Migration to Viable Platform for Effective Library Operations: Millennium Experiences of Two Academic Libraries in Nigeria

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ABSTRACT

The study assessed migration of digital content and provision of viable platform for effective library operations; the Millennium experiences of two academic libraries in Nigeria. This was with a view to providing valuable information for stakeholders to guide them in software subscription and development. The descriptive survey, method was adopted for the study. eighteen librarians/ 5 para-librarians from Covenant University and 20 Librarians/ 8 para-librarians from University of Lagos constitute the target population. The purposive sampling technique was adopted. Instruments of data collection were interview, focus group discussion (FGD) and Questionnaire. The study revealed that migration experience to Millenium software was not so smooth and easy. Respondents preferred it however because it is web-based and has wide range of operations and upgrade options to suit any emerging demand in the future etc. The challenges faced by the librarians include: Subscription to individual right to access (pot) in Millenium, vendor/host controlled actual content with Millenium, absence of in-depth feasibility study and testing the product before embarking on the migration exercise. The study recommended that subscription to any software should not be based on individual pot or module as with Millenium software but be open and integrated among others.

Keywords: Migration, library software, library operations, technology advancement, academic libraries, Millennium

1. INTRODUCTION

The role of any university library in supporting teaching, learning, research, and community services of the parent body cannot be overemphasised. However, only a viable library with a robust collection can enhance academic activities of an institution. Thus, the Library is the heart and sustainer of all academic activities in the University. In view of this, libraries must meet the world class standard in physical environment, financial and material resources, availability and accessibility of quality information resources, to achieve their unique purpose.

The trend in library operations has tilted to provision of more electronic information resources therefore; the library of the 21st century holds a combination of virtual and print resources. This is geared toward achieving the main goal of the library which is to give users access to more and improved information with easier and speedy approach that is anchored on availability of effective information and communication technology (ICT). The ICT has changed the work of libraries and information centers and more than ever, libraries of the 21st century need this new technology. A greater number of users, demand for more library materials, proliferation of published materials, novel electronic platforms and

sources, the production of latest and low-priced computers and the advent of a global information society constitute various reasons for the increased need for ICTs in libraries. However, libraries in the developing nations, especially Nigeria have not made much improvement in this regard. Therefore, library patrons, librarians, library supporters and other stakeholders must lend a hand in the development of ICT-based libraries to meet up the new demands of the users.

In Library Automation, the software to be adopted is the most important decision to make apart from the hardware. It is tantamount to database management in every sphere of information management. However, the challenge in automation used to be, selecting the software first, and then the selection of the hardware would be narrowed to the computers on which the software could operate but with the advent of library software in Nigeria which dates back to the 1970s, came the challenge of acquiring and maintaining software packages because of cost. Many potential users view these systems as competitive, and find themselves in a dilemma not knowing which one to adopt. Nevertheless, a commitment to any software system that is comprehensive, no matter how tentative, would involve efforts in choosing, acquiring, installing, and considerably increased effort in learning how to

employ it. Thus basically investigating the effectiveness and efficiency of a software requires a lot of work. Also considering the investment required for creating new collections, digitising existing ones and migrating to new software, can be a herculean task. It is on these bases that this study on is to be carried out.

1.1 Library Software and Academic Libraries in Nigeria

With the advent of library software in Nigeria which dates back to the 1970s, came the challenge of acquiring and maintaining software packages because of cost. Even with the variety of library software available in the ICT market, which came either as integrated or modular package, Nigerian libraries did not adopt any until 1984 when International Institute of Tropical Agriculture (IITA), Library in Ibadan replaced her card catalogue with a fully computerised integrated software called, Battelle Automated Search Information Systems (BASIS).[7]

Academic libraries in Nigeria were not in the scene of library software usage until the National Universities Commission (NUC) acquired TINLIB for only federal University libraries and UNESCO introduced CDS/ISIS. After these two, different software came into market and Nigerian universities have acquired based on their affordability and the result is different software in different universities. This inconsistency and lack of uniformity in the use of library software is one major problem in the academic environment which militates against effective resource sharing and cooperation.[5] Some library software packages available in the Nigerian academic environment are: MASTERLIB, TINLIB, ALICE, GLAS, X-LIB, CDS/ISIS, LIBERTY3, MILLENIUM, ALEZANDRA, KARLMARK, KOHA, SLAM, and VTLS to mention a few.

1.2 Preparing for Migration Exercise

A successful migration certainly would begin with a feasibility study to consider all factors associated with the project, and ascertain if the investment of time and other resources will yield the desired result. When a library is considering the launch of a new product or new operation, the feasibility study is a reasonable tool to utilize before any resource is committed to the new project. One of the most important aspects of such study therefore, is to ensure that the total resources needed for completion is considered. Often, this will include addressing components such as hardware, software and structure.[6]

Also for any transformation to occur in any library, the existing information system must be restructured. According to Nguyen[4] a library functioning manually and planning to computerise its operation, would require the development of a new information system that must be born out of a systems' analysis. System analysis is the process of investigating a system, identifying problems,

and using the information to propose improvements to the system. System design is the process of planning a new approach to system or one to replace or complement an existing system. This stage is very important for any establishment desirous of transitioning from a window application to a web application. Roxanne[8] opined that implementing a new system is an important decision that takes a lot of energy and requires you to do a lot of testing.

2. OBJECTIVES

The specific objectives of this study includes:

- Ascertain the migration experiences of the librarians
- Determining the current pace of work with the deployment both software
- Ascertaining the challenges faced with the use of any of both software
- Ascertaining the possible solutions to these challenges

3. RESEARCH METHOD

The survey, method was adopted for this study; the reason is that it is a study of two social units, University of Lagos Library, Akoka, Lagos Nigeria and Covenant University Ota, Ogun State Nigeria. The academic librarians and para-librarians who use the software for their daily routine in both libraries form the population of the study. Eighteen librarians/5 para-librarians from Covenant University and 20 Librarians/8 Para-librarians from University of Lagos constitute the target population. The variant in study populations is dependent on the size and staffing of both libraries. The purposive sampling technique was adopted.

Instrument of data collection are interview, Focus Group Discussion (FGD) and questionnaire with structured and open-ended questions. The questionnaire questions included the likert scale type and some closed-ended questions which was personally administered and retrieved over a period of two weeks; the descriptive statistical method of analysis was used for the study. The descriptive statistical tools used were mean, standard deviation and simple percentage.

Issues of versatility and idealness of the software were derived from evaluation of open source software checklist by Goh, *et al.*[2,3]

4. FINDINGS

Table 1 revealed that majority of respondents with a mean of 3.2 at a variance of 0.2 in Covenant University found the training materials and encounter for Millenium during migration, easy to understand and work with. This was not quite same for respondents in the University of Lagos library rather the experience of majority with a mean of 3.3 at a variance of 0.3 was that the time allotted for training was too short coupled with the

Table 1. Migration experience for the librarians

S. No.	Statements	Covenant University			University of Lagos		
		Mean	SD	Ranking	Mean	SD	Ranking
1.	It was an easy transition exercise that lasted for a very short period of time.	2.5	-1.5	4	2.2	-2.3	6
2.	There is nothing different from the previous software.	1.4	-5.7	7	1.9	-3.2	7
3.	Work is faster with Millenium than my library's previous software.	3.1	-0.1	2	2.6	-1.3	4
4.	The time allotted for training in preparation for the migration was too short.	2.3	-2	5	3.1	-0.1	3
	The training materials for Millenium were easy to understand and practice.	3.2	0.2	1	2.4	-1.7	5
5.	Conversion from the previous format to MARC format was a challenge.	2.1	2.7	6	3.2	0.1	2
6.	Necessity is laid on every cataloguer to do a more perfect entry because it is in the global domain.	3.0	-0.4	3	3.3	0.3	1

fact that materials were not that easy to understand. In essence, the job was being done under some form of compulsion and struggle not because it was enjoyable this was clearly evident in the FGD where the respondents claimed that the situation was the reason they had to understudy Covenant University's operations on Millenium. Thus, respondents in Covenant University seemed to be more comfortable using Millennium. Librarians in University of Lagos library said it was not easy using the software. Roxanne[8] confirmed this when she affirmed that Millennium was not open and flexible enough thus her library's migration to Sierra.

Both universities acknowledged that the transition exercise took more time than they envisaged. When asked during the interview, they affirmed that their anticipation was for it to last for three or four days. However, it was more problematic for University of Lagos librarians to have their records converted to MARC format as claimed in the FGD. According to them, the library was still faced with the challenge of having all its bibliographic record converted to MARC format, meaning that, they were still in process of migration while Covenant University had long stabilised from the migration shock as it was discovered from the focus group discussion that Covenant University library staff had a more ICT favourable environment including all other necessary facilities than those of University of Lagos. Since both groups' of librarians had their trainings for same period of time (one week) and after one year University of lagos is not yet operating fully on the

software such that they had to visit Covenant University to understudy the system..

Table 2 revealed that 13 (65 %) of Covenant University respondents rated pace of work on Millenniun as good while 2 (10 %) rated it as excellent and 5 (25 %) rated it as fair. 16 (80 %) rated pace of work on ALICE as fair and 4 (20 %) rated it as good while majority 21 (81 %) of University of Lagos respondents rated Glass as good while 19 (73 %) rated Millenniun fair , 7 (27 %) rated it as good and 5 (19 %) rated GLASS as fair. The indication is that respondents from the University of Lagos were more comfortable with their previous software (Glass) than Milennium, while those from Covenant University were more comfortable with Milllennium.

Table 3 above revealed that majority of the respondents from the two universities identified cost of the software and subscription to individual right to access (pot) in Millenium which basically limits the number of staff who can have access to any of the modules and work at the same time, thereby limiting the volume of work per time as the most serious challenges. Also, frequent loss of data because of irregular backup activities with ALICE/GLASS software ranked next in order of seriousness, followed by the backup system that makes it impossible for subscribers to have total control and be able to verify the actual content of their database per time with millennium. In addition, (80 %) of the respondents admitted to the fact that there was not in-depth feasibility study and testing the product before embarking on the migration exercise thus forming part of the challenges.

Table 2. Pace of work of the previous software in library and Millennium

Work effectiveness	Covenant University				University of Lagos			
	ALICE		Millennium		GLASS		Millennium	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Excellent			2	10				
Good	4	20	13	65	5	19	7	27
Fair	16	80	5	25	21	81	19	73
Poor	-	-	-	-	-	-	-	-
Very poor	-	-	-	-	-	-	-	-
Total	20	100	20	100	26	100	26	100

Table 3. Challenges faced by librarians with the use of any of both software

Statements/challenges	SA	A	SD	D	U
Virus attack on ALICE/GLASS software keeps the databases under perpetual threat of loss of bibliographic record.	22 (48 %)	14 (30.4 %)	4 (9 %)	6 (13 %)	-
There is frequent loss of data because of absence of automatic backup with ALICE/GLASS software	24 (52 %)	17 (37 %)	3 (7 %)	2 (4.3 %)	-
Restricted authorisation for different operations slow down the pace at which some basic changes are made with Millenium.	15 (32.6 %)	19 (41.3 %)	5 (10.9 %)	7 (15.2 %)	-
The subscription to individual pot in Millenium limits access to the different modules of the software.	26 (57 %)	17 (37 %)	-	3 (7 %)	-
The subscription to individual pot in Millenium limits the number of staff who can work at a time, thereby limiting the volume of work per time.	31 (67.3 %)	13 (28.2 %)	-	2 (4.3 %)	-
The backup system makes it impossible for subscribers to verify the actual content of their database per time.	21 (47 %)	17 (37 %)	3 (7 %)	5 (10.9 %)	-
Millenium is more expensive to subscribe to and maintain.	31 (67.3 %)	15 (32.6 %)	-	-	-
There was not in-depth feasibility study and testing the product before embarking on the migration exercise.	27 (56.6 %)	11 (24 %)	2 (4 %)	6 (13 %)	-

Table 4. Strategies for proffering solutions to the challenges experienced by the librarians

Solutions to challenges	SA	A	SD	D	U
All library management system software should be well protected from perpetual threat of loss of bibliographic record	27 (59 %)	19 (41 %)	-	-	-
All software should of a necessity have automatic backup to prevent frequent loss of data	30 (65 %)	16 (35 %)	-	-	-
Authentication should be discretional and role-based access controlled.	22 (48 %)	19 (41 %)	-	-	5 (10.8 %)
Subscription to any software should not be based on individual pot in Millenium	34 (73 %)	12 (26 %)	-	-	-
All library software should be easy to navigate and utilize.	37 (80 %)	9 (19 %)	-	-	-
Exclusive control over database concerning daily routines and reports should reside with the subscribing Library.	25 (54 %)	17 (37 %)	-	-	4 (9 %)
All library software should be affordable to subscribe to and maintain.	38 (83 %)	8 (17 %)	-	-	-
There should be extensive feasibility study and testing the product before embarking on any migration exercise.	37 (80 %)	9 (19 %)			

Virus attack on ALICE/GLASS software keep the databases under perpetual threat of loses of bibliographic record. These indicate that respondents are very much concerned with access to the various module of operation, thus free access to same is required to allow as many staff as would need to carry out any assignment do so. Respondents from the two universities expressed their opinions in the FGD that if a thousand patrons can access the catalogue interface at same time, all other modules should be accessed by those inputting data without limitations as it is with their previous software. According to them, input determines output. Table 4 reveals that there is need for solutions to varied challenges encountered with the employment of the software. Apart from authentication and subscriber's control issues, all respondents agreed that all library management system software should be well protected from perpetual threat of loss of bibliographic record. Also, that all software should have automatic backup to prevent frequent loss of data, subscription to be free access to all modules for as many people as possible per time and library software should be affordable to subscribe to, maintain and easy to navigate and utilise.

Lastly, the respondents agreed that there should be extensive feasibility study and testing the product before embarking on any migration exercise.

5. CONCLUSIONS AND RECOMMENDATIONS

It can be concluded from the findings of the study of the two academic libraries that their migration experiences to Millenium software was not so smooth and easy. Also, Millenium is an ideal library software because of its wide range of operations and upgrade options to suit any emerging demand in the future, its protection against Virus attacks, degree of compliance with Library 2.0 and web presence. ALICE/GLAS were easier to employ, considering the pace of work effectiveness (speed).

The study recommends that subscription to any software should not be based on individual right to access (pot). Authentication for different operations should be discretional and role-based access control as supported by Danah & Ellison,[1] while libraries should be given the privilege of having the actual record their holdings especially for accreditation purposes. Backup should be automatic. Also, all software should be well protected from virus attacks thereby eliminating the nightmare.

More so, there should be extensive feasibility study and testing the product before embarking on any migration exercise this is highly necessary for libraries all over the world. Finally, libraries worldwide and Nigeria especially should subscribe only to web-based software as it is the zeitgeist of the time so as to maximize access to their resources. Finally, Government and stakeholders should provide the enabling environment for all academic libraries to implement a sustainable migration.

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