

## AUTOMATION IN UNIVERSITY LIBRARIES OF NIGERIA: A REVIEW

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### ABSTRACT

*Automation in university libraries of Nigeria is far long been realized as an alternative to traditional methods of information handling for the sole aim of providing better services and above all meeting the clients needs. In this context, the present paper attempts to examine the level of automation in university libraries in Nigeria particularly governed by the superior Government of Nigeria. The emphasis is focused on the automation experiences of the libraries, the current state of the projects and the constraints encountered. It identifies problems with possible measures for future.*

### KEYWORDS

*Automation; Nigerian Libraries- Automation; University Libraries- Nigeria.*

### INTRODUCTION

Advancement in information and communication technologies has ushered in an era of development in information handling. It empowers the ability to acquire and process information at a very high speed and transfer it across vast distances. The synergy of these is what has come to be known as *information and communication*

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*technology* (ICT) (**Dan-Isa, 2004**). Moreover, this technological advancement is referred by many scholars to as 'Digital age' (**Malumfashi, 1996**). Simultaneously, the tremendous increase in scientific literature in different fields of human endeavour, coupled with the development of new fields of study and the growing interdisciplinary relationship gave rise to the phenomena called 'information explosion' (**Ajibero, 1987 & Mohammed, 2006**). Hence, the unprecedented accumulation of larger collection in libraries, this development therefore, brings a serious impediment to librarians(managers) who are traditionally trained to identify, collect, select, organize, preserve and disseminate information sources in whatever physical format they may be (**Mohammed, 2006**). Again, this development poses threat to bibliographical control services, as the entire scenario looks more or less overwhelmed, because of the complexities involved in information generation, processing and dissemination. Librarians therefore, face a lot of challenges to cope with the situation. Furthermore, communities of users are becoming more and more sophisticated in their quest for information. They want to have what they need quickly and precisely to solve the problems at hand. This can hardly be achieved if librarians are reluctant to embrace and use these information and communication technologies (ICTs). It is with this consideration, therefore, that the application of information and communication technologies (ICTs) in libraries has become imperative considering the enormous benefits one can derive from it in achieving efficiency, accuracy and aptness.

## DEFINITION

Library automation has been described by many scholars in different ways. **Jegede (1985)** terms library automation as "the application of computer and other related technologies to library routines and services with a view of speedy delivery of information to places where it is needed." **Marghalani (1997)** remarks it as a "term, which encompasses the notion of application of technologies to information

handling (generation, storage, processing, retrieval and dissemination)". **Fatuyi (1999)** views automation as "the use of the computer to efficiently acquire, store, retrieve and disseminate information to library users at a faster rate. He further adds that automation, as it implies is the application of automatic and semi-automatic data processing machines to perform library routines, due to larger amount of data requiring processing, coupled with the increasing demands made from library users. To summarize, library automation is application of modern technology to information handling in libraries from collection development to delivery of all knowledge products and services to its patrons and clients in an efficient and effective way.

## JUSTIFICATION

The rationale for library automation can be summarized as:

- The inadequacy of traditional library services and tools in coping with the detailed requirements of identifying information pertinent to a given problem has forced libraries to automate their functional service areas (**Mohammed, 2006**).
- The rise in the volume of publications and its concomitant problem of information explosion in every field has made it impossible for any library to employ traditional techniques but to shift to library automation techniques and tools.
- The continuing decrease in the purchasing power due to shrinking library budgets as well as the inflationary trends in publishing industries in the developing countries, Nigeria inclusive, calls for libraries to automate their functional service areas which would subsequently give room for libraries to easily develop a networking venture among themselves.
- The greater expectation and change in library user patterns of information seeking strategy and more sophistication in the

demand made to the library, forces planners to switch over to new interfaces of knowledge delivery, dissemination and seeking paths.

- Need for more in-depth range of services to the teaming users of the library.
- Computerized information services offer the advantage of increasing speed and accuracy in performing routine functions, thereby reducing errors and omissions., besides providing reliable, competent and accurate information
- **Abubakar (2006)** observes that automation in libraries permits decentralized access to records and information.
- It helps in cost reduction in running library as viewed by **Dan-Isa (2004)**. He further argues that library service is very labour intensive where two thirds of library's budget usually goes for labour and pleads that since machines can be made more cost effective in a way that human beings cannot, it appears inexorable that the cost of labour will tend to increase relative to other costs. To support the argument, citing **Buckland(1997)** explains the cost reduction trend if library opts for computers for operating its services.(Fig 1)

Labour Unit Cost

Price

Unit

Cost

Machine Unit Cost

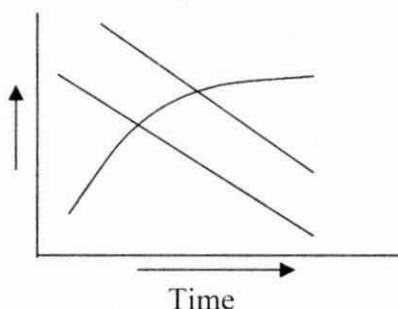


FIGURE 1. *COST TRENDS: LABOUR AND MACHINES*

Source: **Backland (1997)**

Since ICT is steadily shifting relationship between machines and humans, one can expect the amount of machine use to increase steadily, relative to the use of labour of any and all activities for which machines can be used. The effect may simply be to empower more machines power to increase what a person can do. The effect will also be case of substitution-what can be delegated to machines will be heavily increased as it becomes technically and economically feasible.

### UNIVERSITY LIBRARIES

The automation of Nigerian university libraries can be traced back to 1971 when the Nigerian Library Association (NLA) organized a conference at University of Ibadan where the application of computer technologies in libraries was extensively discussed. Some of the vital points discussed during the conference include the rationale for computerization of libraries, and university libraries should not be left out in the '*new information age*'. In spite of all the efforts been put towards university library development in the country, little progress has been recorded by such libraries to automate one subsystem or the other. Although scholars like **Elikhamenor (1990)** report that Nigerian university libraries were the first to attempt in automating their functional services areas, but yet they are lagging behind if compared to other libraries of similar setting. He however attributed the delay on reliance heavily on the facilities available at their respective university computer centers. For instance it is reported by **Oyinloye (2004)** that International Institute of Tropical Agriculture (IITA), Ibadan has replaced the card catalogue with a fully computerized integrated database. The library used the software called

'*Battelle*' Automated Search Information System (BASIS) The other example, is the successful automation project by Federal Institute of Industrial Research, Oshodi (FIRO), library in the year 1988. Since that time the ICTs integration in libraries has started gaining ground in Nigeria (**Oyinloye, 2004**). **Ikem and Ajala (2000)** report that interest in information technology has been generated since early 1970s at Kenneth Dike Library, but the first automated serials catalogue in the country was produced by the library in 1975-a union list of serials in Nigerian University Libraries produced with aid of the computer. Full-scale planning on automation started fully at Ibadan in 1978. This was affected by harsh economic situation for some times until early in 1990 when Kenneth Dike Library encouraged by the automation success of IITA embarked on a new tread of automating the library.

Other university that made modest progress in automation project was Bayero University Library (BUK). **Dan-Isa (2004)** reports that BUK started in 1982 when it compiled information serial information as a database. This was followed by a further attempt to develop a customized library automation package. In 1995 through the World Bank programme, National University Commission (NUC) supplied *TINLIB* software and some hardware equipment to all federal universities. Other universities made active efforts including Ahmadu Bello University (ABU), Zaria; Lagos (**Ogunleye, 1997**) although university library computerization in Nigeria has been in the pipeline since the 1970s, but concerted efforts began in the late 1990s (**Nok, 2006**). In related development, **Mohammed (1995)** reports that a certain break-through was made when the federal Government of Nigeria secured a World Bank facility of about 20 million US Dollars for the 20 federal universities of the country, to acquire resources for the library including automation project. Furthermore, study conducted by **Gwarzo (2000)** on 'the adoption and utilization of CD-ROM technologies in Nigerian University Libraries' reveals some efforts of automation by Nigerian federal universities that "each of the respective beneficiary university libraries was given one micro-

computer, one CD-ROM drive, one UPS and *TINLIB* Software to enable them start automating their functional areas. The National University Commission (NUC) took a step further to organise a workshop on the application of CD-ROM and *TINLIB* software for all universities following the NUC/World Bank programme in the country. Many educational foundations have also assisted Nigerian Universities to make their automation a success story. One good example is the donation of ten (10) systems to Bayero University Library by Mac Arthur Foundation to enable the university to facilitate Internet connectivity. Bayero University Library has subscribed to *Alice for Windows*, in its effort to computerize all their functional service areas.

### THE JOURNEY SO FAR

Perhaps top in the agenda of many Nigerian university libraries annual budget is proposal to automate their sub-systems. Although most of the efforts being made so far by most of these universities yielded little progress, yet many are striving hard to attain the noble goals, **(Mohammed, 2006)**. For example Bayero University Library is vigorously pursuing to automate its sub-system using the *Alice for Windows*, a recommended complimentary hardware, peripherals and time table for the exercise which was already in place and pursuing enthusiastically **(Katsina, 2004)**. More importantly, recently same Bayero University had signed memorandum of understanding (MOU) with Visionary Technology for Library Solution (VTLS), Mortensen Center for International Library Programme Chicago U.S.A for the purpose of automation of University Library. The project is financed by Mac-Arthur Foundation. **(Bayero University Official Bulletin, 2008)**. In related development **Schnuer (2008)** reports that other Nigerian universities to benefit from the same gesture include "six federal Universities: *University of Jos*; *Obafemi Awolowo University Ife University of Ibadan*; *Ahmadu Bello University, Zaria(ABU)*; and *Uni Porharcourt*". And in the recent past the Nigerian University

Commission (NUC) embarked on a project titled "*Nigerian Universities Networks (NUNET)*" a laudable project aiming at automating Nigerian universities and their libraries in which, if the project fully executed, would facilitate networking among them for the purpose of resource sharing (**Mohammed, 2006**). The most recent effort is the one made by Education Tax Fund (ETF) in which a total sum of one point two billion naira (#1.2 billion) was spent on ICTs in Nigerian institutions of Higher Learning. As part of their contributions to see that university libraries in Nigeria join the race of the world in automation. **Kawo (2005)** viewed that ETF also provided a statistics which indicates that in 2002 alone a total sum of #600 million naira was expended on ICT projects in 24 colleges of medicine, another #165.6 million was spent on the 'ETF digest project' a laudable project that covers all the six (6) geo-political zones in the country. It is also realized that shortage of capacity in the institutions of higher learning is one of the obstacles undermining automation in Nigerian universities. This has made ETF Management to organize and embark on intensive training of both the students and the teachers on the ICT capacity building, which according to them was the fourth phase of the ICT capacity building workshop to be carried out in six selected universities including : "University of Agriculture Abeokuta; Ambrose Ali University, Ekpoma, Nnamdi Azikiwe (College of Health Sciences) Enugu; University of Agriculture Makurdi; Abubakar Tafawa Balewa- University Bauchi and Usman Danfodio University, Sokoto" (**Kawo, 2005**).

It is reported that president of the Federal Republic of Nigeria, *Olusegun Obasanjo* made a request during the 31<sup>st</sup> general Conference of the United Nations Education, Scientific and Cultural Organization (UNESCO) in October 2001, to focus its special plan action programme to establish a virtual library for higher institutions to stock their libraries with relevant books and literature (**Ya'u, 2003**). Although several projects have been initiated and some were even executed, but yet, little result was obtained as **Olarunsola (1986)**

comments that none of the projects produced the desired results. Nigerian libraries have the aspirations and the hope to embark the ICT in one form or the other in their libraries, but it is not sure how soon the hope will turn in to reality.

## CHALLENGES AND STRATEGIES

From the foregoing discussion, it is clear that lots of efforts have been made by libraries to automate one sub-system or the other but little progress is recorded, attributed to many problems. **Manuh and Budu (2007)** identified the following problems militating against full flag automation in Ghanaian universities which is considered part of the same in Nigeria and considered relevant here:

- i) Limited hardware availability
  - ii) Absence of reliable infrastructures
  - iii) Insufficient management cooperation to system integration
  - iv) Lack of fund to cover cost of maintenance
  - v) Inadequate ICT professional staff
  - vi) Inadequate adoption of the software to the Nigerian context and to the users need of Nigerian staff
- **Ochogwu (1994)** in his study further discovered some of the problems hindering library automation in Nigerian Universities, which include “inadequate resource base in the libraries and the low volume of transaction
- Lack of government commitment towards the libraries, especially lack of policy towards information, although in recent past there were moves and agitations by the Civil Society Groups (CSG) to ensure that government legislate and pass a bill on information freedom which is not directly related to libraries, but if achieved could be a starting point.

- Incessant power interruptions, which are common with Power Holding Company of Nigeria (PHCN) and poor telecommunication services.

**Danladi (2002)** opined that “the present privatization exercise of major social services such as power and communication sectors is a blessing to libraries that are willing to automate their sub-systems by increasing efficiency of services rendered by these agencies”. Whether this privatization has lead to improvement of these sectors in the country or not is for every individual to judge. It is however, at this juncture, to note that in spite of all these obstacles towards automating libraries in Nigeria coupled with the trial and error, it seems that the society and information providers have now realized the need for effective and efficient delivery of information for development. It must be stressed here that, the continued efforts by the Nigerian Library Association (NLA) and its various sections especially cataloguing and classification section of the NLA for organizing continued conferences and workshops on the application of ICTs to information service provision, need to be applauded and encouraged.

## RECOMMENDATIONS AND CONCLUSION

It is recommended that:

- Government of Nigeria should reorder priorities and invest more in information sector which is a key pre-requisite for much meaningful development. Nigerian has the financial capability, to restructure power and telecommunication sectors and all other sectors of the economy for more efficiency in their services.
- Equally Librarians should also come to term with reality and stop shying away towards automation.
- The NLA should redouble its efforts in seeing that all libraries and librarians alike embrace the issue of automation

of libraries. It is suggested NLA to serve as a central advisory agency for any library to plan for automation. Their role could be to advice on the selection of right hardware and software, the module and or sub system to start with and so on and so forth.

- Since the automation of library routines and services enhances efficiency and effective management of resources and retrieval of information but most academic libraries in Nigeria are left far behind in automation activities, mainly due to lack of adequate finances from the Government. So unless 10% of the total annual budget is allocated to universities which according to law is supposed to go to libraries must be put in to action so help libraries execute meaningful automation projects. It is therefore desirable that university libraries in Nigeria should embark fully on automating their functional service areas for development and it is high time to do so.

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