowed library books and journals. Few of the respondents 95 (25.7%) indicated that they had used reference materials before and these were mostly the dictionary and the encyclopaedia. Three hundred and seventeen students and three hundred and twenty students constituting 85.9% and 86.7% respectively had never used the CD-ROM and the microfilms in libraries.

Table 2: Reasons for Using Libraries

Reason	Frequently		Occasionally		Never	
	No.	%	No.	%	No.	%
To read my books	212	57.5	113	30.6	44	12.0
To wait in-between lectures	40	10.8	165	44.7	164	44.5
To borrow books and other materials	100	27.1	176	47.7	93	25.2
To borrow journals	47	12.7	90	24.3	185	50.1
To access the Internet	20	4.5	47	12.7	302	81.9
To search CD-ROM	9	2.4	40	11.7	317	85.9
To use microfilms	9	2.4	43	10.8	320	86.7
To read newspapers and magazines	98	26.6	127	34.4	144	39.0
To hold discussion with my classmates	48	13.0	79	21.4	242	65.6
To search catalogue of a library	38	10.3	160	43.4	171	46.3
To use the reference materials in the library	95	25.7	177	48.0	97	26.3

N = 369

The questionnaire sought to know whether students were given references and assignments that would require their going to use the library. Most of the students (97.3%) indicated that they did not have such assignments. Rather, some lecturers sold or encouraged students to read some texts, articles and other materials authored by them. Thus, it could be inferred that the students were not encouraged to develop the culture of inquiry and independent study. It could also be inferred that the lecturers did not also interact with the librarians in order to facilitate the use of library materials. Core texts and reading materials were not placed on reserve shelves in two of the universities and there were no communications between the lecturers and the librarians on the information requirements of the students. Indeed, the librarians were not involved in the programmes in the two universities studied.

The study sought to know if the students had access to some information technology resources located on campus or elsewhere for their courses. These include video and audio recordings, networked computers and Internet access, etc. Multi-media libraries often have audio and video-recordings of lectures and also Internet access, etc. The study

investigated students' access and previous use of these resources. They were not to confine their report to usage on campus only. The findings are presented in table 3. A respondent could indicate using more than one option. The findings revealed that 230 of the respondents, constituting 62.3%, had never used video recordings while about 55.6% indicated that they had no access to audio-recordings. Most of the respondents had occasionally used the computer and other electronic resources. The findings in table 3 reveals that few students (6.8%) indicated using the Internet to source information regularly, while 81.9% of respondents indicated that they had never used the Internet inside the library even if the facility was there. May be it was more convenient to access the Internet from outside the university library.

Table 3: Students' Access to Information Sources

Information Source	Always		Sometimes		Never	
	No.	%	No.	%	No.	%
Live video recordings	37	10.0	88	23.8	170	46.1
Recordings of lectures on audio cassettes	16	4.3	91	24.7	205	55.6
Recordings of lectures on video cassettes	22	6.0	47	12.7	230	62.3
CD-ROM	11	2.9	33	8.9	302	81.8
Computers	29	79	113	30.6	165	44.7
Internet resources	25	6.8	115	31.2	169	45.8

N=369

User education services and training in the use of library was not provided to majority of the respondents. Considering that the study group had spent between two and four years of DL studies, one would have expected the university libraries to have arranged guided tours of the libraries and provided user education services and library use instructions. The findings of this study show that the importance of the library in the learning process had been down-played.

The study also found that the course organisers and the university administrations and libraries had no formal arrangements with other libraries in designated towns and study centres for the students to use during the over nine months of private study. Thus, it could be inferred that all the universities actually underrated and ignored the value of library use and access to information resources in higher education. This was found to be a serious oversight. Many respondents expressed their discontent with this situation.

On their part, many students indicated that the periods of residency on university campuses were usually fully occupied with lectures and interactions with lecturers. Since the schedules were tight, there was little or no time to use the library. They therefore did not feel seriously deprived of library services because there was no time to use libraries.

Conclusion and Recommendations

One of the obvious shortcomings of the DL programmes studied in three universities was inadequate use of library resources for information and self-development by the students. The lecturers were more interested in teaching through their lecture notes and textbooks. They downplayed the importance of libraries and information materials. Obviously, the textbook and lecture notes are inadequate for broad-based learning at the university level. A degree without an in-depth knowledge of the subject through investigative learning is questionable.

On their part, the university libraries could still improve on their arrangements for the distance learning students. The study found that no arrangement was made for library use when the students were on campus in one university; and in another university, libraries could not loan out materials, students were constrained to use materials only within the library. Also, no arrangements were made for library use in libraries located in study centres in the towns inhabited by majority of the students. It is suggested that satellite campus libraries be established by the universities teaching these programmes and in cities across the country. There could also be cooperation with some public libraries to provide relevant materials and make these accessible to DL students who register to use those libraries.

However, there should be institutional commitments before this arrangement can be effective. Universities running the DL programme need to have frameworks and master plans for providing holistic education. Thus, they should arrange for the libraries to register and provide same services for all categories of students whether full time or part time. Also, the libraries are to provide library use instruction programmes, do orientation and familiarise students with the use of library materials.

The researcher found through direct observation that the libraries of the three universities studied had CD-ROMs and Open Public Access Catalogues, but they were not utilised to the maximum by the students. Ideally, students from all over the world should have been able to access the catalogues of their university libraries and other catalogues. They should also be able to access abstracts, documents and some other databases from all over

the world. But these facilities were lacking in the universities under study. The National Universities Commission embarked on the Virtual Library project in 2002. But this has suffered a setback. Thus, by 2004, none of the libraries had digitised their records or provided access to digitised records for its full-time and distance learning students.

The dearth of good books and journals also created barrier to accessing recent publications in the libraries. Perhaps, if the libraries had more information materials in electronic and hard copies, they would have extended the patronage to the part-time degree students.

Thus, it could be concluded, judging from the existing scenario, that the students belonged to the traditional "part-time students" category. There were no infrastructure, facilities and, indeed, institutional frameworks or policies to justify the term "distance learning" as conceived and practised all over the world.

It could be assumed that the findings of this study are likely to be representative of what pertains in other Nigerian universities offering the DL programme. Thus, it could be inferred that the provision by the universities for the DL students to use library and other information resources needs a critical review. The study has shown that access to information resources is a far cry from what pertains in other countries as reported by Simamora and Gunawan (2002), Oladokun (2002) and Kavulya (2004). It is hoped that one of the outcomes of this study is that lecturers would encourage the students to read and use library resources in order to have a well-balanced education. Librarians could also be more involved in the DL programmes of their universities, do more research on the information needs of DL students and understand what they want (Dew, 2001; Bibb, 2003).

One of the remedies being proposed is that each university administration should recognise the importance of libraries in distance learning. There should be opportunities for the DL students to use all the libraries on the campuses. Library use programmes are to be integrated into the curricula. The practical components should also be compulsory for students. Some arrangements could also be made with libraries outside the universities, especially in study centre locations, to allow the students to have access to their library and information resources. If indeed degrees awarded through correspondence are equivalent to the degrees obtained by regular and full-time students, then all the correspondence students must be exposed to the use of libraries. The quality of any degree is diminished if holders of such a degree never used a library for independent study and learning.

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Melvin Defleur's Information Communication Model: Its Application to Archives Administration

Henry N. Kemoni

Faculty of Information Sciences

Department of Archives and Records Management

Moi University

P. O. Box 3900,

Eldoret, Kenya.

E-mail: hkemoni@yahoo.com

Abstract

The paper discusses Melvin Defleur's information communication model and its application to archives administration. It provides relevant examples in which archives administration functions involve the communication process. Specific model elements and their application in archives administration are highlighted. The paper concludes by emphasising the need for archivists to be conversant with information communication models in order to provide efficient and effective archives administration services.

Introduction

The need for archivists to have knowledge and skills of communication is well documented in the literature. Waalne (1988) defines an archivist as a person who is professionally occupied in the administration of archives. McKemmish (1997) further observes that archivists are transmitters of knowledge and experience of past and present human interaction to present and future generations. They do this by identifying, documenting and preserving archives and enabling their continued use. Blaise and Enns (1993) note that archivists are not only keepers of information but also communicators of information. In this regard, they must interact with many groups that make up their user constituency.

Odini (1999) identifies communication as one of the core competencies that all information professionals (including archivists) should possess, while Hughes (2003) notes that records managers (and by extension archivists) need to possess some knowledge and skills in communication so as to enable them survive in a knowledge-

based environment. Vickery and Vickery (1987) reported that communication is a social technique upon which all social processes depends and in all situations, people communicate intentions, attitudes, opinions and beliefs among others.

According to Ojiambo (1993), communication involves the giving and receiving of information, signals or messages by talk, gestures and writing, while Afullo (2000) reports that communication may also involve the use of the Internet, the information super-highway, which is the global information infrastructure of convergent communications, information and media technologies.

Mcquail and Windahl (1993) observed that communication could be any or all of the following: an action on others, an interaction with others and a reaction to others. It is evident from the above definitions that communication is a means of sending and receiving messages either through verbal or non-verbal means. Furthermore, the communication process is affected by a number of factors, some of which have to do with the sender of messages, others with the receiver, or both the sender and receiver.

But what is a model? Kousoyannis (1979) defines a model as a simplified representation of a real situation, including the main features of the real situation it represents. She further notes that there are two main purposes of a model, namely, analysis and prediction. She notes that the validity of a model may be judged on several criteria, namely:

- Its predictive power;
- The consistency and realism of its assumptions;
- The extent of information it provides;
- Its generality; and
- its simplicity.

Katz and Harvey (1994) further define a model as a description of phenomena that abstracts from the details of reality. They note that "abstracting" from details means ignoring those details that are not directly essential to the understanding of the phenomenon at hand, and thereby enabling individuals to concentrate on important factors.

This paper seeks to demonstrate the importance of information communication models to archives administration, using Melvin Defleur's information communication model. It is hoped that the paper will stimulate further debate among archives practitioners, educators

and trainers on the core competencies required by archivists in an increasingly changing archives administration environment.

Communication Related Records and Archives Administration Activities

Archivists are involved in records and archives administration-related activities, which involve the communication process within the framework of the records lifecycle concept. The specific records management related activities include:

- planning, implementing and monitoring records management programmes;
- interpreting and implementing the provisions of existing records and archives legislation;
- surveying and appraising records in the public service;
- developing and implementing records retention and disposition schedules;
- conducting records management seminars to sensitise public officers on the need to manage records effectively as a public resource;
- providing records management consultancy services;
- providing education and training opportunities to students undertaking courses in records and archives management at diploma and undergraduate levels; and
- marketing records management in the public service.

To manage records during their entire life-cycle, archivists usually conduct records survey, appraisal and disposition exercises. Other activities involve the provision of training for record creating agencies on how to effectively manage records. This requires that archivists work in consultation with record creating agencies. Archivists, therefore, may communicate with record creators through the use of correspondence, telephone, personal visits (face to face) or use of electronic mail.

In archives administration, the activities that archivists are involved in include:

- accessioning archives;
- archives arrangement and description;
- developing access and reference policies;
- preservation and security of archives;
- developing relevant archives legislation;
- integrating the use of information technology in the provision of archives services; and
- marketing archives to enhance their exploitation and use.

Archives administration functions such as description programmes involve the preparation of finding aids which communicate to users' information about the existence of certain categories of archival materials which have been processed and are available for consultation. The provision of access and reference services does also involve some communication with users. For example, developing access and reference policy, assisting researchers with their queries and getting feedback from researchers regarding the extent to which their information needs have been met.

Archival marketing programmes also involve a great deal of communication, for example the use of advertising (television, radio, magazines, newspapers, the Internet), personal selling (talks, workshops, conferences, seminars, lectures, personal visits) or public relations (brochures, leaflets, guides, newsletters, reports, press releases and exhibitions). In situations where archival institutions need to adopt computers to enhance service delivery, communication takes place between the interested parties. In the case of a public archives, there will be need to communicate with staff, users, financiers of the project, (e.g. the government) and the vendors who will provide the relevant hardware, software, install the system and provide training to staff.

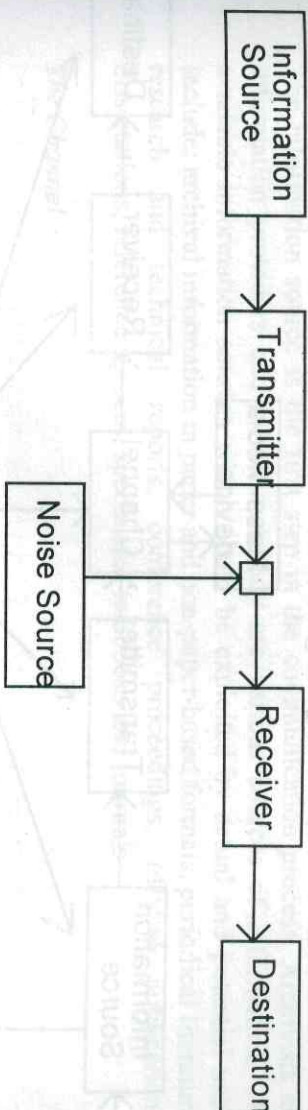
Melvin Defleur's Information Communication Model

Defleur's communication model, developed in 1970, is an improvement of the Shannon and Weaver communication model which was developed in 1949. The model incorporated Shannon's and Weaver's communication elements but added the element of feedback.

Mcquail (1993) points out that Shannon worked for the Bell Telephone Laboratory in the United States of America. His model of communication involved questions such as: What kind of communication channel can bring about the maximum amount of signals? How much of transmitted signal is affected by noise while travelling from transmitter to receiver? The model consists of five functions to be performed, and one dysfunctional factor, noise, which affects the communication process (see Figure 1). The five functions are:

- the source producing the message;
- the transmitter which forms the message into signals;
- the channel through which the message goes;
- the receiver which constructs the message from the signal; and
- the destination where the message finally arrives.

Figure 1: Shannon and Weaver's Communication Model

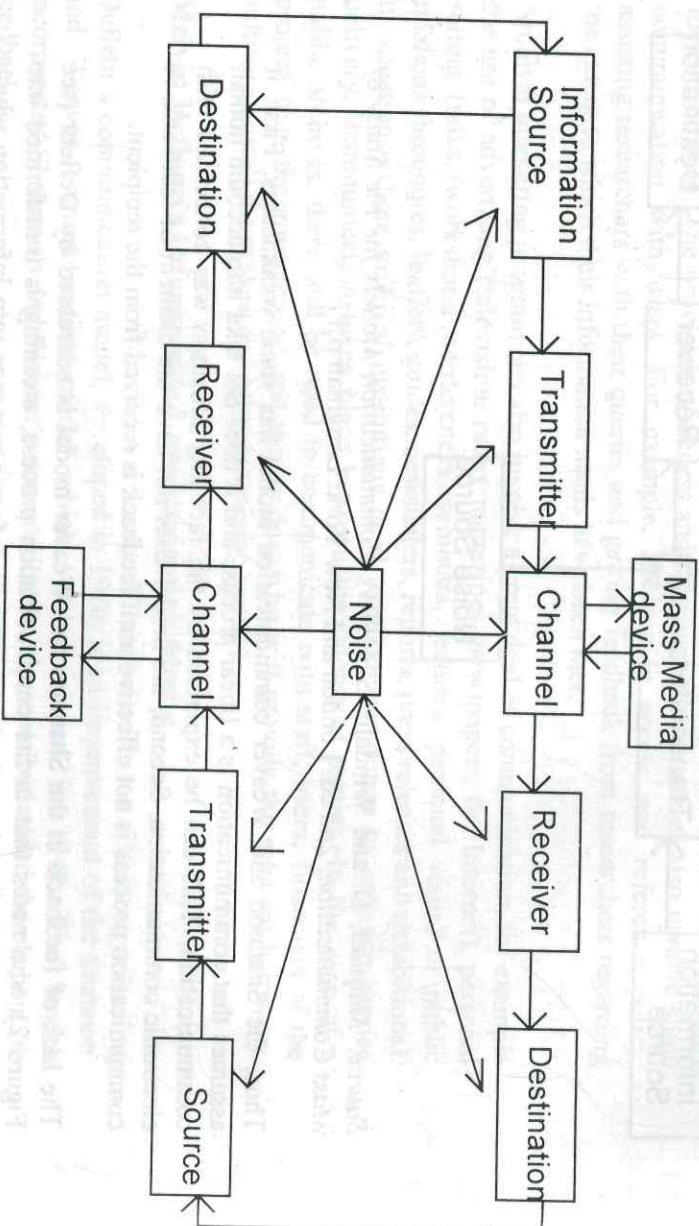


Source: Maquail, D. and Windahl, S. (1993). *Communication Models for the Study of Mass Communication*, 2nd ed. London and New York: Longman p.17

Thus, the Shannon and Weaver communication model has some weaknesses. First, it assumes that communication is a linear process and it does not take into account human communication. This can be explained by the fact that Shannon was concerned with electronic communication. Second, the model does not have the element of feedback. A communication process is not effective until feedback is received from the recipient.

The lack of feedback in the Shannon and Weaver model is addressed by Defleur (see Figure 2) who notes that in the communication process, meaning is transformed into message and describes how the transmitter transforms message into information which then passes through the channel. The receiver decodes the information as a message which, in turn, is transformed at the destination into meaning. If there is a correspondence between the two meanings, the result is communication. According to Defleur, feedback gives the source the possibility of adapting more effectively its way of communication to the destination.

Figure 2: Melvin Defleur's Improvement of the Shannon and Weaver Communication Model



Source: Maquail, D. and Windahl, S. (1993). *Communication Models for the Study of Mass Communication*, 2nd ed. London and New York: Longman p.17

Application of Defleur's Information Communication Model to Archives Administration

Aspects of Defleur's communication model such as the information source, the channel, noise and feedback are applicable in archives administration as presented in the following discussion.

MELVIN DEFLEUR'S INFORMATION COMMUNICATION MODEL

The Information Source

The information source is the first step in the communication process. Archivists are information providers and in their custody are various sources of information. The available information sources which could be exploited by actual and potential users include: archival information in paper and non-paper-based formats, periodical literature, research and technical reports, conference proceedings, official publications, dissertations, reference sources, specialised textbooks and journals.

The Channel

A channel is an important element in the communication process that transmits a message. Archives personnel should ensure that the channels used for communicating information to researchers are effective. The consultation of archives can be through the use of branch networks such as records centres, personal visits, telephone or mail enquires, e-mail and the Internet. However, the choice of channel depends on certain factors such as customer and information products characteristics, archives policy and available resources.

The Element of Noise

Noise is a dysfunctional factor that can affect the communication process and refers to any barrier that may hinder the effective utilisation of archives. In this regard, archivists should be conversant with and address those barriers that may hinder the use of archives such as: inadequate search room facilities and services, insufficient opening hours, inadequate or ineffective finding aids, access rules and regulations that are not user-centred, lack of information on user studies, inadequately trained staff and lack of information technology (IT) resources, such as computers, to store, process and communicate information.

The Element of Feedback

Defleur notes that in the absence of feedback from the receiver, no communication takes place. He further notes that a sent message is not the same as received message. Archivists should ensure that they get feedback from users regarding the nature of services offered by conducting archival user studies. Through such studies, they get feedback regarding users' information needs, seeking behaviour and levels of satisfaction

and dissatisfaction. The results of a user study can be used to re-engineer an archives service.

Archivists can use the following methods to get feedback from users namely: newsletters, suggestion boxes, informal discussions through workshops and seminars, questionnaires, personal interviews and use of the Internet.

Conclusion

This paper has attempted to discuss Melvin Defleur's information communication model and its application to archives administration. It has also highlighted the various record management and archives administration activities that involve the communication process. Since communication is central to their work, there is need for archivists to be conversant with information communication models to enable them enhance service delivery in archives administration.

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*Henry Kemoni is a lecturer in the Department of Archives and Records Management, Moi University, Kenya. He holds Bachelor of Arts (Hons), Post-graduate Diploma in Archives and Records Management, Master of Philosophy in Information Sciences. He is currently a doctoral student at the University of Kwa-Zulu Natal, South Africa.

Towards Improved Management of University Law Libraries in Nigeria

C.O. Ajidahun

Adekunle Ajisin University Library

P.M.B. 01

Akungba-Akoko

Ondo State

Nigeria

jideajidahun@yahoo.co.uk

Abstract

This paper investigated the state and the management of university law libraries in Nigeria. Issues considered included the staffing situation, location of library buildings, organisation, acquisition and processing of law books. Fifteen university law libraries in Nigeria participated in the study. A questionnaire consisting of 26 items was used as the instrument for collecting the data. The findings reveal that most of the university law libraries in Nigeria were not managed by professional law librarians. The study also shows that most of the law libraries were managed and controlled by university librarians. The paper recommends that law library staff should be exchanged among law libraries in Nigeria with a view to strengthening their capacities. Those who are professionally qualified but without law training could be exposed to relevant law seminars and conferences in order to further enhance their skills in law librarianship.

Introduction

The need to improve the quality of the legal profession in Nigeria led to the agitation for the establishment of academic law libraries. As at 1962, only four Nigerian universities, Ahmadu Bello University, Zaria, University of Lagos, Obafemi Awolowo University, Ife-Ife, and University of Nigeria, Nsukka, had law libraries. By 1982, the number of Nigerian universities with faculties of law and law libraries had risen to thirteen. As at the time this study was carried out in 2002, thirty-four universities in Nigeria had faculties of law and twenty-nine of these faculties had law libraries. It could be assumed that most of the universities in Nigeria run at least first-degree programmes in law. The desire by most universities in Nigeria to have a faculty of law is attributable to the high premium the society places on the legal profession.

The National Council of Legal Education, a body responsible for the accreditation of law programmes in Nigerian universities, provides guidelines for establishing law programmes in Nigerian universities. For any faculty of law programme to be accredited, the Council insists, among other requirements, that such a faculty of law must have a law library located either within

The law library is expected to serve the interests of students and meets their information needs. Books are indispensable tools for lawyers. Jegede (1994) opines that "law libraries are the lawyers' tools just as stethoscopes are to doctors or laboratories to scientists." The law librarian is therefore responsible for the acquisition, storage and retrieval of law books which are highly invaluable kits for lawyers.

In comparing the professional and academic function of the law librarian with the law teacher, Lee and Thomas (1992) concluded that the law librarian will outshine his academic colleague in the impartation of legal skills. The position further underscores the importance of law librarianship in the intellectual development of law students. After all, according to Malomo (1994) the main purpose of establishing law libraries is to meet the basic needs of the users of law libraries. Writing on the impressions of people on law librarianship, Jeffries (1992) decries the people's perception of the law library as performing a mere supporting role in an academic environment. He vehemently asserts that the law library should be recognised avowedly as having a distinctive and valuable contribution to make to the academic community. It is against this background that this study was conducted on the organisation and management of university law libraries in Nigeria.

This study aimed to find out the state of, and management of university law libraries in Nigeria, and the accreditation status of university law libraries in Nigeria and the areas in which these law libraries need improvement.

Methodology

The study was a descriptive survey, which involved all the 29 university law libraries in Nigeria. The data for the study was generated through the use of a questionnaire designated "Management of Law Libraries Questionnaire" (MLLQ). The questionnaire was designed to obtain information about the organisation and management of Nigerian university law libraries. The questionnaire, which was divided into parts, required information concerning the law library's staffing situation, organisation of the library building, acquisition of law books, processing of law books and the level of accreditation of the libraries. Copies of the questionnaire were mailed to all the 29 university law libraries in Nigeria in October 2002 along with self-stamped addressed envelopes in order to facilitate early reply. Only 15 of the law libraries completed and returned the questionnaire. The private universities were exempted because virtually all of them were at the gestation period of development at the time the study was carried out. The data were analysed using frequencies and percentages.

Findings

The results of the research are reported under three issues: location and organisation of law libraries, processing of law materials, and accreditation.

Location and Organisation of Law Libraries

Table 1 shows that 9 (60%) of the law libraries were located within the faculties of law buildings while 5 (33%) of them were located within the main university library as separate law libraries. Only one of the universities had no law library. Therefore, 14 out of the 15 law libraries surveyed had law libraries. This appears to be a good development. The findings further reveal that 10 (67%) of the law libraries surveyed were directly managed and supervised by the university librarians while 5 (33%) of the libraries were managed and supervised by the law-librarians. Most of the law libraries 10 (67%) had non-law librarians as heads of the law libraries. This result agrees with the study of Jegede (1985) when she observed that the professional librarians in the law libraries had diverse backgrounds and received professional training in different institutions all over the world. Only a very few of them had qualifications in law plus professional training in librarianship. That is why some law libraries are managed by para-professionals, that is, people of library officer cadre. Tearle (2002) recalled that on her visit to Liverpool University Law Library, the most memorable feature was the understaffing. The Library was managed by an assistant librarian and evening student assistants. The situation in Nigeria is such that an average qualified lawyer will prefer first of all to be addressed as a lawyer rather than as a law-librarian when he eventually has a professional training in librarianship. Besides, a lawyer would therefore prefer to practise his law profession rather than to sit down in an office processing law books. In addition, most law librarians today are in the profession accidentally.

Table 1: Location and Organisation of Law Libraries

Location of Law Building	No of University	%
A separate law library detached from the University Library	-	-
A separate Law Library located within the University Library building	5	33
A separate Law Library within the Faculty of Law building	9	60
No Law Library at all	1	7
TOTAL	15	100

Processing of Law Materials

Table 2 reveals that 13 (87%) of the libraries indicated that the acquisition and processing of law materials were centrally done by the university main libraries while the acquisition and processing of law materials were done by the law libraries in 2 (13%) of the law libraries surveyed. When the respondents were asked to indicate the classification scheme used in their law libraries, majority of the respondents (80%) as shown in table 3 stated that they used Moy's scheme, while 2 (13%) used Library of Congress Classification Scheme, and the remaining used Benyon's law classification scheme. Moy's Classification Scheme appears to be most popular among the university law libraries in Nigeria which agrees with the findings of

Ifebuzor (1994). Dina (2002) observes that the College of the Bahamas Law Library (COB), Nassau initially classified its collection with the Library of Congress Classification scheme but it later changed to the Moy's Classification scheme from August 2001. It should be noted that African Law materials are not well catered for by the Library of Congress Classification scheme. However, in a research carried out among the law libraries in the UK by Clinch (2002), the findings show that most law libraries used Library of Congress Classification scheme, closely followed by one locally designed scheme. Only 2 law libraries out of the 37 law libraries surveyed used Moy's Classification Scheme.

Table 2: Mode of Processing of Law Materials

Mode of Processing	No. of University	%
Acquisition and processing of law materials are centrally done by the University Library	13	87
Acquisition and processing of law materials are done by the Law Library	2	13
Acquisition and processing of law materials are done by the Faculty of Law	0	0

Table 3: Classification Scheme used for Processing of Law Materials

Mode of Processing	No. of University	%
Moy's scheme	12	80
Library of Congress Classification scheme	2	13
Benyon's Law Classification Scheme	1	7

Accreditation of Law Libraries

Table 4 shows that 7 (50%) of the Law Libraries had been given full accreditation by the National Council of Legal Education while 5 (36%) were given partial accreditation. Two (14%) of the libraries had not been accredited. Some of the reasons given are that these law libraries with partial or no accreditation at all lacked the required human resources and the basic law books such as law reports and foreign law periodicals.

Table 4: Accreditation

Level of Accreditation	No of University	%
Full Accreditation	7	50
Partial Accreditation	5	36
No Accreditation	2	14
TOTAL	14	100

N = 14 (% Rounded off)

N = 14 and not 15 because one of the University Libraries did not respond to the question

Implications of the Findings

The study has shown that most university law libraries in Nigeria were supervised and managed by the university librarians. This is in line with the directive of the National Universities Commission (NUC). The implication of this finding is that this management style will ensure uniformity, efficiency and accountability. It will also enable the university librarians to, confidently discuss the challenges of developing and managing university law libraries in different forums. Based on the findings that most of the university law libraries did not have professional law librarians, that is those who have the Bachelor's degree of Law (LLB) and have been called to the bar in addition to a master's degree of in librarianship (MLS), it implies therefore, that the professional duties of law librarians were carried out, aberrantly and abysmally, by librarians with limited or no knowledge in law. Yet, the National Council of Legal Education insists that all university law libraries in Nigeria must have qualified law librarians for their institutions' law faculties to be accredited. This position is supported by Herzog (1993) who believes that the position will raise the status of law librarianship in public and other perceptions. The implication of this finding is probably the reason why 50% of the law libraries surveyed were not accredited for lack of qualified law librarians among other things. This is obviously a challenge for law librarianship in Nigeria.

That most of the institutions surveyed had law libraries is a good and welcome development. Besides, most of the law libraries were located within the faculties of law buildings. The location of a university law library as shown in this study appears to reflect the modern trends of law library buildings in the world. Tearle (2002) reports that in the 1960s and 1970s, the Bodleian Law Library (1964), Liverpool Law Library (1966) and IALS (1974) were built separately from the main university libraries. Recently, in the U.K, new law libraries are either located within the general library buildings or located around law firm premises. The implication of this finding is that the law libraries are located within the immediate environment of their clientele, the law students and lecturers. Obviously, therefore, the contiguous location of these law libraries within the law faculties makes the law libraries exclusive to the law students and lecturers of the faculties of law. This has implications for other users with background in other disciplines such as political science, public administration, sociology and history who might need some legal information available only in the law library. Recent advances in both the physical and natural sciences, according to Asein (1982) "have revealed that no one discipline can claim to have an exclusive and inviolable island to itself." The interrelationship of disciplines is fast gaining the attention of writers and critics in the international literary scene.

This study found that the acquisition and processing of law materials were centrally done by many university libraries using Moy's Scheme. This style will ensure uniformity, prudence, equity, probity, efficiency and accountability. The common use of Moy's Classification scheme will bring about uniformity in the organisation of law books and thus facilitate the retrieval of information. Besides, library cooperation would be enhanced.

Conclusion

The study has revealed that most of the law libraries were staffed by professional librarians without law training. This obviously has implications for the delivery of services to users. It is, however, being suggested that the professional librarians without law training, but with devotion and a sense of duty, could be exposed to relevant law seminars and conferences in order to further enhance their skills in law librarianship. Such a suggestion could improve the staffing situation in Nigerian university law libraries. In addition, law libraries, as advocated by Mawson (2002), could look at the possibility of a law library staff exchange. This has been experimented successfully between the University Library at Sheffield, UK and the Law Library at Madison, Wisconsin, USA. This has perhaps led to the increasing number of law librarians who have law degrees as well as library degrees in the U.S.A. If these suggestions are adopted, the Nigerian university law libraries stand a good chance of being accredited by the National Council of Legal Education.

The Moy's Classification scheme, as it is widely being used by most of the Nigeria law libraries, is inadequate for the classification of legal materials on Nigeria. The scheme should be revised such that a uniform schedule could be developed for class KP, which is generally considered unsuitable for the treatment of Nigerian legal materials. This revision will bring about the desired uniformity in the classification of legal documents and books among university law libraries in Nigeria.

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*Dr. C. O. Ajidahun is Principal Librarian and Head of Technical Services, Adekunle Ajasin University Law Library, Akungba-Akoko.

Appendix

University Law Libraries Used for the Study

1. Abia State University Law Library, Utau.
2. Adekunle Ajasin University Law Library, Akungba-Akoko.
3. Ahmadu Bello University Law Library, Zaria.
4. Ambrose Ali University Law Library, Ekpoma
5. Aminu Kano University Law Library, Kano.
6. Hezekiah Oluwasanmi University Law Library, Ile-Ife.
7. Imo State University Law Library, Owerri.
8. Nnamdi Azikiwe University Law Library, Awka.
9. University of Abuja Law Library, Abuja.
10. University of Ado-Ekiti Law Library, Ado-Ekiti.
11. University of Calabar Law Library, Calabar.
12. University of Jos Law Library, Jos
13. University of Nigeria Law Library, Nsukka.
14. University of Uyo Law Library, Uyo.
15. Usmanu Dan Fodiyo University Law Library, Sokoto.

The Impact of ETF Funding on Nigerian Academic Libraries: A Case Study Approach

O. K. Odusanya and L. F. Osinulu

*Olabisi Onabanjo University Library
Ago-Iwoye, Ogun State, Nigeria*

Abstract

This paper examined the deplorable state of Nigerian university libraries resulting from inadequate budgetary allocation. It examined the various coping strategies adopted to save university libraries from their downward slide. The survey focused on Olabisi Onabanjo University, one of the third generation state owned universities in Nigeria. Specifically, the study evaluated the support of the Education Tax Fund (ETF) towards the acquisition of information technology equipment and other learning facilities for the library. The findings reveal that prior to the intervention of the Education Tax Fund (ETF), budgetary allocation to the library was abysmally low, hence the library was not able to perform many of its functions satisfactorily. With the intervention of ETF, the library was able to purchase computer equipment and library-processing tools needed for effective functioning of the library. The paper recommends that the library should look for other sources of generating income in order to boost its services.

Introduction

Academic libraries are Expectedly charged with the responsibility of meeting the information needs of scholars and students in the pursuit of their academic endeavours. This is made possible through the library's traditional functions of identifying, selecting, acquiring, processing, storing and disseminating knowledge in print and non-print formats. The collections should be adequate in depth and breadth. Equally important is the acquisition of audio-visual equipment, and, recently, computer technology to support teaching, learning and research.

Information is said to be the lifeblood of the library. Within the purview of university goals, university libraries have tried to fulfil the information needs of students, lecturers and researchers through the provision of educational materials. However, much as Nigerian libraries struggle to meet the users' information needs, they are incapacitated by under funding. Ojoade and Ochai (2000) aptly observed that with hardly any funds, the library is put under pressure to justify its existence and to provide improved services.

Studies have shown that under funding is the bane of libraries in Nigeria. This has been occasioned by the economic downturn, coupled with the escalating cost of books, journals, and other educational facilities (Osinulu, 1998). Agboola (2002) submits that the situation has

It is this deplorable state of the economy that made the Federal Government to enter into agreement with the Academic Staff Union of Universities (ASUU) in 1992 to increase the total University Library budgetary allocation to 10% of the recurrent allocation. The agreement stated that 60% of the allocation be spent on books/journals and 40% utilised for personnel and other goods and services. In spite of this effort, building virile collections in university libraries still poses great challenges to the universities.

In view of these antecedents, this study attempts to find out how Nigerian university libraries have risen to the challenges of under funding, and the coping strategies adopted. Specifically, the study was designed to evaluate the support of the Education Tax Fund in alleviating the dwindling financial fortunes of Nigerian university libraries with particular reference to the Olabisi Onabanjo University (OOU).

Nigerian University Libraries Coping Strategies

The appalling situation of university libraries prompted the Federal Government in 1990 to source for a \$120 million World Bank credit facility for the development of federal universities. Out of this amount, 31% was earmarked for the supply of library materials and equipment. Similarly, the Federal Government initiated a project funded by the European Commission (EC) for the state owned universities in 1992. The project aimed at providing current publications covering certain disciplines and learning equipment. It must be mentioned that the impact of these foreign donors could not be assessed in real terms as a result of the political upheavals experienced in Nigeria in 1993. Specifically, the European Commission Project was aborted because of the political upheaval, and it has not been revived till date.

The dwindling financial resources available to university libraries made them to source for income generation alternatives to shore up their resources. Literature is replete with various income drive strategies adopted by libraries to augment their lean financial allocations (Adeniyi, 1995; Anafulu, 1997; Ojoade and Ochai 2000). These writers identified some avenues for revenue generation. These are: resource sharing, fines for overdue books, charges for reservation books, interlibrary loans, income from photocopying services, binding charges and abstracting services. Others are library registration fees, electronic database searches and reprography. Ikhlizama and Oduwole (2000) aver that the money raised through these sources is a useful addition to a library budget. Salisu (1999/2000) supports the libraries' initiatives for generating fund internally. However, Ojoade and Ochai (2000), from their survey of 18 African university libraries, reported that income generated internally through the various means identified from the survey was insignificant.

Establishment of Education Tax Fund (ETF)

Government is the primary source of public university funding in Nigeria. The Federal Government funds federal universities while state owned universities are funded by the respective state governments. It must be said that some state universities received little or no capital

allocation from their proprietors. The situation in federal universities is equally frustrating considering the fact that allocation for education in year 2000 is less than 2% of government expenditure.

This view was corroborated by Ekoja (2003) with particular reference to Usmanu Danfodiyo University Library who reported that yearly allocation to the library was between 1.02% and 1.85% of the university's total recurrent expenditure. He identified three intervention programmes:- The World Bank, PTF and ETF that were established to assist University Libraries in their collection development drive.

From the above scenario, it can be said that governments have been unable to give the expected financial support to education. It is in recognition of this fact that the Federal Government in line with its agreement with the Academic Staff Union of Universities (ASUU) of 1992 established a special fund to improve the quality of education and libraries through the promulgation of the Education Tax Decree.

The Education Tax Fund (ETF) is a trust fund established under the Education Tax Act No. 7 of 1993 and later amended by Act No. 40 of 1998. The act imposes a 2% education tax on the assessable profits of all registered companies in Nigeria. The mission of the ETF is to deliver competent and forward-looking intervention programmes, through funding, to all levels of the Nigerian educational system. Its objectives are to:

- (a) provide funding for educational facilities and infrastructural development;
- (b) promote creative and innovative approaches to educational learning and services;
- (c) stimulate support and enhance improvement of activities in educational foundation areas like teacher education, teaching practice, library development, etc; and
- (d) champion new literacy enhancing programmes such as scientific information and technology literacy (Tell, 2003).

(e) In justifying the objectives of the ETF Intervention programme, Ekoja (2003) reported the impact of intervention measures on collection development at Abubakar Tafawa Balewa University Library, Bauchi and concluded that the ETF had boosted the library in the acquisition of computer hardware and photocopiers. ■

The objectives of this paper are twofold: one, to assess the budgetary allocation to Olabisi Onabanjo University library in the last four years (1999-2002), and secondly, to assess the extent to which ETF has supported the University Library.

Brief History of Olabisi Onabanjo University Library System

Olabisi Onabanjo University, formerly known as Ogun State University, was established in 1983. The University assumed its new name in year 2001 in acknowledgement of the great role played by the first civilian Governor of Ogun State, Chief Olabisi Onabanjo who founded the institution. Like any other university, the library came on stream to support the teaching and research

programmes of the Institution. Since inception, the University has been growing in leaps and bounds with two colleges, a postgraduate school, eight (8) faculties and a Centre for Sandwich Programmes (CESAP). It has a population of 19,500 full time undergraduate and sub-degree students, 20,600 part-time students and 1,300 postgraduate students. The Library system consists of the Main Library at the Mini Campus and four (4) other branch libraries, namely: Law Library sited at the Mini-Campus, Medical Library at the Obafemi Awolowo College of Health Sciences (OACHS) Sagamu, Sopolu Library, Ikenne – a private library of the late sage Chief Obafemi Awolowo bequeathed to the University, and a branch library at the permanent site of the University serving the information needs of students in the Faculties of Management Sciences, Arts, Education and Social Sciences. Since inception, the Olabisi Onabanjo University Library (OOLIB) has increased its collections to a sizeable number. The libraries serve over 40,000 students offering various courses and programmes in the University as well as cater for the needs of teaching staff and researchers.

Methodology

Using Olabisi Onabanjo University Library as a case study, all documented records and data in the library relating to the Education Tax Fund (ETF) intervention programme were consulted. For reliability and validity, interview technique was employed. The University Librarian and some senior staff directly involved were interviewed. This method was employed to elicit more information on the impact of the ETF intervention on the library acquisitions.

Findings and Discussion

Table 1 shows the budget proposals of the library from 1999 - 2002. The budget includes provision for books and journals, library processing tools and computer facilities. During the four-year period, 19 million naira was proposed for books and journals, but only 3.7 million naira or 19.7% as shown in table 2 was actually allocated. Table 2 presents the University allocations to the Library from 1999 - 2002. A cursory look at the data reveals that less than one million naira was allocated in 1999 as against the ₦2.4 million proposed by the Library. In 2002, there was a sharp drop in the University Library's acquisition, as only 2,387 volumes of books and 234 journal titles were acquired between 1999 and 2002. The Library's purchasing power was also eroded as a result of devaluation of the Naira.

Table 1: Library Budget Proposal

Year	Books and Journals	Library Processing Tools	Computer Facilities
1999	₦2.4m	N/A	₦1m
2000	₦3.5m	₦1.5m	₦2.5
2001	₦3.5m	₦4m	N/A
2002	₦8m	₦3m	₦3.5m

Source: *Library Budget File (LUS\$ = N130 as at June 2004)*

Table 2: University Allocation and Library Acquisitions List

Year	Actual Amount Allocated (N)	Library Acquisitions Books (Volumes)	Journal Titles
1999	913,057.00	649	28
2000	649,650.00	387	37
2001	1,870,000.00	546	31
2002	306,505.00	805	138
TOTAL	3,739,212.00	2,387	234

Source: *Acquisition and Serials Records*

Table 3: Education Tax Fund Allocation To Olabisi Onabanjo University Library

Year	Amount Allocated	Project Utilisation
2000	-	-
2001	₦3.5m	1. Acquisition of 10 computers and components 1 Dedicated Server 10 PCs of various sizes 8 Printers 8 Network set up 1 Scanner (High Resolution) 1 Laminating Machine 1 PAVO Spiral Punching Machine 2. Library processing tools
2002	₦3.5m	1. Steel Book Shelves (various sizes) 2. Automation of Main Campus & Medical Library at Sagamu
2003	₦3.5m	Not yet released.

However, with the intervention of ETF, as reflected in table 3, the improvement was very noticeable as the amount allocated to the University Library soared, that is from 2001 to 2003. The amount allocated was also constant. For the 2001 allocation, the Library utilised the ₦3.5 million naira for the acquisition of computer hardware and software, library processing tools and other library facilities.

Discussion

Table 2 shows that less than 40 journal titles were acquired annually by the library during 1999-2001. It improved to 138 titles in 2002 during the period of the ETF intervention. During the

same period, less than 600 books were purchased annually and for the four-year period, 1999-2002, the university library only acquired 2,387 books. Given the fact that the average student population was about 40 000 per year during the period covered, it means the ratio of students to 138 journal titles acquired in 2002 was at the best of times about 290 students to one journal title, while the ratio of students to books acquired in 2002, was 50 students to one book. It is obvious that the university library could not function effectively under this situation

It is evident from the analysis that prior to the ETF intervention, the library system had suffered large-scale decadence and neglect. The Library could not acquire necessary processing tools for many years due to lack of funds and the prohibitive cost of the processing tools. These are indispensable tools for the processing of library materials.

Over the years, the Library made use of Library of Congress Classification scheme of 1976 edition. This edition is clearly obsolete and has adversely affected the operations of the library. Most modern libraries now use computers in information processing alongside current editions of the Library of Congress Classification scheme.

Prior to the ETF intervention, the Library relied heavily on library levies and budgetary supplementation from the University's Centre for Sandwich Programmes (CESAP). Mention needs be made that such library levies which were released on request to meet special needs, such as accreditation of programmes, were hardly sufficient to buy books and journals, let alone computer facilities. Besides, the pattern of release did not allow for proper planning. A close examination of tables 1 and 2 clearly confirms that funds allocated fell short of the amount required by the library. No doubt the Library is grossly under funded, as less than ₦4 million naira was spent on books and journals in the last four years. This development has seriously affected the growth of the library collections and consequently the services rendered by the library.

Obviously, the ETF intervention came in the nick of time as a right step to salvage the education sector from collapsing. The policy of the Education Tax Fund (ETF) intervention programme which, among others, is to stimulate support and enhance improvement in library development (Tell Magazine, 2003) is aptly demonstrated by the amount allocated to the Olabisi Onabanjo University Library. The findings revealed that the library's unsuccessful attempt to acquire computer hardware in previous years had become a fulfilled aspiration with the ETF support. Without gainsaying, Olabisi Onabanjo University Library has benefited in no small measure from the ETF intervention through the acquisition of computer hardware and other components and tools as could be gleaned from the analysis. The implication of this study is that the University authorities must be ready to fund the University library substantially if it were to carry out its mandate. But for the ETF intervention, it means the University Library would not have been able to perform its functions effectively. The University Library cannot depend on ETF intervention forever, so it is hoped that the University would provide more funding to the library. They agreed that it is crucial for appropriate persons in the library to have personal involvement and commitment to the strategic planning process if it is to have long-

Conclusion

Based on the findings, it is evident that the Education Tax Fund (ETF) is indeed a positive intervention programme. It has actually brought succour to the Library system. With the acquisitions of 10 new computers and accessories, the library operations and services are at the stage of being automated. With these facilities in place, users will have easy access to information flow, and learning and research activities will be greatly enhanced.

However, both the Federal and state governments should increase the percentage of budgetary allocation to education and demonstrate sincere commitment to the budget by ensuring the timely release of funds earmarked for such projects. ETF, on the other hand, should keep up with its standard and policies and also maintain its present level of support to the educational sector.

The University and the Library in particular should work towards a sustainable automated Library system. No doubt, innovation in information technology will bring about effective and efficient information delivery services. Finally, it may be necessary for the University Library to intensify its search for donors, philanthropists and also embark on commercial services to boost its revenue generation drive.

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* O.K. Odusanya is the University Librarian, Olabisi Onabanjo University, Ago-Iwoye, Nigeria. He is a graduate of Ahmadu Bello University, Zaria and the University of Pittsburgh, USA. He holds BLS and M.S. Information Science

* Mrs. L.F. Osinulu is Principal Librarian and Head of Main campus Branch Library Olabisi Onabanjo University, Ago-Iwoye, Nigeria. She attended Olabisi Onabanjo University, Ago-Iwoye and the University of Ibadan, both in Nigeria. She holds B.Sc. (Hons) and M.L.S.



L. F. Osinulu



O. K. Odusanya

Sensitising Users for Increased Information Use: The Case of Nigerian Farmers

Innocent I. Ekoja

Abubakar Tafawa Balewa University

P.M.B. 0248, Bauchi, Nigeria

Abstract

This is a descriptive research that used a questionnaire, documentary sources and interviews to find out how much do Nigerian farmers know and access NAEERLS information services, and how much the knowledge and access have acted as impetus for increased information use as revealed in their level of information needs. The six broad information services of the NAEERLS are farm broadcast (radio and television), extension publications, agricultural shows/farmers' field days, training whose beneficiaries are extension agents, extension advisory and library services. Generally, the information services are well known and accessed by farmers in the zones they are meant for, especially services rendered via extension agents, posters and leaflets, the radio, agricultural shows and farmers' field days. The sustained provision of the NAEERLS information services has also adequately sensitised many Nigerian farmers to their information needs, and as a consequence, they are likely to use more agricultural information, if made available.

Introduction

Farming is a technical activity and farmers often encounter some problems in executing some tasks. To resolve these problems, they require accurate and up to date information on regular basis. Farming, therefore, is an information intensive activity (Spore, 2001). Agricultural information is continuing to assume greater importance because of the link between its use and increased and sustained agricultural production (Aina, 1990; Gooch, 1994).

For the farmers, regardless of where they operate, there are various channels through which agricultural information gets to them. These could be formal channels, like extension services, or informal channels, e.g. getting information through fellow farmers. Agricultural extension service as one of the channels for the diffusion of agricultural information is offered all over the world, including Nigeria. Agricultural extension service is meant to educate farmers and encourage them to adopt new techniques. The fundamental concern of agricultural extension activities is with the transmission of

Training

The NAERLS offers training to farmers through extension agents. The training is conducted for extension agents in the state ADPs, ministries of agriculture, educational institutions, farmers, etc. Training takes the form of conferences, seminars, workshops, etc. Between 1970 and 2000, the Institute had conducted 388 training sessions from which 53,528 participants benefited. For the purpose of training, the Institute also produces documentary teaching slides which are also distributed to the ADPs, ministries of agriculture, etc. In all, 470 slides in sets of between 20 and 60 covering various areas of agriculture were produced.

Extension Advisory Services

The NAERLS offers advisory services to livestock and crop farmers and rural women, as well as youths. They cover production, pest control, post-harvest technology and any other aspect or problem in agriculture for which beneficiaries invite the Institute.

Library Services

In addition to a non-book library whose content constitutes all the radio and television programmes produced by the NAERLS, the Institute also has another library whose collection is in print. This library is intended to be a national agricultural library holding a comprehensive collection on all agricultural extension and research publications in Nigeria emanating from local and international research institutes (NAERLS, 1993). The Library has 1,417 volumes of books and monographs, 69 current journal titles and 1,657 bound volumes of back sets of the journal titles. Its users include specialists, students and farmers. It opens only on weekdays.

Methodology

The research method used for this study was the descriptive/survey type. The population comprised the NAERLS and Nigerian farmers (including fishermen, livestock farmers and agro-foresters, found in the five ecological zones of the country. Under the NAERLS, the headquarters of the ecological zones are Bida, Ibadan, Maiduguri, UmuDike and Zaria.

The sample was made up of farmers found in and around the zonal headquarters. A sample of 100 farmers was studied in each zone, making a total of 500. In the absence of a list of all farmers in the country, the researcher followed the recommendation of Hyllegard et al. (1996) by adopting the cluster sampling method to select the farmers studied.

The research instruments used were the questionnaire and documentary sources, both of which were complemented by interviews. There were two types of questionnaires: one for the NAERLS staff, and the other for the farmers. The NAERLS questionnaire was mainly open-ended and sought to find out the Institute's background information on the Institute and the information services offered. The farmers' questionnaire sought to find out their knowledge of, and access to, NAERLS information services, and how these have contributed to increased desire for information, and consequently, information use.

The data from the NAERLS questionnaire was analysed descriptively. From the farmers' responses, the data were analysed using the Statistical Package for the Social Sciences (SPSS) to answer four research questions, viz:

- How well known are the NAERLS information services?
- How much do Nigerian farmers access NAERLS information services?
- How have the knowledge of and access to NAERLS information services contributed to Nigerian farmers' desire for agricultural information and consequently, increased information use?
- What are Nigerian farmers' areas of need?

Findings

The findings are reported mainly under two categories. These are: knowledge about NAERLS information services and access to farmers, and farmers' areas of information needs.

Knowledge about and Access to Farmers' NAERLS Information Services

Table 1 shows the NAERLS information services, including radio and television programmes, extension publications, etc that the respondents knew of. From an overall view of the responses, it would appear that some of the information services, especially radio programmes were not well known. This is because looking at the responses from a national perspective, the most known radio programme was "Mu Koma Gona", which 232 (46.9%) respondents agreed they know. "Mu Koma Gona" is closely followed by "Noman Zamani" and "Noman Karkara Magajin Garba" with 221 (44.6%) and 214 (43.2%) respondents respectively. The fact, however, is that the programmes in Hausa, Igbo, Yoruba and pidgin English were zonal-based. From this standpoint, most of them were well known in their respective zones. In this respect, therefore, "Mu Koma Gona" as a programme meant for the three Northern Zones was known by 231 (76.7%) of the respondents from these Zones. Even "Kiwoce Kiwoce" the least known Hausa radio programme, which nationally attracted 170 (34.3%) respondents, when limited to the three zones it was meant for, recorded 169 (56.1%) responses.

Similarly, for the Yoruba language programmes meant for the South-West Zone, apart from "Ilana Fun Aṣṣe" which was only fairly known, the other two, i.e. "Obalokete" and

"Kebi Ma Palu" were well known. About 44 (44.8%) of the South-West respondents knew of "Ilana Fun Agbe", 91 (92.8%) and 83 (84.6%) knew of "Kebi Ma Palu" and "Obalokele" respectively. With 21 (21.9%) responses, it could be said that "Country Farmer" was not well known in the South-East Zone. This was unlike "Onye Oru Ubi" with 79 (82.2%) respondents. Unlike the vernacular language radio programmes, the English language radio programmes were not well known. The best known of these programmes were "Agricultural Panorama" and "Animal Husbandry", each of which scored 57 (11.5%) responses. The least known national English radio programme was "Down to Earth" with 21 (4.2%) respondents.

In terms of knowledge by respondents, the television programmes did not fare well. "Noma Yanke Talauchi" meant for the Northern Zones only 122 (40.5%) respondents from these zones indicated awareness of the programme. As a programme meant for the entire nation, "Agricultural Panorama" (television) was little known with only 94 (19%) respondents. Among the extension publications, the best known were leaflets and posters which attracted 278 (56.2%) respondents. The next item with the highest scores was *Recommended Practices* with 199 (40.2%) respondents. Newspaper articles, news letters, extension guides and bulletin were not well known. They attracted between 94 (19.0%) and 183 (37.0%) respondents. As an information service, extension agents were the most known information service providers with 435 (87.9%). This was followed by agricultural shows 347 (70.1%) and farmers' field days, 334 (67.5%) respondents in that order.

Generally, access to NAERLS programmes and information services follows the pattern of knowledge about them. This could be established from the comparison of tables 1 and 2. Almost an equal number of the respondents who knew about a programme or information services had access to it. Like knowledge of radio programmes, "Mu Koma Gona" with 232 (46.9%) respondents was the most accessed programme when programmes beamed through this medium were looked at nationally. "Mu Koma Gona" under access to programmes and information services was again followed by "Noman Zamani" and "Noman Karkara Magajin Garba" which occupied the same positions under knowledge of programmes and information services. With 264 (53.3%) respondents having access to them, leaflets and posters were the best accessed extension publications. This followed the pattern of the knowledge about them since they equally ranked highest among extension publications. That very many respondents used posters is a confirmation of the statement by Aboyade (1987) that posters are crowd pullers. The finding in this study is however contrary to that of Onwegba and Anyanwu (1992) that posters would not influence significantly farmers' use of agricultural information.

Access to the two television programmes, "Noma Yanke Talauchi" and "Agricultural Panorama" recorded 133 (26.9%) and 90 (18.2%) respondents respectively. That these television programmes were little known and accessed by Nigerian farmers was because the majority of them reside in rural settlements, which lack electricity and other infrastructure that facilitate the receipt of television programmes. Most of the zonal

programmes and information services were well accessed in the same manner as the respondents in their respective zones knew about them. Just as English language radio programmes were generally little known, so were they little accessed nationally. That the respondents' knowledge about NAERLS information services and access to them were almost at par is an indication that access to an information service is not possible without the knowledge of it. Therefore, knowledge about an information service will likely facilitate access to it and consequently its use.

For the extension publications, knowledge of and access to them were almost at par. The best known extension publications were leaflets and posters which were equally the most accessed. While 278 (56.2%) respondents knew about NAERLS leaflets and posters, 264 (53.3%) respondents had access to them. The best known and accessed information service were the extension agents with 435 (87.9%) and 387 (78.2%) respondents respectively. Almost as agricultural shows and field days were known, so were they accessed.

Ideally, it is expected that of all the respondents who knew about a programme or information service, an equal or fairly less number should have access to it. This was the case for 18 of the 27 programmes and information services of the NAERLS. But for the other nine programmes and information services, the respondents who had access were slightly higher than the number that knew about them. This is unusual. The nine programmes, as seen from the comparison of tables 1 and 2 were "Noma Karkara Magajin Garba," "Filin Kungiyoyin Manoma," "Kiwoce Kiwoce," "Country Farmer," and "Agricultural Panorama." Other were "Farming in Nigeria Today," "Noma Yanke Talauchi," newspaper articles and extension bulletins.

All the respondents in this study had knowledge of, and access to, at least one form of NAERLS information service or the other. This was especially true of information services offered via extension agents, leaflets and posters, agricultural shows, farmers' field days and radio programmes/broadcasts. The reader should note that the "many" used under the *language of communication* column for newspaper articles, newsletter, leaflets and posters, extension agents, etc, in tables 1 and 2 is to indicate that the languages used for the provision of information in these channels or information services are two or more.

Areas of Information Needs of Nigerian Farmers

The respondents' information needs were on how to improve their agricultural practices, and these needs were generally very high as shown in table 3. In all areas, except agro forestry, fishing and 'others,' the respondents' scores for need for them were in excess of 70%. Farmers needed information on how to improve practice as attested to by Aboyade (1987) and Kaniki (1991). Ozowa (1995) in a study on the information needs of Nigerian small scale farmers made similar assertions. He indicated that farmers needed

information to resolve problems on pest hazards, weed control, water moisture insufficiency, soil fertility, farm credit, labour shortage, soil erosion, etc.

In this study and as in Aboyade's study where farmers' request for information on fertiliser supply topped all other requests, the need for information on the procurement and use of the same commodity recorded the highest response of 88.7%. In this study, 76.8% of the respondents needed information on farm/wild fire unlike in Kaniki's (1999) study where the information seeking on this topic by Zambian farmers was only 1%. However, Nigerian farmers were more interested and would most likely use information, for example, on the control/prevention of farm/wild fire than Zambian farmers.

Conclusion

The NAEERLS has a long history of information services provision to Nigerian farmers, especially those in the northern States. The most popular of these services are the vernacular language radio programmes meant for particular zones, extension agents, posters and leaflets, agricultural shows and farmers' field days. The little known and accessed information services were television programmes, English language radio programmes, and most extension publications. The fact remains, however, that the provision of the popular information services, as well as the sustained provision of those which are not widely known and accessed, have helped to sensitise Nigerian farmers to the need for information. As a result, most Nigerian farmers have a great desire for agricultural information which is attested to by the findings relating to their information needs in this study.

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*Dr. Innocent I. Ekoja is Deputy University Librarian/Director, General Studies Directorate of Abubakar Tafawa Balewa University, Bauchi, Nigeria. He holds BLIS, MLIS and PhD degrees in Library Studies. He attended Ahmadu Bello University and the University of Ibadan, both in Nigeria.



Innocent I. Ekoja

1. Knowledge about the NAERLS Programmes and Information Services

			N. CENTRA		N. EAST		N. WEST		S.EAST		S. WEST			
			Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Gona	Hausa	Radio	64	63.4	68	68	99	99	-	-	1	1.0	232	46.9
rkara magajin Garba	Hausa	Radio	34	33.7	79	79	100	100	-	-	1	1.0	214	43.2
nani	Hausa	Radio	82	81.2	48	48	90	90	-	-	1	1.0	221	44.6
oyyin Manoma	Hausa	Radio	32	31.7	53	53	94	94	-	-	1	1.0	180	36.4
voce	Hausa	Radio	23	22.8	55	55	91	91	-	-	1	1.0	170	34.3
ulu	Yoruba	Radio	3	3.0	2	2	-	-	-	-	91	92.8	96	19.4
gbe	Yoruba	Radio	2	2.0	-	-	-	-	-	-	83	84.7	85	17.2
Jbi	Yoruba	Radio	1	1.0	-	-	-	-	-	-	44	44.8	45	9.1
mer	Igbo	Radio	1	1.0	-	-	-	-	79	82.2	3	3.1	83	16.8
mer	Pidgin English	Radio	3	3.0	1	1	1	1	21	21.9	2	2.0	28	5.7
l Panorama	English	Radio	7	6.9	15	15	9	9	19	19.8	7	7.1	57	11.5
arming	English	Radio	16	15.8	6	6	9	9	11	11.5	7	7.1	49	9.9
urth	English	Radio	4	4.0	5	5	6	6	2	2.1	4	4.1	21	4.2
sbandry	English	Radio	10	9.9	20	20	9	9	11	11.5	7	7.1	57	11.5
Nigeria Today	English	Radio	9	8.9	10	10	8	8	8	8.3	7	7.1	42	8.5
ck to Farm	English	Radio	15	14.9	12	12	8	8	3	3.1	8	8.2	46	9.3
ce Talauchi	Hausa	Television	15	14.9	45	45	62	62	2	2.1	1	1.0	125	25.3
l Panorama	English	Television	8	7.9	15	15	18	18	36	37.5	24	24.5	101	20.4
Articles	Many	Print	9	8.9	15	15	24	24	38	39.6	8	8.2	94	19.0
Posters	Many	Print	7	6.9	11	11	53	53	25	26.0	3	3.1	99	20.0
Guides	Many	Print	62	61.4	89	89	64	64	49	51.0	14	14.3	278	56.2
Bulletins	Many	Print	19	18.8	52	52	61	61	23	24.0	28	28.6	18	37.0
ded Practices	Many	Print	12	11.9	29	29	54	54	19	19.8	23	23.5	137	27.7
agents	Many	Interpersonal	28	27.7	71	71	52	52	44	45.8	4	4.1	199	40.2
l Shows/	Many	Display	87	86.1	96	96	86	86	82	85.4	84	84.7	435	87.9
ld Days	Many	Display	63	62.4	83	83	93	93	50	52.1	58	59.2	347	70.1
			62	61.4	92	92	71	71	44	45.8	65	66.3	334	67.5

SITIZING USERS FOR INCREASED INFORMATION USE

Access to NAERLS Programmes and Information Service

			N. Central		N. East		N. West		S. East		S. West		Total	
Language	Medium		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
ona	Hausa	Radio	65	64.4	67	67	98	98	1	1.0	1	1.0	232	46.9
ara magajin Garba	Hausa	Radio	33	32.7	83	83	100	100	-	-	1	1.0	217	43.8
ani	Hausa	Radio	83	82.2	47	47	88	88	-	-	1	1.0	219	44.2
oyin Manoma	Hausa	Radio	29	28.77	56	56	95	99	-	-	1	1.0	181	36.6
ce-	Hausa	Radio	24	23.8	70	70	92	92	-	-	1	1.0	187	37.8
u	Yoruba	Radio	3	3.0	1	1	1	1	-	-	85	86.7	90	18.2
gbe	Yoruba	Radio	2	2.0	1	1	-	-	-	-	78	79.6	81	16.4
bi	Yoruba	Radio	1	1.0	1	1	-	-	1	1.0	42	42.9	45	9.1
mer	Igbo	Radio	1	1.0	-	-	1	1	70	72.9	2	2.0	74	14.9
mer	Pidgin English	Radio	3	3.0	1	1	-	-	23	24.0	3	3.1	30	6.1
Panorama	English	Radio	8	7.9	19	19	7	7	17	17.7	7	7.1	58	11.7
arming	English	Radio	12	11.9	7	7	7	7	4	4.2	8	8.2	38	7.7
th	English	Radio	4	4.0	2	2	7	7	4	4.2	2	2.0	19	3.8
sbandry	English	Radio	9	8.9	22	22	7	7	5	5.2	7	7.1	50	10.1
Nigeria Today	English	Radio	12	11.9	10	10	7	7	9	9.4	7	7.1	45	9.1
k to Farm	English	Radio	14	13.9	10	10	7	7	6	6.3	9	9.2	46	9.3
e Talauchi	Hausa	Television	18	17.8	53	53	60	60	1	1.0	1	1.0	133	26.9
Panorama	English	Television	7	6.9	17	17	18	18	35	36.5	13	13.3	90	18.2
Articles	Many	Print	11	10.9	15	15	26	26	36	37.5	8	8.2	96	19.4
Posters	Many	Print	6	5.9	9	9	53	53	23	24.0	3	3.1	94	19.0
Guides	Many	Print	61	60.4	86	86	64	64	43	44.8	10	10.2	264	53.3
Bulletins	Many	Print	20	19.8	44	44	63	63	25	26.0	26	26.5	178	36.0
ded Practices	Many	Print	10	9.9	31	31	55	55	20	20.8	22	22.4	138	27.9
agents	Many	Interpersonal	28	27.7	69	69	50	50	39	40.6	5	5.1	191	38.6
l Shows	Many	Display	62	61.4	97	97	69	69	77	80.2	82	83.7	387	78.2
ld Days	Many	Display	49	48.5	78	78	75	75	47	49.0	54	55.1	307	61.2
			46	45.5	90	90	58	58	42	43.0	61	62.2	297	60.0

Information Needs

ation Needs

	ZONES										TOTAL	
	N. CENTRAL		N. EAST		N. WEST		S. EAST		S. WEST		Freq	%
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
ment & Use of Fertiliser	97	96.0	89	89	99	99	72	75.0	82	83.7	439	88.7
disease Control	94	93.1	87	87	99	99	75	78.1	83	84.7	438	88.5
Yield/Agricultural Production	92	91.1	85	85	99	99	73	76.0	87	88.8	436	88.1
g at the Right time	96	95.0	86	86	99	99	67	69.8	78	79.6	426	86.1
ontrol	94	93.1	84	84	98	98	70	72.9	79	80.6	425	85.9
ed Seeds	91	90.1	84	84	99	99	69	71.9	82	83.7	425	85.9
rvest Loss/Preservation	93	92.1	81	81	97	97	71	74.0	80	81.6	422	85.3
tural credit	91	90.1	77	77	95	95	75	78.1	73	74.5	411	83.0
tural Cooperative	92	91.1	80	80	98	98	61	63.5	78	79.6	409	82.6
ent of Agricultural Returns	92	91.1	81	81	99	99	66	68.8	64	65.3	402	81.2
ng Agricultural Produce	92	91.1	81	81	98	98	61	63.5	67	68.4	399	80.6
Welfare	83	82.2	81	81	94	94	71	74.0	54	55.1	383	77.4
nure Laws	88	87.1	72	72	95	95	58	60.4	68	69.4	381	77.0
Prevention of Farm/Wild Fire	84	83.2	81	81	99	99	63	65.6	53	54.1	380	78.8
Availability	88	87.1	81	81	96	96	50	52.1	63	64.3	378	76.4
ural Insurance	83	82.2	76	76	96	96	60	62.5	60	61.2	375	75.8
in Agriculture	86	85.1	78	78	93	93	59	61.5	57	58.2	373	75.4
Husbandry/Livestock	79	78.2	84	84	96	96	59	61.5	48	49.0	366	73.9
stry	83	82.2	64	64	31	31	40	41.7	40	40.8	258	52.1
	71	70.3	59	59	42	42	46	47.9	27	27.6	245	49.5
	-	-	4	4	-	-	3	3.1	-	-	7	1.4

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Book Reviews

Organisation of Data in Information Systems by M. Tiamyu. Ibadan: Stirling Horden Publishers, 2003, 249 p. (ISBN 978-032-077-6).

This book is broad in scope and comprehensive in detail. It covers topics largely in information and library science; but also strides across related disciplines such as computer information systems, information technology and communication science. The book covers principles and strategies of organising information like information generation, processing, data communication, document representation, controlled and natural indexing languages and classification systems. This book also covers computerised retrieval systems, bibliographic databases, bibliographic standards, data modelling and data models, normalisation, of databases, data dictionaries, record structures, management of data in organisations, and organisation of data for communication.

Each chapter begins with simple introduction that sets the tone and scope of the subject under discussion and ends with review questions and a comprehensive bibliography for those who may wish to read further on the subjects. The book is logically organised into major sections and sub sections. The sections start with fundamental issues and progressively build up content with increasing degree of sophistication while maintaining the simplicity for ease of understanding. Concepts such as data, information, field, record, file, information systems, entities, recall ratio, and precision ratio are neatly explained and illustrated with real life experience thereby making the content easy to understand.

The book is written in a very simple language and hence easily understood. It appeals generally to information professionals but specifically to students of certificate, diploma and undergraduate programmes pursuing courses in information and library science, as well as beginners in computer information systems, information technology and communication science. The topics on databases, data modelling, and normalisation of databases are written with such simple language that one rarely finds in books of computer science, information technology and computer information systems. In addition, the topics on cataloguing, classification and string indexing, which students generally find difficult to comprehend are well written with several illustrations.