



Digitization of Nigerian university libraries

Nigerian
university
libraries

From technology challenge to effective information delivery

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Abstract

Purpose – The purpose of this paper is to examine the present digitization projects in Nigerian university libraries and the challenges they pose to effective information delivery.

Design/methodology/approach – The research method employs both qualitative and quantitative methods. The questionnaire is the major instrument used for data collection, with observation as complimentary instrument. The respondents constitute 40 professional and para-professional staffers drawn from both universities.

Findings – The results from the paper reveal that the libraries lack written policy on digitization, inadequate ICT infrastructures and manpower, fund, and inadequate government support. Users are not given user education/digital literacy to enable them adequately utilizing the available digitized resources and services, thus posing challenges to effective information delivery.

Originality/value – The paper will make for a more conscious effort in institutionalizing digital library services, formulation and implementation of digitization policies, introduction of user education/digital literacy programmes and conscious staff training programme on ICTs for university libraries in Nigeria.

Keywords Nigeria, University libraries, Information services, Digital storage

Paper type Research paper

Introduction

Most higher education and research institutions are funded by the federal and state governments in Nigeria. These institutions have made a significant contribution to the transmission of knowledge and to research in all fields and disciplines of human endeavour. They have played their role in transforming the community, state and the nation. They support the needs and aspirations of students and scholars. The libraries of these institutions also play a vital role in acquiring and disseminating information for academic and research activities. Digitizing their services therefore, will go a long way in enhancing information delivery. Digital libraries are a way of making educational and research data and information available to faculty, researchers, students and others at the institutions and worldwide. Indeed, the growth of virtual libraries, digital libraries, online databases and library and information networks have transformed the traditional ways of collecting, storing, processing and accessing information.

Ajibola and Tiamiyu (2000) and Ogunsola (2005) among others, have emphasized the effect of the information explosion in the new information era. Digital technology,



internet connectivity, and physical content can now be dovetailed, resulting in a digital library (Varatharajan and Chandrashekara, 2007). These authors state further that:

[...] digital libraries and the digitization of print materials can preserve resources in art and culture, education, science and technology, literature and humanities, media and entertainment, and cultural heritage and history.

Waters (2004) defined a digital library as that which conjures up images of cutting-edge computer and information science research. It is a radically new kind of practices for the management and use of information, which are used to replace earlier references to electronic and virtual libraries. The Digital Library Federation defined digital libraries as:

[...] organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that they are readily and economically available for use by a defined community or set of communities. To this end, we can say that library digitization is the use of information and communication technologies (ICTs) – Internet, computers, telephony, satellites, etc. and specialized/skilled staff in ICTs – by libraries to source, select, order, acquire, organize, and store information resources for the purpose of disseminating current, reliable, and timely information to information seekers via telecommunication channels. In library digitization, little or no movement of persons is required before information can be retrieved and disseminated at a particular time (www.diglib.org/about/dldefinition.htm).

In Nigeria, a number of libraries and information centers, particularly academic, are initiating digital library projects including databases and e-journals. There is the need to urgently digitize library resources and the cultural heritage of our country to preserve them for posterity. Many universities today have local area networks in their libraries, finance departments, MIS units, some faculties/departments, etc. Meanwhile, the NUNet project initiated by the National Universities Commission could not be linked up to for networking of the campuses as planned. This is due to lack of reliable telephone lines (mostly analog) among other factors, but with digital telephone exchange in most part of the country (Nwamarah, 2002), it is expected that the problem would be over and digitizing libraries would not be problem any longer.

However, the scenario is rather different in Nigeria as only a sprinkling of the impact of global information is been enjoyed (Ajibola and Tiamiyu, 2000). The reason is that electronic communication is still very weak due to the low-level computing culture, poor telecommunications infrastructure and general lack of awareness. The University of Dar es Salaam (2000) listed among others; poor telecommunication infrastructures, quantity and quality, absence of a National Information Communication Infrastructure policy, plans and strategies, and lack of the university coherent plan for ICT, as the major obstacles of digitization of university libraries in Africa.

However, some university libraries such as University of Jos, University of Nigeria, Nnsuka, University of Ibadan, Obafemi Awolowo University, Rivers State University of Science and Technology (RUST), etc. do have some form of digitized services. Of over a hundred universities (federal, state and private) in Nigeria, only a handful are making efforts to digitize their operations. In fact, the study of Sani and Tiamiyu (2005) revealed that of the 25 Nigerian universities studied, only six had digital library

services and seven had library OPAC systems. They stated further that university libraries in Nigeria had not recorded much progress toward the effective automation of their operation. Despite the great advantages digitization offers to university libraries, most Nigerian university libraries are yet to introduce digitized services. Hence, this study is to ascertain the extent of digitization in two of these Nigerian university libraries with focus on the challenges technology has posed to effective information delivery.

Objective and methodology

The aim of this paper is to highlight the importance of digitization and the need to integrate it in the Nigerian university library system. The paper will ascertain the availability of a policy on library digitization, which could hinder its implementation, the ICT infrastructure in place to enhance digitization of these libraries, the extent of funding to enhance digitization, the level of training of library staff in ICTs and user education/digital literacy programmes available to facilitate users' access to resources and services and effective information delivery. It is hoped that this study will pave the way for the retrieval and dissemination of current, reliable and timely information by users; and enhance the transfer and dissemination of information to a larger community of users simultaneously.

The paper is a survey research with the target audience as the entire professional and para-professional staff of two university libraries. The total number of staff at the time of the study was 43 staff at the RUST Library, and 49 at the University of Port-Harcourt (UNIPORT) Library – thus making a total population of 92. However, the professional and para-professional staff from RUST Library were 19 and 21 from the UNIPORT Library, respectively, and it is these two groups that constitute the sample for the study. Thus, the 40 professional and para-professional staff of both university libraries were drawn upon using the purposive sampling technique which was based on those working with or using digitized systems in the libraries. These were used to carry out the investigation and get objective results. The questionnaire was the major research instrument used with observation to compliment the questionnaire. The frequency table and simple percentages were used to analyze the data obtained from respondents.

Data presentation and discussion of findings

The study covers the entire population of those using the digitized system, that is 40 people. As noted above, 21 (52.5 per cent) of the respondents were from UNIPORT Library, while 19 (47.5 per cent) were from RUST library. For convenience sake both categories were treated as a single entity in the presentation and discussion except where specified.

There were 26 (65 per cent) male and 14 (35 per cent) female respondents whose ages ranged from 25 to 51 years and above. They have knowledge of computer application and are well abreast with library digitization. This is corroborated by the study of Sani and Tiamiyu (2005) who found that “almost half of the respondents (48.4 per cent) studied had a moderate IT knowledge, whereas 28 per cent and 24 per cent possessed higher and low IT knowledge, respectively.” The respondents' experience in the university libraries, range from 1 to 5 years (22, 55 per cent), 8-10 years (14, 35 per cent) and over 11 years (4, 10 per cent). This implies that the respondents are knowledgeable

enough or have experienced what has been going on in the library and information profession and as such, can make judgments on the true position of events in the library operations. It was noted that most of the respondents had been in the university for about ten years.

From Table I, ICT infrastructures available in the libraries are mainly computers. 16 respondents (40 per cent), stated this while 11 (27.5 per cent) noted that the computers have Internet connectivity with email facilities and 3 (7.5 per cent) indicated the availability of telephones. The result reveals that computers, servers, telephones and internet facilities are available, but there is no alternative electric power supply in case of power outage. From observation the researchers saw a well-equipped computer centre with Internet connectivity in RUST library and virtually all offices entered had computers. However, this was not the case with UNIPORT library. There were networked computers in offices but not in all the offices as in RUST library, suggesting that manual methods were still been used alongside the online method.

Land telephone lines (office phones) were not much in evidence in both libraries – only personal GSM phones were available. Fatoki (2005) highlighted the prospects of using GSM technology in library services. Power supply was epileptic as at the time of this research work in both libraries. Both universities (RUST and UNIPORT) libraries lack adequate infrastructures including telecommunications gadgets. Ogunsola (2004) stated that Nigerian university libraries suffer from lack of spare parts, poor maintenance culture, constant computer breakdowns and low level of electricity supply, which hampers digitization of library services. It was a general opinion the both universities lack a written policy on library digitization. This will no doubt affect library digitization projects in Nigerian universities. Furthermore, many respondents (33 people – 82.5 per cent) asserted that there are not enough infrastructures to facilitate library digitization as shown in Table II.

The results further revealed that there seemed to be little adequate funding and budget dedicated to digitization projects. While 23 (57.5 per cent) respondents

Table I.
Availability of ICT
infrastructures

Infrastructures	Frequency	Percentage
Computers	16	40
Internet and email	11	27.5
Telephones	3	7.5
Fax/facsimile	–	–
Alternative electricity power supply	–	–
All of the above	6	15
Others	4	10
Total	40	100

Table II.
Are there enough
infrastructures for library
digitization?

Responses	Frequency	Percentage
Yes	5	12.5
No	33	82.5
Undecided	2	5
Total	40	100

stated that there was no special fund/budget dedicated to the digitization project, 16 (40 per cent) respondents said there was. From these disparate responses and subsequent interaction with personnel, it is clear that there is no special fund dedicated to the digitization project. No doubt, the digitization of university libraries has been adversely affected by this singular act, which has implications for effective information delivery.

Table III shows that government/university management does not support the libraries adequately. Eleven respondents (27.5 per cent) posited that the government/university management team should support the library by enacting and implementing effective policies on digitization and provision of adequate fund for digitization project, respectively. Five respondents (12.5 per cent) were of the opinion that the government and/or university management should provide infrastructures for digitization project, while 13 (32.5 per cent) asserted that there was no support from the bodies. By implication, about 67.5 per cent respondents claimed that there is support from government/university management, however, from interaction with respondents the extent to which support is given is minimal. The Nigerian government seems to be less concerned about the state of affairs in the university libraries, hence they do not provide adequate support, and this is same with the university management. They do not attach much importance to the library especially since the library is not a profit-making unit. As policy makers, they do not make and implement policies that will see to the digitization of University Library Services.

ICT training for library staff

The result shows that respondents have training in computer operations, networking, database management and internet applications in addition to their professional training in Librarianship or Information Studies. This training spans through a duration of 3 months (7 respondents, 17.5 per cent), 6 months (10, 25 per cent) and 1 year (3, 75 per cent) periods. However, 17 (42.5 per cent) respondents had no training at all. From the responses, it is obvious that the staffers are not adequately trained in ICT application to make for effective and efficient information delivery through digitized library operations. The library staffs at the two libraries are not skilled adequately in ICTs applications. That is to say that library staff are intellectually handicapped when it comes to full integration of information and communication technologies and digitization of library operations.

Igun (2006) confirmed this by saying that the training of librarians for digital operations and services in Nigeria is inadequate and needs radical restructuring to produce librarians suited to deliver service in digital libraries in a knowledge-based society. Although some of the staff attended seminars and workshops and are

Options	Frequency	Percentage
Enactment and implementation of effective policies on digitization	11	27.5
Provision of adequate fund for digitization project	11	27.5
Provision of infrastructures for digitization project	5	12.5
Others	13	32.5
Total	40	100

Table III.
Support to enhance
digitization project

ICT literate, they still cannot work effectively in a digitized library as revealed by 10 (25 per cent) respondents. A total of 23 (57.5 per cent) respondents attended seminar/workshop for training in library digitization, while 17 respondents (42.5 per cent) did not attend. A critical examination of the result reveal that majority of the 23 respondents were from RUST.

It is worthy of note that RUST library is already undergoing the digitization project hence most of them have attended a seminar/workshop, while UNIPORT is yet to digitize their library services. Generally, the result further showed that 28 (70 per cent) respondents assert that there are no adequately trained personnel managing the digitization project while 12 (30 per cent) respondents think otherwise.

Also, a user education/digital literacy programme is not fully implemented in the library. Twenty-four (60 per cent) respondents affirmed this, though 16 (40 per cent) were of the opinion that nothing at all was in place let alone partially implemented. From the result, a user education/digital literacy programme is only being carried out in RUST library which has its library operations digitized. Both libraries in particular and Nigerian university libraries in general are far from institutionalizing user education/digital literacy programmes to facilitate services to users. This of course, is as a result of the fact that digitization is yet to be implemented in most university libraries. Therefore, users are not knowledgeable enough to seek and find the right information using Information and Communication Technologies.

Considering the benefits of digitization, the staff want their libraries to be digitized – indeed, all respondents (100 per cent) thought they were fit to be digitized. Six respondents (15 per cent) said digitization would offer speed and accuracy in data processing, 13 (32.5 per cent) said digitization would allow for the dissemination of current, timely, and reliable information, 16 (40 per cent) were of the opinion that digitization would allow for the dissemination of information to a large community of users at a time, while five (12.5 per cent) respondents said digitization would allow for faster service to users, thereby reducing time wastage and cost of obtaining information as associated with the traditional library services. In other words, digitization will offer speedy, current, accurate, timely and reliable information, simultaneous information delivery to a larger community of users, and reduction in time spent by user and cost of obtaining information.

Recommendations

Based on the outcome of the current survey, the following recommendations are hereby made:

- Formulation and implementation of library digitization policy is of vital importance and all university libraries in Nigeria should put one together as a matter of urgency.
- Adequate funding should be budgeted and released to the libraries without bias. However, libraries should solicit for funds from philanthropists, organizations, and donor agencies for digitization project. Also, libraries should engage in services that could generate revenue.
- Library staff should be given on-the-job training in ICT applications relevant to library services. They could undergo external training programmes for at least six months to attain the person-work-fit in a digital library. In the course of

educating “would be librarians” in library schools, their curriculum should include digital literacy. Also libraries should institutionalize user education in line with digital literacy programmes in the course of discharging their duties.

- Libraries should engage a reputable IT company for the purchase of reliable ICT facilities/equipment to tackle network failures. A maintenance programme should be part of the park with the vendors.
- There is also the need for collaboration among libraries for sustainability. This should make way for information infrastructure linking education, research, government, and business.

Conclusion

Digital libraries and digitization are crucial for preserving and disseminating information and knowledge more effectively and efficiently. Lack of maintenance culture on the part of library staff, inadequate space to accommodate ICT facilities, etc; constitute problems. As such, the problems militating against the effective library digitization project, as attested to by respondents are: lack of policy and implementation, funding, epileptic power supply, unskilled staff on ICT application, high cost of purchasing equipments, network fluctuations, lack of maintenance culture, space inadequacy, environmental disaster and lack of Internet connectivity.

Digital library activities are gathering momentum in Nigeria. Since most higher education and research institutions are funded and controlled by either the federal or state governments, clear-cut national plans and policies are needed for infrastructure, standards, metadata, interoperability, multi-lingual databases, training, co-ordination, copyright and archiving and preservation methods. In conclusion, this research work has unveiled the present state of digitization projects in Nigerian university libraries, as the situation in these universities studied do not differ from others. For an effective and efficient library digitization project to take place in university libraries in Nigeria adequate attention must be given to the issues raised in this study and the recommendations made above.

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